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ASSESSMENT OF THE INFLUENCE OF PROJECT MANAGEMENT PRACTICES ON THE PERFORMANCE OF BUILDING CONSTRUCTION PROJECTS IN RWANDA

BY

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ABSTRACT:

The study aims at examining the influence of project management practices on the performance of building construction projects in Rwanda; case study on building construction selected building construction projects managed by EAACON Ltd (East African Consultants Limited). The objectives of the study were to assess the influence of monitoring and control on the performance of building construction projects in Rwanda, to determine the influence of project planning on the performance of building construction projects in Rwanda, and to identify the influence of risk management on the performance of building construction projects in Rwanda. A descriptive research design was used in this study. Universal sampling was used with a sample size of 205 personnel in the building construction industry. A structured questionnaire was developed to gather information for the measurement of the project performance and determination of project management practices significantly relating to project performance. Performance indices will be developed for the

measurement of time, cost, scope, and quality performance. Multiple Regression Analysis was adopted to determine the influence of project management practices on project performance. Statistical Package for Social Sciences (SPSS) was used to analyse and present the findings of the study. The research major findings indicated that the perceptions of respondents on project planning on the performance of building construction projects overall mean of (M=4.655, SD=0.357) to a large extent, perceptions of respondents on monitoring and control on the performance of building construction projects overall mean of (M=4.859,SD=0.342) to a large extent and the perceptions of respondents on risk management on the performance of building construction projects overall mean of (M=4.843, SD=0.388) to a large

Key Words: influence, project, management practices, performance, buildings, construction projects

1. INTRODUCTION

According to Rwanda Bureau of Statistics (2016), the construction sector is seen to be a key driver of economic growth in Rwanda. It is therefore important to have building construction projects effectively implemented ensuring quality works, timeliness in delivery of the project outcome and the projects to be in the budget with no overruns. Implementation of building and construction projects have remained poor. According to the economic survey conducted by Rwanda National Bureau of Statistics (2017), the ratio of completed building projects reduced from 32.9% in 2016 to 24.7% in 2017.

Further, the economic survey of 2018 indicated that the value of building project completed in 2018 decreased from Ksh 3.8 billion in 2017 to 2.3 billion. The report also indicated that 52% of the projects were not completed within the projected budget and 33% were not completed within the planned schedule. In as addition 22% of the projects had errors identified during the first and second phases. This therefore is an indication of ineffective implementation of building construction projects in Rwanda.

This indicates that the projects do not deliver the expected outcomes which need be addressed by the management of such firms who are responsible for the implementation of the projects. There is therefore need to investigate the factors that are contributing to this ineffectiveness which drives the focus of this study to assess how management practices affect the effective implementation of building construction project Rwanda has seen a significant rise in infrastructure developments in the recent past, especially in the fields of real estate development.

However, many construction projects have failed to achieve project success due to increase risk and uncertainty (Njagi, Mbabazi, & Kibachia, 2016). There are also various failed or abandoned projects which have denied beneficiaries envisaged facilities and services. Contracts for 78 projects worth Frw 126,052,898,036 delayed and were not completed within contract period. Out of these, 14 projects worth Frw 3,368,946,434 failed

2.Statement of the Problem

To complete a project successfully, the product has to meet the expected level of quality and contract terms. The systems have to be integrated and aligned to allow the people to perform their work efficiently, effectively, and safely.

to proceed or contracts were abandoned after paying Frw 1,898,334,461 to the contractors (OAG, 2014).

In addition, report on 8th July 2016 by KT Press Team an editor in Kigali today newspaper stated that regional convention centre got opened after failing 3 times, Kigali convention Centre is worth \$300 Million, commenced in 2009, and was initially supposed to be completed and opened in 2011 but had to be postponed several times till 2016. The completion of a construction project within the time, cost and quality limits should be the ultimate goal of the stakeholders involved in the project (Oke, 2016).

Participants in the construction (investor, contractor, subcontractor, designer, project manager and consultant) as well as the end users of the project will directly benefit from the research on the mutual influence of the project management process on the success of the end product. Like any other organizational endeavors, projects are part of a wider super-system of an organization and are also influenced by both internal and external forces in a super system.

Some external forces like government regulations, environmental society, forces, pressure groups, financial markets, labour markets, technology, customer influence, shareholder etc. are very dynamic and much erratic (Berg & Karlsen, 2007).

Project has therefore become integral part of modern organizations, both profit and on profit oriented. The success or failure of an organization in achieving the project's objectives is to a large extent depends on the knowledge and skills of the project manager (the person assigned by the sponsor to lead the team that is responsible for achieving the project objectives) (Kerzner, 2006). According to Lewis, "the primary responsibility of the project manager is to ensure that all work is completed on time, within budget and scope, and at the correct performance level" (Lewis, 2007, p. 24).

In addition to that, effectively site management should be carried out in accordance with a predefined planning schedule where the purpose is to prevent delays. These delays can be reduced or prevented by an increased pre-project planning and successful project management, as they are some of the most critical success factors of a construction project accomplishment. Many construction companies engage in repeated ineffective practices that lead to low standard results. Most of construction projects failed to maintain their schedules and remain within budgetary costs; this despite there being knowledge of project management practices introduced in construction project.

Despite efforts, man hours and resources, we still find it very difficult to finish construction projects

3. Objectives

The main purpose of this study was examining the influence of project management practices on the performance of building construction projects in Rwanda. While the specific objectives were:

(1) To determine the influence of project planning on the performance of building construction projects in Rwanda;

4. Research Questions

The following denotes a list of formulated question the research is intended to answer:

(1) What is the influence of project planning on the performance of building construction projects in Rwanda?

5. Conceptual Review

Performance of building construction projects

Project performance management is the process of creating, implementing, and managing projects that contribute to the performance of an organization and its strategy. Tracking the

♦ Project planning

Project planning can be done manually or by the use of project management software. Project planning provides structure and foresight for the execution stage, helping to eliminate wasteful

◇ Project monitoring and control

Monitoring is a periodically recurring task already beginning in the planning stage of a project or programme (Kerzner, 2003). Monitoring should be undertaken as close to real time as possible. Real-time monitoring approaches provide a constant flow of data and analysis to allow for timely decision-making.

♦ Project risk management

It is found that the difference and the relationship between uncertainty and risk can be described as a measurable risk of uncertainty, while uncertainty is the greatest risk. There is a on time within budget and available resources (Pranam, Madhusudan, & Sudarshan, 2013). This study therefore, brings focus on the influence of project management practices introduced in building construction projects towards their adequate performance. This research study seeks to understand the relationship between the project performance measures and the use of project management practices from a developing country's perspective. This results in the development of a model for their interrelationship.

- (2) To assess the influence of project monitoring and control on the performance of building construction projects in Rwanda;
- (3) To identify the influence of project risk management on the performance of building construction projects in Rwanda.
- (2) What is the influence of monitoring and control practices on the performance of building construction projects in Rwanda?
- (3) What could be the influence of risk management on the performance of building construction projects in Rwanda?

performance of the project over time. Reviewing your project completions for improvements, when a project is complete it's imperative to review whether project goals were goals. (Jackson, T., 2022).

activities and patterns (Kerzner, 2003). Project planning is often used to organize different areas of a project, including project plans, workloads and the management of teams and individuals.

Advances in information communications and technology (ICT), such as SMS-based applications, facilitate real-time monitoring, and provide new opportunities to enhance the coherence and impact of the UN system (Chang *et al.*, 2018).

correlation between uncertainties about the targeted targets, which means that only the relevant uncertainties that can affect the project's goals can pose a risk (Dario, 2017).

6. Theoretical Review

Stakeholder Theory

Freeman, Wicks and Parmar (2004) proposed the stakeholder theory. The idea applies to incorporated frameworks including nature and people. The stakeholder theory contends that project supervisors should settle on choices in order to assess the interests of all stakeholders in a project including money related petitioners, yet in addition representatives, clients, networks and administrative authorities (Gareis *et al.*, 2009).

Stakeholders' theory questions the power supposition of interests of investors and advocates that a programme ought to be overseen in light of a legitimate concern for every one of its stakeholders. The theory accepts that values are fundamentally and expressly a part of a project and that project directors need to explain the common feeling of significant worth they make to unite its key stakeholders. At the point when stakeholders get what they need from a project, a feeling of possession and having a place is determined (Tembo, 2003).

Orodho and Nzoka (2009) decision of maximizing value as the programme scorecard must be supplemented by great practices of management upheld by the vision, procedure and strategies that link members in the programme in its aim of dominating in a competitive environment. A programme can't yield most value if management overlooks the enthusiasm of its stakeholders in the

The project management theory

It is useful to compare the development of a project management theory with another successful theory, that of thermodynamics. There are parallels between

With the assumption of observable, measurable parameters that remain predictable over the life of the project, management assumes it can predict behavior from initial data. Given that assumption, a Next, simple static relations between the observables are discovered and, finally, dynamic laws are proposed and validated. These dynamic laws explain the behavior of the observables of the system over

Examples of observables are the number of people in the queue, the average time spent in the queue, the number of servers, etc. It is well-known that the single queue, multi-server arrangement is the one in which the people in the queue spend, on average, the least time. A firm's sustainability relies upon sustaining the relationship with stakeholders; an organization must consider and draw in not only investors, representatives, customers but all the included groups thus, stakeholder connections must be the core principle in making of decisions by management.

The whole stakeholder relationship is strategic for the long-haul achievement and survival of an organization; estimation of corporate achievement can't be restricted to the formation of significant worth for just a single stakeholder team (Clarkson, 1995). The supporters of stakeholder theory do not determine how to make the fundamental tradeoffs among these contending interests; they leave supervisors with a theory that makes it unimaginable for them to settle on intentional choices (Freeman, 2015).

long haul. Disarray and absence of clarity for the organization's stakeholders if the firm don't utilize a successful and clear methodology so as to oversee, asses and report their own execution the distinctive stakeholder teams experience issues in analyzing and valuing the efforts of sustainability. (Pawson & Tilley 2004).

the two disciplines and, reasoning by analogy, we will be able to make some comments about the stateof the art of project management.

fundamental theory typically arises in three stages: First, an understanding of observable quantities grows and precise definitions emerge.

time (Pawson & Tilley 2004). A simple example from operations is queuing theory (Hopp & Spearman, 2011).

7. Empirical Review

A study carried out by Hwang and Lim (2013) mentioned that monitoring and evaluation could lead to project success which was further analyzed statistically by Ika *et al.*, (2012), through conducting regression analysis, and from which results showed that there was a statistically significant positive relationship between five critical success factors out of which is the monitoring and evaluation (Kamau & Mohammed, 2015).

According to (Molapo Lebogang, 2019) monitoring and evaluation (M&E) has become a global rational practice across organizations including NGOs and governments. There seems to be consensuses across monitoring and control and project performance in such a way that monitoring, and evaluation affects the performance of the projects and contributes towards their success. Therefore, monitoring and evaluation of project could be of great importance to numerous players including project officers, M&E officers, and all program staff (Marangu, 2012).

Guoli (2010) studied budget-planning effects on project performance. The descriptive research design was used, and the study targeted the stalled projects. The study deduced that a professional developed budget controls the project costs and creates favorable cash-flow conditions in the project. The study also found that insufficient cash flow consequence in a project is frequently associated with delays and large extra costs, since there is big threat for a temporary discontinuation of the entire project. The study did not investigate fully the contribution of budget planning on project performance.

Kress (2014) studied the effects of material planning on project performance through a survey design of selected construction firms. The study targeted construction projects not completed in time in London. The study found that the project management's primary objective is to meet otherwise surpass the material usage sponsors anticipation of the project. According to the study these anticipations are usually

expressed within 3 groupings; a given project generates preferred result with minimum defects. Cost: a given project generates preferred result for the expected cost schedule: a given project generates the preferred result within the expected period. However, the study did not consider many forces intervening and attempting to push projects off target. (Kohli&Chitkara, 2008).

Lloyd (2013) studied time planning functions effects on performance of the project. The study was a survey of construction projects. The study targeted projects not completed in time and the respondents were project managers sponsors. The study found that function is defined as the prior planning of the project at any time based on present certainties as well as revised prospects. The study also found that this is reasonable since the constraints as well as even objectives of the project can change during the process of implementation. It is not easy and sometimes not possible at all to detect deviance from plans. It could be on this preface assert that; planning ought to be thorough to make control achievable, since it loses promptly its worth if nonconformity from it can't be revealed as well as amended promptly.

Telsang (2014) studied the effects of project plans on project performance. Descriptive research design was used. The respondents of the study were the owners of the selected construction companies in New Delhi, India. The study found that alternative components of project plans on time, and mitigation or preventing their negative effects prior to their occurrence in implementation stage of a project can be an improvement on the mechanism of control system. The study as well found that monitoring is very important in a project. Therefore, the chief aim of monitoring is to make sure that various targets of time as well as cost are convened, and the network and its plans operation formulated for projects implementation are followed. It might be too late to evade overruns of cost and time related to corrective action. The study failed to establish the level of correlation between the time plan and project performance (Change et al., 2018).

Moreover, risk management recognized as an important exercise in order to achieve better performance of construction projects. Success in construction project indicated by its performance in the achievement of project time, cost, quality, safety and environmental sustainability objectives. The research of Lawrence (2015) indicated that risk management practices at planning stage had an

effect on project performance. A typical risk management project has five stages but however the aim of the traditionally project risk management is about looking for threats or negative risk in general and below figure is a visualized project risk management process (Hillson, 2020).

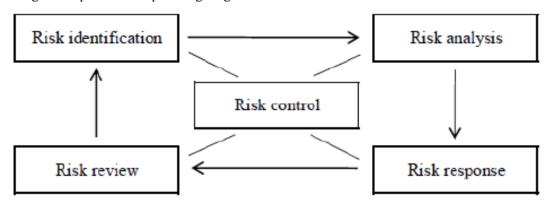


Figure 1: project risk management process

This is both to Bahamid & Doh (2017) seen as an important phase due to in this phase the objectives for the project are being understood and agreed on. The output of this phase is a definition document with the purpose to record the decision on the scope and details of the risk process, this document is often called a Risk

8. Conceptual framework

A conceptual framework is a set of broad ideas and principles taken from relevant fields of inquiry and used to structure a subsequent presentation (Reichel& Ramey, 2010). It is a tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny. It helps the research to explain the relationship among interlinked concepts such as the dependent and independent variables (Kombo, 2006). In this study, the researcher

Management Plan. There are many risk management methods or models in various small and medium projects, but the main risk management process involves four stages namely: Identification and classification of sources of risk, analysis of risk assessments, development of a risk management response and monitoring and control (Bazin, 2017).

seeks to establish the effect of project management practices on project performance of building construction projects in Rwanda. It will be conceptualized within the dependent-independent variable components and their indicators. The figure below shows a diagrammatic representation of the relationship between the dependent and independent variables.

Independent Variables

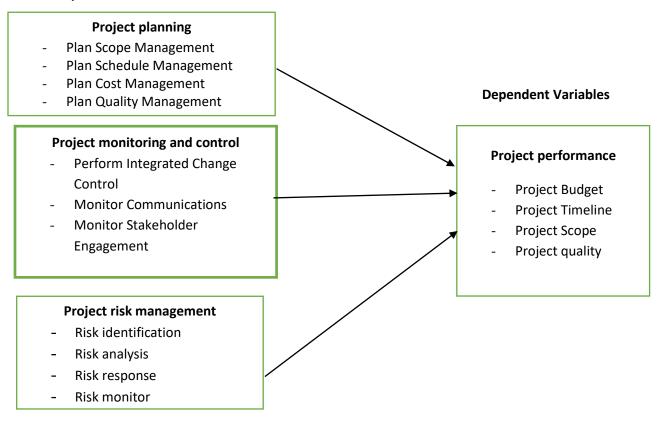


Figure 2: Conceptual framework

Source: Researcher conceptualization (2022)

9. Methodology

The study adopted a descriptive survey research design. Cooper and Schindler (2003), defined a descriptive study as one that tries to discover answers to who, what, when, where, and sometimes how questions. Target population of this study was 205 people.

The researcher preferred to use universal sampling technique to select respondents from different projects and was project teams and stakeholders of selected building construction projects managed by EAACON Ltd in Rwanda, both completed and ongoing was considered. Therefore, the sample size encompasses the entire population i.e., 205.

The instrument of data collection was questionnaire technique, while methods of analysis of data was correlation coefficient matrix analysis that was applied to test the relationship

between variables, and the study used the multiple linear regression analysis to test analysis of variance. Furthermore, we used multiple regression and construct a model to explain variability in the dependent variable. In order to do this, we included the simultaneous and individual influences of several independent variables. Our population regression model was as follow;

Y = b0 + b1X1 + b2X2 + b3X3 + e, Where

Y = performance of building construction projects

X1 = project planning

X2 =project monitoring and control

X3 = project risk management

e= the random error term with a mean of 0 and a variance of s^2

b0, b1, b2 and b3 = are the coefficients, or marginal effects, of the independent, or exogenous variables

9. Findings and Discussion of the Results

Data were collected through questionnaires addressed to 205 respondents; and documents review especially progress of reports of this project in previous years ago. Data obtained, were processed quantitatively using computer

software of SPSS IBM version 23.0. The participation rate was 100.0% of responding the questions, and this helped to continue research with editing, coding, recording, classifying, and tabulating data towards the analysis.

Profile of Respondents

The respondents' profile included by gender, ages, marital status, educational level, and

professional experiences of respondents. The results from respondents' profile are as follows

Table 1: Distribution of respondents by Profession

	Project on schedule	Frequency	Percentage
Valid	Technical staff (engineers, foremen, surveyors, etc.)	122	59.512
	Project management staff	43	20.976
	Client's team	25	12.195
	Other stakeholders (beneficiaries, government	15	7.317
	Bodies, financiers, etc.)		
	Total	205	100.000

Source: Primary data 2022

The results presented in the table 1 are indicating that 59.512% of all questioned respondents were technical staff, 20.976% of all questioned respondents were Project management staff, 12.195% of all questioned respondents were Entrepreneur (client), whereas the rest 7.317% of all questioned respondents were other. Despite the fact that the study was conducted within

people with different professionals in Projects supervised by EAACON Ltd. Profession perceptive also was considered since it is palpable that the percentages representing different profession of people who participate in EAACON Ltd projects are somehow closer to each other.

Table 2: Distribution of respondents by Experience

	Project on schedule	Frequency	Percent
Valid	Less than 2 years	31	15.122
	2-5 years	78	38.049
	5-10 years	65	31.707
	Over 10 years	31	15.122
	Total	205	100.000

Source: Primary data 2022

The results presented in the table 2 are indicating that 15.122% of all questioned respondents were Less than 2 years, 38.049 % of all questioned

respondents were 2-5 years, and 31.707 % of all questioned respondents were 5-10 years, whereas the rest 15.122 % of all questioned

respondents were Over 10 years. Despite the fact that the study was conducted within people of different experience of Projects supervised by EAACON Ltd. Gender perceptive also was considered since it is palpable that the percentages of these workers provided necessary details and most reliable responses.

Table 3: Distribution of respondents on if Project was on schedule

	Project on schedule	Frequency	Percent
Valid	Yes	198	96.585
	No	7	3.415
	Total	205	100.000

Source: Primary data 2022

The results presented in the table 3 are indicating that 96.585 % of all questioned respondents responded Yes whereas the rest 3.415% of all

questioned respondents responded No. This implies that most of projects supervised by EAACON Ltd was on schedule on time.

Table 4: Distribution of respondents by how long has it delayed

	Project on schedule	Frequency	Percent
Valid	Less than 6 months	188	91.707
	6 – 12 Month	16	7.805
	More than 12 months	1	0.488
	Total	205	100.000

Source: Primary data 2022

The results presented in the table 4 are indicating that 91.707 % of all questioned respondents were Less than 6 months, 7.805 % of all questioned respondents were 6-12 Month, whereas the rest 0.488 % of all questioned respondents were More

than 12 months. This implies that projects supervised by EAACON Ltd do not delay for long as most of respondents show that project delayed less than 6 months.

Table 5: Distribution of respondents on if projects were completed above the planned budget

		Frequency	Percent
Valid	Yes	4	1.951
	No	201	98.049
	Total	205	100.000

Source: Primary data 2022

The results presented in the table 5 are indicating that 1.951 % of all questioned respondents responded Yes, 98.049 % of all questioned respondents responded No, this implies that most

of the projects are completed on planned budget which indicates project managers are doing well their jobs as well as management team of EAACON Ltd.

Table 6: Distribution of respondents by how much did go over the budget

		Frequency	Percent
Valid	0% to 20%	2	0.976
	20% to 50%	2	0.976

More than 50%	0	-
Total	4	100.000

Source: Primary data 2022

The results presented in the table 6 are indicating that 0.976 % of all questioned respondents responded 0% to 20%, 0.976 % of all questioned respondents responded 0.976, and 2.0% of all the

statistical results presented above testifies the fact that Projects supervised by EAACON Ltd few projects go over budget at low rate.

Table 7: Distribution of respondents by planned scope

		Frequency	Percent
Valid	Yes	205	100.000
	No	0	-
	Total	205	100.000

Source: Primary data 2022

The results presented in the table 7 are indicating that 100.000% of all questioned respondents have responded Yes, 0 % of all questioned respondents. The statistical results presented

above, testifies that respondents confirmed that projects are well carried out. This implies that most of projects supervised by EAACON Ltd are completed in a planned scope.

Table 8: Distribution of respondents by project completed on planned quality

		Frequency	Percent
Valid	Yes	205	100.000
	No	0	-
	Total	205	100.000

Source: Primary data 2022

The results presented in the table 8 are indicating that 100.000 % of all questioned respondents have confirmed that project completed on

Inferential Results

The study needed to confirm the relationship between independent and dependent variables

planned quality. This implies that management of EAACON Ltd supervise well projects at planned quality which is indicates good quality.

and multiple regression analysis was used for this purpose.

Model Summary

The findings for model summary are as illustrated in Table 9.

Table 9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.899	0.837	0.826	0.082

a. Predictors: (Constant), Project Risk Management, project planning and Project monitoring and control **Source:** Primary Data 2022

Table 9 shows that r=0.899 which implies that the three independent variables have a strong relationship with performance of building construction projects supervised by EAACON Ltd Rwanda. The coefficient of determination

given by R^2 is 0.837, indicating that the three independent variables explain 83.7% of the variations in the Performance of building construction projects supervised by EAACON Ltd.

Correlational Analysis

The study sought to establish the relationship between the study variables. The study results on the relationship between project management practices and project performance were as presented in table

Table 10: Relationship between study variables

		Project Planning	Risk management	Project	Project
		6		monitoring and control	performance
Project Planning	Pearson Correlation Sig. (2-	1			
Risk management	Pearson Correlation	0.407	1		
	Sig. (2- tailed)	0.642			
Project monitoring and	Pearson Correlation	.697	.533	1	
Control	Sig. (2- tailed) Pearson	0.200	0.302		
Project	,	.627**	.523**	. 579**	1
performance	Correlation Sig. (2- tailed)	0.000	0.000	0.000	
	N	205	205	205	205

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

Source: Primary Data 2022

The study results indicated that there was a significant relationship between project planning and project performance (r=0.627, p=0.000). Pearson correlation coefficient of 0.627 showed a strong positive correlation between project planning and project performance. There was a significant relationship between Project Risk Management and project performance (r=0.523, p=0.000). Pearson correlation coefficient of

0.523 showed a weak positive correlation between Project Risk Management and project performance and that there was a significant relationship between Project monitoring and control and project performance (r=0.579, p=0.000). Pearson correlation coefficient of 0.597 showed a strong positive correlation between Project monitoring and control and project performance.

ANOVA Results

The ANOVA was utilized to check the argument that the independent variables (project

management practices) and the dependent variable (performance of building construction projects supervised by EAACON Ltd) are not

significant. The results for ANOVA are

illustrated in Table 11. **Table 11: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	23.039	3	7.680	141.697	$.000^{b}$
1	Residual	10.894	201	0.0542		
	Total	33.933	204			

a. Dependent Variable: Performance of building construction projects supervised by EAACON Ltd b. Predictors: (Constant), Project Risk Management, project planning and Project monitoring and control

Source: Primary Data 2022

The p value is 0.000 that is not greater than p=0.05 thus the model is statistically significant in forecasting how the three project management practices influence performance of building construction projects supervised by EAACON Ltd. The F critical (141.697) at 5% level of

significance was greater than the F calculated (value = 1.52), and p<0.000<0.05 this shows that the overall model was significant in predicting project management practices influencing performance of building construction projects supervised by EAACON Ltd.

Regression Coefficient

The regression model on which the study was based; $Y = \alpha + \beta 1 \ X1 + \beta 2 \ X2 + \beta 3 \ X3 + + \epsilon$ was transformed into $Y = 1.720 + 0.528 \ (RM) + 0.260 \ (PP) +0.234 \ (PM&C) + \epsilon$. The study Y is the dependent variable (Performance of building construction projects supervised by EAACON

Ltd), α = Constant; β 1, β 2, β 3=Beta Coefficients; PRM= Project Risk Management; PP= Project Planning and PM&C= Project monitoring and control. The regression coefficients are as presented in Table 20.

Table 12: Regression Coefficients

Model		ndardized icients	Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
(Constant)	1.720	.413		4.161	.000
Project planning	.260	.096	2.708	2.703	.007
1 Project monitoring and control	.234	.070	3.343	3.321	.009
Project Risk Manag	ement .528	.086	6.139	6.131	.000

Source: Primary Data 2022

At 5% level of significance, all the three project management practices were statistically significant as their p-value is within the recommended thresholds of (p < 0.05). From the findings, positive effect on Projects supervised by EAACON Ltd performance building construction projects were found on all the three project

management practices, that is, Management of Risk project; Project Planning and Project monitoring and control with coefficient of regression values: $\beta 0$ =1.720, $\beta 1$ =0.528, $\beta 2$ =0.260 and $\beta 3$ =0.234 respectively. Project Risk Management had a $\beta 1$ =0.528 and a p=0.000 revealed that there was a positive statistically

significant association amongst management of risks of projects supervised by EAACON Ltd performance of building construction projects.

Project Planning had a $\beta 2$ =0.260 and a p=0.007 showed that Project Planning and performance of building construction projects supervised by EAACON Ltd have a positive and statistically significant relationship between.

Conclusions

The study concluded that clearly setting roles and responsibilities for the project team improves the performance of building construction projects in Rwanda. The success of any project is highly influenced by the project team tasked with delivering it. Even the best-planned projects may fail to meet their objectives if the project team does not perform to the best of their ability. The effective development and integration of the project team is essential in the success of a project, as it is the project team who will be responsible for the delivery of the scope throughout the project life cycle.

The study also concluded that the proper allocation of project equipment facilitates smooth operations and successful project completion. Proper allocation of resources ensures no project activity stalls due to lack of equipment and facilities; hence the project undertaken can be completed within the shortest time and as scheduled.

Recommendations

The study recommended the following things. Stakeholders' needs should be clearly assessed and analyzed by project managers, supervisors,

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Project Monitoring and control had a $\beta 3 = 0.234$ and p=.009 indicated that there was a positive statistically significant relationship between monitoring and evaluation and performance of building construction projects supervised by EAACON Ltd.

and contractors to ensure the project's success. This can be accomplished by include the needs and opinions of stakeholders in the overall project planning procedure. The project team uses the needs assessment information to engage stakeholders and to develop and carry out project communications.

As far as resource scheduling is concerned, to increase the performance of the project, project managers, contractors, and supervisors should make sure they clearly define roles for the individuals, teams, tasks, or departments. It is essential to the entire team system that everyone understands the methods and follows them. The position in the team comes with a set of duties that each team member must accept.

We have observed individuals, then teams, advance toward cohesion and effectiveness when the project manager addresses team duties promptly and consistently. Ultimately, improving team effectiveness will improve project performance. The study further recommended that project managers should ensure that there are effective measures to manage information since this will contribute to the overall project performance and success of building construction projects in Rwanda.

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