Effect of Stakeholders Management Practices on Performance of Construction Projects in Rwanda

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Abstract: *The purpose of this research was to examine the effects of the Stakeholders Management practices on performance of construction projects in Rwanda because many international investment and delivery projects still have strikingly poor performance records in terms of economy, environment and public support due to poor stakeholders relationship management. The researcher used of three specific objectives namely; to examine the effect of stakeholders Contract Management practices on performance of Kigali-Gatuna Road Rehabilitation Project; to establish the effect of stakeholders Communication Management practices on performance of Kigali-Gatuna Road Rehabilitation Project and to assess the effect of stakeholders Conflict Management practices on performance of Kigali - Gatuna Road Rehabilitation Project. The researcher reviewed both theoretical and empirical literature on the effect of Stakeholders Management practices on performance of construction projects. The researcher used descriptive research method based on qualitative and quantitative approach in order to get a better analysis of the study. Both primary and secondary sources with their relevant tools like questionnaire and documentary analysis were utilized in order to come up with required data. The data was organized, coded then analyzed using Statistical Package for Social Science (SPSS version 23). Regression analysis was used to establish relationship between the two variables. The findings established that stakeholder's management had a positive effect on performance of Kigali - Gatuna road rehabilitation project. The results indicated that all variables (contract management practices, Communication Management practices and Conflict management practices) had a positive relationship with project performance and predicted 57.8% of Kigali - Gatuna Road rehabilitation project performance. The remaining 42.2% may be explained by other factors beyond this research which may be suggested as further research.*

Keywords: Stakeholder management, Contract management, communication management, conflict management, Performance of construction projects

1. Introduction

Stakeholder management involves process and control that must be planned and guided by underlying principles. The advantage of stakeholder management include eliminating conflicting interests among stakeholders, reducing the pressure of management to produce short-term results, reducing the cost associated with a high turn-over among stakeholders and providing the firm with committed stakeholders in an environment characterized by increasing competition (Aaltonen et al., 2008). Different stakeholders will want very different outcomes from projects. A vital part of stakeholder management is managing these competing expectations from the initial phase through to final implementation; Stakeholder priorities have a tendency to change during the programme and project lifecycle and as such compounds the challenge; Managing stakeholders represents a major political challenge to all programme and project managers (Neil, 2011). Researchers described project stakeholder management as a process in which project team facilitates the needs of stakeholders to identify, discuss, agree, and contribute to achieve their objectives (Rowlinson& Cheung, 2008). Therefore knowing the stakeholders and their characteristics relative to the project is an important step in stakeholder management but this can only be achieved through an adequate definition of stakeholders. From a practical point of view, Stakeholder management allows the project leaders to create factors that lead to the effective participation of stakeholders in the project and consequently allow the leaders to reap the benefits of the engagement of the stakeholders with regard to obtaining resources and using their influence (Purvis et al., 2014). Therefore without effective stakeholder management,

construction project with many stakeholders can't succeed. The focus of construction project management over the years has been on the processes leading to the effective planning and management of the complex series of activities involved in delivering successful projects.

Therefore, in order to achieve project success and in line with the current perception of construction project success, it is important to engage/manage stakeholders effectively in the course of carrying out the project. The question however, still remains of how effective stakeholder management can be carried out in construction projects. The following have been identified to be among the causes of project failure, such as a poor definition of the objectives, an inadequate project schedule, too much uncontrolled change, insufficient control, a lack of resources, ineffective communication, an unclear role of the participants, a lack of top management support, too many teams focusing on technical solutions and neglecting the people (Young & Jordan, 2008). Most of these could be associated with either uninformed or ineffective stakeholder management on the project; for instance, the early involvement and considerations of the interests of stakeholders is vital to being able to clearly define and set out the project scope and goals which could also help to avert negative community reaction to the project (Chinyio and Akintoye, 2008). Mere involvement of these key stakeholders is however, not a guarantee for achieving a successful project; it also needs to be properly done. Furthermore, the success or failure of a project is influenced very strongly by the expectations and perceptions of the stakeholders involved on the project and failure to balance and or address the concerns of the

stakeholders has resulted in many projects failing (Bourne, 2005; Chinyio, 2010).

2. Statement of the Problem

As open systems, international projects are subject to the impacts of a wider socio-political environment and the demands and pressures stemming from external stakeholders such as community groups, local residents, landowners, environmentalists, regulatory agencies, local and national governments (Floricel and Miller, 2001; Morris; Winch and Bonke, 2002). Winch (2004), also argues that such stakeholders are actors in the project's environment that are not formal members of the project coalition but may affect or be affected by the project, hence, understanding and managing external stakeholders' demands in the project decision making is of utmost importance in order to ensure the success of an international project (Olander and Landin, 2005, IFC, 2007).

A report by IFC (2007), singled out, a lack of understanding of the various interest groups, the drivers of their actions and their influence potential during the project lifecycle on the part of management, as a major challenge in international projects in terms of time schedule of project delivery, budget line and quality of the project since some of the project stakeholders may not be satisfied. This implies that stakeholders may disagree on some key project milestones and actions hence affecting project delivery as the project may lag behind the schedule, delivered outside the initial project architectural plan and budget line. It is in this regard that the researcher is prompted to analyze the effect of stakeholder management on performance of Kigali - Gatuna Road Rehabilitation Project as an international project.

3. Objectives of the Study

The main objective of the study was to examine the effect of Stakeholder Management practices on performance of construction projects in Rwanda.

The study was anchored 3 specific objectives:

1. To examine the effect of stakeholder Contract Management practices on performance of Kigali - Gatuna Road Rehabilitation Project
2. To establish the effect of stakeholder Communication Management practices on performance of Kigali - Gatuna Road Rehabilitation Project
3. To assess the effect of stakeholder Conflict Management practices on performance of Kigali - Gatuna Road Rehabilitation Project

4. Conceptual Framework of the Study
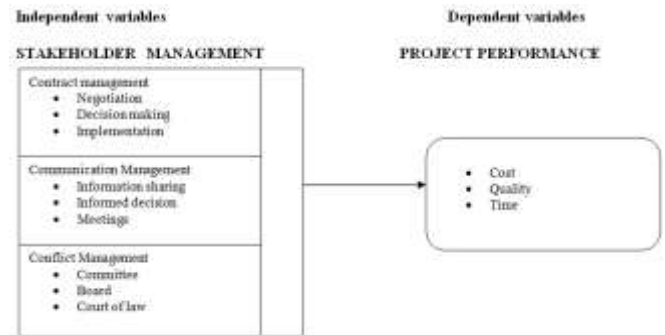
Figure 1: Conceptual Framework

5. Methodology

- **Research Design**: The researcher used descriptive research design
- **Target Population**: The target population of the study was drawn from 143 project members including different stakeholder representatives.
- **Sample Size:** Since the population was quite small in number; the researcher preferred to adopt a census where all target population has been used as sample.
- **Data Collection Instruments:** The survey questionnaires were used as the main data collecting instrument, and the secondary data were gathered from books, research articles and appropriate websites that are relevant to this study
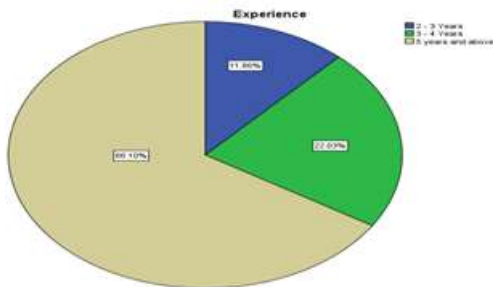
6. Research Findings

1.1 Profile of Respondents by Education
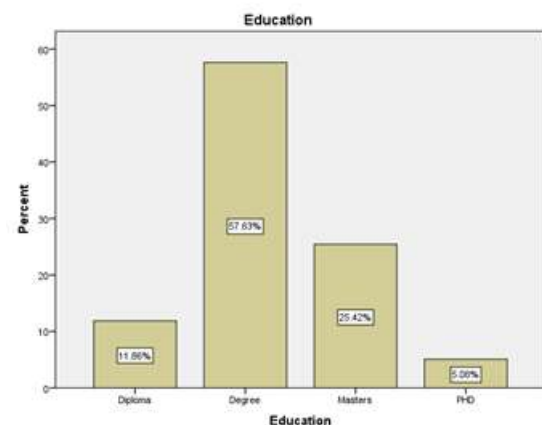
Figure 2: Educational level of the respondents

Presentation on educational background shows that, 57.63% degree, 25.42% masters, 11.86% diploma and 5.08% PhD. This implies that the respondents are able to comprehend and intelligently respond to the questions asked.

Figure 3: Experience level of the Respondents

Presentation on employees experience shows that, 66.10% of the respondents had experience of 5 years and above, 22.03% had experience of between 4 – 5 years and 11.86% experience 2 -3 years. This implies that the respondents are experienced with construction project and the information they gave can be relied on.

6.2 Descriptive Statistics per variables

The table below summarizes how respondents rated answers for every variable. Therefore, based on descriptive statistics results, this indicates that respondents strongly agree with statements made according to the variables.

Table 1: Descriptive Statistics per variable

	N	Minimum	Maximum	Mean	Std. Deviation
Contract_management	143	2.00	5.00	4.0559	.67944
Communication_management	143	3.00	5.00	4.4336	.62303
Conflict_management	143	1.00	5.00	3.9580	.76797
Project_performance	143	4.00	5.00	4.7413	.43948
Valid N (listwise)	143				

6.3. Presentation of inferential statistics

6.3.1   Correlations analysis

In order to assess whether it exists a relationship between variables or interdependence the Pearson correlation coefficient has been processed and results are shown in the following table.

Table 2: Pearson correlation coefficients

		Contract_management	Communication_management	Conflict_management	Project_performance
Contract_management	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	143			
Communication_management	Pearson Correlation	.159	1		
	Sig. (2-tailed)	.059			
	N	143	143		
Conflict_management	Pearson Correlation	.220	.244	1	
	Sig. (2-tailed)	.053	.003		
	N	143	143	143	
Project_performance	Pearson Correlation	.520[**]	.515[**]	.531[**]	1
	Sig. (2-tailed)	.000	.000	.000	
	N	143	143	143	143

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

Table 2 shows that there is a moderate positive correlation between independent variables and dependent variable at 0.01 level of significance. The Pearson correlation coefficient between contract management and project performance is .520; this means that those two variables vary in the same direction which means that if the contract management is enhanced, the project performance increases. This is the case also between Communication management and Project performance (r=.515) and between conflict management and project performance (r=.531). In order to appreciate this relationship quantitatively, regression analysis has been carried out.

6.3.2 Regression Analysis

Table 3: Coefficient of determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.761[a]	.578	.569	.28840

a. Predictors: (Constant), Conflict_management, Contract_management, Communication_management

The Table 3 shows the value of coefficient of determination (R Square) which is equal to .578; this implies that 57.8% of the variation in project performance is due to stakeholder's management. In order to assess whether the model is significant or not it has been necessary to compute the prob(F) or p-value and for this end the analysis of variance (ANOVA) was computed and results are shown in next Table 4.

Table 4: Analysis of variance (ANOVA)

ANOVA[b]					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	15.865	3	5.288	63.579	.000[a]
Residual	11.562	139	.083		
Total	27.427	142			
a. Predictors: (Constant), Conflict_management, Contract_management, Communication_management					
b. Dependent Variable: Project_performance					

The table 4shows that p-value for the overall model was ($p = 0.000$), which was much less than the level of significance of 0.05. This implies that there is almost zero chances over one thousand that the model as a whole can be removed from predictors without affecting the road construction project performance.

This indicated that there was a statistically significant effect of stakeholders management on Project performance in Rwanda. In order to know the contribution of each independent variable to the prediction of road construction project performance, the following Table 5 shows the coefficients of the model.

Table 5: Regression coefficients

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.778	.220		8.080	.000
Contract_management	.248	.037	.384	6.753	.000
Communication_management	.259	.040	.368	6.431	.000
Conflict_management	.204	.033	.357	6.165	.000
a. Dependent Variable: Project_performance					

The table 6 helped in appreciating the statistical effect of independent variables on dependent variable. The multivariate regression model used was: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$ and this table gave the β_i coefficients or regression coefficients which show the contribution of each variable in prediction. Thus the model become $Y = 1.778 + 0.248X_1 + 0.259X_2 + 0.204X_3 + 0.28840$. The results indicate that if contract management is increased by one unit, the road construction project performance will increase by 0.248 units while other variables remain constant. The change in communication management by one unit will increase the change in road construction project performance by 0.259 units if other variables remain constant. On the other hand if all other variable are constant, the change of one unit in conflict management enhance the road construction project by 0.204 units. The P-value of 0.000 (< 0.05) has been noticed for all variables which indicate that their effect is statistically significant at 5 %. This means that none of these variables could be omitted in the model without affecting deeply its accuracy in terms of predicting road construction project performance in Rwanda.

7. Discussions

7.1 Contract management and road construction project performance

The correlation analysis showed that the Pearson correlation coefficient between contract management and project performance is 0.520. This means that there was a moderate positive relationship between contract management and project performance at a significance level of 0.01. The unstandardized coefficient (β_1) of contract performance was 0.248 which means that if there is an increase of one unit in contract performance, this will cause the road construction project performance to increase by 0.248 if other variables remain constant. The fact that the p-value of contract management is almost zero (.000); the value that is very less than the significance level of 0.05, implies that there is almost zero chance in 1000 that the term of the regression equation which contains the variable contract management could be zero or eliminated from the regression equation without affecting the accuracy of the regression. In other words contract management is very important to road construction project performance. This finding agrees with Ssebanakitta (2013), who stated that the road construction projects in Uganda fails when administration loses focus

on contract administration activities. On the other hand Oluka and Basheka (2013) concluded that to ensure that contract management successfully takes the right course, all the parties involved must pay keen attention to all provisions in the given or existing contract.

7.2 Communication management and road construction project performance

The Pearson correlation coefficient between communication and road construction project performance at 0.01 level of significance was 0.515. This means that those two variables vary in the same direction which means that if the communication management is enhanced, the project performance increases too. Further the regression analysis quantified the importance of this relationship by showing that when communication management is increased by 1 unit the road construction project performance increases by 0.259 units while other variables kept constant. The p-value of this variable which equal to 0.000 showed the importance of this communication management in road construction project performance. These findings agreed with those of Emmitt & Gorse (2003) who stated that all the various stages of construction rely on professionals transferring appropriate and relevant information to develop a buildable design that meets the client's requirements. They concord also with the findings of OLANIRAN (2015), whose studies have established that lack of proper communication between the consultants and contractors has a significant impact on project success.

7.3 Conflict management and road construction project performance

The Pearson correlation coefficient of 0.531 at 0.01 significance level confirms the existence of positive relationship between conflict management and road construction project performance. This relationship has been appreciated by regression analysis which showed regression coefficient of 0.204 which means that an increase of one unit in conflict management causes the road construction project performance to increase by 0.204 units if other parameters are kept constant. The Prob(t) or p-value was 0.000 which is very significant if we compare it with the significant level of 0.05. This means that conflict management is also a crucial factor to road construction project performance. These results agrees with those of Ogunlana & Mahato (2011) who founded that to achieve positive results the project manager must manage conflict in the construction industry as a dynamic situation that is intricate and the sector has a rate of change that is not constant but continuous between different parties.

8. Conclusions and Recommendations of the study

8.1 Conclusions

Based on the findings, stakeholder's management had a positive effect on performance of Kigali - Gatuna road rehabilitation project. The results indicated that contract management practices had a relationship with project performance. The finding also showed that Communication Management practices had effect on performance of the Kigali - Gatuna road rehabilitation project. The results indicated that Communication Management practices had a positive relationship with road rehabilitation project performance. The results indicated that Conflict management practices had a positive relationship with road rehabilitation project performance. The regression equation established that taking all variables into account (Contract management practices, communication management practices and Conflict management practices) predicted 57.8% of Kigali - Gatuna Road rehabilitation project performance. The remaining 42.2% may be explained by other factors beyond this research which may be suggested as further research.

8.2 Recommendations

The researcher has identified the following recommendations in order to promote the performance of government projects:

There should be effective planning by consulting all the stakeholders in the project. The stakeholders comprise of the project financiers who give assurance on the source of funds, skilled and competent implementers, environmental factors, political factors and many others so that planning of the project is effectively done. There should be effective communication so that the stakeholders feel that they are not left out of the project activities. The stakeholders especially the government should involve competent legal team and experts to design the project contract for effective contract administration and management.

8.3 Suggestions for further research

The following areas were suggested for further studies;

1. The effect of effect of community involvement on project performance in Rwanda,
2. The effect of communication strategies on efficiency of Governments project in Rwanda.

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