INFLUENCE OF STAKEHOLDERS' PARTICIPATION ON PERORMANCE OF ROAD PROJECTS AT KENYA NATIONAL HIGHWAYS AUTHORITY

Fred Obare Nyandika

Karanja Ngugi

Jomo Kenyatta University of Agriculture and Technology

Kenyatta University Department of Accounting and Finance

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ABSTRACT

In Kenya, the number of public roads construction projects is increasing from time to time. However, it becomes difficult to complete projects in the allocated cost budget. Taking into account the scarce financial resources of the country, cost overrun is one of the major problems in Kenya. KeNHA has been experiencing cost overruns in its Road projects over the years. The purpose of this study was to investigate the influence of stakeholders' participation in performance of road projects in KeNHA. Further, the study sought to determine the influence of user involvement, technology, top management support and resources on stakeholders' participation in performance of road projects in KeNHA. This study used descriptive research design. The study used both qualitative and quantitative methods. The target population for this study was 251, Prequalified Contractors (NCA1 to 3), KeNHA Top management (Job group 7-10) and prequalified consultants. This study used a stratified random sampling to select 30% of the target population. The sample size of this study was therefore 75 respondents. Structured questionnaires were used in this study to collect data. Qualitative data was analysed by use of content analysis presented in a prose form. On the other hand, Quantitative data was analysed by use of Statistical Package for Social Sciences (SPSS) version 21. In addition, descriptive and inferential statistics was used in this study. Data was then presented in graphs and tables. Further, a multiple regression analysis was used to establish the relationship between the dependent and the independent variables. The study also used T-test analysis of variance and F-test to test the relationship of the variables. The study found that awareness, feasibility, conferences and seminars in user involvement have a great positive influence in road projects performance. In

addition, IT skills, computer aided designs, use of intranet and internet and IT policies were found to influence the performance of road projects to a great extent. Top management support was found critical in overseeing funding approvals, good will/commitment, participation and approval of projects which influence positively to road projects performance in KeNHA. The study also revealed that enough financial resource, donor support, availability of human resource and provision of resources on time influence positively to the performance of road projects. The study recommends that KeNHA need to ensure stakeholders' involvement in order to improve its performance in road projects.

Keywords: *Influence of Stakeholders' Participation on Performance of Road Projects.*

Introduction

The existence of good and well-functioning road network is vital for economic growth, poverty reduction, and wealth and employment creation. Thus the Ministry of Roads plays an important role in the attainment of "Kenya vision 2030" goals, Millennium Development Goals (MDGs) and Kenya's Economic Recovery Strategy for wealth and Employment Creation Strategy (ERS) through the provision of basic infrastructure facilities to the public by developing, maintaining, rehabilitating and managing of road networks in the country (Mbaabu, 2012).

The infrastructure has been given the highest priority to ensure that the main road projects under the economic pillar are implemented, according to the Ministry of Roads Service Charter (2008), there is a need for improvement of roads to a motorable condition because the road transport (mode of transport) carries about 80% of all cargoes and passengers in the country. Due to the importance of roads in socio-economic development of the country, the government has in the recent past steadily increased budget allocation to the road sub-sector. However, road projects in Kenya have been facing various challenges, which include delay in completion, cost overruns, demolition of residential and businesses houses and abortive works (Maina, 2013).

Stakeholders' involvement is paramount in development projects. Even though, minor decisions and emergency situations are generally not appropriate for stakeholder participation, a complex situation with far-reaching impacts warrant stakeholder involvement and when done proactively, rather than in response to a problem, helps to avoid problems in the future (Maina, 2013). The focus of public participation is usually to share information with, and gather input from,

members of the public who may have an interest in a project. The Constitution of Kenya 2010 gives citizen the right to take part in activities that have a direct bearing on their lives (Mbaabu, 2012).

Statement of the Problem

Inevitably, governments are the biggest "spenders" world-wide (World Bank, 2007). The figure, varies from country to country, but according to various sources (for example Knight *et al.*, 2011a) government spending on public services accounts for anywhere between 15-45% of GDP. The sheer amount of this spending has a huge impact on the economy.

According to Kenya Roads Board (KRB) report, Kenya National Highways Authority is annually allocated approximately 30% of the total fund allocated to the ministry of roads. Many projects experience cost overrun and thereby exceed initial contract amount. In Kenya, the number of public roads construction projects is increasing from time to time. However, it becomes difficult to complete projects in the allocated cost budget. Taking into account the scarce financial resources of the country, cost overrun is one of the major problems in Kenya. Statistics from the republic of Kenya report show that KeNHA has been experiencing cost overruns in its Roads projects. For instance, in the construction of Thika Super Highway, the cost escalated from 26.44 billion to 34.45 billion (World Bank, 2014). In addition, the initial deadline of the Thika super highway project was July 2011, which was later revised to July 2013. Further, the sewerage system in Lot1-RD 0530 of Thika superhighway project was changed after the construction of the road.

Data from Republic of Kenya report show that cost overruns lead to stagnation of economic development and the realization of the vision 2030 (RoK, 2014). Oakley (2013) show that stakeholders participation is known to solve and intervene loss of money in the management of resources.

Empirical studies that have been done include Adan (2012) study on the influence of stakeholders' role on performance of constituencies' development fund projects a case of Isiolo North Constituency; Onchoke (2013) study on factors influencing performance of community development projects in Kenya; and Ondieki (2011) study on factors influencing stakeholders' participation in monitoring and evaluation of Local Authority transfer fund projects in Kisii

municipality. It is against this background that this study sought to fill the existing research gap by establishing the influence of stakeholders' participation on the performance of road projects in Kenya.

Objectives of the Study

General Objective

The main objective of this study was to investigate the influence of stakeholders' participation on performance of road projects in KeNHA.

Specific Objectives

- i. To establish the influence of user involvement on stakeholders' participation in performance of road projects in KeNHA
- ii. To establish the influence of technology on stakeholders' participation in performance of road projects in KeNHA
- iii. To establish the influence of top management support on stakeholders' participation in performance of road projects in KeNHA
- To establish influence of resources on stakeholders' participation in performance of road in KeNHA

Literature Review

Stakeholders Theory

The stakeholder approach has been described as a powerful means of understanding the firm in its environment (Oakley, 2011). This approach is intended to broaden the management's vision of its roles and responsibilities beyond the profit maximization function (Mansuri & Rao, 2004) and stakeholders identified in input-output models of the firm, to also include interests and claims of non-stockholding groups. Patton (2008) elaborated that the stakeholder model entails that all persons or groups with legitimate interests participating in an enterprise do so to obtain

benefits and that there is no pre-set priority of one set of interests and benefits over another (Karl, 2007). Associated corporations, prospective employees, prospective customers, and the public at large, needs to be taken into consideration.

Overall, a central and original purpose of stakeholder theory is to enable managers to understand stakeholders and strategically manage them (Patton, 2008). The managerial importance of stakeholder management has been accentuated in various studies (Ramabodu & Verster, 2010; Raniga & Simpson, 2009) that demonstrate that just treatment of stakeholders is related to the long term survival of the organization (McManus, 2004). While having its origins in strategic management, stakeholder theory has been applied to a number of fields and presented and used in a number of ways that are quite distinct and involve very different methodologies, concepts, types of evidence and criteria of evaluation. As the interest in the concept of stakeholders has grown, so has the proliferation of perspectives on the subject (Oakley, 2011).

This theory emphasizes the significance of the relationship between the top management staff with the stakeholders. Specifically, managers should understand the success of the projects can be influenced greatly by the participation of various stakeholders. These stakeholders will participate depending on the relationship they foster with the top management and not junior workers acting on their behalf.

Diffusion on innovation (DOI) theory

DOI is a theory of how, why, and at what rate new ideas and technology spread through cultures, operating at the individual and firm level. DOI theory sees innovations as being communicated through certain channels over time and within a particular social system (Sarker & Sahay, 2004). Individuals are seen as possessing different degrees of willingness to adopt innovations, and thus

it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time (Sense, 2008). Breaking this normal distribution into segments leads to the segregation of individuals into the following five categories of individual innovativeness (from earliest to latest adopters): innovators, early adopters, early majority, late majority, laggards. Those firms that are late adopters of technology tend to have trouble securing the support and participation of the stakeholders (Wallace, Keil & Rai, 2004). The innovation process in organizations is much more complex. It generally involves a number of individuals, perhaps including both supporters and opponents of the new idea, each of whom plays a role in the innovation-decision (Tabish & Jha, 2012).

Based on DOI theory at firm level (Sense 2008), innovativeness is related to such independent variables as individual (leader) characteristics, internal organizational structural characteristics, and external characteristics of the organization. (a) Individual characteristics describe the leader attitude toward change. When the leader is flexible and ready to accept change, the stakeholders' opinions are put into practice since the leader does not value his/her opinions above those of the stakeholders'. (b) Internal characteristics of organizational structure includes observations according to Tabish & Jha (2012) whereby: "centralization is the degree to which power and control in a system are concentrated in the hands of a relatively few individuals"; "complexity is the degree to which an organization's members possess a relatively high level of knowledge and expertise"; "formalization is the degree to which an organization emphasizes its members' following rules and procedures"; "interconnectedness is the degree to which the units in a social system are linked by interpersonal networks"; "organizational slack is the degree to which uncommitted resources are available to an organization"; "size is the number of employees of the organization". External characteristics of organizational refer to system openness (Zou, Zhang &

Wang, 2006). This organization of a firm based on the DOI theory highlights the aspects that instigate support from stakeholders.

Top management team theory

The emerging field of strategic decision-making - top management team theory (TMTT) has raised widespread concern in the academic community (Hijzen, Görg & Hine, 2005). Different from traditional strategic management theory, which emphasizes on purely economic and technological processes or information process, TMTT studies the strategic choice and organizational performance determinants from the process of cognitive psychology of top management team (TMT), which overturns the economic man hypothesis in traditional theory and proposes the hypothesis of limited rationality proposed by the Carnegie school (Müller & Jugdev, 2012). As the cognitive psychological process of TMT is too complicated, TMTT invokes prior marketing research on demography to suggest that managerial characteristics and its heterogeneity (such as age, work experience, educational background, etc.) are reasonable proxies for underlying differences in cognitions, values, and perceptions process, which could be good predictor to predict organizational outcome (such as strategic choice, organizational performance, etc.) (Dvir, Sadeh & Malach-Pines, 2006).

In relation to this study, the skills and the support of the top management is paramount in the success of development projects. It reduces the timeline of a projects as it helps to smoothen the communication process.

Resource Based Theory

The core premise of the resource-based view is that organizational resources and capabilities can vary significantly across firms, and that these differences can be stable (Hijzen, Görg & Hine,

2005). If resources and capabilities of a firm are mixed and deployed in a proper way they can create competitive advantage for the firm. Firms with higher competitive advantage tend to create a sense of confidence in stakeholders that their support, whether financial or otherwise, will be valued and put into action. The resource-based view in outsourcing builds from a proposition that an organization that lacks valuable, rare, inimitable and organized resources and capabilities, shall seek for an external provider in order to overcome that weakness (Müller & Jugdev, 2012). The focus of the agency theory originally was on the relationship between managers and stakeholders (Hair, 2006), but had spread over the time on explaining the relationship between two inter-firm subjects. In that context we associate the agency theory to understanding the relationship between the firm and the outsourced resources (Dvir, Sadeh & Malach-Pines, 2006). Stakeholders will want to be involved in projects that have the resources available well managed. Outsourced resources tend to facilitate the reduction of costs of the entire project. Thus, stakeholders can be convinced that the project managers are working towards the achievement of the project at minimum costs for maximum utility and benefit.

Empirical Review

Baroudi, Olson and Ives (2006) did an empirical study of the impact of user involvement on system usage and information satisfaction. They argue that user involvement" in information system development is generally considered an important mechanism for improving system quality and ensuring successful system implementation. The common assumption that user involvement leads to system usage and/or information satisfaction is examined in a survey of 200 production managers. Alternative models exploring the causal ordering of the three variables are developed and tested via path analysis. The results demonstrate that user involvement through conferences in the development of information systems will enhance both system usage and the user's satisfaction with the system. Further, the study provides evidence that the user's satisfaction with the system will lead to greater system usage.

Various studies have been conducted on organization resources and projects. Weiss, Hoegl and Gibbert (2014) conducted a study on the perceptions of Material Resources in Innovation Projects: What Shapes Them and How Do They Matter? This paper focused on team members' perceptions of the provided material resources' adequacy to address this gap. Understanding what

drives perceptions of material resource adequacy may not only reconcile conflicting results in the literature, but may also provide much-needed guidance for project funding, so as to maximize innovation project performance. Further, the analyses in this paper differentiate between two outcome dimensions of innovation project performance, namely, the degree of new product quality and new product novelty, and thus offer a more fine-grained analysis of the relationship between perceptions of material resource adequacy and innovation project teams' performance. The posited hypotheses were tested using a sample consisting of survey data from 121 innovation projects in the electronics industry. The results of the regression analyses identify team potency and workload as socio-cognitive drivers of innovation project teams' perceptions of material resource adequacy. They also established that donor support influences Innovation Projects. Moreover, it is found that perceived material resource adequacy relates positively to new product quality, while it relates negatively to new product novelty.

Data Analysis/Findings

Regression Analysis

A multivariate regression analysis was used to establish the relationship between the dependent and the independent variables. The multivariate regression model was;

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \varepsilon$$

Where: Y = Performance of road projects; $\beta 0$ = Constant Term; $\beta 1$, $\beta 2$, $\beta 3$ and $\beta 4$ = Beta coefficients; X1= user involvement; X2= technology; X3= top management support; X4= resources; ϵ = Error term

Table 4. 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the	
				Estimate	
1	.709ª	.503	.472	.52106	

a. Predictors: (Constant), resources, user involvement, technology, top management support

As indicated in table 4.3 above, the R value (0.709) shows that the overall model is significant. The four independent variables that were studied, explain 47.2% of performance in road projects

as represented by the adjusted R^2 . This therefore means that other factors not studied in this research contribute 52.8% of performance in road projects. These findings agree with Fudge and Wolfe (2008) argument that factors influencing performance of road projects include resources, user involvement, technology, top management support,

Table 4. 2: ANOVA

Model		Sum of Squares	df	Mean Square	\mathbf{F}	Sig.
	Regression	17.333	4	4.333	15.961	.000 ^b
1	Residual	17.104	63	.271		
	Total	34.438	67			

The significance value is 0.000 which is less that 0.05 thus the model is statistically significance in predicting how resources, user involvement, technology and top management support influence performance of road projects. The F critical at 5% level of significance was 2.52. Since F calculated (15.961) is greater than the F critical, this shows that the overall model was significant.

Table 4.3: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
	(Constant)	.505	.441		1.145	.256
	user involvement	.390	.093	.292	3.115	.003
1	technology	.509	.122	.573	4.169	.000
	top management suppor	t.334	.117	.442	2.861	.006
	resources	.425	.135	.398	3.143	.002

From the findings in the table the established regression equation was;

$$Y = 0.505 + 0.390 X1 + 0.509 X2 + 0.334 X3 + 0.425 X4 + 0.52106$$

The regression equation above has established that taking all factors into account (resources, user involvement, technology and top management support) constant at zero the performance of road projects will be 0.505.

Research question one: What is the influence of user involvement on stakeholders' participation in performance of road projects at KeNHA?

The findings presented also show that there is a positive significant relationship between user involvement and performance of road projects as shown by a coefficient of 0.390 and a p-value of 0.003 at 95% confidence interval which is less than 0.05 and a t-value of 3.115 which is greater than 2. This infers that there is a positive significant relationship between user involvement and performance of road projects in KeNHA.

Research question two: What is the influence of technology on stakeholders' participation in performance of road projects at KeNHA?

In addition, the findings show that there is a positive significant relationship between technology and performance of road projects as shown by a coefficient of 0.509 and a p-value of 0.000 at 95% confidence interval which is less than 0.05 and a t-value of 4.169, which is greater than 2. This can be used to conclude that there is a positive significant relationship between technology and performance of road projects in KeNHA.

Research question three: What is the influence of top management support on stakeholders' participation in performance of road projects at KeNHA?

Further, the findings show that there is a significant positive relationship between top management support and performance of road projects as shown by a coefficient of 0.334 and a p-value of 0.006 at 95% confidence interval which is less than 0.05 and a t-value of 2.861, which is greater than 2. This shows that there is a positive significant relationship between top management support and performance of road projects.

Research question Four: What is the influence of resources on stakeholders' participation in performance of road projects at KeNHA?

Lastly, the findings show that there is a positive significant relationship between resources and performance of road projects as indicated by a coefficient of 0.425 and a p-value of 0.002 at 95%

confidence interval which is less than 0.05 and a t-value of 3.143, which is greater than 2. This infers that there is a positive significant relationship between user involvement and performance of road projects in KeNHA.

This infers that technology influences performance of road projects most followed by resources, user involvement and top management support.

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