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# Examining Cost Control Processes in Project Management: A Case Study of Selected Construction Companies in Lusaka

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**Abstract**
Cost control is a fundamental aspect of project management, particularly within the construction industry, where significant investments and extended project timelines demand rigorous budgeting and financial oversight. As construction activities continue to rise in Lusaka, Zambia's rapidly urbanizing capital, the need for stringent financial oversight has become even more pronounced. However, despite the increasing demand for infrastructure and building projects, many construction companies in Lusaka still face significant challenges in maintaining cost discipline throughout the project lifecycle. Cost overruns, poor financial planning, inaccurate forecasting, and weak monitoring mechanisms are some of the persistent issues affecting cost control in construction projects. These challenges often lead to project delays, disputes, compromised quality, and financial losses. The problem is compounded by external factors such as inflation, fluctuating material costs, and inadequate project scope definition, which further complicate efforts to manage project costs effectively. The study aims to examine the effectiveness of cost control processes in project management within selected construction companies in Lusaka. The study embraced a case study design, employing a mixed method approach to gather primary data. Data entry and analysis was done using STATA. Descriptive statistics, including frequencies, percentages, and means, will be used to summarize data. Chi-square was used to determine associations between variables. Thematic analysis will be used to analyze qualitative data. The study findings indicate that Lusaka-based construction companies primarily use budgeting (30%), cost monitoring (25%), and cost forecasting (20%) as their main cost control methods, while advanced techniques like value engineering (15%) and earned value management (10%) are less common. Cost estimation practices vary, with 35% of firms estimating costs at project milestones, 30% monthly, and 25% only at project start. Cost tracking relies heavily on spreadsheets (40%) and project management software (30%), reflecting uneven adoption of digital tools. Labor costs are managed through productivity tracking (30%) and outsourcing (25%), while material costs are controlled mainly via bulk purchasing (35%) and supplier negotiation (30%). Fixed-price contracts (45%) dominate subcontractor cost management, and Microsoft Excel remains the most used software (50%) for project cost control. Chi-square analysis shows significant associations between frequent budget revisions and alignment with project needs, as well as between contingency allocations and risk considerations. Effectiveness metrics reveal that cost variance (40%) is most used, with earned value analysis (35%) supporting early detection of overruns. Planning is the most effective phase (40%), while project closure sees weaker control (10%). Key challenges include design changes (35%), unskilled labor (30%), price fluctuations (40%), scope creep (30%), poor communication (30%), market volatility (30%), technological barriers like outdated software (30%), and administrative issues such as lack of accountability (30%). Companies address unforeseen costs primarily through contingency funds (40%) or scope adjustments (25%). Construction companies should adopt advanced cost control techniques, integrate proactive risk management, and regularly revise budgets to improve alignment with project needs. They should also enhance staff competence and leverage financial software tools for accurate monitoring and timely corrective actions. Finally, aligning practices with international standards and addressing external challenges such as scope changes and resource limitations will strengthen overall cost management.

**Keywords:** Cost Control, Project Management, Construction Industry, Financial Oversight, Risk Management

## 1. Introduction

### *1.1 Background*

Cost control is an essential element of project management that ensures projects are executed within approved budgets while achieving their intended goals (Hanioglu, 2022) [12]. It involves various activities such as cost planning, estimating, budgeting, financing, and ongoing monitoring and control to maintain financial discipline throughout the project lifecycle (Venkataraman, 2023). Effective cost control is especially crucial in the construction sector, where projects often require substantial financial

resources and are susceptible to cost overruns due to factors such as inadequate planning, inflation, insufficient risk management, and project delays (Tembo, 2024).

Worldwide, the challenge of managing costs in construction projects is well recognized. Studies from countries such as the United Kingdom, the United States, and Australia have consistently shown that many construction projects exceed their original cost estimates. For example, Flyvbjerg (2021) [9] found that nine out of ten major projects globally experience cost overruns, often caused by optimism bias, strategic misrepresentation, and errors in cost estimation. In developing regions like sub-Saharan Africa, these issues are often compounded by limited technical capacity, corruption, weak regulatory oversight, and ineffective monitoring and evaluation systems (Appiah, 2022).

In Zambia, construction forms a key part of the national development agenda, as outlined in frameworks such as the National Urban and Housing Policies and the National Development Plans (Changala, 2024) [6]. Government agencies and private firms are actively engaged in the development of commercial buildings, housing, and other infrastructure to support economic and social transformation. Despite various reforms and institutional efforts, many construction projects in Zambia have drawn attention for issues related to cost overruns, procurement challenges, and delays in implementation (Mutale, 2021 [15]; Zajontz, 2023). The effectiveness of cost control mechanisms is critical to the success and sustainability of construction projects. Poor cost management can lead to project delays, budget shortfalls, strained investor or public confidence, and failure to achieve project objectives (Uddin, 2025) [19]. In contrast, robust cost control processes ensure optimal resource utilization, timely completion, and improved service delivery (Catalão, 2022).

### *1.2 Statement of the Problem*

Cost overruns remain a critical challenge in the construction industry worldwide, and Lusaka is no exception (Mulunda, 2025). Despite efforts to implement cost control measures, many construction projects in Lusaka consistently exceed their budgets, leading to financial losses, delayed project completion, and reduced client satisfaction (Jacob, 2025). This persistent issue undermines the profitability and sustainability of construction companies in the region. Existing literature and empirical evidence reveal gaps in the effectiveness and consistency of cost control processes applied by construction firms in Lusaka. Many companies struggle with inaccurate budgeting, poor monitoring systems, and inadequate risk management, which contribute to ineffective cost control (Changala, 2024) [6]. The gap in comprehensive understanding and implementation of robust cost control processes highlights the urgent need to investigate current practices and challenges within selected construction companies in Lusaka.

### *1.3 General Objectives*

To examine the effectiveness of cost control processes in project management within selected construction companies in Lusaka.

#### *1.3.1 Specific Objectives*

1. To identify the types of cost control methods employed in construction projects by selected construction companies in Lusaka.
2. To evaluate the effectiveness of existing cost control processes used in construction project management within selected companies in Lusaka.
3. To determine the challenges associated with cost control practices in construction projects in Lusaka.

### *1.4 Conceptual Framework*

This study's conceptual framework is designed to assess cost control processes in project management by examining three core dimensions within selected construction companies in Lusaka: the types of cost control methods employed, their effectiveness, and the limitations encountered (Venkataraman, 2023). These factors collectively influence the overall cost performance of construction projects, which is the dependent variable. Moderating variables such as stakeholder involvement, project complexity, and regulatory frameworks are also considered, as they can significantly impact the success of cost control efforts and overall project outcomes (Tembo, 2022).

## 2. Literature Review

### *2.1 Cost Control Methods Used in Construction Projects*

Changala (2024) [6] aimed to develop a model that integrates effective planning strategies to improve the management of feeder road projects in Zambia and minimize implementation failures. Additional challenges included poor prioritization of projects, disjointed and inadequate procurement procedures, and excessive contract awards particularly within the Ministry of Local Government and Rural Development (MLGRD), where contract amounts surpassed budget estimates by over 500%. The evaluation process for bidders was also found to lack rigor. Alarmingly, more than 90% of MLGRD projects were executed without design or supervision consultants, and only 8.3% of the 210 projects procured between 2016 and 2021 were completed. Based on these insights, a planning model was proposed to tackle the identified issues (Changala, 2024) [6].

Mutale, C.T. (2021) [15] conducted the study with the objective of developing a framework to address the deficiencies in the management of high-value contracts at the RDA. The study identified 25 key factors contributing to weak contract management, including delays in payment processing, awarding contracts without confirmed funding, and launching projects with incomplete designs or ambiguous scopes of work. Additionally, the research found that RDA's contract management process comprises four primary phases: planning and design, development and award, mobilisation, and implementation. Drawing from these findings, the study proposed an integrated contract management framework aimed at strengthening the management of high-value road projects at the RDA (Mutale, 2021) [15].

Tembo (2024) found that during the planning phase, project meetings and expert judgment were the most frequently employed tools. In the estimating stage, detailed cost estimation and expert judgment were dominant. For budgeting, participants relied to some extent on expert judgment and cost comparisons, while during the cost control phase, the most commonly applied techniques were cash flow monitoring and forecasting (Tembo, 2024).

### *2.2 Effectiveness of Cost Control Processes in Construction Project Management*

Poor estimation of costs is also a common reason for variance. Estimation errors can occur due to a lack of reliable data, incorrect assumptions, or oversights during the planning phase. Inaccurate estimates of quantities, labor costs, or material requirements often lead to underestimation of project costs, causing budget shortfalls as the project progresses (Muthusamy, 2021). Variance analysis can highlight such errors and allow for the identification of patterns in estimating that need improvement. Lessons learned from these discrepancies can be applied to future budgeting efforts, contributing to more accurate financial forecasting (Tariq, 2020).

The results of variance analysis are not only used to address current discrepancies but also to inform future budgeting and cost control strategies (Akbar, 2024) [1]. By identifying the causes of variances, project managers can adjust their approach to budgeting for upcoming phases of the project, ensuring more accurate cost predictions and better financial management practices. Similarly, if price fluctuations are a recurring issue, the project team may explore ways to mitigate these risks, such as negotiating long-term supply contracts or diversifying suppliers (Amin, 2021).

Variance analysis also provides valuable insights for continuous improvement in project financial management (Charles, 2022). By systematically reviewing discrepancies and implementing corrective actions, the project team develops better cost management practices, which can lead to more successful projects in the future. Over time, a well-executed variance analysis process helps establish more reliable cost estimation techniques, more effective cost control measures, and a deeper understanding of the financial risks inherent in road construction projects (Choi, 2023).

### *2.3 Challenges and Limitations in Cost Control Practices in Construction*

Cost management processes in construction projects frequently encounter several limitations that undermine effective budget control and overall financial performance. Key challenges include inaccurate cost estimations stemming from poor initial planning and incomplete design information, insufficient budgeting that neglects inflation or unforeseen risks, and weak cost control mechanisms caused by delayed reporting and the absence of real-time monitoring tools (Tariq, 2020). Other significant issues involve frequent scope changes, inadequate risk management practices, fragmented communication among stakeholders, limited technical expertise within project teams, and low adoption of modern technologies (Okere, 2020) [16]. Publicly funded projects often face additional complications such as corruption and political interference, which further erode cost efficiency. Together, these constraints contribute to cost overruns, project delays, and diminished quality, highlighting the urgent need for enhanced systems, transparent procedures, and skilled management to improve cost control in construction (Rao, 2022).

## 3. Research Methodology

### *3.1 Research Design*

The study adopted an exploratory case study, utilizing a mixed method approach.

### *3.2 Target Population*

The target population for this study consisted of project managers, architects, engineers working for selected construction companies in Lusaka.

### *3.3 Sample Size*

The target population for this study consisted of project managers, architects, engineers working for selected construction companies in Lusaka.

### *3.4 Sampling*

Convenience sampling approach was used to select the study sample.

### *3.5 Data Collection Methods*

The study made use of a semi-structured questionnaire, which included both closed-ended and open-ended questions. Primary data was gathered through administration of questionnaires.

## 4. Result Presentation

### *4.1 Presentation of results on background characteristics of the respondents*

The study results show that the majority of participants were male, accounting for 80%, while female participants made up 20%.

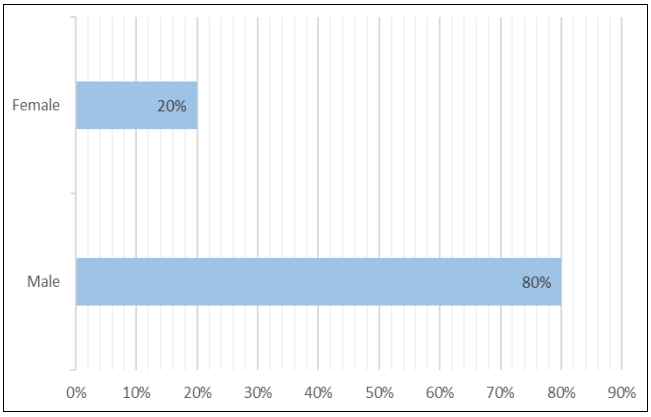


**Fig 4.1.1:** Participants' Gender

The age distribution indicates that most participants were between 30–39 years (50%), followed by those aged 40–49 years (30%). Participants aged 22–29 years and 50 years and above each accounted for 10%.

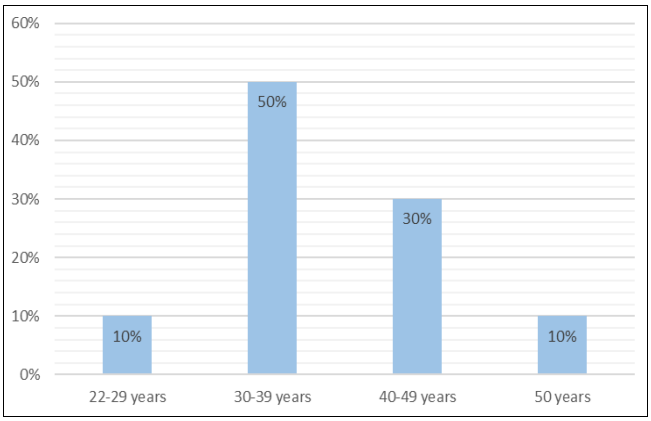


**Fig 4.1.2:** Participants' Age

The results reveal that most participants were married, representing 70% of the sample. Single participants accounted for 20%, while divorced participants made up 10%.

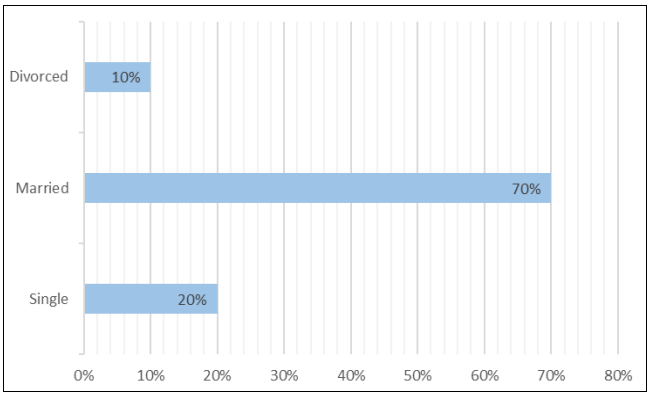


**Fig 4.1.3:** Marital Status

The education results show that most participants held a diploma (60%), followed by those with a certificate (30%). A smaller proportion, 10 percent, had a bachelor's degree.

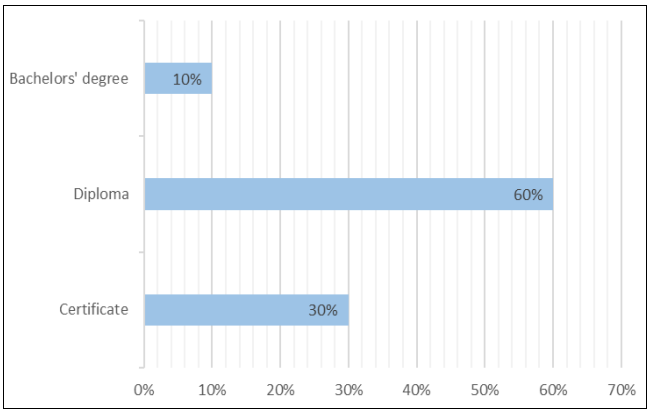


**Fig 4.1.4:** Education Background

The distribution of roles shows that engineers were the largest group, making up 40% of participants. Project managers, procurement managers, and architects each accounted for 20%.

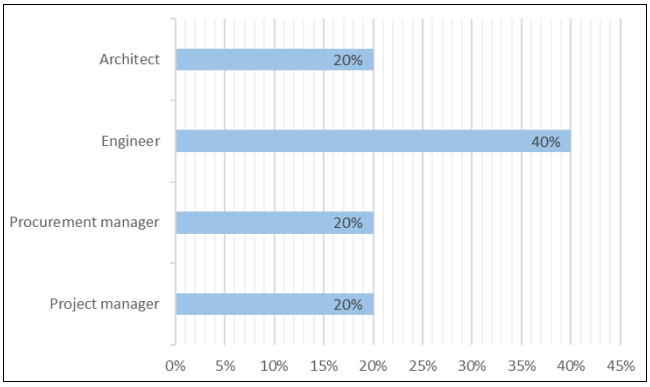


**Fig 4.1.5:** Current Role at the Company

The majority of participants had 4–6 years of job experience (50%), while 30% had 1–3 years. Those with less than one year and those with 7–10 years of experience each represented 10%.

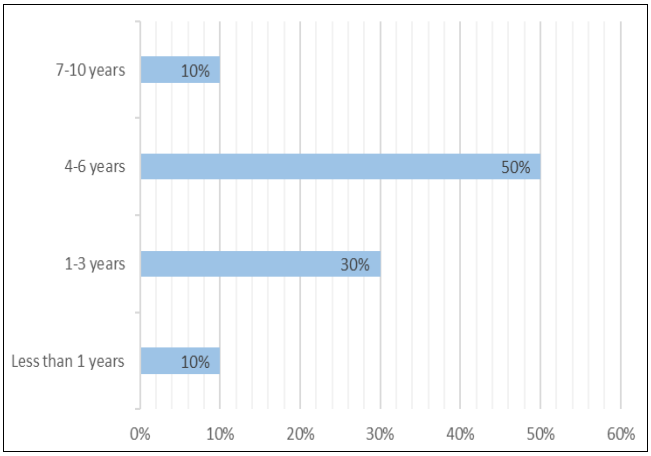


**Fig 4.1.6:** Job Experience

### *4.2 Types of Cost Control Methods Employed in Construction Projects*

The findings show that most companies (30%) use budgeting as their main cost control method. Cost monitoring (25%) and cost forecasting (20%) are also applied by several firms, suggesting efforts to track and predict expenditures during project execution. Fewer firms employ value engineering (15%) and earned value management (10%), showing that advanced cost control methods are less common in local practice.

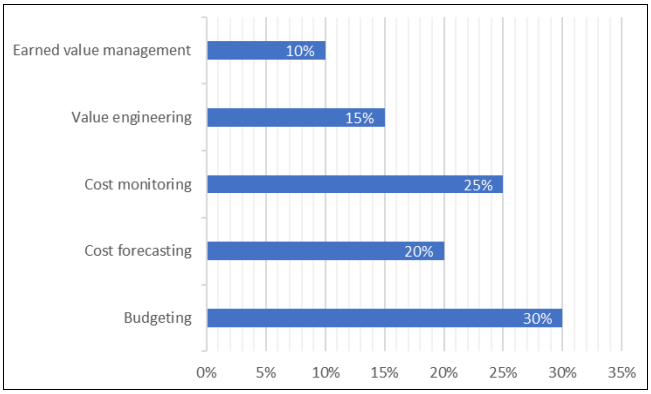


**Fig 4.2.1:** Common Cost Control Methods Used by Construction Companies

About 35% of respondents reported that their companies prepare cost estimates at each milestone of the project. Another 30% prepare estimates monthly, while 25% only do so before project commencement, indicating varying levels of cost tracking frequency across firms.

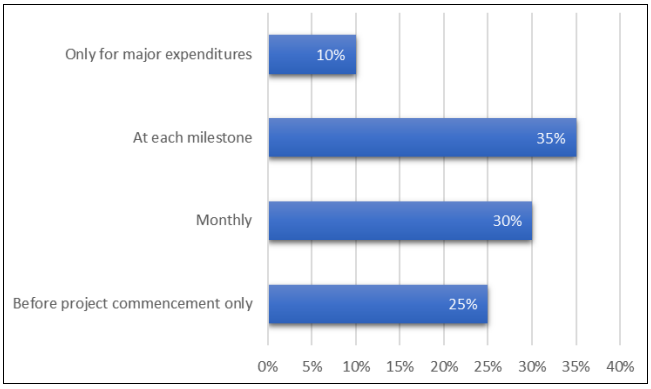


**Fig 4.2.2:** Frequency and Timing of Cost Estimation Practices

A large portion of companies (40%) track actual costs using spreadsheets, while 30% rely on project management software. The use of manual recording and financial accounting systems (15% each) shows that some companies still use traditional or less automated approaches.

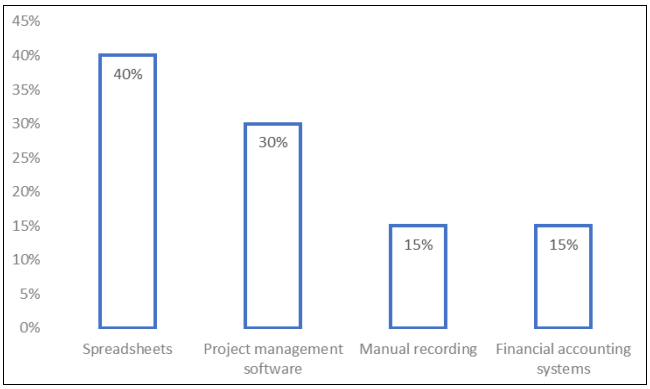


**Fig 4.2.3:** Tools and Systems Used for Cost Tracking

Labor productivity tracking (30%) and outsourcing (25%) are the most used methods to control labor costs. This shows that firms emphasize efficiency and external contracting to manage labor-related expenses. Fixed labor contracts (25%) and time-based payments (20%) are also in use, highlighting a mix of strategies to manage workforce costs depending on project type and size.

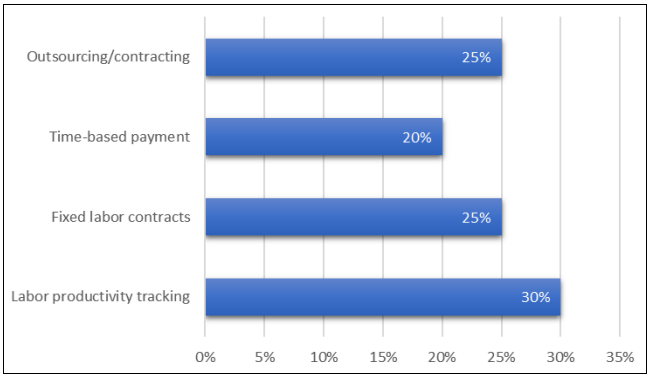


**Fig 4.2.4:** Methods Employed to Control Labor Costs

Most companies (35%) manage material costs through bulk purchasing, showing an effort to reduce expenses through economies of scale. Supplier negotiation (30%) is another common method, indicating that cost savings are also achieved through bargaining. Just-in-time procurement (20%) and regular inventory audits (15%) are used less frequently.

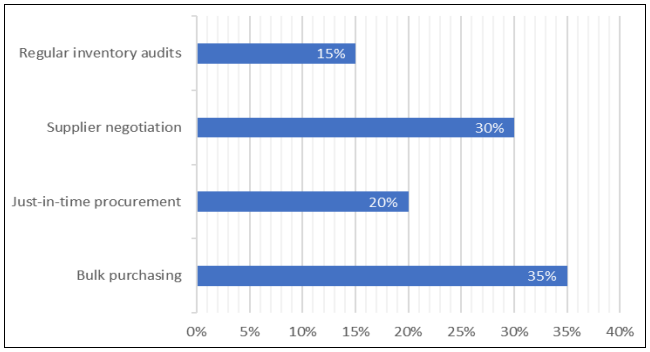


**Fig 4.2.5:** Approaches to Managing Material Costs

Fixed-price contracts (45%) are the dominant approach to managing subcontractor costs, reflecting a preference for predictable expenses and reduced risk of cost overruns. About 30% use performance-based incentives, which indicates that some firms encourage subcontractors to meet budget and performance targets. Cost-plus contracts (25%) are less common, likely due to the higher uncertainty they introduce to project cost management.

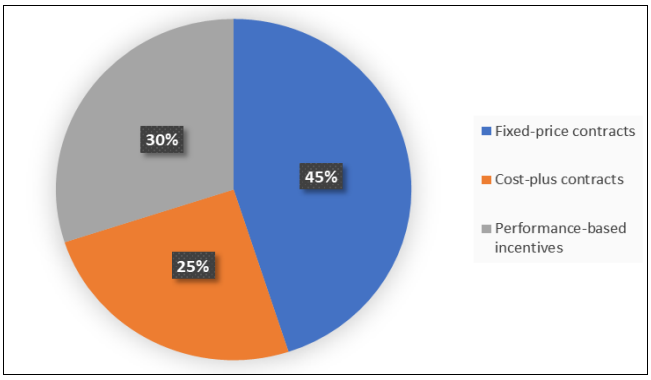


**Fig 4.2.6:** Strategies for Controlling Subcontractor Costs

Half of the companies (50%) use Microsoft Excel for project cost control, demonstrating continued reliance on spreadsheets for financial tracking. Primavera P6 (20%) and SAP/ERP systems (15%) are used by more technologically advanced firms, while 15% use other software tools. This pattern suggests limited adoption of integrated project management systems in Lusaka's construction sector.

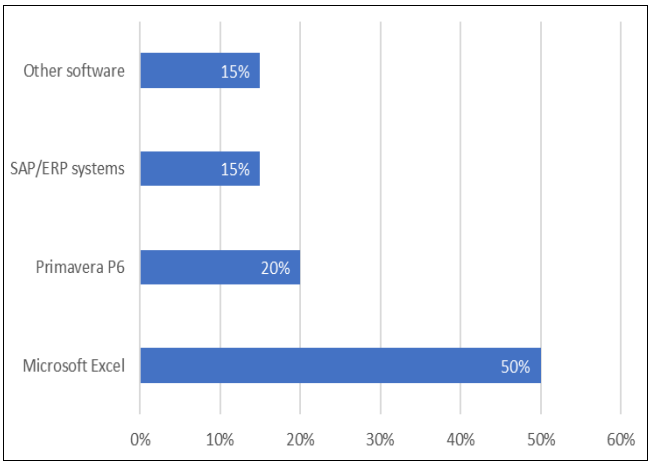


**Fig 4.2.7:** Software Tools Utilized for Project Cost Control

The chi-square test examined the relationship between the frequency of revising cost budgeting strategies during the planning phase and the alignment of initial budgeting with actual project needs. The results show a statistically significant association ($\chi^2 = 133.333$, df = 6, $p < 0.001$), indicating that the frequency of budget revisions influenced how well the budget aligned with project requirements. The linear-by-linear association result ($\chi^2 = 7.419$, $p = 0.006$) further suggests a positive trend, meaning that as budgeting strategies were revised more frequently, the alignment with project needs improved.

**Table 4.2.2:** The relationship between the frequency of revising cost budgeting strategies during the planning phase and the alignment of initial budgeting with actual project needs

| Chi-Square Tests | | | |
|---|---|---|---|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 133.333[a] | 6 | .000 |
| Likelihood Ratio | 134.602 | 6 | .000 |
| Linear-by-Linear Association | 7.419 | 1 | .006 |
| N of Valid Cases | 100 | | |

The chi-square test results show a significant association between the extent to which contingency costs were included in the initial budget and the extent to which risk factors were considered in the cost budgeting strategy ($\chi^2$ = 96.667, df = 6, $p < 0.001$). This suggests that projects that actively considered risk factors were also more likely to allocate contingency costs in their budgets.

**Table 4.2.4:** The association between the extent to which contingency costs were included in the initial budget and the extent to which risk factors

| Chi-Square Tests | | | |
|---|---|---|---|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 96.667[a] | 6 | .000 |
| Likelihood Ratio | 112.288 | 6 | .000 |
| Linear-by-Linear Association | 1.820 | 1 | .177 |
| N of Valid Cases | 100 | | |

### *4.3 Effectiveness of Existing Cost Control Processes in Construction Project Management*

Cost variance (40%) is the most frequently used metric for evaluating cost control effectiveness. Other measures such as schedule variance (20%) and profit margin (25%) are used, while return on investment (15%) is the least considered.

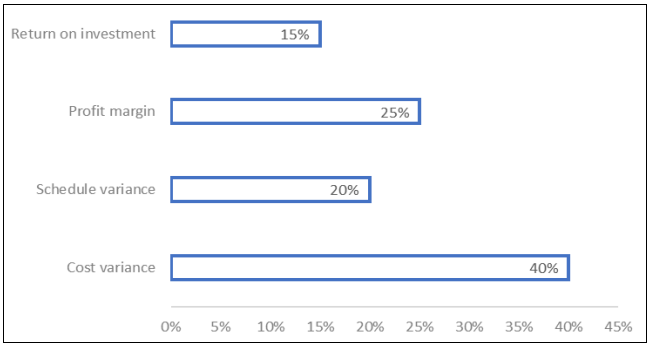


**Fig 4.3.1:** Cost Control Effectiveness Metrics

Earned value analysis (35%) is identified as the main process for early detection of cost overruns. This suggests that some companies apply quantitative methods that combine cost, schedule, and scope performance. Financial audits (25%) and progress meetings (25%) are also common, but supplier audits (15%) are less relied upon, showing a stronger internal than external focus on control.

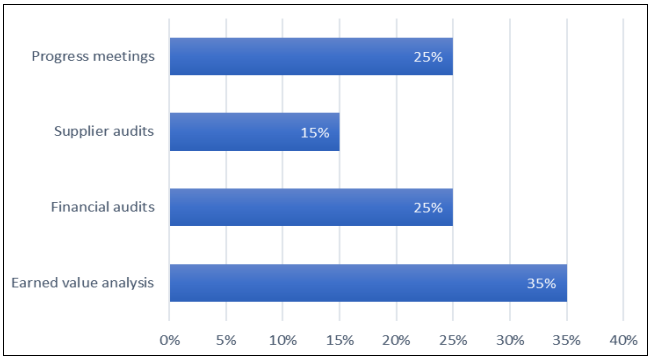


**Fig 4.3.2:** Early Detection of Cost Overruns

Weekly reports (30%) are the most common means of communicating cost performance results, followed by management meetings and quarterly reports (25% each).

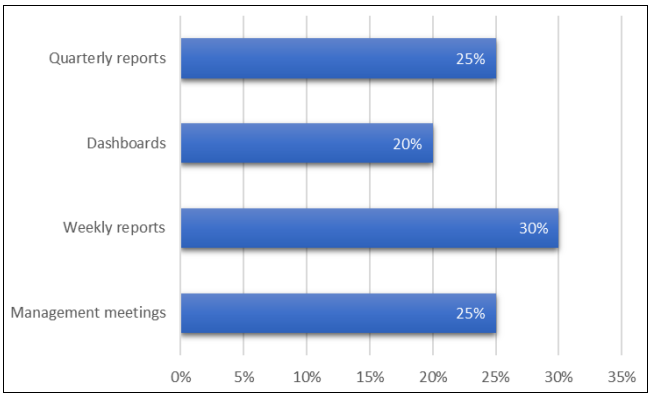


**Fig 4.3.3:** Communication of Cost Performance

The planning phase (40%) shows the highest level of cost control effectiveness. This emphasizes the importance of detailed planning in achieving financial efficiency. The execution and monitoring phases also play important roles, but fewer firms (10%) report strong control during project closure.

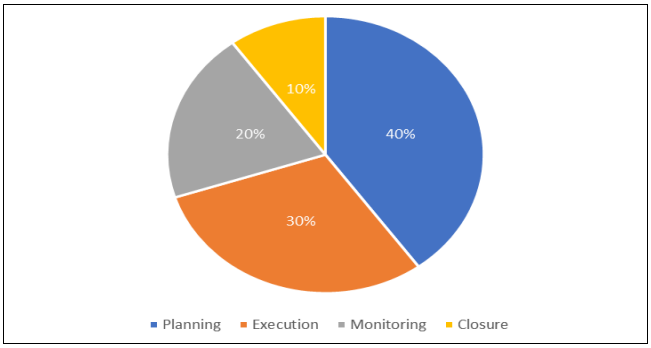


**Fig 4.3.5:** Phase Effectiveness in Cost Control

Corrective actions in response to cost deviations are most often implemented through supplier negotiations (30%) and resource adjustments (25%). These actions help companies realign costs with budgets. Other methods like revising project scope (20%) and rescheduling tasks (25%) are also used, showing a flexible approach to handling cost challenges.


**Fig 4.3.6:** Response to Cost Deviations

Companies mostly track cost efficiency using cost per unit output (40%) and historical comparisons (35%). Benchmarking (25%) is less used, suggesting that firms rely more on internal data than on industry standards when evaluating cost performance.

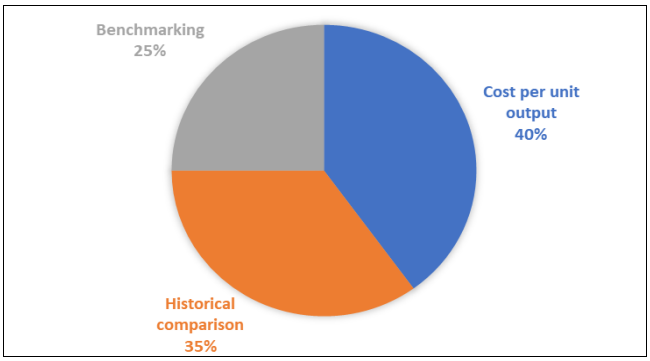


**Fig 4.3.7:** Cost Efficiency Tracking Methods

Accurate estimates (30%) are viewed as the most important factor contributing to successful cost control. Timely reporting (25%), experienced managers (25%), and technology use (20%) are also seen as critical, implying that both human expertise and tools play complementary roles in cost management.

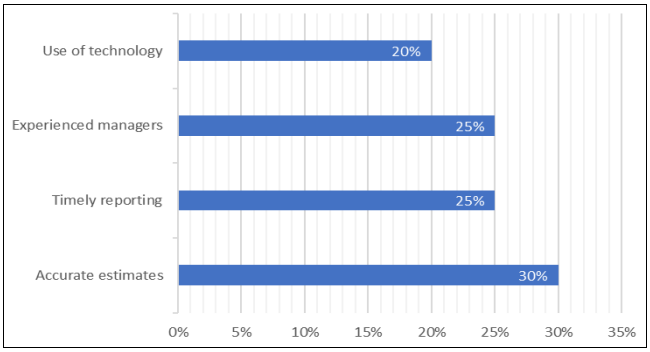


**Fig 4.3.8:** Factors Contributing to Successful Cost Control

Budget adherence (35%) is considered the most reliable indicator of effective cost control, followed by minimal cost overruns (30%). Maintaining profit margins (20%) and timely completion (15%) are also indicators but less emphasized.

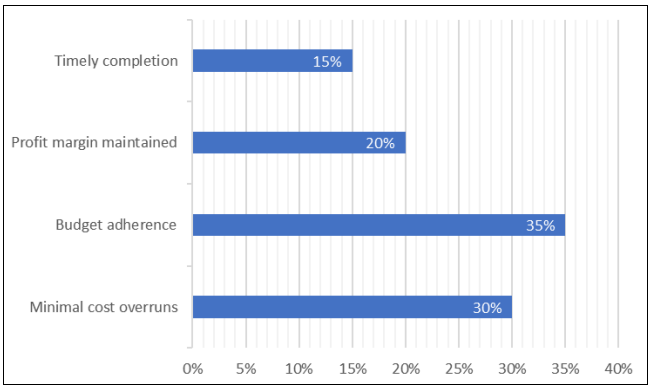


**Fig 4.3.9:** Indicators of Effective Cost Control

### *4.4 Challenges Associated with Cost Control Practices in Construction Projects*

Design changes (35%) are identified as the main cause of cost overruns in construction projects. Poor planning and unexpected site conditions (25% each) also contribute significantly. This suggests that both technical and managerial issues drive financial inefficiencies, while delayed payments (15%) are a less frequent cause.

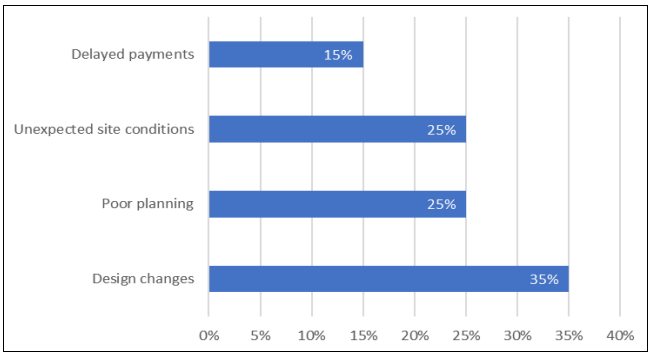


**Fig 4.4.1:** Causes of Cost Overruns

Unskilled labor (30%) and high workforce turnover (30%) are the main challenges affecting labor cost control. These problems lead to reduced productivity and increased training or replacement costs. Inefficient time tracking (25%) and labor strikes (15%) also disrupt labor cost stability.

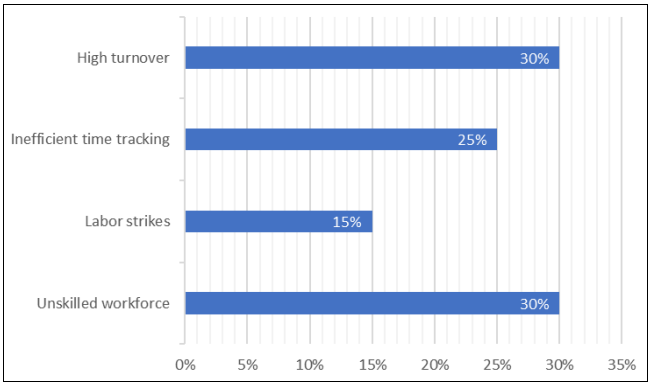


**Fig 4.4.2:** Labor Cost Control Challenges

Price fluctuations (40%) are the most common issue in managing material costs, reflecting the unstable market environment in Lusaka. Supplier delays (25%) and theft or wastage (20%) are also key challenges. Poor inventory management (15%) affects fewer companies but still impacts cost efficiency.

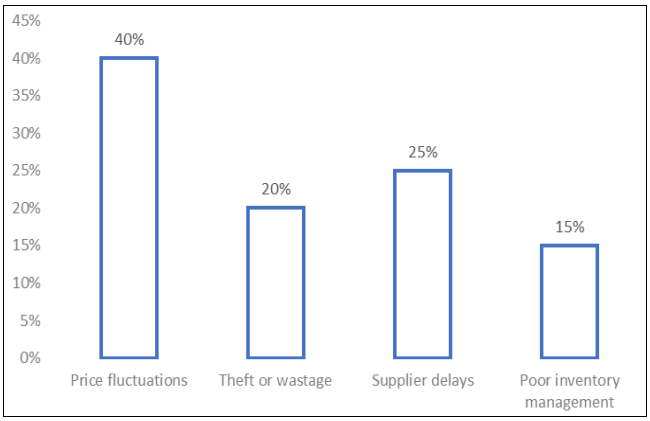


**Fig 4.4.3:** Material Cost Management Challenges

Scope creep (30%) and payment disputes (25%) are the main difficulties in controlling subcontractor costs. These issues often lead to increased project costs and strained relationships with subcontractors. Quality issues (20%) and lack of monitoring (25%) further complicate financial control efforts.

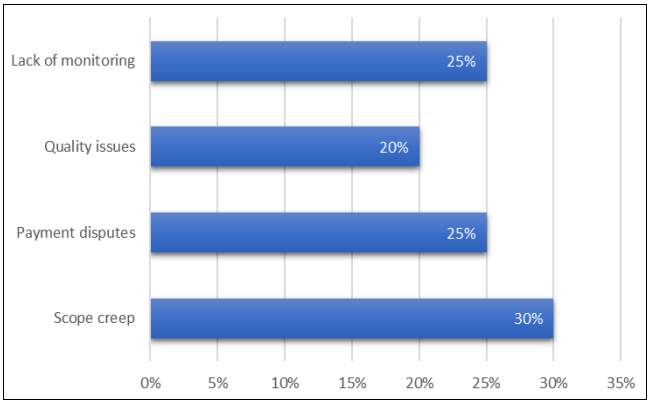


**Fig 4.4.4:** Subcontractor Cost Control Difficulties

Poor communication (30%) is identified as the most significant internal factor limiting cost control effectiveness. Limited software tools (25%) and lack of trained staff (25%) also contribute, indicating that both human and technological capacities need improvement. Inadequate management support (20%) further weakens control measures.

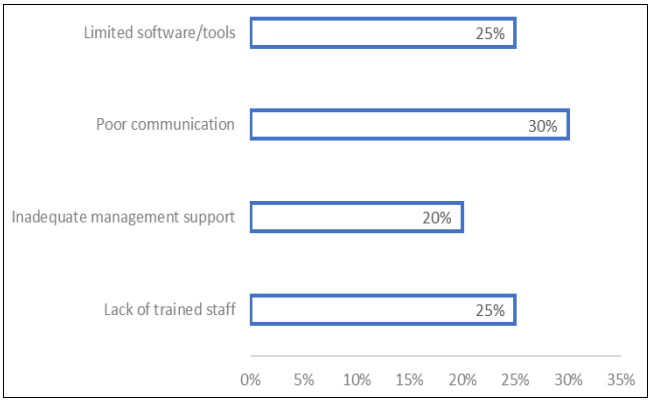


**Fig 4.4.5:** Internal Organizational Challenges

Market price volatility (30%) is the main external challenge to cost control, reflecting exposure to fluctuating material and labor costs. Economic instability (25%), supply chain disruptions (25%), and regulatory changes (20%) also affect cost predictability.

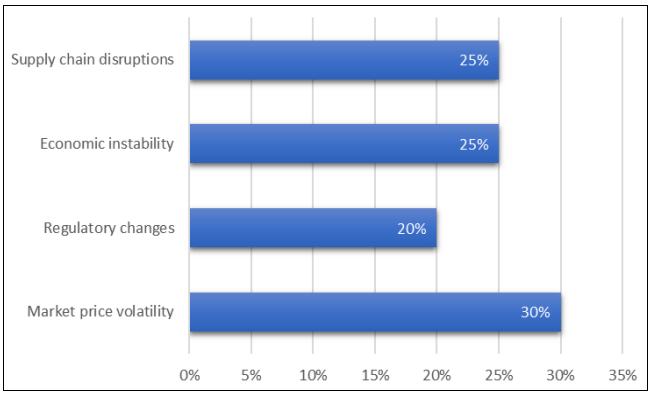


**Fig 4.4.6:** External Challenges to Cost Control

Outdated software (30%) and poor data integration (25%) are the main technological issues affecting cost control. Lack of real-time monitoring (25%) and limited technical expertise (20%) show that many companies struggle with digital transformation in cost management.

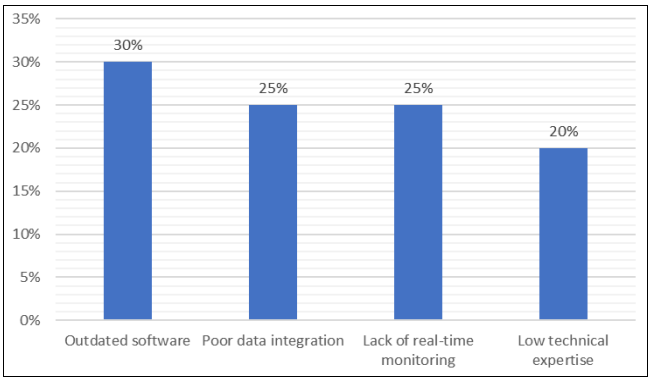


**Fig 4.4.7:** Technological Barriers

Most firms (40%) manage unforeseen costs through contingency funds, which provides financial flexibility. Others respond by cutting project scope (25%) or obtaining financing (20%), while 15% delay tasks. This shows that companies use both proactive and reactive strategies to handle cost surprises.

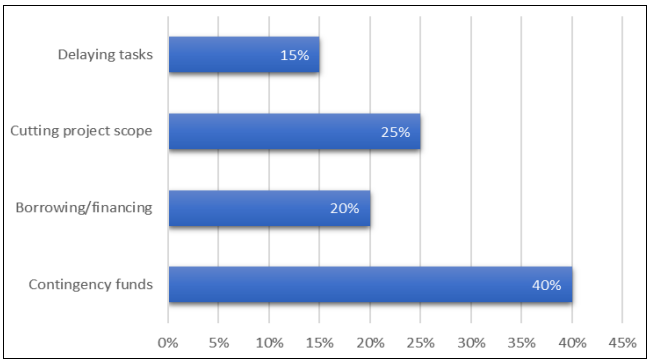


**Fig 4.4.8:** Managing Unforeseen Costs

Lack of accountability (30%) and slow decision-making (25%) are the main administrative challenges in cost control. Incomplete documentation (20%) and inconsistent reporting (25%) also hinder transparency and timely corrective action.

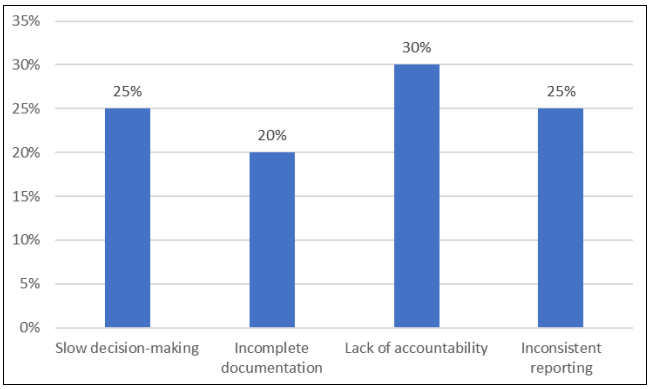


**Fig 4.4.9:** Administrative and Governance Challenges

## 5. Discussion

The study examined cost control methods, effectiveness, and challenges in construction projects among selected companies in Lusaka. Findings show that traditional methods such as budgeting (30%), cost monitoring (25%), and forecasting (20%) dominate, while advanced techniques like value engineering (15%) and earned value management (10%) are less frequently applied due to limited digital infrastructure and technical expertise. Cost estimation practices vary, with 35% of firms revising estimates at each milestone, 30% monthly, and 25% only pre-construction, highlighting differences in financial oversight. Labor and material cost management rely on productivity tracking, outsourcing, bulk purchasing, and supplier negotiation, while subcontractor costs are primarily managed through fixed-price contracts (45%) and performance incentives (30%). Statistical analyses confirmed significant associations between iterative budgeting, contingency allocation, and alignment with project needs, supporting proactive cost management. Challenges affecting cost control include design changes, unskilled labor, high workforce turnover, price fluctuations, supplier delays, poor communication, limited software tools, and external factors such as economic instability and market volatility. Overall, the findings reveal that Lusaka construction companies are aware of standard cost control practices but face constraints in fully implementing integrated, technology-supported approaches, resulting in reliance on internal monitoring, manual tools, and traditional methods, with opportunities for improvement in digital adoption, capacity building, and adaptive management strategies.

## 6. Conclusion

The study found that construction companies in Lusaka primarily employ cost forecasting and activity-based costing as their main cost control methods, supplemented by regular financial audits and budget monitoring with variance analysis, while advanced techniques such as earned value management are less widely adopted. Cost control practices are most frequently applied during the planning phase, and frequent revisions of cost budgeting strategies were significantly associated with better alignment between initial budgets and actual project needs, indicating that active budget management improves estimation accuracy. Contingency costs were largely included, and a significant relationship was observed between risk consideration and contingency allocation, highlighting the importance of integrating risk assessment into budgeting. Parametric estimation and expert judgment were common budgeting techniques, historical data was considered effective, and financial software tools played a substantial role in budget development. Monitoring mechanisms, primarily Excel spreadsheets and project management software, were generally effective in detecting deviations, with timely corrective actions, accurate real-time data, and competent staff supporting cost management. Challenges included variable effectiveness of initial cost estimation, scope changes, project delays, inflation, limited financial resources, and predominantly reactive risk management. Stakeholder involvement and technical capacity positively influenced outcomes. Overall, the findings suggest that Lusaka construction companies maintain structured and systematic cost control practices, particularly in planning, budgeting, and monitoring, but require wider adoption of advanced methods, proactive risk management, and continuous budget alignment throughout the project lifecycle.

## 7. Acknowledgement

I am deeply grateful to the Divine Creator, the ultimate source of life, knowledge and insight, for guiding and blessing me on this research journey. I sincerely thank my research supervisor Ms. Lynn Kazembe, for her unwavering support, guidance and patience. It was an honor to work under her leadership and I deeply appreciate the valuable insights and wisdom he shared with me. Her expertise and commitment significantly influenced the results of this project.

## 8. References

1. Akbar F. Automation of Project Status Updation Using Integrated Machine Learning, AI, and UAV Technologies (Doctoral dissertation, NUST-MCE), 2024.
2. Amin MN, Nengzih N. Proposed application of the use of Activity-Based Budgeting (ABB) method for cost

control of daily and casual workers (A case study at PT XYZ). Saudi J. Econ. Fin. 2021; 5(9):411-420.
3. Appiah M, Onifade ST, Gyamfi BA. Building critical infrastructures: Evaluating the roles of governance and institutions in infrastructural developments in Sub-Sahara African countries. Evaluation Review. 2022; 46(4):391-415.
4. Awuku B, Asa E, Baffoe-Twum E, Essegbey A. Conceptual cost estimation of highway bid items-A systematic literature review. Engineering, Construction and Architectural Management. 2024; 31(3):1187-1221.
5. Catalão FP, Cruz CO, Sarmento JM. Public management and cost overruns in public projects. International Public Management Journal. 2022; 25(5):677-703.
6. Changala K. Effects of planning on the successful implementation of feeder road projects in Zambia (Doctoral dissertation, The University of Zambia), 2024.
7. Charles V, Diaz J, Aparicio J. The performance of regional governments under the results-based budgeting framework: A two-stage sectoral analysis. RAIRO-Operations Research. 2022; 56(2):501-528.
8. Choi I, Kim WC. Estimating historical downside risks of global financial market indices via inflation rate-adjusted dependence graphs. Research in International Business and Finance. 2023; 66:p.102077.
9. Flyvbjerg B. Top ten behavioral biases in project management: An overview. Project Management Journal. 2021; 52(6):531-546.
10. Galea K. Cost overruns in public procurement (Master's thesis, University of Malta), 2024.
11. Gitari E. Use of Alternative Dispute Resolution to Settle Conflicts From Infrastructural Development Activities: A Case Study of Standard Gauge Railway Project in Nairobi National Park (Doctoral dissertation, University of Nairobi), 2019.
12. Hanioglu MN. A cost based approach to project management: Planning and controlling construction project costs. Routledge, 2022.
13. Jacob M, Kelvin C. Evaluating the Effectiveness of Quality Control Measures in Project Management: A Study of Construction Companies in Lusaka. Journal of Arts, Humanities and Social Science. 2025; 2(1):113-120.
14. Mulunda BB, Chibomba DK, Kabubi M. Examining the Impact of Project Management Methodologies on Public Sector Projects: A Case Study of CDF Road Projects in Lusaka, Zambia, 2025.
15. Mutale CT. Contract management of high-value road works in Zambia: A case of road development agency (Doctoral dissertation, The University of Zambia), 2021.
16. Okere G. A construction project classification framework: Mapping the dimensions for classification of Pacific Northwest highway project types, 2020.
17. Rao SA, Patel SB, Jain PN, Patel VM. Effective Scheduling and Time Management of Dhamra Railway Project Using Primavera P6. In ASPS Conference Proceedings, December 2022; 1(4):1165-1173.
18. Tembo CK, Muleya F, Kalumbi P. An investigation into pre-project planning challenges on public building projects in Zambia. In Building Smart, Resilient and Sustainable Infrastructure in Developing Countries. CRC Press, 2022, 43-51.
19. Uddin MZ. The Cost of Coordination Failures: Impacts on Urban Development Projects and Citizen Services in Bangladesh. Open Access Indonesia Journal of Social Sciences. 2025; 8(1):1922-1936.
20. Venkataraman RR, Pinto JK. Cost and value management in projects. John Wiley & Sons, 2023.