

# **Relationship Between Procurement Management and Project Performance of Public Infrastructure Projects at the Ministry of Infrastructure Housing and Urban Development in Zambia (MIHUD)**

**Mark Zulu**

Postgraduate School  
University of Lusaka  
Lusaka, Zambia  
zulumark93@gmail.com

**Funmilayo Caroline Jayeola**

Department of Civil and Environmental Engineering  
University of Zambia  
Lusaka, Zambia  
funmilayocar@gmail.com

**Ayodeji Emmanuel Oke**

Department of Quantity Surveying  
Federal University of Technology  
Akure, Nigeria  
emayok@gmail.com

**Erastus Misheng'u Mwanaumo**

Department of Civil and Environmental Engineering  
University of Zambia and University of South Africa (UNISA)  
Lusaka, Zambia and Pretoria, South Africa  
erastus.mwanaumo@unza.zm

## **Abstract**

The objective of the study is to determine the effect of procurement management on project performance as little research has been conducted on this topic regarding government institutions in Zambia. The researcher determined that Contract management at the Ministry of Infrastructure, Housing and Urban Development (MIHUD) was not adequate as most of the respondents felt they had adequate training and personnel in contract management despite the project management challenges being faced by the Ministry in Zambia. A Quantitative research design was adopted. Primary data was collected using structured self-administered questionnaires on employees involved in the procurement and project management of public infrastructure. The constructs in this study were developed using measurement scales adopted from prior studies. The instrument was evaluated for reliability and validity. Quantitative data were analyzed to determine any statistical relationships that affect project performance due to procurement. The Coding of data was done for ease of data interpretation. Data were analyzed using SPSS Version 20. The result of this study showed that all the procurement management variables for the research have a significant effect on project performance. Procurement planning and bid solicitation had a positive correlation and contract management had a negative correlation based on the study's findings. Finally, it was recommended to give due attention to all the stages of procurement management and give contract management training to both procurement staff and project managers. The researcher recommends future researchers consider a larger sample size, other variables that are not included in this study, and other government ministries and quasi-government institutions to get more reliable results.

## **Keywords**

Procurement, Project Performance, Public Infrastructure, Bid Solicitation and Contract Management.

## **1. Introduction**

In Zambia, there has been an increase in the prudent planning, management, and execution of public procurements. Management of public procurement has been at the centre of politics, led to interest in the topic by researchers, policy makers and practicing managers (Davison and Sebastian 2009). In the same line of argument, Arrowsmith and Trybus (2013) argue that public procurement is usually on the main agenda over the amount's projects, goods and services procured cost, as many people are interested in ensuring quality products, services and design lives of projects are achieved during the operational phase. Ntayi (2009) on the other hand states inefficient and ineffective procurement procedures, laws and regulatory authorities led to loss of millions of dollars. Despite having procurement guidelines set to enhance the fulfilment of project deliverables Ketchen et al. (2011), state that procuring entities have a tendency of using procurement techniques they are comfortable with regardless of differences in project's needs. Laedreet et al. (2016), and Eriksson (2017). Further state that to enhance understanding on why each aspect of project performance is affected by the type of procurement selected for project solicitation is vital in procurement management.

Project Procurement Management includes processes for goods and services acquisition from outside the organization (Project Management Institute 2017). In this study, goods and services refer to the procurement of Public Infrastructure. Procurement traditionally viewed as repetitive clerical tasks, has emerged to be one of the major core organizational core functions, and procurement management has become vital for achieving organizational objectives including public institutions under central government and local governments. Developing countries have been struggling with decentralization policy for effective service delivery (Davison and Sebastian 2009). However, due to the rise in incomplete, failed, and bureaucratic government contract management, there are arguments regarding government contracts as they are perceived to have high accountability problems, poor service quality and have a poor-quality improvement track record and savings (Brown and Potoski 2003). The success of procuring entities is related to organizational procurement and contract planning, from feasibility to monitoring, evaluation and is dependent on organizational contract administration capabilities (Brown and Potoski 2013). In Norway, the Norwegian Auditor General's report of (2010-2011) failure to conform to procurement regulations by the public sector was the ranked first.

According to the Zambian Government's Auditor General's Report (2020), on 3<sup>rd</sup> June 2013, the Ministry of Infrastructure, Housing and Urban Development (MIHUD) on behalf of the Government of Republic of Zambia signed a contract with China Jaingxi corporation for international economic and cooperation for the design and construction airport infrastructure at Kenneth Kaunda International Airport (KKIA) in Lusaka at the contract price of US\$ 385,000,000.00. However, on 15<sup>th</sup> August 2013, China jaingxi requested the ministry of Infrastructure, Housing and Urban Development to revise the contract sum to US\$ 360,000,000.00 and turn it into an engineering Procurement and Construction Contract (EPC)/turnkey project. According to the Auditors General's report (2020) the Ministry of Infrastructure Housing and Infrastructure Development (MIHUD) terminated (19) projects for various works amounting to ZMW 121,118,079 for fundamental breach of contract by the contractors in which advance payments totalling to ZMW 24,124,958 had been paid. An amount of only ZMW 1,278,910 had been recovered out of the ZMW, 24, 124, 958 as there were no security bonds valid for the unrecovered amount at the time of contract termination. The rate of recovery of advance payment bonds is 5.3% and the Public Accounts raised concerns regarding the project management of projects.

## **2. Literature Review of Procurement Management and Project Performance**

Procurement management has been cardinal in achieving successful organizational buying performance. Purchasing management is the management of relationships with potential suppliers/suppliers in line with organizational business goals and interests. The procurement management by public sector, where the public body is responsible for contract management of the project, it calls for the public body to have knowledge on construction project management (Pettersen 2012), and relationship management to achieve set goals requires understanding of complex project management knowledge and co-ordination of contractual relationships (Pettersen 2012).

## **2.1 Procurement Planning and Project Performance**

Once a need has been identified and the need to procure has been made, procurement begins with planning what to procure and when. The purchaser will have to have the legal authority to procure goods and services, mandated by law to procure and complete transactions in line with laws and organization procedures (Arrowsmith et al. 2010). To achieve successful procurement, procurement planning must be carried out to minimize the chances of not meeting organizational objectives and service delivery. Lack of procurement function will affect the acquisition/procurement processes. Despite procurement planning playing an integral part in procurement, very little research has been carried out to determine the extent procurement affects the entire procurement and contract management process in local governance (Davison and Sebastian 2009). He also noted that procurement planning is the primary function led to other subsequent procurement activities. Procurement planning is the core of procurement management. Under decentralization, procurement must meet local needs in line with national procurement acts and laws.

Mullins (2013) argued that that procurement planning requires determinations of needs of the organization, allocate resources, and assign timelines when their needs will be procured. Minahan (2007) noted that the procurement objectivity should always be employed to procure quality goods in line with technical specifications and quantity. To procure goods and services at competitive market prices where value for money is obtained requires adequate planning and expertise in procurement. Therefore, to secure such goods and services at competitive prices requires market research and teamwork and stakeholder participation in negotiations.

Poor planning can lead to inefficiency in the organization, lack of procurement planning value leading to poor project management and thus leading to poor project success (Mwanaumo et al. 2018). Lack of procurement planning can also be attributed to lack of qualified and experienced procurement personnel, commitment, and lack of visionary management in an organization. In fact, Thai (2014), states that despite procedures and checklists being convenient tools, procurement planning in an organization will achieve its goals if there is support from top management and stakeholders. Procurement planning without the support of managers and stakeholders will not achieve desired results. No procurement planning can be disastrous for an organization. The OECD (2015) stated that not attaining value for money, making untimely purchases difficult in procurement management can disrupt the core functions and service delivery. Organizations can procure goods or services that can only be performed after one activity has been performed, as a result can led to waste of procurement resources. Lack of procurement planning has occurred due to procurement of goods that expire off the shelf due to lack of adequate resources.

## **2.2 Bid Solicitation and Project Performance**

The goal of Solicitation is to receive and analyse information about the financial and technical capability to deliver goods and projects deliverables. The information reviewed under solicitation is costs, technology to be employed, methodology, environment and statutory obligations and alternatives products or methodologies. the Inter Agency Procurement Work Group (IPWG) (2006) recommends that solicitation should commence within the existing markets before exploring external markets as this reduces the cost of conducting business. Regardless of the solicitation method chosen, the goal is to have a fair, non-corrupt free solicitation method that attains value for money at the best quality that meets set standards and specifications and end user satisfaction.

Whereas Monczka et al. (2014) acknowledges the use of multiple sourcing for different project components, the merits, and demerits of using integrated sourcing strategies in public procurement. Carr et al. (2006), states that multiple sourcing can increase the efficiency in supplier meeting the deliverables and thus increasing the rate at which services are rendered and ensure the Government meets their obligation. Cooke (2012) states that, solicitations mainly involve: tender documents control for request for proposals and quotations and evaluation. He further states on the need to have an evaluation criterion that does not favor a particular supplier, but one that is fair and considers public interest. During solicitation of bids, it is the point that most procurement illegalities are conducted such as providing wrong information to some bidders to misdirect them, sharing of confidential information to favor one supplier over others and corruption throughout the procurement process is highest at the solicitation stage. The illegality at solicitation highly affects the outcome of bid evaluation process.

## **2.3 Management of Contracts and Project Performance**

Procurement management in the public sector is governed by laws, policy, and regulations. The regulations and policies leave no room for innovation as they must operate within the laws in place in the ever-changing complex project management environment. The long processes of changing regulations often may not be adequate to meet the

rapidly changing global environment and lack of political will is a major determinant to project performance and monitoring. Ntayi (2014) observes that millions of dollars are wasted due to the processes and approvals due to government regulation, inefficient procurement structures, flawed laws, and failure by regulatory authorities in carrying out their duties due to lack of funding and poor implementation strategies. The poor regulatory authorities and multiple procurement processes lead to poor service delivery.

Once the contract award is complete, it is the responsibility of the procurement officer to ensure all stakeholders in the contract commence their contractual duties and the project manager must ensure contract management commences soon after the contract award. The procurement and project manager must allocate resources for contract management and measure actual contract performance with the intended project objectives. It's the responsibility of the project manager to ensure the right personnel, tools, and techniques depending on the nature of the contractual work are used. the tools and techniques used are dependent on the nature of contract, complexity, and resource availability. IAPWG (2016) suggests for minor contractual works, a simple electronic mail is all that is needed to procure goods or services, for large projects, they require detailed designs, expert advice, estimates of proposed works that must be formalized with source of funding secured to ensure no disruption during the project life cycle (European Union 2017). In performance-based contracts, performance indicators used in the contract may be derived from the supplier's quality assurance of product performance for the purpose of performance monitoring. All parties to the contract must ensure they have a good understanding of contract management internally to achieve the contractual obligations.

### **3. Research Methodology**

A target population of 30 respondents, composed of staff from the following departments: Department of Public infrastructure, department of planning monitoring and research, department of housing development, departments of preventive maintenance and finance and technical department under the ZPPA. A representative sample size was derived from the target population. A set target population of 27 participants, who are employees from the Ministry of Infrastructure, Housing and Urban Development and 3 participants from Zambia public procurement Authority. Purposive sampling was used to select potential respondents at Ministry of Infrastructure, Housing and Urban Development and ZPPA. Representative sample was based on the education requirements, position, and involvement in procuring and contract management of public infrastructure at MIHUD (Kothari 2004). Questionnaires were sent to respondents to obtain primary data, there was a high response rate from respondents during the survey. Three scaled (3) closed ended questionnaires and open ended for other answers were part of the questions used to provide greater insight into procurement, contract management and project success. Quality control measures to ensured data collection tools and instruments used were clear, concise, and reliable to give the researcher an understanding of what is required of them. To ensure the quality of data collected was reliable, validity and reliability tests were conducted. Internal validity using the Alpha Cronbach's tests requires a score of 0.7 and above to validate the data as an honest and true representation of data collected on the ground. Questionnaire validity was conducted using interviews on five (5) MIHUD before questionnaires were utilized for data collection. Respondents were asked if they had any challenges in understanding what the questionnaires were clear and concise. All respondents were content with the questions and did not request for further clarification regarding the questionnaires. All respondents were informed that the research is confidential and no information regarding any respondents being implicated because of the research study. Data was entered using Microsoft excel, coded, and analyzed using Statistical Package for Social Scientists (SPSS). Statistical Tables, correlation analysis to determine the relationships between the dependent and independent variables in the study. Quantitative data was be analyzed to determine any statistical relationships that affect project performance due to procurement. Coding of data was done for ease of data interpretation.

### **4. Findings**

The respondents were asked how long they have worked in the public service as procurement or projects expert personnel. The findings in Table 1 show that majority of the respondents had worked as procurement or project experts in the public sector for a period between 5 to 10 years at 37.0% followed by those with work experience of more than 10 years at 33.4%. Next, 22.2% had job experience of 2 to 5 years with 7.4% having worked for a period of 2 years. This shows that the information obtained from the respondents is reliable. From the data collected in the field, had the Cronbach's alpha value of 0.76 suggesting that the data collected is very good.

Table 1. Job experience

PERIOD	Frequency	Percent
Below 2 years	2	7.4
2 - 5 years	6	22.2
5 - 10 years	10	37
Above 10 years	9	33.4
<b>Total</b>	<b>27</b>	<b>100</b>

#### 4.1 Effect of Procurement Planning on the Project Performance of Public Infrastructure Projects

The process of procurement planning entails, among other things, identifying the users, their requirements, and needs, creating a procurement schedule and connecting it to the authorized budget, pricing the plan, and providing support to the user departments. The performance of the project is positively impacted by the efficient completion of these stages. Using the scale of 1 = Disagree, 2 = Neutral, and 3 = Agree, the respondents were asked to state how much they agreed with statements on the effect of procurement planning on the contract management of public infrastructure projects at the Ministry of Housing and Urban Development. To achieve efficient procurement and project performance, project workers on the public infrastructure projects were involved in creating their own procurement needs and specifications (Mean=2.44), according to the findings in Table 2. The findings also demonstrate that the project budgets were approved before the project began (Mean=2.7), the plan was costed in accordance with the approved budget (Mean=2.3), project personnel were given training and counselling (Mean=1.8), and users and the procurement department agreed on the quality standards (Mean=1.3). The means of these variables are biased to the right. Finally, the purchase planning procedure often enhances project performance (Mean=2.8).

Table 2. Effect of Procurement Planning on Project Performance

Statement	Mean	SD
Project personnel are involved in defining their procurement needs and specifications to ensure effective procurement and project performance	2.444	0.64
Project budgets are approved prior to project commencement	2.667	0.67
A procurement schedule/plan is developed and agreed upon by all parties	1.74	0.902
The procurement plan is costed as per the approved MHUD project budget	2.259	0.813
All procurements are submitted on time and consistent with the project plan and schedule	2.185	0.834
Professional advice and support such as training and counselling are provided to individual procuring entities	1.814	0.786
Realistic timelines for delivery of project equipment and services are provided	1.667	0.679
Quality standards for goods and services are agreed upon by the contractor and the Ministry	1.259	0.447
Overall, the procurement planning process improves project performance	2.778	0.424

Pearson correlation between overall procurement planning and how it relates to project performance indicated a moderately low positive significant relationship with the value ( $r = 0.230$ ,  $N = 27$ ,  $p = 0.551$ ). from the correlational analysis it can be concluded that overall procurement planning improves project performance. al results here. Make sure to describe all figures and add inferences.

#### 4.3 Effect of solicitation of bids on the project performance at MIHUD

The Ministry of Housing and Urban Development's research on the impact of bid solicitation on the performance of public infrastructure projects is presented in this section. The respondents were once again asked to rate their agreement with statements on the impact of bid solicitation on the performance of public infrastructure projects at the Ministry of Housing and Urban Development. The results in Table 3 show that most respondents disagreed on whether the monitoring by Zambia public procurement Agency affected bid solicitation at MIHUD, the mean was 1.4. asked whether an evaluation panel with the right expertise was constituted, a mean value of 2.6 was obtained. On whether project managers or client representatives recommended the appropriate solicitation methods, the determined mean

was 1.7. Most respondents agreed that the public procurement act of 2022 does not impede competitive bidder participation, the mean score was 1.8. Public procurement's main core anchors are highly dependent on integrity and honesty in executing duties. Bid solicitation must ensure value for money is obtained for all public resources spent. (Soudry, 2017). The goal was to establish if there was a correlation between bid solicitation, evaluation and regulatory bodies' monitoring of procurement processes affects project success.

Table 3. Effects of Solicitation of bids on Project Performance

Statement	Mean	SD
The Zambia Public Procurement monitoring of procurement affects the solicitation of bids at the MIHUD	1.407	0.5
An evaluation panel with the right technical skills is constituted on time	2.556	0.577
Project managers/Client representatives recommend the appropriate solicitation methods if there is a lack of skills at MIHUD	1.704	0.608
The Zambia Public Procurement Act of 2022 requirements impede the competitive participation of bidders?	1.815	0.786

The link between bid solicitation and project performance was analyzed using Pearson's correlation coefficient. The results of  $r = 0.941$ ,  $N = 27$ ,  $p = 0.059$  imply a strong correlation between appropriate solicitation techniques and project success.

#### **4.5 Effect of Contract Management on the Performance of Public Infrastructure Projects at MIHUD**

The Ministry of Housing and Urban Development's research on the impact of contract management on the execution of public infrastructure projects is presented in this section. To fulfill contractual responsibilities, efficiently offer services, and identify and manage business risks, contracts must be managed. Skilled contract management is needed as part of overall planning for detailed performance management regimes, a realistic amount of projected change, continuous duties on either side, such as disaster recovery testing or benchmarking, performance slippage, or conflicts. Finally, using the scale above, respondents were questioned about how the Ministry of Housing and Urban Development's public infrastructure projects performed in relation to contract management. According to the results in Table 4, the delay in getting approval from the secretary to the cabinet, most respondent agreed to the process affecting contract management and ultimately the project success. The mean score due to approvals from secretary to the cabinet was 2.7. asked on whether political pronouncement affect contract performance, delivery and payment, most responds agreed that it does affect contract management, the mean score due to political pronouncements and project performance was 2.9. on whether the MIHUD has adequate and qualified personnel in the contract management, the mean score was 1.4. from the mean score, most respondents were of the view that the ministry does not have adequate and experienced personnel for contract management performance.

Table 4. Effect of Contract Management on Project Performance at MIHUD

Statement	Mean	SD
Does the delay in getting approvals for variations from the secretary to the cabinet affect the timely delivery of projects in time?	2.667	0.62
Do political pronouncements affect performance, delivery, and payment of projects?	2.852	0.456
Does the MHIUD have adequate personnel and qualified for contract supervision and monitoring	1.444	0.506

The link between bid contract management and project performance was analyzed using Pearson's correlation coefficient. The results ( $r = -0.618$ ,  $N = 27$ ,  $p = .0576$ ) imply that there is a negative strong correlation between contract management and project performance.

## **5. Discussion**

### **5.1 Procuring Planning and Project Performance Management**

Add The research focused on the link between project performance of public infrastructure projects and procurement management and supported by other researchers and academicians such as Basheka (2008) and Wysocki (2014). These academics and researchers stressed the beneficial impact of procurement strategy on project performance. The results of this investigation highlight this. In this study, it was found that the contract managers and personnel involved in procurements of public infrastructure projects carefully considered their requirements and created a procurement strategy that was accepted by all stakeholders. The study's conclusions about the relationship between project performance of public infrastructure projects and procurement management are supported by work by other researchers and academics, including Basheka (2008), Rotich (2011) and Wysocki, (2014). The results of this investigation highlighted that before they publicly release the contract award, all potential areas of concern are addressed pertaining to the specific procurement and in return minimize the risk of conflicts during contract administration.

Most responders concurred that costs for the procurement plans were determined in line with the MIHUD, which were approved before the project began. These results support Wysocki, (2014) claim that procurement strategies have an impact on project performance since they aid with budgeting and planning and optimal utilization of available resources. Contract management and project performance is therefore enhanced with adequate funding provided because of procurement planning and finance implementation strategies. The findings also showed that procurement strategies are useful for determining what to purchase, when to acquire it, how to buy it, and which technique of procurement to utilize. Rotich (2011) concluded that when annual procurement planning is carried out and evaluated periodically, it encourages responsibility in the procurement process and improves the function's efficiency and effectiveness.

During the interviews, it was noticed that all participants had participated in either technical evaluation or procurement evaluation and participated in annual procurement planning which is very essential to attaining procurement success and ultimately project success. These results concurred with those of Basheka (2008), who argued that one of the core procurement roles is planning, which can strengthen public organizations procurements and delivery of services. Mamiro (2010), also agrees that having a procurement road map is critical and it serves as guide on execution of tasks in order to achieve success during the project life cycle. Setting up tasks in a detailed timetable is crucial since it serves as a project road map. It's critical to stay on course and understand where the project is in relation to the intended completion date.

### **5.2 Solicitation of Bids and Project Performance**

The outcomes showed that there is a sizable impact of bid solicitation on project performance. It was found in this study that the Ministry of Infrastructure, Housing and Urban Development does not have a list of prequalified service providers with whom it has a solid working relationship and who offer consultancy services as every bid must undergo through the outline public procurement guidelines and processes. This is consistent with the Zambia Public Procurement Act of 2022 which does not permit having pre-qualified service providers unless for specialized and justifiable services. The Ministry of Infrastructure Housing and Urban Development invites prospective bidders through print media and Zambia public Procurement Agency website with the stipulated duration in line with the ZPPA act of 2022. The guidelines stated in the ZPPA act of 2022 for bid solicitation allow for adequate time for prospective bidders to participate and put their documentation in order in line with bid requirements to lodge in a successful bid. All bidders must ensure they fulfil their requirements and ensure records for attendance of site visits and other requirements are in place.

This study discovered that, even though some project managers faced challenges during the contract administration. up to their standards, experts on public infrastructure projects were confident that the evaluation of bids adhered to the ethical standards of procurement. These findings can be contrasted with those of Tushman et al. (2017) conducted seven research in the United States of America (USA) using experimental and naturalistic methods on the variables

influencing ethical standards in the public sector. According to the findings, politically exposed persons have a high risk exposure to illegal procurement activities than non-exposed persons. In this way, unethical behavior in public sector procurement is fostered by the upper class's dishonest views. The results, however, were at odds with those of Musanzikwa, M. (2013), who found absolutely no connection between performance and the code of ethics. These results also refuted the claims made in Davis, P. and McKeivitt, D. (2014). on studies that there is a link between ethical behavior and performance.

### **5.3 Contract Management and Project Performance**

The conducted survey determined that political pressure did affect the contract management of public infrastructure projects and had minimal impact on project performance. The study further revealed that government approvals had a negative effect on contract management, as the approvals could take longer than the stipulated response time frames in the contract. The study further confirmed that most MIHUD personnel did not have the right experienced personnel for the management of complex engineering projects and contract management skills. Nadiope's (2015) observation that the government lacks qualified staff for contract management in Uganda. Only after what is known about contract management has been established in Zambia can the specific requirements for training public project managers in construction be determined.

To resolve the current public governance capacity shortages in project management, particularly in contract award and administration, public procurement organizations must consistently invest and execute strategies. This is further supported by the Auditor General's report (2022), which indicated that several government ministries and quasi-intentions had major difficulties with the execution and supervision of contracts, with some contractors failing to meet their contractual obligations in time after receiving their advance payment resulting in incomplete or delayed projects. As a result of their poor behavior, certain contractors have been banned. However, this is partially attributable to public entities like the MIHUD in our case study having inadequate contract management. The study findings showed that several respondents there is a negative correlation between project management and project success. However, this shows that there is need for capacity building at the Ministry of Infrastructure, Housing and Urban Development to strengthen their contract management skills, understand that good contract management practices result in project success.

According to the research, some contractors were unable to meet their contractual obligations due to the Ministry of Infrastructure, Housing and Urban Development failure to meet their financial obligations in accordance with contract agreement. According to Tanaka and Hayashi (2011), the parties understand their contractual obligations, fairness when implementing them is crucial for smooth administration of between the parties plays a crucial role in the creation and administration of every contract. propose improvements write here including additional numerical and graphical results (10 font)

## **6. Conclusion**

The public infrastructure project's performance is greatly impacted by procurement planning procedures, solicitation, and contract management. The report also highlighted that the project's success would rely on how well the MIHUD, other sponsors will enhance contract management and procurement management. There is further needed to have adequate funding to MIHUD. once funds have been confirmed to avoid the MIHUD from meeting the financial contractual obligations. The need to review the contract clauses in cases where there is a delay emanating from nonpayment on time and delays due to approvals from authorities in line with government regulations. The results showed a significant positive link between project performance and procurement planning. This led to the conclusion that there is a considerable link between project performance and procurement strategy.

The study found that public infrastructure projects must adhere to ZPPA guidelines, and they do not influence project success. The procurement strategies used must encompass the time requirements stated as required by the ZPPA act of 2022. It was also mentioned that having procurement strategies made it easier to know what to procure and adequate planning, approvals are acquired in time. Most respondents agreed that most procurements commence on time but usually face challenges at obtaining final approvals to allow for project commencement.

Results reveal that most respondents agreed that MIHUD kept watch on contract performance and wrote reports on the work carried out by contractors. A few respondents, however, comment that the contract management was not



carried out in time resulting in loss of disbursed funds. The analysis discovered that although the MIHUD had challenges in contract management of public infrastructure, most respondents agreed that political statements did affect how contracts responded to instructions. Most of them were reluctant to meet their contractual obligations and they felt there was no political will to fund the projects till completion. The failure to timely release funds on time by the Ministry of Finance impacted the projects negatively due to time value of money and costs associated with mobilizing and demobilizing. The MIHUD's Monitoring, and Evaluation system are not up to speed with the current state of projects and will need to improve on their project monitoring and evaluation systems.

In view of the findings, the Ministry of Infrastructure Housing and urban Development need to ensure the procurement schedules are implemented and payments made within set timeframes. MIHUD also need to ensure right procurement personnel to achieve high efficiency in procurement management. Additionally, it was observed that there was significant information sharing on why procurement had stalled with the public due to the number of procurement related queries raised at PAC. Improved communication will result in less audit queries by the Auditor General's office as most the raised queries are addressed at PAC. More so, the ministry should also need to invest in the capacity building and development. Ministry staff as determined from the study do not value the relationship of contract management and project success. The Ministry of MIHUD cost the Zambian government resources due to lack of capacity in ensuring the contractor has submitted all guarantees in cases of default and there have been instances as raised in the Auditors General's report of 2022 highlighting lack of any advance payment records making it difficult to recoup disbursed funds.

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## **Biographies**

**Mark Zulu** is a Civil Engineer Professional with experience working on large scale infrastructure projects. He has held positions of Supervision/structural engineer and Supervising engineer responsible for overseeing the project implementation, compliance to quality, technical specifications and health and safety. Mark holds a Bachelor of Engineering in Civil Engineering from Copperbelt University and has just completed his MSc in Project Management.

**Funmilayo Caroline Jayeola** is a graduate of Bachelor of Technology (B. Tech) in Quantity Surveying at the School of Environmental, Federal University of Technology Akure, Nigeria. She earned a Master of Engineering in Construction Management at the Department of Civil and Environmental Engineering, School of Engineering, University of Zambia, Lusaka, Zambia. Her area of research interest is in construction, digitalization, quantity surveying, and sustainability.

**Ayodeji Emmanuel OKE** has over 15 years of experience in teaching, research and community engagement. He is presently in the Department of Quantity Surveying, and Team Leader of Research Group on Sustainable Infrastructure Management plus (RG-SIM+), Federal University of Technology Akure, Nigeria. With more than 300 publications, his research interest is in Sustainable Infrastructure Management (SIM), emphasizing sustainable construction, value management, quantity surveying and construction in the digital era.

**Erastus Misheng'u Mwanaumo** is a Director, an academic and researcher. He is a Professor Extraordinaire in the Department of Civil Engineering, College of Science, Engineering & Technology at the University of South Africa, and a member of the faculty /school of engineering at the University of Zambia. He holds a BSc, an MSc, a PhD (Eng) and several Certificates in Monitoring & Evaluation of Multinational Development Banks funded projects, Climate adaptation and Resilience of Infrastructure, Dispute Boards in Public Private Partnership Projects (DB-PPP), Dispute Resolution Administration and Practice (DR-AP), Mini grid Solar; Solar Roof Tops, Hazards Identification and Risk Assessment (HIRA), Occupation Health and Safety (OH&S), and in Managing Research Project, Supervision and Ethics. He is a Fellow of Chartered Institute of Building, a Registered Engineer, Professional registered Construction Project Manager and a Member of the Dispute Resolution Board Foundation and Member of the royal institute of chartered Surveyors.