EFFECT OF PROJECT STAKEHOLDERS MANAGEMENT ON PERFORMANCE OF ROAD CONSTRUCTION PROJECTS IN MOMBASA COUNTY, KENYA

Gwaya Job Mageto[1], Dr. Samson Kitheka[2], Patricia Ogolla[3]

[1 & 3]Jomo Kenyatta University of Agriculture and Technology
[2]Technical University of Mombasa

ABSTRACT

The study sought to examine the effect of project stakeholder management on the performance of road construction projects in Mombasa County, Kenya. Specifically, the study sought to establish the effect of project stakeholder identification, project stakeholder mapping, project stakeholder analysis and project stakeholder risk management on the performance of road construction projects in Mombasa County, Kenya. The study adopted a census design with a target population of 188 that is project managers, engineers, supervisors, inspectors, surveyors and contractors from KeNHA. Quantitative data were analyzed using SPSS version 25 where relationships between the variables were assessed using correlation and regression analysis. Test of the hypothesis was done at 95% confidence interval. The study found out that there was a positive and significant relationship between project stakeholder identification and performance of road construction projects in Mombasa County Kenya, there was a positive and significant relationship between project stakeholder mapping and performance of road construction projects in Mombasa County Kenya, further, the results revealed that there was a positive and significant relationship between project stakeholder analysis and performance of road construction projects in Mombasa County Kenya. Lastly, there was a positive and significant relationship between project stakeholder risk management and performance of road construction projects in Mombasa County Kenya. Based on the findings, the study concluded that project stakeholder identification, project stakeholder mapping, project stakeholder analysis and stakeholder risk management have a positive and significant effect on the performance of road construction projects in Mombasa County, Kenya. The study recommends that KeNHA should embrace project stakeholder identification practice in all their road construction projects to establish how various stakeholders will influence the project, project stakeholder analysis should properly be conducted to ensure adequate consultation and communication with the stakeholders, policymakers to develop stakeholder management policies which will guide road contractors in road project activities, road construction agencies should consider project stakeholder mapping to ensure stakeholders values are considered and that the degree of enforcement of the values and interests are controlled and lastly, there should be a training of project personnel on sustainable stakeholder risk management strategies with a bigger emphasis on the continuous resource risks monitoring for cost revisions to reduce cost overruns.

Key words: Project Stakeholder, Risk Management, Stakeholder Analysis, Stakeholder Mapping

1. INTRODUCTION

Project stakeholder management is defined as the systematic identification, analysis and planning of actions to communicate with and influence stakeholders (Nyandika & Karanja, 2014). To manage project stakeholders effectively project managers should be competent in all areas of stakeholder management. Proper stakeholder management enables an organization to achieve its strategic objectives through support from stakeholders and understanding the external environment (Omari, 2018). Stakeholder management entails four key components; stakeholder identification, mapping, analysis and risk management, these components are necessary for the success of road construction projects (Adek, 2016). For any successful road project, stakeholder management is critical as stakeholders have an impact on the performance (Nyandika & Karanja, 2014). Omari (2018) suggests that power, legitimacy and urgency are key stakeholder characteristics. As such, a project manager is required to develop a sufficient understanding of such characteristics, which are changing variables within the various stakeholders in a road project environment (Ogombe, 2017).

Road construction projects are very sensitive to decision and actions taken by any stakeholder (Nyandika & Karanja, 2014). Almost all the projects operate in a context where their respective stakeholders play a primary role in the accomplishments of tasks (Adek, 2016). Mutune, Mang'uriu & Diang'a (2017) stated that road project stakeholders may be within or outside the organization. Stakeholders of a particular road project vary during the entire life cycle of the project that is in terms of the number, power, interest and influence (Ogombe, 2017). The perception, interest and motivation the stakeholders have on the road project should never be ignored. Stakeholder review, identification, mapping, analysis and risk management should be conducted throughout the development stages of the road project (Adek, 2016; Mvutune, Mang'uriu & Diang'a, 2017; Njogu, 2016).

Rwakarehe and Mfinanga (2014); Matembo (2016); Kinyondo and Villanger (2017) indicated that poor performance of the road construction projects in Tanzania was associated with inadequate stakeholder management. Simon (2017) found that stakeholder management in terms of analysis and risk management were the key factors that affected road construction projects in Dar-es-Salaam. In Uganda, a study by Alinaitwe, Apolot and Tindiwensi (2013) as cited by Matembo (2016) highlighted that stakeholders changing the scope of works had the greatest impact on cost overruns and delays, a more collaborative approach in project management is advocated in road construction projects. Muzaale and Auriacombe (2018) in an examination on the policy challenges to road infrastructure projects performance-trends, issues and concerns in Uganda indicated that internal stakeholder management in terms of project communication and extra project communication has the positive and combined predictive potential of project stakeholder commitment. They further add that many projects in Uganda have lacked stakeholder commitment to road projects due to inadequate information attributable to gaps in stakeholder communication systems.

2. RESEARCH PROBLEM

According to the ADB report (2018), road construction projects in Kenya are characterized by low or poor completion. Moreover, projects in Kenya have been poorly rated on completion by the Operations Evaluation Department (OED) of the World Bank as compared to other East African countries. Kenya attained an overall rating of 49 % on completion of public projects funded during the period 2008 to 2011 as compared to Uganda's and Tanzania's rating of 59.5%

and 70.1 % respectively. Beyond East Africa, Ghana had a rating of 64.7 % in the same period (World Bank, 2013). This shows that among the three East African countries rated by OED, Kenya was rated the poorest in public project completion (Omari, 2018). If the situation is not looked into and rectified, it will be challenging for the devolved governments and national government to make proper capital development budgets and time appropriations for construction of roads hence this might impact negatively on both governments with regards to planning for developmental projects. This will subsequently affect the national and global performance of the country (Akal *et al.,* 2017).

Nduati (2017) investigated the causes of delay and disruptions in road construction projects in 6 counties including Mombasa county and found that only 22%, 30% and 44% of the road construction projects were completed on estimated time according to clients, consultants and contractors respectively while the maximum time overrun was 78%, 70% and 56% for clients, consultants and contractors respectively. Michugu (2020) in his study on factors causing delays in road construction projects in Kenya using a survey on consultants found out that the overall top causes of delay are; delayed payment by the client, slow decision-making and bureaucracy in the client organization, inadequate planning/scheduling and rain. Munano identifies inadequate resources, non-performance by the contractor and delayed payments as the major issues affecting project delivery in Kenya. Construction cost and time surges have been reported in most of the road projects in most counties (Kibuchi & Muchungu, 2019). For instance, most road construction projects such as Thika Super Highway have reported having cost overruns. The cost escalated from 26.44 billion to 34.45 billion (Wambui *et al.,* 2015). It was further reported the time and cost overruns were due to stakeholder management challenges.

Several studies have been done on the performance of road construction projects but none has focused on project stakeholder management. However, these studies focused on financial capability. skilled manpower, information technology, procurement procedures and communication (Mwangi, 2016; Onyango, 2019; Wairimu, 2016, Ogutu & Muturi, 2017). Kibuchi and Muchungu (2019) studied the contribution of human factors in the performance of road construction projects in Kenya. Nyangilo (2016) did research on an assessment of the organization structure and leadership effects on road construction projects' performance in Kenya. Lepartobiko (2016) studied the factors that influence success in large construction projects. Wambui *et al.* (2015) examined the factors that affect the completion of road construction projects in Nairobi. From the local studies done previously, a lot has been discussed, both literarily and empirically, on the dynamics that contribute towards the accomplishments, or otherwise, of construction projects. Nonetheless, little or no evident study has been conducted in the area of "project stakeholder management on the performance of road construction projects in Mombasa County".

It is in this light that the current study sought to fill the existing research gap by examining the effect of project stakeholder management on the performance of road construction projects in Mombasa County, Kenya with a focus on project stakeholder mapping, project stakeholder identification, project stakeholder analysis and project stakeholder risk management.

3. GENERAL OBJECTIVE
The general objective of the study was to examine the effect of project stakeholder management on the performance of road construction projects in Mombasa County, Kenya.

3.1 Specific Objectives

1. To establish the effect of project stakeholder identification on the performance of road construction projects in Mombasa County, Kenya.

2. To establish the effect of project stakeholder mapping on the performance of road construction projects in Mombasa County, Kenya.

3. To determine the effect of project stakeholder analysis on the performance of road construction projects in Mombasa County, Kenya.

4. To investigate the effect of project stakeholder risk management on the performance of road construction projects in Mombasa County, Kenya.

4. REVIEW OF LITERATURE

4.1 Theoretical Framework
This study was anchored on the following theories; Theory of Stakeholder Identification and Stakeholder Theory.

4.1.1 Theory of Stakeholder Identification
Building upon this typology, Inuwa and Kunya (2015) propose a theory of stakeholder salience. In this theory they suggest a dynamic model, based upon the identification typology that permits the explicit recognition of situational uniqueness and managerial perception to explain how managers prioritize stakeholder relationships. Peng, Cheng and Liwen (2017) demonstrate how the identification typology allows predictions to be made about managerial behaviour concerning each class of project stakeholder, as well as predictions about how stakeholders change from one class to another and what this means to project managers. According to John, Faremi & Lowal (2016), they do not argue that project managers should pay attention to this or that class of stakeholders. Rather, they argue that to achieve certain ends, or because of perceptual actors, project managers do pay certain kinds of attention to certain kinds of stakeholders. Knowing what types of stakeholders exist according to what identification typology facilitates, and why project managers respond to them the way they do, which our notion of salience clarifies, sets the stage for future work in stakeholder theory that specifies how and under what circumstances managers can and should respond to various stakeholder types.

Koops *et al.* (2016) suggest that the question of stakeholder salience-the degree to which project managers give priority to competing stakeholder claims-goes beyond the question of stakeholder identification because the dynamics inherent in each relationship involve complex considerations that are not readily explained by the stakeholder framework as it currently stands. What is needed also is a theory of stakeholder salience that can explain to whom and to what managers pay attention.(Davis, 2014) proposes that classes of stakeholders can be identified by their possession or attributed possession of one, two, or all three of the following attributes: the stakeholder's power to influence the project, the legitimacy of the stakeholder's relationship with the project, and the urgency of the stakeholder's claim on the project. This theory produces a comprehensive typology of stakeholders based on the normative assumption that these variables

define the field of stakeholders: those entities to whom managers should pay attention (Kraemer *et al*., 2014).

The theory of stakeholder identification, therefore, resonates well with the project stakeholder identification variable because it attempts to articulate a fundamental question in a systematic way for instance, which groups of stakeholders are deserving or requiring management attention, and which are not?

4.1.2 Stakeholder Theory
Stakeholder theory was first fronted by Freeman (1984) who described groups and individuals who are affected by, or who affect the organization's activities as that organization's stakeholders. Bagaya and Song (2016) stress the financial benefit that is obtained by the firms that embrace stakeholder theory by building stronger relationships with stakeholders. According to Zewdu and Aregaw (2015), competitive advantage can be achieved by strengthened stakeholder relationships emanating from the trust, reputation and innovation which translates to better performance of the projects. All projects have stakeholders with the potential to exert influence on the performance of a project, such stakeholders should, therefore, be recognized and evaluated for their possible support or threat to the project goals (Adek, 2016). As to such, each stakeholder has varied power and interest in the project and the management of the project need to undertake a 'Stakeholder mapping' exercise to understand the different characteristics of the organization's stakeholders; who they are, where they come from and what interest they have in the performance of the business (Ndunda, Paul & Mburu, 2017).

Stakeholder mapping will, therefore, be able to group and categorize the various stakeholders according to the power and interest they wield in the organization. This is done to manage these stakeholders to contribute positively to the organization. Mugata and Chelule (2018) citing Mendelow (1991) developed a two-by-two matrix with four quadrants where each stakeholder can be grouped in the Mendelow Matrix for determining their potential influence and interest in the organization or project. The importance of stakeholders' management is described in several studies (Sama-Lang & Zesung, 2016; Harrison& Wicks, 2013). This theory has been applied in different fields despite it having a strategic management origin and how it is used is distinct where it uses different methods and criteria of evaluation (Harrison & Wicks, 2013). The theory emphasizes a significant relationship between stakeholders and the top management staff (Wu & Wokutch, 2015). In specific, the managers should understand that stakeholders affect the success of projects (Moldogaziev & Resh, 2016). The relationship with the top management determines the stakeholders' participation.

Stakeholder theory lays a fertile ground that spruces up the second variable of this study. The objective of this theory is to enable managers to map the stakeholders and to have an understanding of stakeholders and manage them strategically. Stakeholder mapping will, therefore, be able to group and categorize the various stakeholders according to the power and interest they wield in the organization.

4.2 Conceptual Framework
Omeno and Sang (2018) explain a conceptual framework as a diagram showing a relationship between the independent and dependent variables. The relationship between the stakeholder management and performance of the road construction project is represented in figure 2.1.
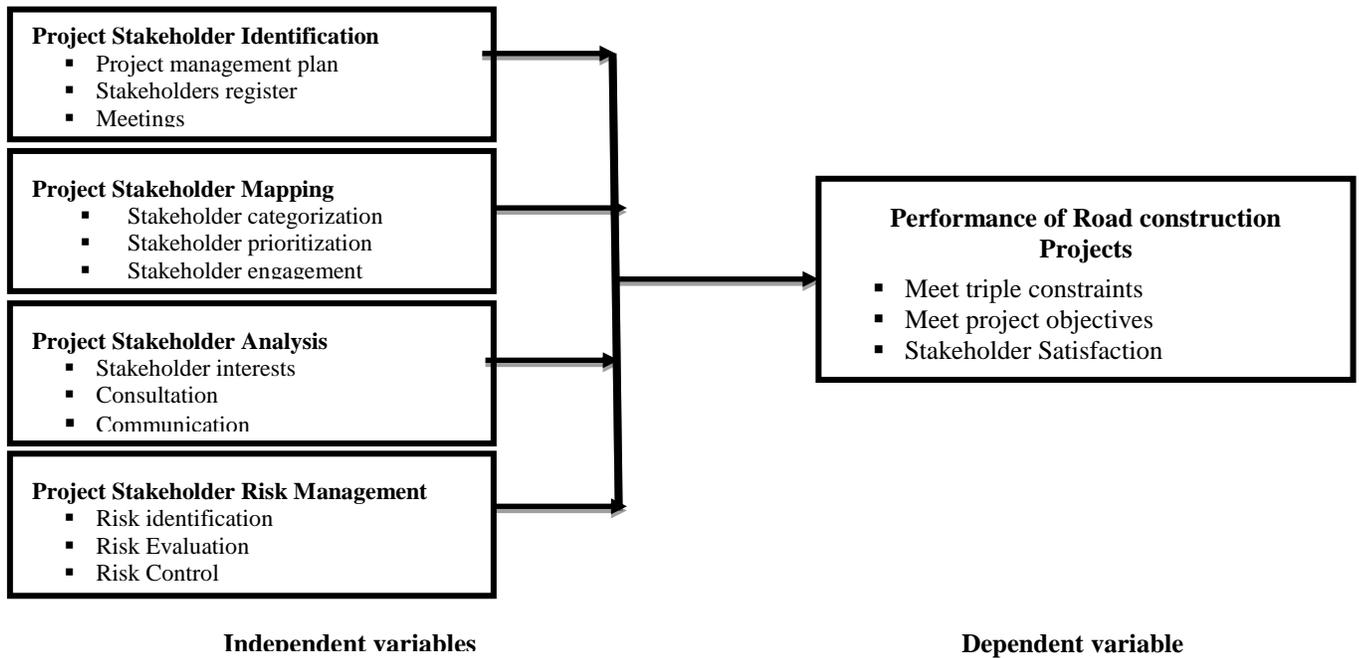
```
┌─────────────────────────────────────┐
│ Project Stakeholder Identification  │
│   ▪ Project management plan          │
│   ▪ Stakeholders register            │
│   ▪ Meetings                         │
└─────────────────────────────────────┘

┌─────────────────────────────────────┐          ┌──────────────────────────────────┐
│ Project Stakeholder Mapping          │          │  Performance of Road construction │
│   ▪ Stakeholder categorization       │          │            Projects               │
│   ▪ Stakeholder prioritization       │          │   ▪ Meet triple constraints       │
│   ▪ Stakeholder engagement           │          │   ▪ Meet project objectives       │
└─────────────────────────────────────┘          │   ▪ Stakeholder Satisfaction      │
                                                  └──────────────────────────────────┘
┌─────────────────────────────────────┐
│ Project Stakeholder Analysis         │
│   ▪ Stakeholder interests            │
│   ▪ Consultation                     │
│   ▪ Communication                    │
└─────────────────────────────────────┘

┌─────────────────────────────────────┐
│ Project Stakeholder Risk Management  │
│   ▪ Risk identification              │
│   ▪ Risk Evaluation                  │
│   ▪ Risk Control                     │
└─────────────────────────────────────┘
```

Independent variables   **Dependent variable**

Figure 1: Conceptual Framework

4.3 Review of Study Variables

4.3.1 Project Stakeholder Identification

Stakeholder identification largely accounts for the performance of the project particularly that of complex projects (Njogu, 2016). Stakeholders' identification requires the checking of an individual or a group of individuals, who are influenced by or able to influence a project (Nyandika & Ngugi, 2014). Stakeholders can be classified along with several dimensions. They could be classified as primary or secondary (Kamau & Mohammed, 2015). Primary stakeholders have formal and economical relationships with the project, while secondary stakeholders are not directly related to the project despite being able to influence and be influenced by its operation and outcomes (Ngacho & Das, 2014). Stakeholders may also be classified as environmental or process-related (Wamugu, 2017). Therefore, identifying how stakeholders influence project success is an important and fundamental issue of stakeholder management.

Primary stakeholders are defined by Akoh (2018) as those without whose continuing participation in the project cannot survive as a going concern. These groups mainly include project managers, employees, customers, and suppliers and the public sector: the governments and communities that afford infrastructure, regulate project activity, and enforce taxes. The project and the primary stakeholders are highly dependent on one another. Davis (2014) further addresses the importance of managers to create value for each stakeholder group to ensure the continued relationship and stakeholder retention. Aduma and Kimutai (2018) state that these groups of stakeholders possess power that influences managerial decisions. Due to the contractual relationship's projects have with primary stakeholders, they are highly visible:

choices, opportunities, decisions, and the valuation of their demands are required by projects (Adek, 2016).

Secondary stakeholders are those who are not directly linked to the projects but can influence the activities of the project in various ways. Aduma and Kimutai (2018) defines secondary stakeholders as those who influence or affect, or are influenced or affected by, the project, but they are not engaged in transactions with the project and are not essential for its performance (Nyandika & Karanja, 2014). The secondary stakeholder groups include competition, media, trade associations, and support groups (special interest). They can also include the government, neighbours, pressure groups, political groups, local councils, and the surrounding communities Although these groups have no contract or authority with the project and the project is not dependent upon these groups for their performance, they can cause significant disruption to the project (Ndunda, Paul & Mbura, 2017; Njogu, 2016).

4.3.2 Project Stakeholder Mapping
Stakeholder mapping in a project is a method of understanding the voice of the project stakeholders for the successful performance of a project. There is usually a four-step approach to stakeholder mapping to enhance stakeholders' engagement in the project (Ngacho & Das, 2014; Wairimu, 2016). Stakeholder mapping involves locating, analyzing and prioritizing the people and organizations with a stake in your project features and performance. Initially, this will assist the project to determine requirements and ultimately it will help it to manage and communicate with key stakeholders effectively (Kamau & Mohammed, 2015).The project managers need to map appropriately the stakeholder's values they have in the project. This could be viewed as seeing them as instruments and agents to be harnessed and controlled at one extreme, or as having intrinsically moral rights for their needs to be considered. Project managers lean towards instrumentality because we believe that understanding a stakeholder's value proposition and their characteristics, and improved engagement strategy may result in project management success (Davis, 2014).

Considering the stakeholder's intervention level, this dimension has a continuum with the stakeholders right to intervene through regulations at one end be that at local government, regional, national or global authorities on the performance of the project (Njogu, 2016). At the other end of the spectrum lies the individual's intrinsic right to intervene. At the mid-point, where stakeholders position their main interest, lies the project. We argue that projects can benefit from understanding what influence and power stakeholders may have and should negotiate a planned approach to allow that influence to shape plans and actions. Thus, there is a need for stakeholder engagement and integration into project planning, communication planning and risk management (Nyandika & Karanja, 2014).

4.3.3 Project Stakeholder Analysis
The analysis consists of a stakeholder impact is to determine the nature and impact of stakeholder influence, the probability of stakeholders exercising their influence and each stakeholder's position concerning the project are the proponents or opponents (Kamau & Mohammed, 2015). The goal of stakeholder analysis is to develop a strategic view of the human and institutional landscape, and the relationships between the different stakeholders and the issues they care about most. According to Onyango (2019), the basic premise behind stakeholder

analysis is that different groups have different concerns, capacities and interests and that these need to be explicitly understood and recognized.

According to Akoh (2018), the basic premise behind stakeholder analysis is that different groups have different concerns, capacities and interests and that these need to be explicitly understood and recognized. This is done during the process of problem identification, objective setting and strategy selection, implementation and completion, and plotted in the stakeholder analysis matrix; strength, weakness, opportunity and threats (SWOT) analysis are among the premises widely used by donors. The interests of the stakeholders need to be well taken care of to improve the performance of projects (Adek, 2016).

According to Carol and Morgan (2017), stakeholder analysis leads to project consultation which can lead to the identification and monitoring of the trends of the specific project stakeholders. The stakeholder analysis enhances promote perceptions and attitudes of the individuals of the project stakeholders and eliminate the specific challenges. The stakeholder analysis helps to identify and track the expectations and needs of the individuals or groups to improve the performance of the project. This will improve the provision of the planned developments evaluate the implementations and actions, brand values and position of the project progress.

4.3.4 Project Stakeholder Risk Management

Stakeholder risk management contributes and synergizes with proactive risk management as it anticipates and foresees possible social risks and relationship risks (Hassan, 2014). Management of stakeholders can be conducted utilizing traditional risk assessment methods, such as the impact probability analysis. Conceived similarly, according to (Aduma & Kimutai, 2018), the power-interest graph constitutes the bespoke methodology for classifying stakeholders. For every successful implementation of a project, the stakeholders need to be closely interconnected. Adek (2016) states that personnel risks are occasioned by a lack of risk management expertise and also, the prohibitive costs of implementing sustainable risk management strategies. Risk management strategies identified included a need for training of project personnel on sustainable risk management strategies with a bigger emphasis on the time and other benefits of effective risk management. Such training was geared towards demonstrating the implementation of risk management strategies as an investment that would result in positive outcomes, thus changing the negative perception of overall risk management as an unnecessary and costly undertaking (Wamugu, 2017; Ali-Mohammed, 2014; Ngacho & Das, 2014).

4.3.5 Project Performance

According to Kinyondo and Villanger (2017), the performance of any project is judged by the satisfaction of stakeholders' needs and is measured by the extent of meeting standards laid down at the start of the project. This is regarding the delivery of construction projects by contractors within budget, time, quality, environment, safety and performance. Construction projects are considered successful when delivered within the scheduled duration, allocated budget, and specified quality (Matembo, 2016). Delay in the completion of construction facilities is a critical challenge with a global dimension, often leading to increased costs due to time extension or acceleration as well as a loss of productivity, disruption of work, loss of revenue through lawsuits between contractual parties, and project abandonment (McKim, 2017; Kinyondo & Villanger, 2017).

Ameyaw and Chan (2015) stated that performance can be measured by key indicators for evaluation. The purpose of Key performance indicators (KPIs) is that clients want their projects delivered on time, within budget, as per the specifications, efficiently, right first time, safely, by profitable companies. So, regular clients expect continuous improvement from their construction team to achieve year-on-year reductions in project costs and time and achieve a quality product. Kimemia (2015) assert that the Key Performance Indicators (KPIs) can be used for benchmarking purposes and will be a key component of any organization move towards achieving best practice. Clients, for instance, assess the suitability of potential suppliers or contractors for a project, by asking them to provide information about how they respond to a range of indicator.

The performance of road projects has not been determined from the perspective of risk management practices (Mwakajo & Kidombo, 2017). Lack of risk management has been blamed as one of the compounding factors that affect the evaluation of the performance of road projects in Kenya (Ngacho & Das, 2014). According to Owolabi (2014), as cited in Kithinji (2017), the construction of road projects is considered successful when delivered within the scheduled duration, allocated budget and specified quality.

5. RESEARCH METHODOLOGY
This research adopted a descriptive research design to address the formulated hypotheses. Census method was used and hence all the target population of 188 road engineers, road supervisors, road inspectors, road surveyors and contractors in Mombasa County was used in the study. Primary data was collected by use of self-administered structured questionnaires which were distributed through the drop and pick method.

6. DATA ANALYSIS AND RESULTS

6.1 Correlation Analysis
From table 1, the results generally indicate that independent variables (project stakeholder identification, project stakeholder mapping, project stakeholder analysis, and project stakeholder risk management) were found to have positive significant correlations on the performance of road construction projects at 5% level of significance. There was a strong positive and highly significant correlation between project stakeholder identification and performance of road construction projects ($r = 0.829$, $P < 0.05$). There was a strong positive and highly significant correlation between project stakeholder mapping and performance of road construction projects ($r = 0.773$, $P < 0.05$). There was a strong positive and highly significant correlation between project stakeholder analysis and performance of road construction projects ($r = 0.673$, $P < 0.05$). There was a strong positive and highly significant correlation between project stakeholder risk management and performance of road construction projects ($r = 0.765$, $P < 0.05$).

Table 1: Pearson Correlations

		PSI	PSM	PSA	PSRM	PRCP
PSI	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	120				
PSM	Pearson Correlation	.727**	1			
	Sig. (2-tailed)	.000				
	N	120	120			
PSA	Pearson Correlation	.629**	.552**	1		
	Sig. (2-tailed)	.000	.000			
	N	120	120	120		
PSRM	Pearson Correlation	.654**	.581**	.947**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	120	120	120	120	
PRCP	Pearson Correlation	.829**	.773**	.673**	.765**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	120	120	120	120	120

**Correlation is significant at the 0.01 level (2-tailed).
Key: PSI=Project Stakeholder Identification, PSM=Project Stakeholder Mapping, PSA=Project Stakeholder Analysis, PSRM=Project Stakeholder Risk Management, PRCP=Performance of Road Construction Projects

6.2 Coefficient of Determination (R2)

Table 2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.917[a]	.842	.836	.13141
a. Predictors: (Constant), Project Stakeholder Risk Management, Project Stakeholder Mapping, Project Stakeholder Identification, Project Stakeholder Analysis				

From the model summary in Table 2, it is clear that the adjusted R^2 was 0.836 indicating that a combination of project stakeholder risk management, project stakeholder mapping, project stakeholder identification and project stakeholder analysis explained 83.6% of the variation in the performance of road construction projects in Mombasa County.

6.3 Analysis of Variance
From the ANOVA Table 3, it is clear that the overall standard multiple regression model (the model involving constant, project stakeholder identification, project stakeholder mapping, project stakeholder analysis and project stakeholder risk management) is significant in predicting the effect of project stakeholder identification, project stakeholder mapping, project stakeholder analysis and project stakeholder risk management on the performance of road construction

projects in Mombasa County. The regression model achieves a high degree of fit as reflected by an R^2 of 0.836 (F = 152.7; P = 0.001 < 0.05).

Table 3 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.547	4	2.637	152.692	.000[b]
	Residual	1.986	115	.017		
	Total	12.533	119			
a. Dependent Variable: Performance of Road Construction Projects						
b. Predictors: (Constant), Project Stakeholder Risk Management, Project Stakeholder Mapping, Project Stakeholder Identification, Project Stakeholder Analysis						

6.4 Regression Analysis

Table 4 presents the regression results on how project stakeholder risk management, project stakeholder mapping, project stakeholder identification and project stakeholder analysis determine the performance of road construction projects in Mombasa County. The multiple regression equation was that: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ andthe multiple regression equation became: $Y = 0.208 + 0.417X_1 + 0.227X_2 + 0.508X_3 + 0.822X_4$. As depicted in table 4.14, there were positive and significant effects of project stakeholder risk management on the performance of road construction projects ($\beta = 0.845$; t = 7.080; p < 0.05). There was a positive and significant effect of project stakeholder analysis on the performance of road construction projects ($\beta = 0.542$; t = 4.689; p < 0.05). There was a positive and significant effect of project stakeholder mapping on the performance of road construction projects ($\beta = 0.280$; t = 5.072; p < 0.05). There was positive and significant effect of project stakeholder identification on performance of road construction projects ($\beta = 0.414$; t = 6.952; p < 0.05).

Table 4 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.208	.173		1.202	.232
	Project Stakeholder Identification	.417	.060	.414	6.952	.000
	Project Stakeholder Mapping	.227	.045	.280	5.072	.000
	Project Stakeholder Analysis	.508	.108	.542	4.689	.000
	Project Stakeholder Risk Management	.822	.116	.845	7.080	.000
a. Dependent Variable: Performance of Road Construction Projects						

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions
Based on the findings, the study concluded that project stakeholder identification has a positive and significant effect on the performance of road construction projects in Mombasa County, Kenya. Stakeholders can be classified as primary or secondary. Primary stakeholders have formal and economical relationships with the project, while secondary stakeholders are not directly related to the project despite being able to influence and be influenced by its operation and outcomes. Therefore, identifying how stakeholders influence project success is an important and fundamental issue of stakeholder management. Stakeholder identification largely accounts for the performance of the project particularly that of complex projects.

Based on the findings, the study concluded that project stakeholder mapping has a positive and significant effect on the performance of road construction projects in Mombasa County, Kenya. Stakeholder mapping in a project is a method of understanding the voice of the project stakeholders for the successful performance of a project. The project managers need to map appropriately the stakeholder's values they have in the project. This could be viewed as seeing them as instruments and agents to be harnessed and controlled at one extreme, or as having intrinsically moral rights for their needs to be considered. Project managers lean towards instrumentality because it is believed that understanding a stakeholder's value proposition and their characteristics, and improved engagement strategy may result in project management success.

Based on the findings, the study concluded that project stakeholder analysis has a positive and significant effect on the performance of road construction projects in Mombasa County, Kenya. Stakeholder analysis leads to project consultation which can lead to the identification and monitoring of the trends of the specific project stakeholders. The stakeholder analysis enhances the perceptions and attitudes of the individuals of the project stakeholders and eliminates the specific challenges. The stakeholder analysis helps to identify and track the expectations and needs of the individuals or groups to improve the performance of the project. This will improve the provision of the planned developments evaluate the implementations and actions, brand values and position of the project progress.

Based on the findings, the study concluded that project stakeholder risk management has a positive and significant effect on the performance of road construction projects in Mombasa County, Kenya. Management of stakeholders can be conducted using traditional risk assessment methods, such as the impact probability analysis. Conceived similarly, the power-interest graph constitutes the bespoke methodology for classifying stakeholders. For every successful implementation of a project, the stakeholders need to be closely interconnected. It was also noted that personnel risks are occasioned by a lack of risk management expertise and also, the prohibitive costs of implementing sustainable risk management strategies.

7.2 Recommendations
KeNHA and other road agencies should embrace project stakeholder identification practice in all their road construction projects to establish how various stakeholders will influence the project and consequently affect project success. Stakeholder identification largely accounts for the performance of the project particularly that of complex projects.

Project stakeholder analysis should properly be conducted to ensure adequate consultation with stakeholders. A comprehensive stakeholder analysis willhelp to identify and track the expectations and needs of the individuals or groups to improve the performance of the project. This improves the provision of the planned developments evaluate the implementations and actions, brand values and position of the project progress.

There should be the training of project personnel on sustainable stakeholder risk management strategies with a bigger emphasis on the time and other benefits of effective risk management. Such training should be geared towards demonstrating the implementation of stakeholder risk management strategies as an investment that would result in positive outcomes, thus changing the negative perception of overall risk management as an unnecessary and costly undertaking.

The project managers need to map appropriately the stakeholder's values they have in the project. This could be viewed as seeing them as instruments and agents to be harnessed and controlled at one extreme, or as having intrinsically moral rights for their needs to be considered. Moreover, the stakeholder mapping process will ensure that project's stakeholder's values are considered and that the degree of enforcement of the values and interests are controlled.

REFERENCES
Adek, R. T. (2016). *Determinants of successful projects implementation of infrastructure projects in devolved units; a case study of Mombasa County, Kenya*. Unpublished MA Project, University of Nairobi.
Aduma, L. K., & Kimutai, G. (2018). Project risk management strategies and project performance at the National Hospital Insurance Fund in Kenya. *International Academic Journal of Information Sciences and Project Management*, *3*(2), 111-136.
Aigbavboa, C., Oke, A., & Mohapeloa, K. (2016). Performance of construction projects in South Africa: perceptions of consultants and contractors.
Akal, A. Y., & El-Hamrawy, S. (2016). Management of Highway Projects in Egypt through Identifying Factors Influencing Quality Performance. *Journal of Construction Engineering*, 2(3), 1-6
Akoh, S. R. (2018). *Risk management framework for highway construction projects in Nigeria*. Doctoral dissertation, Heriot-Watt University.
Alinaitwe, H., Apolot, R., & Tindiwensi, D. (2013). Investigation into the causes of delays and cost overruns in Uganda's public sector construction projects. *Journal of Construction in Developing Countries*, *18*(2), 33.
Amandin, M. M., & Kule, J. W. (2016). Project delays on cost overrun risks: a study of Gasabo district construction projects Kigali, Rwanda. *ABC Journal of Advanced Research*, *5*(1), 21-34.
Amandin, M. M., & Kule, J. W. (2016). Project delays on cost overrun risks: a study of Gasabo district construction projects Kigali, Rwanda. *ABC Journal of Advanced Research*, *5*(1), 21-34.
Asomani-Boateng, R., Fricano, R. J., & Adarkwa, F. (2015). Assessing the socio-economic impacts of rural road improvements in Ghana: A case study of transport sector program support (II). *Case studies on transport policy*, *3*(4), 355-366.
Atout, M. M. (2016). The Reason of Principles of Construction Engineering and Management Being Necessary for Contracting Firms and Their Projects Managers. *International Journal of Structural and Construction Engineering*, *10*(4), 466-471.
Bagaya, O., & Song, J. (2016). Empirical study of factors influencing schedule delays of public construction projects in Burkina Faso. *Journal of Management in Engineering*, *32*(5), 501- 514.

Bundi, S. (2018). *Institutional Factors Influencing Completion Of Construction Projects In Public Day Secondary Schools In Kenya. A Case Of Imenti North Subcounty, Meru County*(Doctoral dissertation, University of Nairobi).

Chatterjee, S., & Hadi, A. S. (2015). *Regression analysis by example*. John Wiley & Sons.

Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.

Davis, K. (2014). Different stakeholder groups and their perceptions of project success. *International journal of project management*, *32*(2), 189-201.

Erkul, M., Yitmen, I., & Çelik, T. (2016). Stakeholder engagement in mega transport infrastructure projects. *Procedia Engineering*, *161*, 704-710.

Famiyeh, S., Amoatey, C. T., Adaku, E., & Agbenohevi, C. S. (2017). Major causes of construction time and cost overruns: A case of selected educational sector projects in Ghana. *Journal of Engineering, Design and Technology*, *15*(2), 181-198.

Freeman, R. E. (1999). Divergent stakeholder theory. *Academy of management review*, *24*(2), 233-236.

Gacheru, E. N. (2015). *An investigation into the national construction authority's challenges in regulating building contractors: the case of Mombasa County*. Doctoral dissertation, JKUAT.

Gwaya, A. O. (2018). *Development of a Project Management Evaluation Model for the Construction Industry in Kenya*. Unpublished Doctoral Thesis, Jomo Kenyatta University of Agriculture and Technology.

Inuwa, I. I., &Kunya, S. U. (2015). Project Management Theory Exploration for Indigenous Contractors' Project Planning in Nigeria. *International Journal of Applied*, *5*(3).

John, I. B., Faremi, O. J., & Lawal, O. S. (2016). Construction Craftsmen Skill Needs and Training in the Nigerian Construction Industry. *Lagos Journal of Environmental Studies*, *8*(1), 72-84.

Kahura, N. (2019). *Factors Influencing Effective and Efficient Delivery of Road Construction Projects in Kenya: A Case of Nairobi County*. Unpublished MSc. Thesis, University of Nairobi.

Kerzner, H., & Kerzner, H. R. (2017). *Project management: a systems approach to planning, scheduling, and controlling* . New Jersey: John Wiley & Sons.

Khomela, E. M. (2016). The Use of Stakeholder involvement (TQM) Concepts in Public Sector Infrastructure Project Delivery. *South African Journal of Industrial Engineering*, 16(1), 29-40.

Kibuchi, N., & Muchungu, P. (2019). *The Contribution of Human Factors in the Performance of Construction Projects in Kenya*. Unpublished MA Project Planning, University of Nairobi.

Kimemia, J. G. (2015). *Determinants of projects delay in the construction industry in Kenya; The case of selected road projects implemented by Kenya National Highways Authority in Kenya's Coast Region*. Unpublished MA Project, University of Nairobi.

Kinyondo, A., & Villanger, E. (2017). Local content requirements in the petroleum sector in Tanzania: A thorny road from inception to implementation? *The Extractive Industries and Society*, *4*(2), 371-384.

Koops, L., Bosch-Rekveldt, M., Coman, L., Hertogh, M., & Bakker, H. (2016). Identifying perspectives of public project managers on project success: Comparing viewpoints of managers from five countries in North-West Europe. *International Journal of Project Management*, *34*(5), 874-889.

Kumar, R. (2019). *Research methodology: A step-by-step guide for beginners*. Sage Publications Limited.

Matembo, F. (2016). *Assessing the compliance on public procurement act no. 7 of 2011 and its regulations on road construction projects in Tanzania local government authorities (tlgas). A case of selected lgas in Dodoma region*. Doctoral dissertation, Mzumbe University.

McKim, C. A. (2017). The value of mixed methods research: A mixed-methods study. *Journal of Mixed Methods Research*, *11*(2), 202-222.

Michugu, J. (2020). *Project factors influencing completion of Rural Roads projects in Kenya: a case of Rumuruti-Maralal Road project in Laikipia and Samburu Counties* (Doctoral dissertation, University of Nairobi).

Effects on Construction Projects Performance in Kenya: A Case of Public Building Projects within Nairobi. Unpublished MA Projects Planning, University of Nairobi.

Ogombe, J. A. (2017). *Influence of road infrastructure interventions on implementation of pedestrian safety rules in the city of Kisumu, Kenya* (Doctoral dissertation, Doctoral Dissertation, University of Nairobi).

Oguya, S. A., & Muturi, W. (2016). Factors affecting Performance of Road Construction Projects in Arid and Semi-Arid Areas in Kenya. *International Journal of Social Sciences and Information Technology*, *2*(8), 55-62.

Olang'o, A. J., Arvinlucy, O., & Peterson, M. (2016). Material flow, supply chain performance and lead time of road construction projects in Kenya. *African Journal of Business and Industry*, *2*(1), 17-33.

Seboru, M. A. (2015). An investigation into factors causing delays in road construction projects in Kenya. *American Journal of Civil Engineering*, *3*(3), 51-63.

Simon, J. (2017). *The Factors Causing Delays in Road Construction Projects in Tanzania: A of Case of TANROAD Dar es Salaam City*. Doctoral dissertation, The Open University of Tanzania.

Sulemana, M., Musah, A. B., & Simon, K. K. (2018). An assessment of stakeholder participation in monitoring and evaluation of district assembly projects and programmes in the Savelugu-Nanton Municipality Assembly, Ghana. *Ghana Journal of Development Studies*, *15*(1), 173-195.

Verweij, S. (2015). Producing satisfactory outcomes in the implementation phase of PPP infrastructure projects: A fuzzy set qualitative comparative analysis of 27 road constructions in the Netherlands. *International Journal of Project Management*, *33*(8), 1877-1887.

Von Bertalanffy, L. (1972). Ludwig von Bertalanffy. *General Systems*, *17*, 219-228.

Wambui, D. N. U., Ombui, K., & Kagiri, A. (2015). Factors Affecting Completion of Road Construction Projects in Nairobi City County: Case Study of Kenya Urban Roads Authority (KURA). *International Journal of Scientific and Research Publications*, *5*(11), 2250-3153.

Wafula, E. F. (2017). Factors Influencing Road Projects Performance in Kenya: A Case of Road Contractors in Machakos County. *University of Nairobi*.

Wamugu, J. W., & Ogollah, K. (2017). Role of Stakeholders Participation on the Performance of Constituency Development Fund Projects in Mathira East constituency in Kenya. *International Academic Journal of Information Sciences and Project Management*, *2*(1), 104-125.

Wirahadikusumah, R., Susanti, B., Coffey, V., & Adighibe, C. (2015). Performance-based contracting for roads–experiences of Australia and Indonesia. *Procedia Engineering*, *125*, 5-11.

World Bank. (2013). *Devolution Without Disruption—Pathways to a Successful New Kenya*. Nairobi: World Bank

World Bank. (2014). *Rural Transport in Multi Sectorial and Community Driven Projects*. Washington, DC: World Bank

Zewdu, Z. T., & Aregaw, G. T. (2015). Causes of contractor cost overrun in construction projects: The case of Ethiopian construction sector. *International Journal of Business and economics research*, *4*(4), 180-191.