International Journal of Science and Research (IJSR)
ISSN: 2319-7064
ResearchGate Impact Factor (2018): 0.28 | SJIF (2019): 7.583

Combined Influence of Stakeholder Participation in Project Life Cycle Management on Catalyzing Completion of Urban Roads Transport Infrastructure Projects in Kenya

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Abstract: ***This paper examines the combined influence of the indicators of stakeholder participation in project life cycle on catalyzing completion of road projects implemented by Kenya Urban Roads Authority. Descriptive survey and correlation research design were used for analysis. The findings revealed that stakeholder participation in all stages of project life cycle showed a strong, positive and statistically significant relationship of coefficient correlation (R) of 0.849 and P-Value of 0.000 less than 0.5 alpha with completion of urban road transport infrastructure projects in Kenya. With an adjusted R-Squared (R^2) of 0.715, the model explained a total variation of 71.5% in the completion of urban road projects. The study recommends design of mechanisms for engaging stakeholders in all phases of project life cycle. The study also recommends need for a policy guideline by the Kenya Urban Roads Authority to outline the level of participation by each stakeholder. This will shape the future of road construction and stakeholder engagement.***

Keywords: Urban road transport; Project Life cycle management, Stakeholder participation, project initiation, project planning, project execution; project closure

1. Introduction

Stakeholder participation in project life cycle management plays an essential role in project completion (Silvius and Schipper 2019; Newcombe, 2013). Stakeholder participation in project decision making is critical to the success of every project and organization (Miller, 2015; Matu, Kyalo, Mbugua and Mulwa 2020a). Indeed. Biskupek (2016) upholds that "stakeholders as a whole group are significant for the implementation of the whole project," and also, "their impact is so important that it is possible to tell that they decide also about the project success or failure." This assertion implies that a project is successful when it accomplishes its goals as per the stakeholders' expectations (Moodley, 2012; Miller, 2015). Decisions about the level of participation by stakeholders are an important issue for consideration by project managers regardless of the type of project. (Usadolo & Caldwe, 2016; Nalweyiso, *et. al*, 2015; Arca & Prado, 2011)

Stakeholders are usually defined as entities who care about or have a vested interest in the project (Freeman, 1984). They are the individuals who are involved in the work of the project. The stakeholders therefore, may have something to either gain or lose as a result of the project. It is important to identify all the stakeholders in the project upfront because leaving out important stakeholders or their functions in the project may compromise project outcomes (Olander & Landin, 2015; Newcombe, 2013; Yang et al., 2010).

Construction projects are executed through the efforts and involvement of various groups of individuals from initial stages to the completion stages. These groups of individuals are referred to as the 'project stakeholders'. Stakeholders can aid or impede a project based on their ability to influence results founded on their individual expectations (Olander & Landin, 2015). Precise management of stakeholders is imperative to the outcomes of the project (Yang et al., 2010).

Critical to stakeholder involvement is stakeholder mapping. Reed, Graves, Dandy, Posthumus, Hubacek, Morris, Prell, Quinn and Stringer (2009) then defined stakeholder mapping as a process that (1) defines aspects of a social and natural phenomenon affected by a decision or action; (2) identifies individuals, groups and organizations who are affected by or can affect those parts of the phenomenon (this may include non- human and non-living entities and future generations); and (3) prioritizes these individuals and groups for involvement in a decision-making process.

The importance of stakeholders can also be determined by examining the needs of a business and the degree to which an organization is in need of a particular stakeholder (Olander & Landin, 2015; Jailaubekov, Willard, Tritsch, Chan, Sai, Gearba & Zhu, 2013).

In certain instances, some stakeholders can be more important than others and the project leader should carefully analyze their requirements and attributes at different times during the project lifecycle. Phillip (2013) stated that the stakeholder theory should focus on the groups who can input into the decision-making process as well as who are affected by the outputs of such decisions.

2. Statement of the Problem

The combined project life cycle management phases have not been studied as a cohort on urban roads transport infrastructure in Kenya thus the need for this current study. This claim is supported by Ndengwa, Mavole and Muhingi (2017), Maunda and Moronge (2016) and Mavuti, Kising'u and Oyo (2019), who focused their studies on health projects, completion of public projects and implementation of Kenya Ports Authority respectively. On the poor completion of road infrastructure projects studies have found that there is a poor rate of completion of road infrastructure projects in Latin America, Asia, East Africa and Kenya (Young, 2011; PWC, 2013; Government of Kenya, 2015; Maina, 2013). These failures cause great disappointments with various scholars citing ignorance of poor stakeholder involvement as probable reasons for poor project implementation (Aaltonen, 2011; Chang et al., 2013; Hietbrink, Hartmann & Dewulf, 2012).

In Kenya, despite the quest for successful completion of projects by project managers and increasing budget for transport infrastructure projects, many road projects have continuously experienced time overrun, budget overrun, poor quality, and top on this list unsatisfactory stakeholder requirements (Amnesty International, 2015; Maina & Kimutai, 2018; Kipkurui & Obura, 2018).

3. Literature Review

Project stakeholder management is often portrayed as a set of procedures that relate to the different project management processes Silvius and Schipper (2019). The PMBOK provides a more elaborated breakdown by distinguishing four processes: (1) identify stakeholders; (2) plan stakeholder engagement; (3) managing stakeholder engagement; and (4) monitor stakeholder engagement (Project Management Institute 2017). Bal et al. (2013), who depict project stakeholder management as a continuous cycle of processes involving (1) identifying key stakeholders and significant issues; (2) analyzing and planning; (3) strengthening engagement capacities; (4) designing the process and engaging; (5) acting, review and reporting. Divergent stakeholder philosophies have been expressed owing to the expansion of interest in improving the management and engagement of project participants. In the view of Kolk and Pinkse (2016), the stakeholder concept can be explained through three themes of "(1) recognizing the nature of stakeholders, (2) investigating how and under which circumstances, stakeholders can impact organizational decisions and operations and (3) determining different plans and strategies to deal with stakeholders." Jones (2011) classified stakeholders into three major approaches "descriptive, instrumental, and normative"

Stakeholder management as a task is specific to context and therefore, any strategies and methods applied should reflect this context (Bourne & Walker, 2015). In the construction industry, during the different stages of a project from planning through to the operation and maintenance, specific stakeholders get involved whose expectations can affect the outcomes of the implementation of the project (Olander & Landin, 2015). The current study therefore, assesses stakeholder engagement through the project cycle stages as a combined process this stages are the project initiation, planning, execution and closure.

3.1 Stakeholder involvement across the project life cycle

Stakeholder involvement on each of stages of the project life cycle has been reported in different contexts. In the project environment, the relevant stakeholders are usually numerous, and can, therefore, vary significantly according to the degree of influence. This is why PMI (2013) maintained that power, legitimacy, and urgency are key characteristics of stakeholder analysis in research. Therefore, all project managers are required to develop sufficient understanding of these characteristics, which are changing variables within the various stakeholders in a project environment.

According to Moodley (2012), the number and nature of stakeholders must vary with the life of the project; it would, therefore, make sense to carry out the review of identification throughout the project life cycle. The project life cycle serves to define the beginning and the end of a project. The project cycle definition also determines which transitional actions at the end of the project are included and which are not. Therefore, a project life cycle can be used to link the project to the on-going operations of the performing organization.

3.1.1 Stakeholder Participation in project initiation

At the foremost, the initiation stage focuses on assessing the project's viability from the perspective of the different stakeholders Aapaoja, Haapasalo, Söderström (2013). In this stage the threat of not accomplishment the appropriate level of specification has to be managed without overstating stakeholders' potential influence. Consequently a clear goal for each dialogue has to be set, the correct primary stakeholders and representatives spoken to. The aim should be attainment of common agreement and confidence, while preventing unrealistic expectations. The advantages of an effective early stakeholders include preventing costly incidents and juridical and regulatory conflicts leading to time and cost overruns (Silvius and Schipper 2019; Lock, 2007; Onna and Koning, 2003).

The early involvement of stakeholders may also pose some disadvantages. The slowing down of decision making may be an expense to the project. The approaches of dealing with stakeholders should be properly assessed; spending valuable time on insignificant stakeholders is money down the drain (Lock, 2007; Onna and Koning, 2003).

Research has shown the need for stakeholder involvement in the initiation stage. For instance Matu, Kyalo, Mbugua and Mulwa (2020a) found that participation in project initiation had a positive and significant influence on the completion of urban road transport infrastructure projects in Kenya ($r=0.859$, $R2=0.737$, $F(1, 212)=594.869$, $p<0.001<0.05$). The study established that there was a positive influence of participation in project initiation on completion of urban road transport infrastructure projects in Kenya.

3.1.2 Stakeholder Participation in project planning

The second stage is the planning stage. Planning just as initiation is deemed to be a relatively important in the project lifecycle of any project. Both planning and initiation have incredible influence on project success (Zwikael, 2009: Matu 2020a).

According to PMI (2013), a cost estimate is needed for a contingency plan involves integration of the planning process. Similarly, quality planning is necessary to ensure that the quality objectives that meet the requirements of key stakeholders are achieved. Correctly identifying and managing stakeholders and analyzing their needs, is a critical part of the planning phase, managing stakeholders can mean the difference between success and failure (PMI, 2013; Heravi, Coffey, and Trigunarsyah, 2015).

On project planning stage, Matu, Kyalo, Mbugua and Mulwa (2020b) established that stakeholder participation in project planning had a positive and significant influence on the completion of urban road transport infrastructure projects in Kenya ($r = 0.838$, $R2 = 0.703$, $F(4, 209) = 123.43$, $p < 0.001 < 0.05$). $R2 = 0.703$ indicating that stakeholder participation in project planning explains 70.3% of the variations in the completion of urban road transport infrastructure projects in Kenya. The study concluded that stakeholder participation in project planning significantly influences completion of urban road transport-infrastructure projects in Kenya.

3.1.3 Stakeholder Participation in project execution

The third phase is the execution phase. Olander and Landin (2005) stated that conflict and controversies about the implementation of a construction project can arise if stakeholders are inadequately engaged and their concerns and expectations are not managed well. To avoid this, project managers need to engage all stakeholders when making decisions on project definition. They need to acknowledge the concerns of all stakeholders and mitigate conflicting interests. Any negative perception by stakeholders on the project definition can have an impact on a project.

Musyoki and Gakuu (2018) examined the influence of stakeholders in the implementation of infrastructural projects and concluded that stakeholders had a negative and significant influence. This shows a lack of convergence in the literature on whether stakeholders should be allowed or ignored to participate in project life cycle management of the construction projects hence the need for the current study. On project execution, Kobusingye, Mungatu and Mulyungi (2017), in a study on the influence of stakeholders' involvement on project outcomes: a case of water, sanitation, and hygiene (wash) project in Rwanda, found that stakeholder involvement in project implementation contributed most to project outcome ($r = 0.971$) followed by project review ($r= 0.681$), then project planning ($r =0.651$) while projects identification ($r = 0.571$) had the least influence on project outcome. This study primarily studied the influence of community participation in water and sanitation projects.

Ndegwa, Mavole and Muhingi, (2017) sought to find out the effects of public participation in the implementation of successful health projects in Nyeri South sub–County in Kenya. The study focused on the entire project management cycle: identification, designing, execution, and M&E. The conclusion was that, public participation influences project identification, project planning and project M&E for successful implementation of public funded health projects hence the need to involve them in all the four stages of any public project to ensure that they attain their own objectives and equally projects are also accepted by the targeted community. The current study, however, combined project initiation, project planning, project execution and project closure vis a vis implementation of urban roads infrastructure in Kenya

3.1.4 Stakeholder Participation in project closure

Finally the nature of projects dictate that they have an end. The temporary nature of projects implies that stakeholder engagement and relations are also dissolved at the closing of the project (Huemann and Zuchi 2014) for example with the goal to capture the knowledge that emerged in the relationship or to transfer the relationship to the permanent organization. Closure may also contribute to sustainability of the project when handed over to the community of owner. The involvement of stakeholders during closure is thus critical.

3.2 Combined project Cycle indicators stakeholder Participation

The combined project life cycle management phases have not been studied as a cohort on urban roads transport infrastructure in Kenya thus the need for this current study. This claim is supported by Ndegwa, Mavole and Muhingi (2017), Maunda and Moronge (2016) and Mavuti, Kising'u and Oyo (2019), who focused their studies on health projects, completion of public projects and implementation of Kenya Ports Authority respectively. On the poor completion of road infrastructure projects studies have found that there is a poor rate of completion of road infrastructure projects in Latin America, Asia, East Africa and Kenya (Young, 2011; PWC, 2013; Government of Kenya, 2015; Maina, 2013).

These failures cause great disappointments with various scholars citing ignorance of poor stakeholder involvement as probable reasons for poor project implementation (Aaltonen, 2011; Chang et al., 2013; Hietbrink, Hartmann & Dewulf, 2012).

In the construction industry, during the different stages of a project from the initial planning through to the final operation and maintenance, specific parties get involved whose expectations can affect the outcomes of, or may be affected by, both negatively and positively the implementation of the project (Olander, 2007). Atkin and Skitmore (2008) signified that successful implementation and completion of the project largely rely on addressing the needs and expectations of those who are involved and failure to correctly address their requirements can result in many project issues.

4. Conceptual Framework

Stakeholder participation can take place in different places in the project cycle, including initiation, planning, execution/controlling and closure, and also at different levels of society Andersen, 2009; Yu, Shen, Kelly & Hunter 2016; Maunda and Moronge (2016). This informed the conceptual framework of the study.

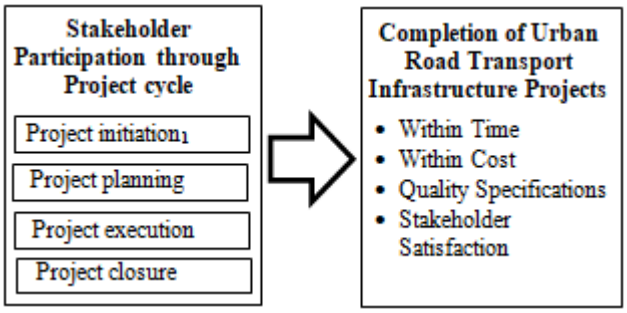

Figure 1: Conceptual Framework for analysis (source Authors 2020)

This paper is based upon this conceptual analysis framework, the stakeholders' participation is looked as a whole other than fragmented within the stages of a project life cycle. Completion of urban road transport infrastructure projects was evaluated in terms completion of within time, within cost, quality specifications and stakeholder satisfaction

5. Theoretical framework

The study was anchored on both the stakeholder model by Donaldson and Preston (1995) and the theory propounded by Freeman (1984).

First we look at the stakeholder model. The stakeholder model presents a framework for the identification of stakeholders of the organization, firm or institution. It was developed by Donaldson and Preston (1995) Figure 2.

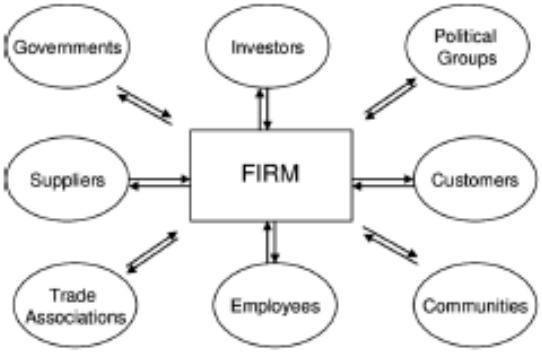

Figure 2: The stakeholder model (Donaldson and Preston 1995)

According to Silvius and Schipper (2019) the stakeholder model recognizes customers, suppliers, employees and investors as stakeholders that provide a direct contribution to the organization. The core of the stakeholder model, nonetheless, is the acknowledgement of groups that are not likely to have a direct relationship with the organization, for instance trade associations, communities, political groups and governments, as stakeholders. This study adopts this model because it considers the role of many stakeholders across the life cycle of road construction projects.

Secondly, we consider the stakeholder theory. According to Freeman, the purpose of a project is to create optimum value for stakeholders. The theory identifies and models the groups which are stakeholders of a project, describes and recommends methods by which management can give due regard to the interests of those groups (Hassan, 2012). Stakeholder theory is primarily a management theory, which claims that power and urgency must be adhered to if managers are to serve the interests of stakeholders. As such, successful completion of projects cannot be devoid of stakeholder engagement from which project success is likely to happen.

According to Freeman (2010), the stakeholder theory attempts to address the principle of who really matters in the projects or business environment. It assumes that values are necessarily and explicitly a part of undertaking tasks. It encourages managers to articulate the shared sense of the value they create and what brings its core stakeholders together. Freeman further posits that stakeholder theory is managerial in that it reflects and directs how managers operate with its focus being based on two core questions that are what is the purpose of a firm and what responsibility does management have to stakeholders.

Applying the theory to this study implies that stakeholders are part of urban road transport infrastructure projects in Kenya and as such have a significant role in the processes and procedures that lead to the improvement of their completion. The theory is therefore relevant in the evaluation of urban roads transport infrastructure projects in the identification of the key stakeholders and their roles including their interests, power and influence (Freeman, 2010).

6. Research Methodology

This study used a pragmatism paradigm, to guide a mixed research approach. This allowed the research to balance the weaknesses and strengths of two approaches; quantitative and qualitative. The aim of the study is to examine stakeholder participation in construction cycle and completion of urban road transport infrastructure- projects, which contain both social and scientific attributes. Mixed research allows the researcher to describe research phenomena in both social and natural settings through research processes (Sarantakos 2010).

The unit of analysis in this study was; Kenya Urban Roads Authority (KURA) project implementation teams' members, KURA project planners and directors, road contractor's project management teams, consultants construction supervision teams, representatives of Project Affected Persons, and complimentary service providers, making up a target population of 1593 participants.

The concept of stakeholder was adopted by project management institute (PMI), following the definition of stakeholder as individuals, groups, organizations who may affect, be affected by, or perceive project activity, or outcome" (PMI, 2013). The Project Management Body of Knowledge (PMBOK) notes that a project has many stakeholders whose interests may be related, or in conflict.

The sample size of the study was 310 participants. This was arrived at by utilizing Yamane (1967) sample size determination research formula. Out of the 310 sampled respondents, 214 responded. This gave a response rate of 69.0%. The key informants interviewed include 17 representatives of PAPS and 8 Complimentary service providers. This study obtained data from all 9 counties where KURA road projects were located through the use of a questionnaire.

The questionnaire items were tested using a 5-point Likert scale where: SA = Strongly Agree (5), A = Agree (4), U = Uncertain (3), D = Disagree (2), SD = Strongly Disagree (1). The Likert scale items were designed as a series of questions that when combined measure a particular construct. An interview guide was issued to the key informants for triangulation. The study then employed both descriptive and inferential statistics for the data analysis. Pearson correlation coefficient analysis was conducted to identify the relationship between the independent variable and the dependent variable.

7. Results and Findings

7.1 Overall Descriptive Analysis of Stakeholder Participation in Project Life Cycle Management

Combined stakeholder participation in project life cycle management was considered in terms of Stakeholder Participation in project initiation, Stakeholder Participation in project initiation, Stakeholder Participation in project initiation and Stakeholder Participation in project initiation (Table 1).

Table 1: Means and Standard Deviations of Stakeholder Participation in Project Life Cycle Management

Variable Dimension/Indicator	Mean (M)	Std. Dev.
Stakeholder Participation in project initiation	3.50	0.921
Stakeholder Participation in project planning	3.59	0.958
Stakeholder Participation in project execution	3.93	0.847
Stakeholder Participation in project closure	3.49	0.828
Composite mean and standard deviation	**3.63**	**0.889**

Results (Table 1) indicate that the overall mean of combined stakeholder participation in project life cycle was 3.63. Dominant was stakeholder participation in project execution (M=3.93). This shows that stakeholder got a chance to participate in execution phase which significantly and positively influenced the road project performance. The standard deviation was 0.847 lower than the composite standard deviation of 0.889, which implied convergence of opinions.

Stakeholder participation in project initiation (M=3.50) did not influence completion of urban road transport infrastructure projects positively since the line item mean was below the composite. The standard deviation on this item was 0.921 greater than the composite standard deviation of 0.889, which implied divergence of opinions.

Stakeholder participation in project planning (M=3.59) did not positively influence the completion of urban road transport infrastructure projects. The standard deviation was .958 greater than the composite standard deviation of 0.889, which implied divergence of opinions.

Stakeholder participation in project closure (M=3.49), does not seem to influence the completion of urban road transport infrastructure projects. The standard deviation was 0.828 lower than the composite standard deviation of 0.889, which implied consistency in opinions.

7.2 Inferential Analysis of Combined Stakeholder Participation in project lifecycle management and Completion of Urban Road Transport Infrastructure Projects

The objective of this study was to examine how combined stakeholder participation in project lifecycle management influences the completion of urban road transport infrastructure projects in Kenya. The combination of participation in project initiation, participation in project planning, participation in project execution and participation in project closure was referred to as combined stakeholder participation in project lifecycle management. The combined influence of these factors on completion of urban road transport infrastructure projects was tested using inferential statistics.

7.2.1 Correlation between Combined Stakeholder Participation in project Lifecycle Management and Completion of Urban Road Transport Infrastructure Projects

Correlation analysis of combined stakeholder participation in project lifecycle management as the independent variable and completion of urban road transport infrastructure projects as the dependent variable was conducted to examine the strength and direction of the relationship. The results are presented in Table 2.

Table 2: Correlation between Stakeholder Participation in Project Lifecycle Management and Completion of Urban Road Transport Infrastructure Projects

Correlations						
Variables		Combined stakeholder participation in project life cycle management	Participation in project initiation	Participation in project planning	Participation in project execution	Participation in project closure

Completion of urban road transport infrastructure projects	Pearson Correlation	0.849	0.859	0.838	0.796	0.855
	Sig. (2-tailed)	0.000	0.015	0.011	0.028	0.042
	n	214	214	214	214	214
**Correlation is significant at 0.05 level of significant (2-tailed)						

Results (Table 2) indicate positive and significant coefficients between the variables. Participation in project initiation had a strong and positive correlation on completion of urban road transport infrastructure projects (r=0.859, p=0.015), participation in project planning and completion of urban road transport infrastructure projects were strongly and positively correlated (r=0.838, p=0.011), participation in project execution and completion of urban road transport infrastructure projects were also strongly and positively correlated (r=0.796, p=0.028) while participation in project closure and completion of urban road transport infrastructure projects were established to have a strong and positive correlation (r=0.855, p=0.042). This is an indication that combined stakeholder participation in project lifecycle management (r=0.849, p=0.000) has a positive influence on completion of urban road transport infrastructure projects in Kenya.

7.2.2 Regression Analysis of Influence of Combined Stakeholder Participation in Project Lifecycle Management on Completion of Urban Road Transport Infrastructure Projects

Additionally, multiple regression analysis was conducted in line with objective five which sought to examine how combined stakeholder participation in project lifecycle management influences the completion of urban road transport infrastructure projects in Kenya. Combined stakeholder participation in project lifecycle management included participation in project initiation, participation in project planning, participation in project execution and participation in project closure. A composite index for each of the variables was computed and used in the hypothesis testing. The null hypothesis in line with objective five was tested using the linear regression.

Hypothesis Testing

The following hypothesis was tested using simple regression model to satisfy the objective

H_0: Combined participatory project life cycle management does not significantly influence completion of urban road transport infrastructure projects in Kenya.

H_0: There is a significant relationship between combined participatory project life cycle management and completion of urban road transport infrastructure projects in Kenya.

Regression Model

The mathematical model used for testing the null hypothesis was as follows:

Completion of urban road transport infrastructure projects = f (participation in project initiation, participation in project planning, participation in project execution and participation in project closure)

$Y = f(X_1, X_2, X_3, X_4, \varepsilon)$

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where

Y = Completion of urban road transport infrastructure projects

X_1 = Stakeholder participation in project initiation

X_2 = Stakeholder participation in project planning

X_3 = Stakeholder participation in project execution

X_4 = Stakeholder participation in project closure

β_0 = Constant term

β_1, β_2, β_3 and β_4 = Beta coefficients

ε = Error term

Data was analyzed and the regression results for the influence of combined participatory project life cycle management on completion of urban road transport infrastructure projects in Kenya are presented in Table 3.

Table 3: Combined stakeholder participation in Project Life cycle Management and Completion of urban road transport infrastructure projects

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.849	0.721	0.715	1.298

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig
1	Regression	921.983	4	230.496	134.785	0.000[b]
	Residual	357.41	209	1.710		
	Total	**1279.393**	213			

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	**Beta**		
1	(Constant)	1.267	0.182		6.962	0.001
	Stakeholder participation in project initiation	0.889	0.143	0.859	6.217	0.014
	Stakeholder participation in project planning	0.895	0.245	0.838	3.653	0.013
	Stakeholder participation in project execution	0.802	0.212	0.796	3.783	0.007
	Stakeholder participation in post-closure	0.911	0.265	0.855	3.438	0.016

Predictors: (constant), Stakeholder participation in project initiation, Stakeholder participation in project planning, Stakeholder participation in project execution, Participation in project closure

Dependent Variable: Completion of urban road transport infrastructure projects.

Results (Table 3) shows that r=0.849. This indicates that combined stakeholder participation in project lifecycle management has a strong relationship with completion of urban road transport infrastructure projects in Kenya. R^2 =

0.721 indicating that combined stakeholder participation in project lifecycle management explains 72.1% of the variations in the completion of urban road transport infrastructure projects in Kenya.

The results on test of significance also indicate that; stakeholder participation in project initiation ($p<0.014$), stakeholder participation in project planning ($p<0.013$), stakeholder participation in project execution ($p=0.007$), stakeholder participation in project closure ($p=0.016$) were all-significant at $p<0.05$ and 95% confidence level. A beta value of 0.859 means that a unit increase of stakeholder participation in project initiation contributed to 85.9% increase in completion of urban roads transport infrastructure projects. A beta value of 0.838 means that a unit increase of stakeholder participation project planning contributed to 83.8% increase in completion of urban roads transport infrastructure projects. A beta value of 0.796 means that a unit increase of stakeholder participation in project execution contributed to 79.6% increase in completion of urban roads transport infrastructure projects. A beta value of 0.855 means that a unit increase of stakeholder participation in project closure contributed to 85.5% increase in completion of urban roads transport infrastructure projects. This result implies that combined stakeholder participation in project lifecycle management explains 72.1% of the variations in the completion of urban road transport infrastructure projects in Kenya.

The overall F statistics, ($F = 134.785$, $p<0.000<0.05$), indicated that there was a very statistical significant relationship between combined stakeholder participation in project lifecycle management and completion of urban road transport infrastructure projects in Kenya. The null hypothesis was therefore rejected and it was concluded that combined stakeholder participation in project lifecycle management significantly influences completion of urban road transport infrastructure projects in Kenya.

Using the statistical results (Table 4), the regression model was substituted as follows:

$$\mathbf{Y= 1.267 + 0.\ 859X_1 + 0.\ 838X_2 + 0.\ 796X_3 + 0.\ 855X_4}$$

Where;

X_1 = Stakeholder participation in project initiation
X_2 = Stakeholder participation in project planning
X_3 = Stakeholder participation in project execution
X_4 = Stakeholder participation in project closure

8. Discussion of the Results

The findings of this study show that the indiviudal phases or variables of stakeholder participation in project life cycles have strong positive and significant relationship with completion of road projects. The cobination of the whole cycle too shows that it influences road completion, thus, the findings are consistent with the study of Ndegwa, Mavole and Muhingi, (2017) who found that public participation influences project identification, project planning, project planning and project M&E for successful implementation of public funded projects. The findings further support Maunda and Moronge (2016) who found that the combined project life cycle management influenced completion of public projects in Kenya. Based on the descriptive analysis of the current study, stakeholders particiapatin in project execution (M=3.93) have positive influence have positive influence on completion of road projects. The least contributors, with perceived negative influence, include closure (M=3.49), initiation (M=3.50) and finally planning (M=3.59). The findings are therefore consistent with Kobusingye, Mungatu and Mulyungi (2017) who found that stakeholder or community participation during what he termed as implementation (execution) has positive influence on the project outcome.

Although stakeholders may have indicated inadequate involvement during initiation, planning and closure phases, Moodley (2012) opined that the number and nature of stakeholders must vary with the life of the project. This implies that although it is not necessary to involve stakeholders in all and every stage of the project life cycle, the use of all the variables (combined phases/stages) under stakeholder participation in project lifecycle management still remains and would play a critical role in contributing to successful completion of projects as opposed to focusing on one phase only. This therefore signifies the importance of engaging stakeholders in all the four phases of the project lifecycle as advocated for by Mkutano and Sang (2018). This is hoped to address issues that have always led to late complettion, cost overruns and poor quality of final products or roads transport instrastructure projects.

9. Conclusion

The combination of participation in project initiation, participation in project planning, participation in project execution and participation in project closure shows that combined stakeholder participation in project lifecycle management act as catalyst for completion of urban road transport infrastructure projects in Kenya. Although the combined influence act as a catalyst to the process the role of each phase, must not be lost. At the planning phase for example, budgeting had the highest correlation among subcomponent of planning yet in practice the community stakeholders are left out at the budgeting stage. Although stakeholder appears to be fully involved during project implementation, most of the activities scheduled for execution may not have been spelt out during initiation and planning and phases. This is something that needs to be observed at all times to have positive influence in completion of urban road projects. In sum we conclude that involvement of stakeholders at all stages of project cycle should be seen a continuum for project success.

10. Recommendation

The study recommends that for effective completion of urban roads, there is need to engage stakeholders at all levels of project life cycle since each level or phase is a prerequisite of each other. As such, inadequate or failure to involve the stakeholders in some phases may trigger issues of poor quality of completed projects or delay to some extent.

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