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Abstract

In several of Rwanda's key industries, including construction, there is a chronic lack of qualified project consultants. In most cases, the owner of a building project places his trust in the words of the contract agreements between himself and the builders or project contractors. The general objective of this research assessed the relationship between project consultants and performance of construction projects in Rwanda. This study had the following specific objectives: to find out the relationship between cost management consultancy and performance of Rwanda Urban Development Project I, examine the relationship between scope management consultancy and performance of Rwanda Urban Development Project I, determine the relationship between risk management consultancy and performance of Rwanda Urban Development Project I and analyze the relationship between stakeholders participation consultancy and performance of Rwanda Urban Development Project I. The survey design collected data via the use of questionnaires, while the correlational approach investigates the connection between the variables under consideration analyzed quantitatively and qualitatively. Target population of this study was 138 staff of Rwanda Urban Development Project in City of Kigali, Huye, Muhanga, Musanze, Nyagatare, Rubavu, Nyagatare and Rusizi District. Sample size was determined by the help of Solvin's formula. For this study, 103 Questionnaires used to collect quantitative and qualitative data related on Rwanda Urban Development Project I. To analyze the data gathered, the researcher used Statistical Package for Social Sciences (SPSS) statistical methodology. The correlation coefficient (R) of 0.858 indicates a strong positive relationship between the combined consultancy factors (Stakeholders Participation, Scope Management, Risk Management, and Cost Management) and project performance. The coefficient of determination (R squared) at 0.736 suggests that approximately 73.6% of the variability in project performance can be explained by the variation in these combined consultancy factors. This highlights the significant influence of these consultancies on enhancing project outcomes. To enhance the

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relationship between cost management consultancy and project performance in Rwanda Urban Development Project I, it is recommended to implement robust cost estimation techniques, regularly monitor budget variances, and employ advanced cost forecasting models.

Keywords: *Project Consultants, Cost Management, Scope Management, Risk Management, Stakeholders Participation and Project Performance*

1. Introduction

In several of Rwanda's key industries, including construction, there is a chronic lack of qualified project consultants. In most cases, the owner of a building project places his trust in the words of the contract agreements between himself and the builders or project contractors. However, the builders and project contractors often deviate from the client's objectives and really accomplish more. Lack of a qualified consultant on a construction project can lead to disastrous outcomes, including wasted time and money due to mistakes in planning and execution, poor quality of the finished product, legal disputes, and even the loss of life on the job. In only one area of Rwanda, 65.7% of public building projects were behind schedule between 2012 and 2015. Another facility that was supposed to open in 2011 but didn't open until 2016 is Kigali's convention center. Another example is the delayed opening of Bugesera International Airport, which was intended to be finished in 2016 (Ndundo and Mbabazi, 2016). An investigation on the causes of building project delays in Rwanda was conducted. A statistical examination of 15 commercial construction projects completed between 2010 and 2020 shows that not a single one of them was on time. Chandu and Bhalerao (2016) found that 15% of these projects were scrapped and 75% needed more time to finish.

According to Rwanda Urban Development Project (2021) reported that 60% of Rwanda's urban dwellings were located in informal neighborhoods that lacked access to basic services, including paved roads, public transportation, running water, electricity, and sanitary facilities. The Bank's Poverty Assessment indicated that people in metropolitan regions who lived in areas with weak infrastructure were more likely to be poor. While the majority of the poor lived in the countryside, we also saw rates of poverty in secondary towns ranging from 37% in Nyagatare to 19.8% in Muhanga, with the lowest rates seen in the CoK (16.8%). Large portions of the population in all of the cities were located in squatter communities that lacked proper planning and were often located in vulnerable regions that were susceptible to floods because of the country's rugged terrain. In Musanze, 37% of the population lived in informal settlements, whereas in Huye, that number was just 14%.

There is the limited focus on the impact of project consultants on project performance in developing countries. While some studies have explored the role of project consultants in developed countries, such as the United States and the United Kingdom, there is a lack of research on the role of project consultants in developing countries. This research contributed to a better understanding of the role of project consultants and their impact on project performance in Rwanda, which was crucial in enhancing project management practices and ensuring the success of projects in different contexts.

1.2 Objectives of the Study

The general objective of this research was to assess the relationship between project consultants and performance of construction projects in Rwanda.

This study had the following specific objectives:

- i. To find out the relationship between cost management consultancy and performance of Rwanda Urban Development Project I.
- ii. To examine the relationship between scope management consultancy and performance of Rwanda Urban Development Project I.
- iii. To determine the relationship between risk management consultancy and performance of Rwanda Urban Development Project I.
- iv. To analyze the relationship between stakeholders' participation consultancy and performance of Rwanda Urban Development Project I.

1.3 Research hypotheses

The followings are the hypotheses of the study formulated based on research objectives:

- i. **H0a:** There is no significant relationship between cost management consultancy and performance of Rwanda Urban Development Project I.
- ii. **H0b:** Scope management consultancy has no significant relationship with performance of Rwanda Urban Development Project I.
- iii. **H0c:** There is no significant relationship between risk management consultancy and performance of Rwanda Urban Development Project I.
- iv. **H0d:** Stakeholders participation consultancy has no significant relationship with performance of Rwanda Urban Development Project I.

2. Literature review

2.1. Theoretical review

For this study, theoretical review is a thorough look at and evaluation of the existing theories and ideas about the topic under study. It is the process of systematically analyzing and putting together information from different sources in order to get a full picture of issue.

Stakeholder theory

Stakeholder theory was initially developed in 1984 by Edward Freeman. Freeman stated that corporations should not just concentrate on increasing shareholder profit but also on the interests and requirements of other stakeholders. Several researchers and practitioners expanded on the notion of stakeholder theory, such as Thomas Donaldson, who stressed the ethical and moral components of stakeholder theory, and Archie Carroll, who offered a framework of corporate social responsibility that included stakeholder theory (Freeman *et al.*, 2020).

As the researcher aims to conduct a study on projects and want to provide suggestions to show the role of projects consultants, their contributions, their recommendations and their reputation found the stakeholder theory to be a useful framework. By taking a stakeholder-focused approach, researcher ensured that project outcomes align with the needs and expectations of consultants, leading to more successful projects and increased beneficiaries satisfaction.

Goal setting theory

The goal-setting theory was first introduced by Edwin Locke and Gary Latham in 1968. Since then, the theory has been widely studied and applied in various fields, including business, education, sports, and personal development. According to Locke and Latham, goals should be explicit, quantifiable, achievable, relevant, and time-bound. They also stated that feedback and support from supervisors and coworkers might assist people in meeting their objectives and improving their performance (Latham & Locke, 2019).

The goal-setting theory helped this research, which aims to improve project performance and get better results, by giving it a framework. The idea helped make sure that everyone involved in a project is working toward the same goals and that resources are used in the best way possible by setting clear goals, creating motivation and commitment, and encouraging responsibility and ownership.

Theory of change

The Theory of Change (ToC) is a management and planning approach that describes how change happens and what actions are needed to achieve specific goals. The origins of the Theory of Change are difficult to trace, but it is believed to have been first used in the 1960s by the social science community in the United States. In recent years, the Theory of Change has gained popularity as a planning and evaluation tool in the fields of international development, social innovation, and philanthropy. The ToC approach helps organizations and communities to clarify their goals, identify the necessary steps to achieve them, and measure progress towards their desired outcomes (Connell et al., 2020)

In this study, the Theory of Change (ToC) used to help plan, carry out, and evaluate projects. The ToC method is especially useful for big, complicated projects where it is important to know what changes are happening and why, as well as how they are happening. The ToC method helped project managers get a better understanding of the environment in which their projects run and come up with strategies that are more in line with the results and goals of the project.

2.3 Conceptual framework

A conceptual framework is used to map out the important ideas, variables, and relationships in this investigation. In other words, a conceptual framework is a strategy for organizing concepts in order to achieve a set of research objectives.

Independent Variable

Project consultants' services

- Cost management consultancy**
- Resource planning
 - Cost estimation
 - Cost budgeting
 - Cost control

- Scope management consultancy**
- Collect requirements
 - Create work breakdown structure
 - Assign responsibilities
 - Scope control

- Risk management consultancy**
- Identifying risks
 - Analyze risks
 - Prioritize risks and response
 - Risks monitoring

- Stakeholder's participation consultancy**
- Stakeholders in project identification
 - Stakeholders in decision making
 - Stakeholders in monitoring
 - Stakeholders in project funding

Dependent Variable

- Project performance**
- Efficiency
 - Effectiveness
 - Timeliness

- Intervening variables**
- Government Policies
 - Organization culture

Source: Researcher conceptualization, 2023

Figure 1: Conceptual framework

3. Research methodology

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 (Creswell & Creswell, 2014) . The survey design was correlational approach investigates the connection between the variables under consideration analyzed quantitatively and qualitatively.

According to Saunders *et al.*, (2019) the target population is the group of people or things that the researcher wants to learn more about. It is the group that the researcher wants to draw conclusions about based on the data collected in the study. To make sure that the group of interest can use the results of the study, the target population should be defined in a clear and specific way. Target population of this study was 138 staff of Rwanda Urban Development Project in City of Kigali, Huye, Muhanga, Musanze, Nyagatare, Rubavu, Nyagatare and Rusizi District.

Sample design is the process of choosing some people or things from the target population to use in a research study. The goal of sample design is to make sure that the sample is a good representation of the population being studied so that the results of the study can be applied to the whole population. The Solvin formula used to calculate the sample size since it provides a simple technique for doing so. Cluster sampling involved selecting groups, or clusters, of participants from the population. The clusters were chosen based on 103 staff position with Rwanda Urban Development Project in City of Kigali, Huye, Muhanga, Musanze, Nyagatare, Rubavu, Nyagatare and Rusizi District.

To make sure the investigation is done right, exact questions used to study each goal. The following tools used to collect data for the study: a questionnaire and documentation research. To analyze the data gathered, the researcher used Statistical Package for Social Sciences (SPSS) statistical methodology. The researcher used a descriptive and correlational technique in this study.

4. Research findings

This section of the chapter primarily focused on the outcomes of the study and the analysis of gathered data. The results, along with discussions related to the research objectives, were presented using descriptive measures like percentages, means, and standard deviations, as well as inferential methods such as regression and correlation analyses. These analyses were facilitated through the utilization of the Statistical Package for Social Sciences (SPSS). The survey comprised a sample size of 103 participants, with all distributed questionnaires being successfully completed and returned by the respondents.

Table 1: Correlations matrix

		Cost management consultancy	Scope management consultancy	Risk management consultancy	Stakeholders participation consultancy	Performance of Rwanda Urban Development Project
Cost management consultancy	Pearson Correlation	1	.645**	.691**	.971**	.739**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	103	103	103	103	103
Scope management consultancy	Pearson Correlation	.645**	1	.756**	.593**	.774**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	103	103	103	103	103
Risk management consultancy	Pearson Correlation	.691**	.756**	1	.644**	.783**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	103	103	103	103	103
Stakeholders participation consultancy	Pearson Correlation	.971**	.593**	.644**	1	.710**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	103	103	103	103	103
Performance of Rwanda Urban Development Project	Pearson Correlation	.739**	.774**	.783**	.710**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	103	103	103	103	103

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

Table 1 presents the correlation matrix, which reveals the relationships among various factors in the Rwanda Urban Development Project I. The correlation between cost management consultancy and performance of the project is 0.739, which suggests a strong positive relationship between effective cost management and overall project success. The correlation between scope management consultancy and performance of the Rwanda Urban Development Project I is quite notable. The Pearson Correlation coefficient for these two variables is 0.774, indicating a strong and positive relationship between effective scope management consultancy and the overall performance of the project.

The correlation between risk management consultancy and project performance is 0.783, implying that a strategic approach to risk management can contribute to favorable project outcomes. Stakeholders' participation consultancy exhibits high correlations with various factors. The correlation between stakeholders' participation consultancy and project performance is notably strong at 0.710. This suggests that meaningful engagement of stakeholders in decision-making processes has a positive impact on the overall success of the project.

The findings supported by the study by Matu *et al.* (2020) highlights that stakeholder participation in the design phase of urban road transport infrastructure projects strongly

influences their likelihood of completion ($r = 0.838$, $R^2 = 0.703$, $F(4, 209) = 123.43$, $p < 0.001$). This underlines the crucial impact of involving stakeholders in project planning to enhance project success. The findings emphasize the need for meaningful stakeholder engagement in decision-making processes to increase the likelihood of achieving project goals. The correlations highlight strong connections between these factors and project performance. These findings underscore the need for strategic consultancy integration throughout project lifecycles to achieve optimal results.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.858 ^a	.736	.726	7.66658

a. Predictors: (Constant), Stakeholders Participation Consultancy, Scope Management Consultancy, Risk Management Consultancy, Cost Management Consultancy

Table 2 shows the model summary for the relationship between various consultancy factors (Stakeholders Participation, Scope Management, Risk Management, and Cost Management) and their combined impact on project performance. The correlation coefficient (R) of 0.858 indicates a strong positive relationship between the combined consultancy factors (Stakeholders Participation, Scope Management, Risk Management, and Cost Management) and project performance. The coefficient of determination (R squared) at 0.736 suggests that approximately 73.6% of the variability in project performance can be explained by the variation in these combined consultancy factors. This highlights the significant influence of these consultancies on enhancing project outcomes.

The findings are in line with the study by Heravi, Coffey, and Trigunarysyah (2014) highlighted the role of stakeholder participation in the success of urban road transport infrastructure projects. The findings underscore the significant role that comprehensive consultancy practices play in shaping project performance outcomes. The strong correlation and notable R squared value suggest that a well-rounded approach to consultancy factors can greatly contribute to achieving successful project outcomes in terms of time, budget, quality, stakeholder satisfaction, and overall project objectives.

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	16098.338	4	4024.585	68.473	.000 ^b
1	Residual	5760.089	98	58.776		
	Total	21858.427	102			

a. Dependent Variable: Performance of Rwanda Urban Development Project

b. Predictors: (Constant), Stakeholders Participation Consultancy, Scope Management Consultancy, Risk Management Consultancy, Cost Management Consultancy

The significant ANOVA results (Table 3) point to a strong link between the predictor variables (Stakeholders Participation Consultancy, Scope Management Consultancy, Risk Management Consultancy, Cost Management Consultancy) and the dependent variable (Performance of Rwanda Urban Development Project). This implies that the combined impact of these consultancy factors significantly influences project performance. The substantial F-value (68.473, $p < 0.05$) demonstrates that the model's variables collectively contribute to explaining variations in project performance. Consequently, it's evident that a comprehensive consultancy approach can play a crucial role in shaping positive outcomes in the Rwanda Urban Development Project. The results are in line with the study of Matu *et al.* (2020) highlight the significance of stakeholder participation in project planning, which aligns with the Stakeholders Participation Consultancy variable in this study. These insights mirror the statistically significant relationship between the predictor variables (including Stakeholders Participation Consultancy) and project performance. Therefore, the study's results align with prior research, affirming the pivotal role of consultancy strategies in fostering favorable project performance in the context of Rwanda's urban development projects.

5. Conclusion

The general objective of this research was to assess the relationship between project consultants and the performance of construction projects in Rwanda. This study had the following specific objectives: to find out the relationship between cost management consultancy and performance of Rwanda Urban Development Project I, examine the relationship between scope management consultancy and performance of Rwanda Urban Development Project I, determine the relationship between risk management consultancy and performance of Rwanda Urban Development Project I and analyze the relationship between stakeholders participation consultancy and performance of Rwanda Urban Development Project I. all objectives were achieved and null hypotheses were rejected.

6. Recommendations

To enhance the relationship between cost management consultancy and project performance in Rwanda Urban Development Project I, it is recommended to implement robust cost estimation techniques, regularly monitor budget variances, and employ advanced cost forecasting models.

To strengthen the relationship between scope management consultancy and project performance, emphasis should be placed on comprehensive scope definition, stakeholder alignment, and continuous monitoring.

To optimize the relationship between stakeholders' participation consultancy and project performance, prioritize engagement and collaboration from project inception. Conduct thorough stakeholder analysis to identify key participants and tailor engagement strategies to their preferences.

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