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**Evaluating the Influence of Stakeholders' Involvement on  
the Performance of Road Construction Project in Nigeria**

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## Evaluating The Influence of Stakeholders' Involvement on the Performance of Road Construction Project in Nigeria

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### Abstract

**Purpose:** Roads make a crucial contribution to economic development and growth and bring important social benefits. They are of vital importance in order to make a nation grow and develop. Effective project performance in terms of meeting the set objectives is very critical for any project. The aim of this study was to evaluate the influence of stakeholders on the performance of road construction.

**Methodology:** Theory of leadership and theory of game backed the literature reviewed in this research. Mixed research design was adopted; thus, data for the research was sourced through questionnaires, direct observation and Oral interview. The collected data was analyzed using percentages, regression tools in Eview8 which were validated by experts in the field of study.

**Findings:** The result was presented in pie charts and tables. The results from the findings show

that 40% of the respondents strongly agreed to the fact that performance of road construction is greatly influenced by proper involvement of stakeholders, 39.6% agreed, 10% disagreed and 10.4% strongly disagreed. The regression result of the response had  $R^2$  of 0.154 which means that about 15.4% of road project performance is as a result of proper involvement of stakeholders.

**Recommendations:** It is recommended that road construction firms should involve all the inputs of stakeholders in the road constructions project from inception to completion so as to have effective road deliveries

**Keywords:** *Economy, Project; Performance; Road construction; Stakeholder*

## 1.0 INTRODUCTION

Roads make a crucial contribution to economic development and growth and bring important social benefits. They are of vital importance in order to make a nation grow and develop. In addition, providing access to employment, social, health and education services makes a road network crucial in fighting against poverty. Roads open up more areas and stimulate economic and social development. For those reasons, road infrastructure is the most important of all public assets [6]. The importance of road as to man cannot be overstated. This is because road is one of the basic infrastructures to man. Roads are the arteries through which the economy pulses. By linking producers to markets, workers to jobs, students to school, and the sick to hospitals, roads are vital to any development agenda [2]

Road infrastructure projects play a major role in economies world over. It remains the major means of transportation in Africa, covering about 75% of freight and passengers [3]. Road infrastructure projects are massive investments undertaken to support the prosperity of any country through haulage of goods and services from one place to the other [5]. Its importance cannot be overstated, the reason why developed countries provide so much in terms of annual budget to fund road projects. It is important that the contractors accomplish projects timely, within cost and as per required quality [1]. Road infrastructure projects play a major role in economies world over. It remains the major means of transportation in Africa, covering about 75% of freight and passengers [3]. Road infrastructure projects are massive investments undertaken to support the prosperity of any country through haulage of goods and services from one place to the other [5] In Sub-Sahara Africa, road infrastructure presently remains the means of conveying about 75% of freights and passengers [3]. Considering that about 50% of the roads in the Sub-Sahara region are yet to be constructed implies that road infrastructure development remains on the top list of physical infrastructure developments in such cities, potentially impacting the socio-economic and physical environment of the cities and their peri-urban areas [4] Construction projects include Buildings, highways/roads, residential units, healthcare facilities, utility infrastructure, oil and gas and other industrial facilities which may appear to be typical but each present its own challenges and risks [9]. Each construction project no matter how small it is, solves basic human problem from shelter to provision of basic amenities like water, light and ease of transporting goods from one place to the other. This is supported by [4] noting that projects arise out unmet needs by finding solution to critical business problem that has evaded prior attempts at finding a solution.

The success of any road construction depends on some critical factors. Critical success factors are those fundamental issues vital to the current operating activities and future success of an organization [4]. This implies that critical success factor can predict and improve the effectiveness of a road project. The determinant of success in the construction industry has been project based where cost, time and quality underscore the parameters. [17] Observes that there are a number of factors that inhibit successful implementation of road construction in developing countries. Investors in this sector require being certain about project time and cost and thereby delays could cause the contractor incur monetary liabilities. The question of performance of road construction projects is thereby a universal concern that affects a number of parties in a construction project. It is therefore in the best interest of the project management to address the critical factors that influence completion of road construction projects.

Effective project performance in terms of meeting the set objectives is very critical for any project. This involves effective and efficient mobilization of resources to meet the project purpose. An appreciation of the critical factors that influence performance of a project is therefore imperative so as to provide project managers with an idea regarding where to lay focus on [10]. The responsibility of ensuring that construction projects are completed successfully lies with the project manager as well as other stakeholders. There should also be mechanisms to discourage parties in a project from laxity that often led to abandonment or delays. As such, many parties are required to implement construction projects [12]. They include investors, contractors, architects, consultants, materials suppliers, among others. The participation of the entire parties (that is, stakeholders) in project implementation signifies a key challenge [8]. However, the completion of a project within a specified time is one of the major objectives in project management. [7] observes that road construction plays a pivotal role in country's development which could explain the fact that it is one of the largest industries in the country contributing about 10 percent of the gross national product (GNP).

Therefore, there is need to identify actual causes of time and cost overruns so as to mitigate its impact on the overall performance of the project and allow stakeholders create sustainable road projects. Based on the above stated evidences from researchers, road projects' performance could be influenced by proper involvement of stakeholders from the inception to completion stage. This study seeks to ascertain the influence of stakeholders on level of performance of road construction projects in the South-East Geo-political zone of Nigeria.

### **General Project Management Overview**

According to [13] project management is vital in realization of any project. Project management is a discipline for planning, leading, organizing, and controlling a well-defined collection of work. A typical project management life cycle consists of initiation, planning, executing, and completing phases [16]. In the typical project management life cycle, the phases of initiating and planning may include similar activities conducted in prediction phase in disaster related public project management. Similar to activities conducted in executing phase in the project management, warning, emergency relief, and rehabilitation (short-term) activities as well as reconstruction (long-term) activities are carried out in the disaster related public project management. Therefore, a private-public project management includes project life cycle phases of prediction, which includes the initiation and planning which are required for the predication phase. After onset of occurrence, executing involves warning, emergency relief, rehabilitation, and reconstruction. Completion tasks are done when completing and transferring reconstruction outputs to stakeholders or clients [19]

The idea of development projects as the time-bound creation of physical assets led to the recognition of phases within the project process and from there to the concept of the project cycle [26]. Each project cycle is marked by completion of one or more deliverables. Deliverables was defined as a tangible, verifiable work product such as feasibility study, a detailed design or a working prototype [26]. Phases are said to be part of a generally sequential logic designed to ensure proper definitions of the product/service from the project [27].

At the same time, a conclusion of a project phase is marked by a review of both key deliverables and project performance in orders to determine if the project should continue into the next phase and to detect and correct errors cost effectively. 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.

### **Project Performance Concept**

The ultimate performance of project is achieved through keeping it within the allocated budget, time, scope and meeting the required technical standards for quality, operations, functionality, safety and environment protection [19]. Project performance ensures that organizations, maximize on profitability and minimize the consequences of risks and uncertainties events in terms of achieving the project's objectives [7] According to [17], the basic components and criteria to measure project performance are cost, time, scope and quality which are also largely accepted by project management previous reviewers. In Guinea, project performance, frequently has been assessed through project cost, quality, users' satisfaction, timeliness and achieving project overall objective and those factors are considered as an effective indicator to measure project success [17]

Finally, stakeholder involvement is often dependent on the characteristics of the project and type of organization. Many studies suggest undertaking stakeholder management processes in accordance with a standardized methodology and scholars strongly advocate the central role of stakeholder involvement in delivering successful projects [24]

### **Concepts of Project Success**

A project is considered successful when the expected outcomes are of the predetermined standards, sustainable, achieved within the stipulated time and come under the umbrella of the preliminary budget. Moreover, success is a multidimensional concept that ensures project efficiency, organizational and business success, customer satisfaction, and preparing for the future [24]. Success in projects enhances the social, economic, and environmental wellbeing of various stakeholders involved [22]. This implies that a nation economy can be developed through the success of public sector construction projects. These construction projects include roads, bridges, buildings, and irrigation facilities which have effect on the masses. Additionally, it is believed that every 1% of government investment in infrastructure developmental projects will cause an increase in the gross domestic product (GDP) equivalent to 1% [20].

It is important to differentiate between project success and project management success. There is no such thing as an absolute success in a project and there is only perceived success [23]. The measuring of the project success is a complex task since the success is intangible and hardly be agreed upon [20].

On the other hand, micro viewpoint of a project, success considers project achievement in smaller component level [5]. Their results show that 48% of the professionals surveyed believed that project success is indeed projected management success while 52% of respondents indicated that they are totally different. We can say that the concept of project success has still ambiguous in the minds of professionals.

In the past years the simple definition for the success of the project was only based on the implementation phase of the project lifecycle [23]. But in these days the definition of the project success is required from the beginning till the end of the project and product life cycles. Projects can succeed or fail independently of the project management process. Judging a project's success within an organization must take into account that the project contributing in an archive to the organization's strategic objectives, it cannot be limited to the efficiency of the project management processes employed [23]. This statement has been confirmed by some other researchers. For



example, the projects are ways to implement strategies, and a project's objectives must be directly connected to the organization's strategic objectives [3]. From the review of the literature on project success, it is clear that project success is something much more complex than simply meeting cost, schedule, and performance specifications. Today we know that determining whether a project is a success or failure is far more complex [21]. Both of these are needed for enhancing the likelihoods considered stakeholders to possess the power to influence the organization either coercive, utilitarian or normative; the legitimacy of the relation with the organization either individual, organizational or societal based and the urgency of the stakeholders claim on the organization calling for immediate action; either time sensitive or critical to the stakeholder. However [1] criticizes earlier stakeholder conceptualizations and proposes that a distinction should be made between stakeholders, stake watchers and stake keepers. In his categorization stakeholders are those who have a concrete and real stake in a company. Stake watchers do not really have a stake themselves but they protect the interests of real stakeholders. They include local and national unions and community lobby groups. Stake keepers are the independent regulators who have no stake in the firm but have influence and control, they include government, regulatory agencies, authorities and certification organizations.

Furthermore, stakeholder management was referred to as the systematic identification, analysis and planning of actions to communicate with, negotiate and influence stakeholders [28]. The stakeholder approach has been described as a powerful means of understanding the firm in its environment. This approach is intended to broaden the management's vision of its roles and responsibilities beyond the profit maximization function and stakeholders identified in input-output models of the firm, to also include interests and claims of non-stockholding groups [2]. Consequently, stakeholder theory argues that stakeholders who include communities, community groups, trade unions, trade associations, environmental groups, governmental bodies, associated corporations, prospective employees, prospective customers, and the public at large, need to be taken into consideration.

Considering further views, managing a project includes adapting the specifications, plans and approaches to different concerns and expectations of the various stakeholders. The underlying assumption in project stakeholder literature is that efficient and effective execution of projects requires management to pay attention to stakeholders [28]. The importance of project stakeholder management can be considered to be specially emphasized in the context of inter-firm projects that are temporary constellations of multiple business and non-business organizations with differing objectives and goals. Stakeholders may be classified based on stakeholders' involvement in the project and the nature of their relationship with the project, the nature of stakeholders claim and position towards the project, the stakeholders' role in the project and the degree to which stakeholder's behavior can be expected. Internal stakeholders are the stakeholders who are formally members of the project coalition and hence usually support the project. Internal stakeholders are clients, sponsors, contractors, and suppliers while the stakeholders are not formal members of the project coalition, but may affect or be affected by the project [6].

The community stakeholders refer to people who do not form the core of the project organizations, yet, are affected by and can affect the project. This set of stakeholders received appalling attention in research and practice [25] attributes this trend to the perceived low salience develops from top-down identification approach widely employed by researchers in construction management. Community stakeholders are in three groups: social; economic; and political, and in twelve distinct categories. The social group are individual household groups and the rank and file which form the

core of unskilled labour in the construction environment [25]. The economic group are power brokers in the community with adequate power to mobilize resources or restrain flow of resources into project organization (e.g., community-based professionals, SMEs contractors and local suppliers). The political groups are the instituted agency of government in the community-council of chief, traditional ruler's council, and youth council. Based on their uniqueness and level of opposition they posed to project, effective engagement is therefore a critical step to ensuring successful project outcomes. Stakeholder management activities can be divided into two; demonstrating and articulating the managerial importance of stakeholder management and examining the role and value of stakeholder management process [18] the majority of the research on managerial behavior with regard to project stakeholders has adopted a practice-oriented view and focused on the conceptual development of different managerial frameworks, tools and processes to identify, categorize and manage project stakeholders. Effective stakeholders' engagement benefits the project by eliminating conflicts and increase cooperation between the firm and the stakeholders. While there may be basic discrepancy between the stakeholder management and engagement, it is pertinent to emphasize that the stakeholders' salience determines the engagement strategies to be adopted [10]. Apparently, the degree of importance attached to the engagement relationship can in fact influence the placement of the stakeholders on the importance scale. The success of stakeholders' engagement is therefore measured on the ability to give and receive support from stakeholders and harmoniously work together to develop innovative business solutions [18]. Engagement is a structured process encompassing agreement to negotiate, setting criteria for negotiation and monitoring the outcome [11] The persistence of opposition to every project in the Niger Delta is not entirely negligence but a case of ineffectiveness, inability to smoothened imminent obstacles and the adoption of positional tactics by firms on the stakeholders [25]. To enhance effective engagement, [13] identified the need to form project coalition with the stakeholders as priority criteria in the stakeholder needs hierarchy. The common underlying denominators in all the definitions are trust, collaboration, understanding, and respect to the human race. Stakeholder engagement therefore must be geared towards interest resolution on a common platform.

There are also different levels of engagement. [14] Identified three basic levels of engagement. First, when information is provided in one way relationship that is emphatically aimed at keeping the stakeholders well informed. Second, when the construction organization consults- a two prong relationships which extend beyond mere information disclosure to listening and obtaining feedback. Third, active participation- a relationship based on partnering the stakeholders which embraces information disclosure and actively working with stakeholders. Irrespective of the engagement level, six principles are prerequisite namely: inclusiveness; reaching out; mutual respect; integrity; affirming diversity; and adding value [10].

**Table 1: Matrix of Stakeholders“ Engagement Definitions”**

<b>Authors</b>	<b>Definitions</b>
Gable and Shireman (2005)	A process of relationship management that seeks to enhance understanding and alignment between company and their stakeholders.
James and Phillips (2010)	A type of interaction that involves, at minimum, recognition and respect of common humanity and the ways in which the actions of each may affect the other.
Pikaaar (2011)	The participative process of discovering what really matters to the key stakeholders, feeding this back into corporate strategies and monitoring of satisfaction levels of stakeholders

### **Factors Influencing Stakeholders Roles and Engagement**

While effective stakeholders’ engagement benefits the project by eliminating conflicts and increase cooperation between the firm and the stakeholders, ineffective engagement may result in unexpected problems that may be more visible than a high-profile construction mishap. There are also other widespread implications: financial; political; cultural; and social effects [29]. This protest if not managed properly could result in a serious lengthy, costly, and acrimonious dispute between the sponsoring contractor and the community.

Stakeholders interact with the project in two fronts: cultural and political [22]. These two fronts combined to impose invaluable barriers on stakeholder’s engagement process. Barriers can start from the lack of awareness within the external stakeholder’s community in respect of available package thereby leading in exclusion of citizens. Ignoring the short-term objectives of the community stakeholders and paying attention to the long-term objectives of the project can also breed public resistance. Under-resource or insufficient allocation of time and resources can result in sub-optimal outcome, strong resistance either from the stakeholders or construction organizations towards engagement [18]. The lack of identifiable project leadership also generates lack of accountability and transparency in the process. Barriers can also originate from the engagement and participation pattern; attitude towards the relationship, communication medium, accessibility and availability of the stakeholders, nature of interaction and location of projects.

Stakeholders (community representatives, non-governmental organizations and construction project managers) are critical to the success of an engagement endeavor.

### **Stakeholder Involvement in Project Planning and Project Performance**

Stakeholder involvement in project planning activities involves definition of the project's work requirements, quality and objective, the specification of resources needed and their allocation, the definition of schedule, evaluation of various risk and determination of delivering methods. The advantage of stakeholder involvement during the planning stage allows project managers to strengthening project implementation process or its outcome. Stakeholders’ involvement in planning contributes to understand the place and roles of stakeholders in determining how to plan, developing the milestones, scope statement, assigning the planning team, identifying deliverables, creating the work breakdown structure (WBS), estimating the required resources for the activities, developing schedule, estimating time and cost necessary for activities, risk planning, getting formal approval to start work [19]. In Addition, critical process as project planning, identifying



the roles and responsibilities of all stakeholders and maintaining a warm working relationship with them are also generally suitable for project performance. The most common techniques or tools employed in the stakeholder involvement in planning stage are project Plan and Milestones Reviews. The method consists of full commitment of different stakeholders in the planning process. There are other operating departments which approve project budget, schedule and work plan in their respective fields.

## **2.0 LITERATURE REVIEW**

### **Theoretical Framework**

#### **Theory of Leadership**

The management skills and leadership experience of the project manager would determine the extent of application. Murayama in the formulation theory of leadership, which substantiate that leadership theory is made in consideration of a certain angle of the management. Hence, a number of similar thoughts on management can be integrally considered with respect to this theory, by which such a new development can be obtained. The theory indicates mental attitudes to be applied to leadership in road performance.

#### **Game Theory**

Game theory is an economic theory that models the interactions between different parties each pursuing personal interests. The parties interact where each player is trying to find an optimum strategy and choose their action in view of what is particularly effective and the clauses that govern the contractual relationships for effective delivery. Each stakeholders' involvement on the performance of road construction can be described in the game theory framework.

Finally, the logic behind of engaging stakeholders in planning stage is to deliver successful and sustainable projects through identifying, analyzing, scheduling, coordinating, controlling every factor that could influence project performance. It is of note therefore that so many authors discussed several roles of stakeholders on project's delivery without linking the influence of these stakeholders on performance of road projects in Nigeria which form the gap of this work.

## **3.0 METHODOLOGY**

This research adopted survey research design because survey design is a non-experimental design in which the researcher studies a community or a group of people to present findings from samples collected from the larger population through questionnaire, interviews and observation. Data for the research was sourced through questionnaires, direct observation and Oral interview. The interviews adopted for the study also allowed meanings and perceptions on the influence of critical success factors on the performance of road construction project in Nigeria. The population of the study comprises all the 2,200 project managers, site Engineers, Design Engineers, Quantity Surveyors and Land Surveyors practicing with registered road construction firms in the South-East Geopolitical Zone of Nigeria (Source: Abia, Anambra, Enugu, Ebonyi and Imo States Ministries of works, Federal Ministry of works, Niger Delta Development Commission (NDDC), Cooperate Affairs Commission (CAC) Database for Registered Contractors and Consultants, 2022). These project managers, site Engineers, Design Engineers, Quantity Surveyors and Land Surveyors have been practicing, and are still practicing their profession of road construction within the study area. The distributions of the population among the five (5) States in South-East zone are as follows:

Abia, Imo, Anambra, Ebonyi and Enugu state. The instruments that were used in the collection of data for the study are Questionnaire, Oral Interview and Road Construction Observation Checklist (RCOC) developed by the researcher. Data was analyzed using Eview8 and percentage and was presented using pie chart and tables.

#### 4.0 FINDINGS

##### Sex Distribution of the Respondents

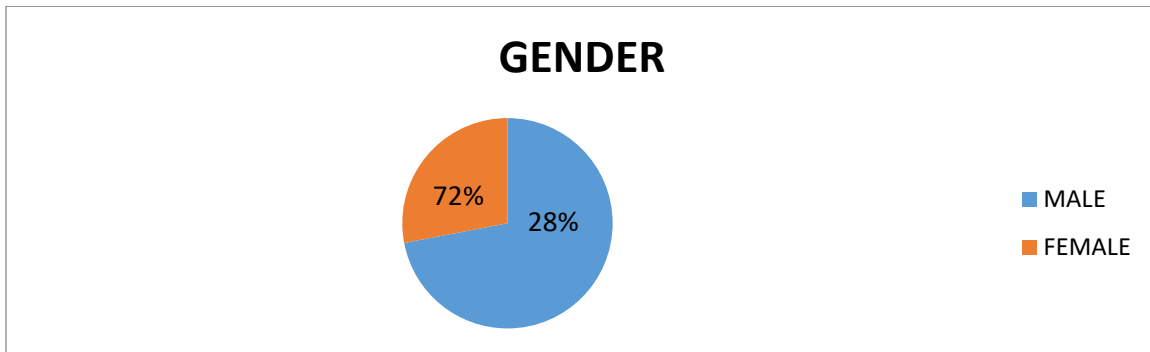


Figure 1: Sex Distribution of Respondents

The fig. 1 above revealed that out of 500 respondents, 360(72.0%) were males while 140(28.0%) respondents were females. Male are the majority in the study area.

##### Educational Qualification of Respondents

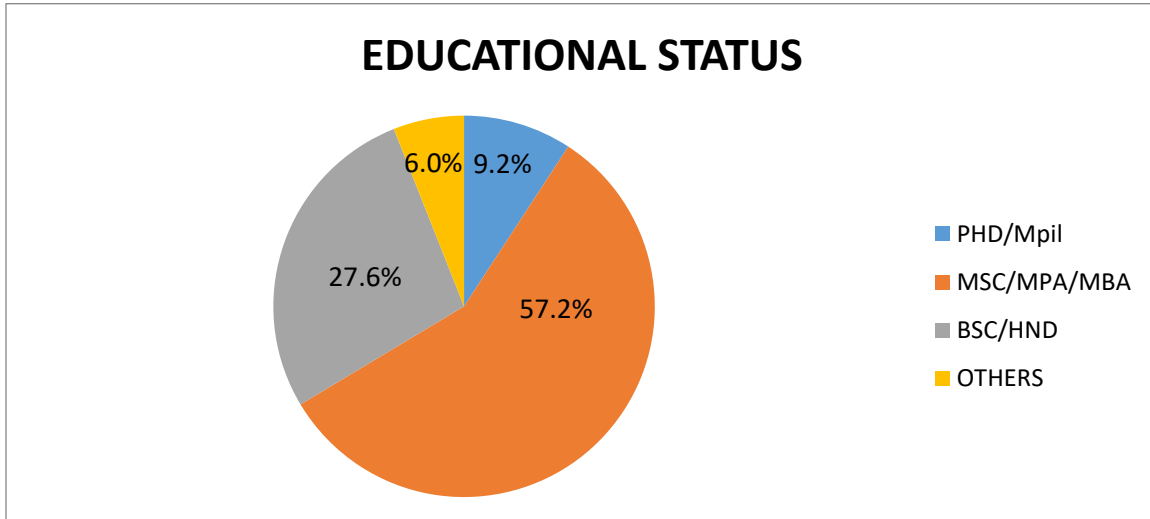


Figure 2: Educational Qualification of the Respondents

Fig. 2 above shows that 48 (9.2%) of the respondents have acquired a Ph.D./MPhil, 286(57.2%) acquired MSC/MPA/MBA, 138(27.6%) acquired HND/BSC while 30 (6.0%) have acquired others qualification not specified in the questionnaire.

**Table 2: Professional Distribution of Respondents**

Profession	Frequency	Percentage (%)
Project Manager	100	20.0
Site Engineer	100	20.0
Design Engineer	100	20.0
Quantity Surveyor	100	20.0
Land Surveyor	100	20.0
<b>Total</b>	<b>500</b>	<b>100</b>

*Source: Field Survey, 2022*

Table 2 indicated that out of 500 respondents, 100(20%) each were Project Manager, site engineer, design Engineer, Quantity Surveyor and Land Surveyor.

**Table 3: Respondents Based on Length of Time Involve in Road Construction**

Length of Time	Frequency	Percentage
Less than 1 year	78	15.6
2-3years	166	33.2
4-5years	216	43.2
6years and above	40	8.0
<b>Total</b>	<b>500</b>	<b>100</b>

*Source: Field Survey, 2022*

Table 3 above shows that 78 (15.6%) of the respondents involve in road construction within one year, 166(33.2%) involve with 1-2 years, 216(43.2%) involve within 4-5years while 40 (8.0%) involve within 6 years and above.

### **How Does Stakeholders' Involvement Influence the Performance of Road Construction Project?**

**Table 4: Summary of Distribution of Respondents to The Research Question**

Response	Frequency	Percentage
Strongly agreed	200	40.0
Agreed	198	39.6
Disagreed	50	10.0
Strongly disagreed	52	10.4
<b>Total</b>	<b>500</b>	<b>100</b>

Table 4 indicated the extent to which stakeholders' involvement influence the performance of road construction project. The finding of the study using simple percentages shows that 200(40.0%) of the respondents strongly agreed that stakeholders' involvement influence the performance of road



prediction model ( $t= 29.841$  &  $-9.518$  respectively,  $p=.000$  &  $.000 < .05$ ). The prediction equation may therefore be written as:

$$y = 78.273 - 1.152x$$

where,

y = Performance of road construction

x = Stakeholder involvements

### **Discussion of Findings**

This section is concerned with the discussion of finding of the hypothesis directing the study. And this discussion is done hypothesis by hypothesis.

The result showed that there is significant influence of stakeholder involvement on the performance of road construction project. Stakeholder involvement is one of the most important project management knowledge areas that influence road construction. Involving stakeholders throughout the project life cycle will facilitate smooth running of the project and also minimize other risk that might emerge during the project life cycle. This requires structures to be in place to manage conflict among project participants (Sineslassie, Zafar, Tabish & Jha, 2017).

The finding is in agreement with Mutheu and Perris (2021) who noted that the dimensions of measurement in the performance of projects are decided at the project conception period to act as a guide and direction of all project activities for stakeholders to focus on the same objectives. According to Khan (2013) failure is due to problems linked to managerial aspects, lack of stakeholder management, poor structural organizational designs, budget overruns, organizational structure failure, poor communications and interrupted identification of projects and start-ups as well as postponement of activity implementation. The finding is in agreement with Garbharran and Govender (2012) who recommended that construction projects to be undertaken in comfortable setting, by competent people with a clear communication plan and commitment from all stakeholders to ensure success.

In construction projects, poor stakeholder management leads to problems such as inadequate resources assigned to the project, poor scope and work definition, poor communication, changes in the scope of work, and unforeseen regulatory changes, which result in project delays and cost overruns (Nauman & Piracha, 2016). The finding is in line with Nauman and Piracha (2016) who asserted that the project stakeholders may have either a positive or a negative impact on the success of projects.

## **5.0 CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

The findings of the study have generated the following conclusions: stakeholders' involvement, have significant contribution towards effective and improve the performance of road construction project in South East, Nigeria. Road construction films would perform maximally and complete their road project in time when they properly plan their projects, timely project payments, stakeholders' involving the whole project processes, using high quality construction materials and effective project monitoring. The cost of organizing the key players in the road construction in planning the project, timely release of project funds, involving stakeholders for their vital contributory ideas, using high quality construction materials and effective project monitoring is



better and safer than for the firm to incur cost overrun and performing below quality standard that would have negative effects on the transporters.

### **Recommendations**

It is recommended that road construction firms should include all the inputs of stakeholders in the road construction projects from inception to completion so as to have effective road deliveries. This would help such organization to improve on their quality performance of road construction projects.

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