***Assessing the Effects of Project Management Practices on Road Construction Project Performance***

***A Case study of Lusaka District***

*Paper ID:*

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***Abstract****–* Improved project performance is a top priority; thus, managers and supervisors often apply a variety of techniques and approaches. In spite of ongoing efforts to boost productivity, residential construction projects in gated communities continue to underachieve. An examination of the relevant literature demonstrates that many public construction projects, residential construction projects, and road construction projects continue to register poor performance linked to project management techniques.This study examined to what extent project management practices affect the success of road construction projects in Lusaka, Zambia. The research strategy, a descriptive survey, made use of stratified sampling. The selected population included the project managers, supervisors, and contractors from 116 road construction projects. Questionnaires were used to tally responses. A pilot study was conducted to ensure the quality of their survey instruments. The information in the tables was analysed using descriptive and inferential statistics. Project performance was found to be influenced by these study’s four variables: project planning, resource scheduling, communication, and project monitoring and assessment. The results of the research indicated that the success of a project hinged on four factors: proper planning, clear communication, strategic allocation of resources, and thorough monitoring and evaluation at regular intervals. It was concluded that there are essential techniques for project management that can significantly improve the success rate of any given project, and these recommendations were made to project managers, supervisors, and contractors.

**Keywords** *– Road Construction; Project Management; Monitoring and Evaluation; Project Planning; Resource Scheduling Project Performance.*

1. **Introduction**

An organization’s strategic goals cannot be attained without the delivery of the necessary capital assets, which is what projects are all about. Taking into account a generic project, its status shifts from that of an idea or a concept through feasibility studies, execution, and final completion, making it possible to think of it as a system that is dynamic and continually changing from one stage to another in a life cycle (Albert et al., 2017). The innovative idea of project management is universal and general. This transcended all borders of language, geography, and logistics, albeit some workplace cultures were naturally more open to using project management approaches than others. If upper-level management wants to implement project management or boost existing projects’ effectiveness, they must take cultural, structural, practical, and personal factors into account (Dykstra, 2021). The primary goal of project management is to ensure that the building project is successfully implemented. To what extent a road construction project succeeds is largely dependent on the approach taken by the organisation in charge of it. Project planning, material management, communication, and monitoring and evaluation are the pillars upon which the success of any road building project rests (Nwachukwu, 2018). This study examined to what extent project management practices affect the success of road construction projects in Lusaka, Zambia.

* 1. **Background**

Organisations that have embraced effective and efficient project management strategies have been able to complete their projects and activities with more speed and less waste (Lessard et al., 2013). Project success or failure is dependent on a wide variety of variables and methods used in project management. The ability to manage scope, issues that arise from project teams, monitoring and evaluating progress, and project risk are just a few of the many facets of a successful project. The success of road infrastructure projects plays a critical role in the expansion and development of any economy. The construction industry is one of the fastest-changing industries in the world contractors need to constantly work tobetter theirperformance in light of rising consumer expectations, heightened environmental consciousness, scarce resources, and intense competition (Mwishwa et al., 2021). Nwachukwu (2018) argues that in a developing country like Zambia, the frequency with which construction projects fail or are abandoned and structures collapse is retrograde. Delivering successful infrastructure projects require management dedication, adequate information and communication channels, and skilled workers (Body, 2019). Inefficient cost management, increased project scope, and a lack of skilled labour were cited by Ochieng and Price (2019) as the primary causes of infrastructure project cost overruns and delays. The purpose of this study was to determine how effective project management practices are in improving the outcomes of road infrastructure projects built in Lusaka Zambia.

* 1. **Statement Problem**

Economic expansion and development depend on the timely completion of road construction and maintenance projects. The government of Zambia is well aware of this problem and has taken numerous steps to improve the efficiency of road construction projects. This was done by passing the Roads and Road Traffic Act CAP 464, the Public Roads Act of 2002 which created the RDA, and the Road Transport and Safety Agency (RTSA). The purpose of these rules was to establish a legal and institutional structure for road building, repair, and maintenance. Unfortunately, many of the problems that plagued road infrastructure projects in Zambia that were built by local organisations notwithstanding the safeguards still persisted (Cheelo and Liebenthal, 2020; KPMG International, 2014). When it comes to road infrastructure projects in Zambia, only 45.6% were completed on time and under budget, according to a report by KPMG in 2014. Moreover, the report found that just 35% of the projects completed by local companies fulfilled the required quality levels. When comparing the performance of road projects completed by local enterprises in Uganda (40.5%) and Tanzania (43.7%) to that of Kenya (36.9%), the latter country comes out on top. When looking at regions outside of Africa, Zambia came in at 45.6%, China at 70.5%, India at 65.8%, and Europe at 71.56%. The results showed that Zambia was among the countries which has low project performance among the countries evaluated by the World Bank. The purpose of this study was to determine how effective project management practices are in improving the outcomes of road infrastructure projects built in Lusaka Zambia. Additionally, the study aimed to determine whether or not organisational structure acted as a moderator or mediator between government policy and the success of road building projects. Since many of the roads in Lusaka, Zambia were rated as having poor performance, here is where the study concentrated.

* 1. **Objectives**

The aim of the study was to determine the effect that project management practices; project planning, resource scheduling, communication and monitoring & evaluation have on the performance of road construction projects in Lusaka Zambia.

* 1. **Research Questions**

The research questions for the study were:

1. What is the effect that project planning has on the performance of road construction projects in Lusaka, Zambia?
2. What is the effect that resource scheduling has on the performance of road construction projects in Lusaka, Zambia?
3. What is the effect that communication has on the performance of road construction projects in Lusaka, Zambia?
4. What is the effect that monitoring, and evaluation has on the performance of road construction projects in Lusaka, Zambia?
	1. **Theoretical Framework**

**Constraint Theory**

Goldratt (1984) developed a new approach to management called the theory of limits. The ultimate goal is enhanced project performance for the benefit of the organisation. It identifies four primary limitations that reduce the efficiency of projects. Scope, budget, quality, and completion time are all factors that must be controlled in order to successfully execute the project. Fundamental to the theory of constraint (TOC) is the idea that such limitations have a deleterious influence on business output. According to proponents of the theory of limits, project managers should center their efforts on overcoming these limitations. According to Steyn (2010), the theory of constraints, when combined with other management approaches like Just in Time (JIT) and Total Quality Management (TQM), can give a comprehensive set of techniques that emphasize continual improvement in project operations. This improves the quality, cost, and timeliness of project deliveries to customers. The theory of constraints is best understood as an approach to managing projects by the careful application of a framework of ideas, principles, and metrics that center on the logistics that ensure a project runs smoothly.

1. **Literature Review**

Project management success considers the achievement of the PM related objectives, inclusive of the traditional measures, i.e., time, cost, and quality (PMI, 2004). Construction project performance evaluation continues to be one of the primary competitive issues of the new millennium. Performance measurement (PM) is an integral part of management and defined as a process of quantifying both the efficiency and effectiveness of an action (Wadugodapitiya et al, 2010). Umulisa, Mbabazize, and Shukla (2015) indicated that the success of a project was in part due to careful design. Budgeting, forecasting, and money generation were identified as the primary financial planning activities, and a strong positive link was found between financial planning and project success. The project’s end result was affected by the team’s attention to detail during the planning stages, particularly during the phases of placing orders, tracking those orders once they were delivered, and executing the scheduled projects. . Investigating the impact of project planning on project success, Naeem, Khanzada, Mubashir, and Sohail (2018**)** took into account the moderating effect of culture and the mediating effect of risk management. It was found that there is a positive relationship between project success and project planning, and that successful project planning early in the project life cycle has a major impact on the project’s ultimate outcome. The study effectively highlights the significance of risk management during the planning phase, emphasizing the need of planning early on and reminding project managers of the importance of not rushing through the planning process.

Carter (2012) looked into the difficulties road infrastructure companies in sub-Saharan Africa have when attempting to produce high-quality projects. Gitenya and Ngugi (2012) found that insufficient funding is a major obstacle for local enterprises working on infrastructure projects like housing. The project budget acted as a constant and significant limitation. The research also noted that the project’s schedule presented challenges, despite the fact that the available resources would be sufficient to complete the project in principle. In order to complete a project within its allotted budget, it was necessary for project managers to make the most efficient use of available resources (Allen, 2012). Majanja (2012) examined the difficulties that Kenyan infrastructure projects face in securing funding. The first was predicated on the extent to which corporations are constrained in their ability to obtain funding, and the second was predicated on how frequently businesses made use of bank credit. To ensure that road projects have enough money to be built, Majanja (2012) argued that the government should encourage Public-Private Partnerships. Simmons (2012), echoed this sentiment, noting that local businesses have trouble gaining access to credit facilities due to a lack of confidence in the safety of their assets.

Ghura (2013) argued that avoiding budget overruns in road construction may be achieved by careful and timely planning of staff. As a result, it was crucial for the project manager to have an accurate count of the people who would be needed to carry out all of the planned tasks**.** Leyman’s (2013) research aimed to track the growth of project management skills in large Swedish companies. According to the report, another problem with building road infrastructure is a shortage of workers with the appropriate abilities. The importance of this to the project’s overall success cannot be overstated. Time spent on a task was also used to argue that team members’ skill sets should be matched to the tasks at hand. The local construction companies lacked this quality, which caused jobs to take much longer to finish than expected. Consequently, the major responsibility of a project manager was to devise a strategy for carrying out the project’s objectives within the restrictions of available resources. The successful completion of road infrastructure projects necessitated careful resource planning, which included things like staffing the project with people who possessed the necessary skills, and arranging for the availability of things like tools and equipment (Warner well, 2013). The importance of managerial abilities in overseeing European infrastructure projects was investigated by Mcrael (2013). According to the findings, improving construction businesses’ performance in terms of quality and completion time can be achieved by increasing the degree and training of managerial abilities. As a result, people would be able to supply higher-quality goods and services and make more informed judgments thanks to training. According to the research, the project manager established the appropriateness of workers to project tasks when creating the timetable and allocating resources for the road infrastructure.

Construction projects are notorious for running over budget, behind schedule, or even being scrapped altogether due to a lack of clear and effective communication. For projects to succeed, there must be clear lines of communication between all parties involved. According to Ziek and Anderson (2015), the outcome, direction, and content of a project are all determined by the discussion between the many project stakeholders and the project manager. Project managers need to be able to communicate effectively because it is one of the keys to a successful project and, ultimately, the factor that determines whether or not the project succeeds or fails. The impact of communication-conflict interaction on project success was studied by Wu, Liu, Zhao, and Zhuo (2017). According to the results of the study, disagreements over how to proceed with a work have a favorable effect on the final product, and researchers also found that increased team communication amplifies this effect. Furthermore, it was seen that interpersonal conflict and process conflict influenced each other and were negatively associated to project success due to the fact that they both resulted in poor communication between the teams. Franz, Leicht, Molenaar, and Messner (2017) looked into how well-integrated teams and open lines of communication influenced the efficiency with which construction projects were completed. Cost, scheduling, and quality results for completed projects were analysed. Communication was shown to be a major factor in the success of a project’s delivery when researchers looked at the relationship between integration and cohesion. The results showed that timely and formal communication was crucial to team cohesion and the success of the projects. Thus, programmes with more frequent and timely communication were seen to have better outcomes. Studying the elements that mediate the relationship between effective communication and project performance, Afroze & Khan (2017) looked into the ways in which effective communication practices affected the success of foreign development projects in Pakistan. Since projects require a unique set of coordinated activities and resources, it follows that a project manager needs special communication skills to effectively direct and coordinate these elements to achieve the project’s performance goals (Goczol and Scoubeau, 2013; Maylor, 2015). Project communications is a critical aspect in project performance, as investigated by Cornelissen (2016),who claims that efficient communication among project stakeholders guarantees timely and accurate data gathering, distribution, storage, and eventual disposal. Successful projects are those that provide benefits to the intended audience as planned and within the allotted budget and time frame (Effy and Sosik, 2020; Cella et al., 2017); consequently, it is necessary to apply knowledge, skills, tools, and techniques to project activities at each stage of project development in order to achieve efficient project outputs. If project managers want to know if their efforts are bearing fruit and the project is progressing in the correct direction, they should look no farther than an analysis of the project’s communication practices, as suggested by Hargie and Tourish (2019).

There is a direct correlation between the success of a project and its level of monitoring and evaluation. Information on a project’s development can be collected and analyzed using monitoring and evaluation methods (Martin, 2012). An investigation into the obstacles facing monitoring and evaluation of development initiatives in Egypt was conducted by Reyman and Harries (2008). Information from 37 projects was used to accomplish the goals. The study indicated that the management function of project monitoring and assessment was widely acknowledged. The research findings also highlighted the most pressing issues and obstacles that have hindered development project monitoring and evaluation. The failure to monitor and evaluate, to discuss and share the findings, and to incorporate them were all factors. The survey also revealed other barriers, such as a lack of trained people, a dearth of technical resources, a lack of funding for monitoring and evaluation, and a dearth of available training opportunities. The construction companies’ ability to successfully deliver road projects was hampered by the limitations imposed by monitoring and evaluation. Key monitoring and evaluation activities in a project were also highlighted in research by Kabwegyere and Kiyega (2010) and another by Kerzner (2011). Initial needs assessment; project design; logical framework; monitoring and evaluation; baseline study. Studies also concluded that an effective monitoring and evaluation system would pay attention to how well road project inputs were utilised and how efficiently the project was implemented. Leung Xha’s (2014) research in China aimed to determine the significance of project activity supervision for the success of Chinese infrastructure projects. According to the research, better results can be achieved when supervisors keep an eye on all aspects of a project. Furthermore, the study findings highlighted the significance of an effective supervisory system in successful project management. According to the findings, monitoring and evaluation systems are crucial for RBM. Improved infrastructure project success can be attributed in large part to the transparent and accurate reporting made possible by result-based management. Since M&E is still a relatively novel instrument in the field of project management, it encounters obstacles in the form of sustainable result and performance matrices.

Problems exist in the areas of capacity building for M&E systems, harmonization of project management education and technical assistance, and the availability of experienced M&E specialists (Gorgens and Kusek, 2019). There needs to be a well-defined role for each member of the project’s human capital, as well as a clear identification that corresponds to their expertise. In the event that they are insufficient, a plan should be established for evaluating the training needs associated with acquiring the required competencies. There must be frequent and intense onsite supervision for projects that use workers posted to work in the field and carry out project operations independently. When carrying out projects on the ground, field workers need the reassurance of managerial backing and proper direction (Ramesh, 2022). (Pamela, Joe and Nay, 2013). A timely, frequent, and reliable monitoring and evaluation system on infrastructure projects was also shown to help to organisational learning and knowledge exchange, uphold responsibility and compliance, create chances for stakeholder feedback, and aid in the mobilization of resources.

1. **Research Methodology**

Deductive examination was used in this study, beginning with a persuasive social theory, and then testing its implications using data. A case study approach was used in this study as a research strategy. A case study design helps researchers keep up with the rapid changes in a rapidly changing field in addition to researching a unit or organization in depth. Because the road construction projects are constantly evolving, a case study design was most appropriate for this study. In arriving at the conclusions and suggestions, the study used the quantitative approaches to data analysis. The population for this study consisted of the 116 road construction projects in Lusaka, Zambia for the period from 2012 to 2021. Study participants and respondents included project managers, project supervisors, and contractors.

This study made use of a stratified random sampling strategy described by Mugenda and Mugenda (2003), involves dividing respondents into smaller groups called stratums based on qualities they have in common. Structuring employees into different stratum (project companies) was done through stratified random sampling. Stratum (project companies) of respondents were grouped, and random numbers were used to choose respondents from each stratum. Giving each respondent a unique number, and then selecting random responders from each stratum, was the method used. Based on the population sizes for each company, there were approximately 357 respondents sampled. The questionnaires were used to collect the primary data that was then be analysed. SPSS was used to code, summarize, present, and analyse the data. Tables, bar charts, and graphs based on frequencies, percentages, and inferential statistics will be used to display the findings. The Exploratory Factor Analysis (EFA) were performed to test the validity of the scales in the study. The Cronbach’s Alpha was used to assess the data’s dependability. For this research study the researcher made use of data triangulation and methods triangulation

1. **Results/Findings**

**4.1 Presentation of results**

Figure 4.1 presents the results of the characteristics of the sample of participants. It shows that most of the respondents (87.2%) were male and the remaining (12.8%) were female. This indicates that road construction project employees are dominated by male employees. However, the inclusivity of female employees was a merit for the study to get opinions of both sides of the gender.

Figure 4.1: Gender of the participants

Figure 4.2 shows the distribution of the respondents by age group. that most of the respondents (48.9%) were aged from 36 to 45 years old, (30%) of the respondents were aged from 26 to 35 years, and (19.3%) were aged from 46 to 55 years old. About (1.2%) of the respondents were aged at least 55 years old and the remaining (0.6%) were aged from 16 to 25 years old. It is noted that most of the respondents were not youthful in that most of them were at least 35 years old.

Figure 4.2: Respondent’s Age Group

Figure 4.3 shows that most of the respondents (51.4%) had attained an undergraduate level of education, (36.4%) had attained a diploma level of education, and (7.6%) had attained a post-graduate level of education. The remaining (4.6%) respondents had attained a certificate level of education. All the respondents had attained a tertiary level of education with most of them having attained an undergraduate level of education.

Figure 4.3: Respondent’s Level of Education

The respondents were asked about the position they held in their respective organisations. Figure 4.4 shows that most of the respondents (36.4%) were project supervisors, (29.1%) of the respondents were assistant project managers, and (22.9%) were project managers or directors. The remaining (11.6%) of the respondents were site clerks of works for road construction projects. It is clear from the findings that most of the respondents were project supervisors followed by project assistants.

Figure 4.4: Respondent’s Job Designation

Figure 4.5 shows the distribution of the respondents based on the project management background. It shows that most of the respondents (78.3%) had a background specialization in project management while the remaining (21.7%) had no background specialization (i.e., academic or professional) in project management. It is clear that most of the respondents had a background specialization in project management.

Figure 4.5: Respondent’s Project Management Background

Figure 4.6 shows the distribution of the respondents based on the respondent’s training undertaking of project management. It shows that most of the respondents (91.1%) had undertaken a training in project management while the remaining (8.9%) had not undertaken any project management training besides their academic accomplishments. It is noted from the findings that most of the respondents had undertaken a project management training.

Figure 4.6: Respondent’s Project Management Training

Figure 4.7 shows that most of the respondents (39.4%) had been involved in 11 to 15 road construction projects, (31.2%) of the respondents had been involved in 6 to 10 road constructions, and (16.8%) had been involved in the 16 to 20 road construction projects. About (11%) of the respondents had been involved in the at most 5 road construction projects and the remaining (1.5%) had been involved in at least 20 road construction projects.

Figure 4.7: Number of Projects Undertaken

*Table 4.1: KMO And Bartlett’s Test*

|  |  |
| --- | --- |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | 0.749 |
| Bartlett’s Test of Sphericity | Approx. Chi-Square | 2907.947 |
|  | df | 171 |
|  | Sig. | 0.000 |

Results of the KMO and BST findings is provided in Table 4.1. The results showed that the KMO statistic’s measure of sampling adequacy yielded a score of 0.749, which is higher than the typically accepted value of 0.600. The KMO was statistically significant, with a BST chi-square value of 2907.947 (p = 0.000).

Table 4. 2: Correlation Results

|  |  |  |
| --- | --- | --- |
|  |  | Project Performance |
| Project Performance | Pearson Correlation | 1.000 |
|  | Sig. (2-tailed) |  |
|  | N | 323 |
| Planning  | Pearson Correlation | 0.011 |
|  | Sig. (2-tailed) | 0.843 |
|  | N | 323 |
| Resource Scheduling | Pearson Correlation | .168\*\* |
|  | Sig. (2-tailed) | 0.003 |
|  | N | 323 |
| Communication | Pearson Correlation | .289\*\* |
|  | Sig. (2-tailed) | 0.000 |
|  | N | 323 |
| Monitoring and evaluation  | Pearson Correlation | .351\*\* |
|  | Sig. (2-tailed) | 0.000 |
|  | N | 323 |

Table 4.2 shows that all the project management practices had a positive relationship with project performance. Project planning had a positive relationship with project performance. The correlation coefficient was approximately 0.011 which indicated that project planning variations had a 1.1% explanation on the variations of project performance. The relationship however not statistically significant at 5% significance level (i.e., 0.843 > 0.05). On the other hand, resource scheduling had a positive relationship with project performance. The correlation coefficient was about 0.168 which indicated that the variations in resource scheduling explained about 16.8% of the changes in project performance. The relationship between resource scheduling and project management was significant at 5% significance level (i.e., 0.003 < 0.05). The relationship between communication and project performance was positive as well. It has a correlation coefficient of approximately statistically significant 0.289. This indicated that the changes in communication explained about 28.9% of the changes in project management. The relationship between communication and project performance was statistically significant at 5% significance level (i.e., 0.000 < 0.05). With respect to monitoring and evaluation, there was positive relationship with performance of the project. The correlation coefficient was approximately 0.351 which entailed that the changes in monitoring and evaluation explained about 35.1% of the variations in project performance. The relationship between monitoring and evaluation and project performance was statistically significant at 5% level (i.e., 0.000 < 0.05).

Table 4.3: Regression Model Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **R** | **R Square** | **Adjusted R Square** | **Std. Error of the Estimate** |
| 1 | .441 | 0.195 | 0.185 | 0.7619 |

*Predictors: (Constant), Monitoring and Evaluation, Resource Scheduling, Communication, Planning.*

Table 4.4: Analysis of Variance Results

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Model** |  | **Sum of Squares** | **df** | **Mean Square** | **F** | **Sig.** |
| 1 | Regression | 44.678 | 4 | 11.169 | 19.241 | .000 |
|  | Residual | 184.598 | 318 | 0.58 |  |  |
|  | Total | 229.276 | 322 |  |  |  |

*Dependent Variable: Project Performance Predictors: (Constant), Monitoring and Evaluation, Resource Scheduling, Communication, Planning*

As table 4.4 shows, the F-statistic for the model was 19.241 which was above the recommended 2.000. The overall model was statistically significant at 5% level of significance (i.e., 0.000 < 0.05). The model significance also entails the significance of the R-Squared. In this regard, the model had a significant strong correlation between the project management practices and the project performance

Table 4.5: Model Regression Coefficients

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Model** |  | **Unstandardized Coefficients** | **Standardized Coefficients** | **t** | **Sig.** |
|  |  | B | Std. Error | Beta |  |  |
| 1 | (Constant) | 2.678 | 0.258 |  | 10.374 | 0.000 |
|  | Planning  | 0.344 | 0.079 | 0.378 | 4.348 | 0.000 |
|  | Resource Scheduling | 0.414 | 0.089 | 0.447 | 4.672 | 0.000 |
|  | Communication  | 0.428 | 0.088 | 0.423 | 4.864 | 0.000 |
|  | Monitoring and Evaluation  | 0.335 | 0.064 | 0.335 | 5.275 | 0.000 |

*Dependent Variable: Project Performance*

Table 4.5 shows that the effect of planning on project performance was positive. This implies that an increase in project planning increased project performance. The extent to which project planning affected project performance was approximately 0.344. This implied that an increase in project planning increased project performance by 0.344. The effect was statistically significant at 5% significance level (i.e., 0.000 < 0.05). On the other hand, there was a positive effect of resource scheduling on the performance of the project. The beta coefficient was approximately 0.414 which indicated that an increase in resource scheduling increased project performance by about 0.414. The effect was statistically at 5% level of significance (i.e., 0.000 < 0.05).

The effect of communication on project performance was positive. This indicates that an increase in communication increased the project performance. The extent to which communication increased performance was approximately 0.428. This entailed that an increase in communication increased project performance by approximately 0.428. The effect of communication on project performance was statistically significant at 5% significance level (0.000 < 0.05). With respect to monitoring and evaluation, the effect on project performance was positive. As with project planning, communication, and resource scheduling, an increase in monitoring and evaluation increased the performance of the project. The extent to which monitoring, and evaluation increased project performance was approximately 0.335. The effect was statistically significant at 5% level of significance (0.000 < 0.05). The constant, which indicates the value of project performance when all the independent variables are zero was approximately 2.678. The constant was statistically significant at 5% significance level (i.e., 0.000 < 0.05). It is noted that all the project management practices had an increasing effect on project performance at 5% significance level.

**4.2. Discussion of findings**

The study was conducted to assess the effects of project management practices on the performance of road construction project performance in Lusaka, Zambia. A total number of 116 road construction projects were considered in the study. The targeted respondents were 398 and 327 questionnaires were well responded. The study used correlation and regression to determine the relationship and effect of project management practices on project performance. The correlation findings showed there was a positive correlation between project management practices and project performance. All the project management practices were statistically correlated with project performance except project planning. In terms of the effect, project planning had a positive effect on the performance of project performance. An increase in project planning increased project performance by 0.344.

There was a positive effect of resource scheduling on the performance of road construction projects. This indicated an increase in the performance of road construction with an increase in resource scheduling. The extent to which performance of the road construction project increase with an increase in resource scheduling was 0.414. Communication also had a positive effect on the performance of road construction projects. The performance of the projects increased with an increase in communication. The extent to which performance of the road construction projects increased with an increase in communication was approximately 0.428. Lastly, monitoring and evaluation had a positive effect on the performance of road construction projects in Zambia. This entailed that monitoring and evaluation increased the performance of road construction projects by 0.335. Hence, all the project management practices had a positive effect on the performance of road construction projects. The performance and success of the road construction projects were enhance by the considered project management practices: communication, planning, monitoring and evaluation, and resource scheduling.

**4.3. Conclusion**

The results of the study showed that project performance was increased when team members were given specific assignments. The group responsible for carrying out a project has a significant impact on how successful that endeavor is likely to be. The best-laid plans might go awry if the project team is unable to carry out its duties to the best of its ability. Since the project team will oversee delivering the project’s scope over the course of its life cycle, it is crucial that they be well-formed and cohesive from the start. It was also determined through this study that if resources are divided up correctly, projects are more likely to run smoothly and be completed on time. When resources are allocated correctly, there is no risk of a project’s progress being slowed down due to a lack of necessary tools and infrastructure, allowing for the project’s completion in the shortest possible period and according to plan.

It was also determined that one factor contributing to the performance of the project was the level of formality in the communication between the various teams. The performance of a team and its projects depends on their ability to communicate effectively and to do so in a way that is timely, relevant, and credible. All members of the team should have the same level of information about the project, so it is important to maintain continuous communication throughout the entire process. To foster trust in the workplace, it is important to encourage open communication and a *no surprises* policy. The utilization of several channels of expression is encouraged as well. The study revealed, finally, that proper monitoring tools aid in efficient time and cost management on projects. In addition to being an integral part of organisational learning and feedback, the monitoring process is vital to the identification of processes and projects.

1. **Acknowledgements**

I would love to extend my gratitude to my family and friends for the love and support throughout my academic journey.

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