

Effect of Project Management Practices on Project Performance: A Case of Tubura Project in Nyanza District, Rwanda

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<https://doi.org/10.51867/ajernet.6.1.68>

Submitted: 8th March 2025 Accepted: 14th March 2025 Published: 21st March 2025

ABSTRACT

The general objective of this research was to find out the effect of project management practices on performance of Tubura Project in Nyanza District, Rwanda. Specifically the study was guided by the following objectives: finding out the effect of project planning on performance of Tubura Project in Nyanza District, determining the effect of project implementation on performance of Tubura Project in Nyanza District and assessing the effect of project monitoring and evaluation on performance of Tubura Project in Nyanza District. This research was guided by Goal Setting Theory, Theory of Change and Resource Based View Theory. The researcher conducted both descriptive and correlational studies. Descriptive survey research use surveys to collect information on a variety of issues and correlational studies research design examined at the links that exist between variables under the study. The population of this study was 321 people including Tubura Project staff, District staff, Sector staff, Project cell committee and One acre fund employees in Nyanza District. Using Slovin's formula, the researcher estimated how big of a sample was needed to get reliable findings. The researcher relied on document analysis and questionnaire methods to collect data. The researcher more easily displayed the findings in the form of numbers and statistics, giving the reader a more holistic understanding of the findings. Statistical Package for Social Sciences (SPSS) was used in the study. The findings presents a summary of a regression model, indicating a very strong positive correlation ($R = 0.922$) between the predictors (Project monitoring and evaluation, Project planning, Project implementation) and the performance of Tubura Project in Nyanza District. Specifically, for each unit increase in Project planning, the performance of Tubura Project in Nyanza District is expected to increase by 0.318 units ($\beta=0.318$, $t=5.915$, $p=0.000$). Similarly, project implementation, with a coefficient of 0.293, indicates that an increase in this variable is associated with a 0.293 unit increase in the performance of Tubura Project in Nyanza District ($\beta=0.293$, $t=5.138$, $p=0.000$). Project monitoring and evaluation, with a coefficient of 0.382, indicates that an increase in this variable is associated with a 0.382 unit increase in the success of Tubura Project in Nyanza District ($\beta=0.382$, $t=8.061$, $p=0.000$). In this case, this study concluded that project planning, project implementation and, project monitoring and evaluation significantly contribute to predicting the success of Tubura Project in Nyanza District. It was recommended that Tubura Project staff should be integrated Continuous capacity building and training programs into the project implementation strategy to ensure that the team is equipped with the necessary skills and knowledge to address evolving challenges and opportunities.

Keywords: Project, Project Management Practices, Project Performance, Tubura Project, Rwanda

I. INTRODUCTION

The concept of project performance is integral to the success of any project and requires continuous monitoring, analysis, and adaptation to ensure that the project delivers its intended benefits and meets stakeholders' expectations. Project management approaches are becoming more visible and significant to businesses since they increase the enterprise's value, increase profit realization, and enhance profit management activities. Organizations may ensure that their projects are finished on schedule, within budget, and in compliance with the necessary quality standards by putting these strategies into effect (Owuori *et al.*, 2020).

In the United States, maintainable extended administration is the planning, monitoring, and management of project delivery and support mechanisms, taking into account the natural, financial, and social perspectives of the life-cycle of the project's assets, forms, deliverables, and impacts, with an eye toward realizing benefits for partners, and done in a clear, reasonable, and moral way that includes proactive partner cooperation (Ahmed, 2021). Malaysian projects experience significant cost and time overruns due to ineffective project planning practices. Results from a systematic questionnaire poll were used to determine how well construction projects in Malaysia met their deadlines and budgets. The research showed that only 8 percent of building projects were completed in accordance with the agreed-upon time frame (Coffie *et al.*, 2019).

Numerous studies conducted in Africa have demonstrated the value of project planning methodologies. Idowu and Ajibola (2020) examined the persistent management problems in Ghana's housing industry. The focus of the study was on how project managers might boost project quality in terms of efficiency and completion date. The research's findings indicated that there was a shortage of qualified management professionals in the housing sector. This is why it has been suggested that hiring qualified and experienced management professionals will improve the outcomes of projects in the construction industry.

Project planning by providing guidance on how to eliminate and resolve the majority of issues that lead to projects, particularly in sectors that fail, the methods and their sustainability round out our knowledge of the methods by which each nation can achieve and maintain economic progress. The suggestions provided in this study will enhance project delivery and are thorough enough to bring about a fundamental shift that will influence people who choose industrial projects and their sustainability (Dubois & Silvius, 2020). In Kenya, Adema et al. (2020) looked at how project planning techniques impacted the way a mobile money transfer initiative was carried out. The study's findings revealed a significant correlation between project quality and business management practices. However, the connection between project management methods and sustainability is not conclusive.

Gahigana (2019) investigated the factors influencing the success of project management within Rwanda, specifically analyzing the Sur'eau project conducted by the Society for Family Health Rwanda. This research focused on exploring the correlation and significant impact between project leadership, organizational maturity, a business-oriented approach, visibility, executive support, user adoption, and the potential failure of the SFH Sur'eau initiative. The study encompassed SFH personnel, Sur'eau clients, and distributors in Kigali city as its population. Employing a mixed-method approach, the research delved into the six primary drivers crucial for successful project management - namely, robust leadership, organizational maturity, a business-centric approach, executive endorsement, user acceptance, and visibility - and their connection to the outcomes of the Sur'eau project under examination. The findings highlighted that an organizational maturity level at 3 significantly contributed to a 67% failure rate in the Sur'eau project. Notably, inadequate communication from SFH staff, the unpleasant odor of water, the presence of insects due to chemical usage, and cost factors were identified as key drivers leading to the project's failure. Consequently, the study recommends that stakeholders implement policies focusing on improving communication and addressing the cost aspects of the Sur'eau product.

1.1 Statement of the Problem

In developing countries, numerous projects and programs intended to address socio-economic challenges of their beneficiaries have faced significant obstacles in achieving their principal objectives, despite securing funding from various internal and foreign donors. A considerable portion of these challenges can be attributed to deficient project management techniques (Khalifeh *et al.*, 2019).

Research conducted by Gateka (2023) in the past has revealed that projects in Rwanda encounter a myriad of issues that lead to failure, including inadequate risk management, resource limitations, and poor communication. This research has emphasized that success in project outcomes hinges on the meticulous consideration of key performance indicators, such as stakeholder engagement, monitoring, and decision-making. The study underscores the critical role of implementing tools and procedures designed to avoid project failures.

Many projects in Rwanda have faced significant issues leading to failure, often attributed to poor planning, incomplete requirements, resource shortages, and inaccurate cost estimates. The root causes are linked to inadequate project initiation, planning, communication, and scheduling methods. Some techniques used might not be well-suited for specific project types, contributing to their failure. For instance, a 2021 audit report highlighted at least 37 contracts worth Rwf 201 billion across 28 public entities that experienced delays of up to six years, underscoring the challenges in project management effectiveness (Ministry of Finance and Economic Planning [MINECOFIN], 2021).

Though several studies have explored project management techniques and project performance in the region, there remains a substantial gap in the literature concerning the influence of the project business case, the development of a project brief, and the creation of a project plan on the performance of One Acre Fund Projects in Rwanda.

While previous research by Gahigana (2019), Rosine and Khan (2021) and Rodriguez and Gupta (2023) has shed light on various factors affecting project success and performance, they did not specifically delve into these critical aspects. The mentioned studies did not focus on effect of project management practices on performance in Nyanza District. Therefore, the current study seeks to address these information gaps and contribute to a better understanding of how these specific project management practices affects the performance of Tubura Project in Nyanza District.

1.2 Research Hypotheses

The study was guided by the following hypotheses.

H₀₁: There is no significant effect of project planning on performance of Tubura Project in Nyanza District.

H₀₂: Project implementation has no significant effect on performance of Tubura Project in Nyanza District.

H₀₃: There is no significant effect of project monitoring and evaluation on performance of Tubura Project in Nyanza District.

II. LITERATURE REVIEW

2.1 Theoretical Review

The main theories underlying this study are theory of change, goal setting theory and resource-based view theory. Details on theory are reviewed in the following section.

2.1.1. Goal Setting Theory

The Goal Setting Theory, formulated by psychologist Edwin Locke and management researcher Gary Latham posits that setting specific and challenging objectives can enhance performance and motivation for both individuals and teams. The core of their argument is that setting SMART goals—goals that are specific, measurable, attainable, relevant, and have a deadline can motivate people to perform at their best (Larsson & Larsson, 2020).

Goal setting theory is a management theory that proposes that setting specific and challenging goals can lead to increased motivation, performance, and achievement. Individuals and groups function more effectively when they are guided by well-defined objectives, as stated in the theory. Unintended consequences, according to goal setting theory's detractors, might include immoral actions or an obsession with immediate gratification rather than planning forward. However, advocates of the theory argue that these risks can be mitigated by careful goal setting and management. Research and development in the domain of organizational behavior revolve on goal setting theory, which has a substantial influence on management practice (Yu et al., 2018).

The Goal Setting Theory posited that setting clear and specific goals can enhance performance. In the context of research, effective project planning involves defining clear project objectives and limits. When project goals and scope are well-defined, it provides a clear direction for the project team.

2.1.2 Theory of Change

In order to understand and quantify the actions of comprehensive networks, this was developed by the Aspen Institute Roundtable on Community Change. A complete picture and explanation of the how and why of a desired change is intended to occur in the Theory of Change. Since planning entails establishing desired modifications or determining desired outcomes, methods, and timelines, the Theory of Constraints (ToC) is an essential component of project management procedures. The project's success is evaluated based on the change indicators you've set up (Adema et al., 2020).

Even when you have a firm grasp on the problem and know exactly what you want to achieve, project management can feel insurmountable. You can use a Theory of Change to map out your course of action as you go from the current state to your desired future state of affairs. The Theory of Change (ToC) provides an explanation for why and how a given change process will occur. The rationale lays forth the assumptions that underpin the proposed intervention and demonstrates the causal relationships between the short-, intermediate-, and long-term outcomes (Harriet, 2021).

A theory of change should think about the most important changes a project wishes to make, the different routes it could take to achieve those changes, and the reasoning behind choosing one path over another. The theory of change gives us a way to think about how to make the change we want in a world that is constantly changing and uncertain. As a result, we are better able to organize and prioritize our efforts in light of the realities of the world we live in and the means at our disposal (Idowu & Ajibola, 2020).

So, the theory of change is closely related to project management and project performance. This is because when you plan to manage, you also take strategies that will help you reach on objectives as well as the goal, and once the goal is reached, there is the reality of the dream or change or impact made by the proper execution of the plan (Chen et al., 2019).

The researcher used the theory of change to find out how project management practices affect project performance. The researcher used this by looking at how well the project was set up to make the changes that were wanted and whether or not those changes were made. Researchers can also tell if the changes they wanted to see happened by measuring how well the project did. This is because the theory of change in project management practices can be seen as inputs whose results can be seen in how well the project did.

2.1.3. Resource-Based View (RBV) Theory

The RBV Theory, first introduced by Birger Wernerfelt and later extended and modified by Jay B. Barney and other scholars, has achieved widespread acceptance in the business literature. The firm's resources and capabilities determine its competitive advantage, which is a key idea of resource-based theory. The Resource-Based View theory focuses on how a firm's unique resources and capabilities contribute to its competitive advantage and overall performance (Larsson & Larsson, 2020).

Within the framework of this study, this theory described how management practices play a critical role in identifying, acquiring, and managing the right talent for the project. Effective project management practice ensures that the project team possesses the necessary skills, experience, and expertise, which in turn enhances project performance.

2.2 Empirical Review

An empirical review refers to a study, analysis, or assessment that relies on empirical evidence derived from observation. It involves collecting and analyzing data or information gathered through direct observation or experience, rather than relying solely on theory.

2.2.1 Project Planning Practice on Project Performance

Johnson and Lee (2023) investigated the influence of thorough project planning practices on the performance of construction projects in the United States. A quantitative study involving data from 50 construction projects was analyzed using statistical methods, including regression analysis in SPSS, to assess the relationship between project planning quality and project performance metrics. The research revealed a significant positive correlation ($r = 0.70$, $p < .05$) between the depth of project planning and project performance, leading to improved adherence to timelines, budget control, and client satisfaction levels. The study concludes that meticulous project planning is a critical driver of project success in the construction industry, highlighting the importance of integrating comprehensive planning processes into project management practices. It is recommended that construction firms prioritize comprehensive project planning, invest in training to enhance planning capabilities, and adopt robust project management tools to optimize project performance.

Kim and Chen (2021) assessed the relationship between risk management planning practices and project performance in infrastructure development projects in China. Data from 30 infrastructure projects were analyzed using multivariate regression techniques to evaluate the effects of risk management planning on project schedule adherence, cost control, and quality outcomes. Results indicated a strong positive correlation between effective risk management planning and project performance metrics, with a 30% enhancement in on-time project delivery attributed to proactive risk mitigation strategies. The study underscores the pivotal role of risk management planning in achieving successful project outcomes, emphasizing the necessity of integrating robust risk management practices into project planning processes. Infrastructure developers are encouraged to prioritize risk management planning, implement proactive risk mitigation strategies, and regularly assess and update risk management protocols to optimize project performance and minimize potential setbacks.

2.2.2 Project Implementation on Project Performance

Kim and Nguyen (2021) explored how Lean project implementation affects the performance of manufacturing projects in Germany and Japan. Data from 20 manufacturing projects in each country were collected and analyzed using statistical methods, such as ANOVA and regression analysis, to compare project performance metrics and the influence of Lean project implementation strategies. The research revealed a 20% reduction in production lead time and a 15% increase in overall project profitability in projects with Lean implementations compared to those without, indicating the positive impact of Lean methodologies on project performance. Lean project implementation strategies have a demonstrable positive influence on manufacturing project performance, highlighting the importance of Lean principles in optimizing project outcomes. Manufacturing companies are advised to adopt Lean methodologies, streamline project processes, and promote a culture of continuous improvement to achieve optimal project performance and efficiency.

Mohamed (2024) investigated the methods used in project management and the outcomes of NGOs' projects in Nairobi, Kenya. The descriptive method was employed for this study. In Wajir County, where the research was conducted, 201 NGOs served as the focus group. We selected fifty percent of the target population, or one hundred non-governmental organizations (NGOs) in Wajir County, using a mix of stratified and basic random selection. Effective application of project management techniques including planning, communication, monitoring, and assessment led to better project outcomes. The study's finding that inadequate communication significantly affected project results highlights the importance of team leaders and management include the creation and monitoring of project communication mechanisms in their pre-project agendas. Project outcomes were positively and significantly

affected by planning, stakeholder involvement, monitoring, and assessment.

2.2.3 Project Monitoring and Evaluation on Project Performance

In her study, Harriet (2021) investigated the impact of M&E on project performance in Uganda. The author conducted a case study of 10 development projects and analyzed the M&E planning process and project performance data. The study findings suggest that a strong M&E planning process positively impacts project performance by improving project efficiency, effectiveness, and sustainability. In contrast, a weak M&E planning process leads to poor project performance, including delays, cost overruns, and failure to achieve project objectives. The author emphasizes the importance of integrating M&E into project management practices and providing adequate resources for M&E activities to ensure project success. The study contributes to the understanding of the role of M&E in development projects and provides practical recommendations for project managers, donors, and policymakers.

The study by Idowu and Ajibola (2020) aimed to explore the M&E process and its impact on project success. The authors conducted a literature review and a qualitative study involving interviews with 15 project managers and M&E officers in Nigeria. The findings revealed that M&E played a crucial role in project success by ensuring that goals and objectives were met, risks were identified and managed, and stakeholders were engaged throughout the project lifecycle. However, the study also highlighted challenges in the M&E process, including inadequate funding, lack of technical capacity, and resistance to change. The authors recommended that organizations should invest in building capacity for M&E professionals, prioritize M&E funding, and ensure that project teams and stakeholders understand the importance of M&E for project success.

III. METHODOLOGY

3.1. Research Design

A research design is the overarching methodological framework for a study. It specifies how the data gathered and analyzed, as well as how inferences and conclusions were reached. There is no way to do research without first developing a plan, and this is where the study design comes in. Correlation analysis examines the relationships between variables to determine their degree of association or independence (Taherdoost, 2022).

The researcher conducted correlational studies research design examined at the links that exist between variables under the study. Also quantitative approach used for data collected with questionnaire while qualitative approach used for interview response.

3.2 Study Population

The term population is used to describe the whole group of individuals under whose data is collected. A population consists of all the people, things, or quantities that share a set of characteristics that can be seen (Taherdoost, 2022). The population of this study was 321 people including Tubura Project staff, District staff, Sector staff, Project cell committee and One-acre fund employees in Nyanza District.

3.3. Sample Size and Sampling

As defined by Mirzaei et al. (2022), sample size is the selection of the set of observations or repetitions to be used in a statistical study. When drawing conclusions about a larger population based on a smaller subset of the population, as is the case with many empirical studies, the representative sample plays a crucial role. The cost of data collecting and the necessity for adequate statistical power ultimately decided the sample size to be used in a research.

3.3.1 Sample Size Determination

Slovin's formula enabled researchers to sample the community with the appropriate degree of precision, while studying the complete population is impossible owing to lack resources and time. Using Slovin's formula, researcher estimate how big of a sample they needed to get reliable findings.

This is how you determine which version of Slovin's equation to use:

$$n = \frac{N}{1 + (Ne^2)}$$

n= Number of samples or sample size

N= Total population

e= Error tolerance

$$n = \frac{321}{1 + (321 \times 0.05^2)}$$

$$n = \frac{321}{1 + (321 \times 0.0025)}$$

$$n = \frac{321}{1 + 0.8025}$$

$$n = \frac{321}{1.8025}$$

$$n = 178.08 \approx 178$$

Using a random method, every individual in the population has an equal chance of being selected. This means each participant in the study has an equal probability of being part of the sample. Using a sample that faithfully reflects the population as a whole is the fundamental premise of simple random sampling.

3.4 Research instruments

Participants were sent a survey with short, Disagree/Agree answers for this research. With response options, the responders were presented with a number of options from which to choose an answer. For this study, participants were given the questionnaires and expected to fill it out independently, before returning it to the researcher through the same method and in the specified time frame.

3.5 Data Analysis

Taherdoost (2022) defined data analysis as the process through which a participant's perspective is translated into a coherent written document. The scientist will be able to do both theoretical and practical analyses with the aid of this. The statistical approach may be thought of as a toolkit for putting numbers on study findings.

Quantities were employed for analysis of interviewees' perspectives on each variable, and a Pearson's correlation was performed to examine the nature of the relationships between the report's factors.

The model used in the study took the form below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where:

Y= Project performance

X₁= project planning

X₂= project implementation

X₃= project monitoring and evaluation

B₀= Constant Term

β= Beta Coefficient - This metric quantifies the extent to which a dependent variable would vary in relation to a one-unit increase in the independent variable, expressed in terms of standard deviations.

IV. FINDINGS & DISCUSSIONS

4.1 Response Rate

The response rate in a questionnaire or survey refers to the percentage of individuals who completed and returned the questionnaire out of the total people to whom it was administered.

Table 1

Response Rate

Questionnaire	Frequency	Percentage
Returned	154	86.52
Incomplete	5	2.81
Unreturned	19	10.67
Total	178	100.0

Table 1 shows that out of 178 questionnaires given to the respondents, 154 questionnaires were filled and returned, accounting for an 86.52% response rate. According to Mittal (2020), a response rate of 70% and above is considered adequate. Therefore, the obtained response rate of 86.52% was satisfactory for data analysis. This response

rate was good enough to allow for a comprehensive and in-depth analysis of the study's goals. Additionally, 5 questionnaires were incomplete (2.81%), and 19 were not returned (10.67%), due to the absence of respondents during the recollection of responses.

4.2 Inferential Statistics

Inferential statistics involves using data from a sample to make inferences or draw conclusions. This is done through the application of probability theory and statistical hypothesis testing.

Table 2
Correlations

		Pearson Correlation			
		Project planning	Project implementation	Project monitoring and evaluation	Project performance
Project planning	Pearson Correlation	1	.793**	.708**	.836**
	Sig. (2-tailed)		.000	.000	.000
	N	154	154	154	154
Project implementation	Pearson Correlation	.793**	1	.739**	.842**
	Sig. (2-tailed)	.000		.000	.000
	N	154	154	154	154
Project monitoring and evaluation	Pearson Correlation	.708**	.739**	1	.841**
	Sig. (2-tailed)	.000	.000		.000
	N	154	154	154	154
Project performance	Pearson Correlation	.836**	.842**	.841**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	154	154	154	154

** . Correlation is significant at the 0.01 level (2-tailed).

Table 2 presents a correlation matrix examining the relationships between Project planning, Project implementation, Project M&E, and performance of Tubura Project in Nyanza District. The results show a very strong and statistically significant positive correlations between each predictor and performance of Tubura Project in Nyanza District.

Project planning demonstrates a very strong positive association ($r=0.836$, $p=0.000<0.05$), indicating that a thorough understanding of project planning practices is linked to enhanced performance of Tubura Project in Nyanza District. Similarly, Project implementation exhibit a significant and very strong positive correlation ($r=0.842$, $p=0.000<0.05$), emphasizing the importance of well-executed Project implementation in achieving performance of Tubura Project in Nyanza District.

Additionally, the correlation between Project monitoring & evaluation and performance of Tubura Project in Nyanza District is very strong positive and significant ($r=0.841$, $p=0.000<0.05$), highlighting the positive impact of systematically monitoring & evaluating project on overall performance of Tubura Project in Nyanza District. The low p-values indicate that the observed associations are unlikely to have occurred by chance.

The findings, supported by the emphasis of Owuori et al. (2020), indicates the critical role of effective project management practices in optimizing resource utilization, managing risks, ensuring stakeholder satisfaction, and facilitating successful project completion. The correlation matrix reveals very strong and statistically significant positive associations between project planning, project implementation, project monitoring and evaluation, and the performance of Tubura Project in Nyanza District. Owuori's emphasis on project management practices is substantiated by these strong correlations, reinforcing their crucial role in achieving successful project outcomes.

Table 3
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.922 ^a	.850	.847	.26299

a. Predictors: (Constant), Project monitoring and evaluation, Project planning, Project implementation

Table 3 presents the model summary for the regression analysis with predictors including Project M&E, Project planning, Project implementation. The findings presents a summary of a regression model, indicating a very strong positive correlation ($R = 0.922$) between the predictors (Project M&E, Project planning, Project implementation) and the performance of Tubura Project in Nyanza District. The R Square value of 0.850 implies that approximately 85.0% of the variability in the dependent variable is explained by the predictors (Project monitoring

and evaluation, Project planning, Project implementation). The Adjusted R Square, accounting for the number of predictors, is 0.847, highlighting that 84.7% of the variability remains explained after adjusting, and the model demonstrates a moderate level of fit.

The findings strongly align with Coffie et al. (2019) emphasis on project management challenges, particularly in Malaysia. The regression analysis, shows a significant positive correlation between project M&E, project planning, project implementation, and Tubura Project performance in Nyanza District. This correlation supports Coffie et al.'s assertions, emphasizing the crucial role of effective project management practices in influencing the overall performance of projects.

Table 4
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.650	3	19.550	282.664	.000 ^b
	Residual	10.374	150	.069		
	Total	69.024	153			

a. Dependent Variable: Project performance

b. Predictors: (Constant), Project monitoring and evaluation, Project planning, Project implementation

Table 4 displays the results of an Analysis of Variance (ANOVA) for the given regression model. The F-statistic of 282.664 is associated with a p-value of 0.000, indicating that the regression model, which includes predictors such as Project M&E, Project planning, Project implementation, are statistically significant. This indicates that, collectively, these predictors have a significant impact on the performance of Tubura Project in Nyanza District.

The findings, supported by Gahigana (2019), indicates the importance of effective project management practices. Gahigana's study on the Sur'eau project in Rwanda reveals that factors such as robust leadership, organizational maturity, a business-centric approach, executive endorsement, user acceptance, and visibility significantly influence project outcomes.

The statistically significant F-statistic (282.664, p=0.000) affirms that project monitoring, planning, and implementation collectively impact Tubura Project performance in Nyanza District, aligning with Gahigana's emphasis on key drivers for successful project management.

Table 5
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.146	.119		1.226	.222
	Project planning	.318	.054	.322	5.915	.000
	Project implementation	.293	.057	.293	5.138	.000
	Project monitoring and evaluation	.382	.047	.397	8.061	.000

a. Dependent Variable: Project performance

The model was used in the study took the form below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

$$\text{Performance of Tubura Project in Nyanza District} = 0.146 + 0.318 (\text{Project planning}) + 0.293 (\text{Project implementation}) + 0.382 (\text{Project monitoring and evaluation}) + 0.119.$$

Table 5 presents the regression coefficients for the model predicting the performance of Tubura Project in Nyanza District. The constant term (0.146) is the predicted value of the dependent variable when all predictor variables are zero. Specifically, for each unit increase in Project planning, the performance of Tubura Project in Nyanza District is expected to increase by 0.318 units. Similarly, project implementation, with a coefficient of 0.293, indicates that an increase in this variable is associated with a 0.293 unit increase in the performance of Tubura Project in Nyanza District.

Project monitoring and evaluation, with a coefficient of 0.382, indicates that an increase in this variable is associated with a 0.382 unit increase in the performance of Tubura Project in Nyanza District. In this case, project planning (p=0.000) and project implementation (p=0.000) are statistically significant (Sig. < 0.05), indicating their significant impact on the dependent variable and, project monitoring and evaluation (p=0.000) significantly contribute to predicting the performance of Tubura Project in Nyanza District.

The findings, reinforced by Sibomana et al. (2020), highlight the crucial role of effective project management.

Sibomana et al. study on Rwanda's construction industry emphasizes the need for qualified management professionals. With statistically significant coefficients ($p < 0.05$), project planning, implementation, and M&E collectively impact Tubura Project performance, aligning with Sibomana et al. (2020) emphasis on enhancing project quality and efficiency through strong management practices.

The study summarizes the outcomes of hypothesis testing regarding the impact of various factors on the performance of Tubura Project in Nyanza District. The results indicate that project planning significantly affect the project's performance, as evidenced by the rejection of Null Hypothesis 1 (Ho1) with a p-value less than 0.05.

Also, Null Hypothesis 2 (Ho2) concerning the impact of Project implementation is rejected, with a p-value less than 0.05, indicating a significant effect of Project implementation on the project's performance. For Null Hypothesis 3 (Ho3) related to the influence of project monitoring and evaluation, the p-value is also less than 0.05, confirming sufficient evidence to establish a significant effect. These findings contribute valuable observations into the factors influencing the performance of Tubura Project in Nyanza District, offering a basis for informed decision-making and potential adjustments in project strategies.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The primary goal of this research was to find out the effect of project management practices on performance of Tubura Project in Nyanza District, Rwanda. In particular, the following goals served as the basis for the study: Specifically, we want to know how project planning impacts performance of Tubura Project in Nyanza District, how project implementation affect performance of Tubura Project in Nyanza District, Rwanda, and how t project M&E influence performance of Tubura Project in Nyanza District, Rwanda.

The study of Tubura Project in Nyanza District, Rwanda indicated a strong positive perception of the impact of project planning, project implementation, and project M&E on the performance of Tubura Project in Nyanza District, Rwanda. Across various statements, respondents expressed high agreement, with the overall mean scores ranging from 4.20 to 4.30. However, the consistently high standard-deviations above 0.5 highlighted diverse opinions among respondents.

Furthermore, the analysis rejects all three null hypotheses (Ho1, Ho2, and Ho3) as the p-values for each hypothesis are less than 0.05, signifying statistical significance, supporting the conclusion that there is a significant effect or relationship between project planning, project implementation, and project M&E with the performance of Tubura Project in Nyanza District, Rwanda. These findings show the importance of project management practices in influencing the organization performance, providing empirical support for the positive contributions of systematic project planning, project implementation, and project M&E.

5.2 Recommendations

Tubura Project in Nyanza District, Rwanda should establish a comprehensive project planning team that includes stakeholders from diverse backgrounds to ensure a holistic approach and capture various perspectives in the planning process. It is recommended that Tubura Project incorporates a risk management plan within its project planning phase to proactively identify and address potential challenges, enhancing adaptability and resilience during project implementation. Tubura Project in Nyanza-District, Rwanda should prioritize effective communication channels and mechanisms to enhance collaboration among team members, stakeholders, and community members during project implementation, fostering a shared understanding and commitment to project goals.

Tubura Project should be integrated Continuous capacity building and training programs into the project implementation strategy to ensure that the team is equipped with the necessary skills and knowledge to address evolving challenges and opportunities. Tubura Project should implement a robust M&E framework that includes regular feedback loops, enabling the project team to make timely adjustments based on real-time data, thereby enhancing overall project performance. Tubura Project is recommended to foster transparency and accountability involving external evaluators or independent assessors in the M&E process, ensuring unbiased assessments that contribute to continuous improvement and credibility of the project's impact assessments.

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