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# PROJECT MANAGEMENT A PANACEA TO IMPROVING THE PERFORMANCE OF CONSTRUCTION PROJECTS IN OGUN STATE, NIGERIA

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## ABSTRACT

*The parameters for measuring the performance of project managers on any construction project are time, cost, quality, health and safety, meeting requirements of the owners and satisfaction of stakeholders. This study was conducted in Ogun state to ascertain the effects of project manager on construction works and project delivery in Nigeria. Both qualitative and quantitative data were obtained. A cross-sectional survey research design was used. A survey of randomly selected samples of 32 professionals, questionnaires was used to collect data from Architects, Civil Engineers, Builders and Quantity Surveyors practicing in the state. The result of the findings shows that effective engagement of project managers on project ensures that project criteria are achieved both at the preliminary and construction stages of projects. It is concluded that there is need to engage the services of project managers in projects for better efficiencies and quality delivery of projects. It is however recommended that project managers should be properly trained and engage in continuous professional development to be abreast with latest project management strategies.*

**Key words:** Construction, Management, Managers, Performance, Project

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## 1. INTRODUCTION

Project quality are evaluated by performance measurement which can be defined as the process of evaluating performance relative to a success in terms of time, cost and quality these are the basic criteria to project success. While project creates productive assets through the conversion of resources into productive assets, for the right quality, time and cost. (Nagarajan, 2012). In the realm of project management, the schedule, cost and quality achievement is also referred to as the iron triangle. Out of these three aspects, it is the achievement of schedule and cost compliances that the project management is attending to most of the time. This results in a half-hearted attempt to achieve quality at project sites. In order to achieve the schedule and cost objectives, project quality is sometimes also overlooked, (Jha and Iyer, 2006). According to Jha and Iyer, (2006) quoting Collins (1996) describes quality as the world's oldest documented profession. Quality professionals use a number of definitions to define project quality. Quality in its simplest form can be defined as: 'meeting the customer's expectations,' or 'compliance with customer's specification.' No matter what definition we follow for quality, it becomes very complex when we try to put it into actual practice. For a user, quality is nothing but satisfaction with the appearance, performances, and reliability of the project for a given price range. There need for creative conversion of resources into project asset through effective organizes, plans, schedules, and controls the field work to achieve project time, cost and quality, this is the responsibility of the project manager he is responsible for getting the project completed within the time, cost limitations and quality. The success of any project is attributed to the proper management role of the project manager in putting together available resource. The study set out the following objectives:

1. To identify the roles of project manager in project construction
1. To evaluate the effects of project manager on improving construction projects
2. To suggest ways to improve the quality performance of construction projects.

For the study, a questionnaire survey approach was considered to find the impacts of various attributes on project performance using Ogun State in Nigeria as case study.

## 2. LITERATURE REVIEW

### 2.1. Project Manager

The Project Manager organizes, plans, schedules, and controls the field work and is responsible for getting the project completed within the time and cost limitations. He acts as the focal point for all facets of the project and brings together the efforts of all organizations having input into the construction process. He coordinates matters relevant to the project and expedites project operations by dealing directly with the individuals and organizations involved. In any such situation where events progress rapidly and decisions must be consistent and informed, the specific leadership of one person is needed. Because he has the overall responsibility, the Project Manager must have broad authority over all elements of the project (Sears K. S., Sears G. A. & Clough R. H 2008):

According to Horine G. (2009), Project management is applying both the science and art to planning, organizing, implementing, leading, and controlling the work of a project to meet the goals and objectives of the organization. The process of defining a project, developing a plan, executing the plan, monitoring progress against the plan, overcoming obstacles, managing risks, and taking corrective actions. The process of managing the competing demands and trade-offs between the desired results of the project (scope, performance, quality) and the natural constraints of the project (time and cost).

The nature of construction is such that the manager often must take action quickly on his own initiative, and it is necessary that he be empowered to do so. To be effective, he must have full control of the job and be the one voice that speaks for the project. Project management is a function of executive leadership and provides the cohesive force that binds together the several diverse elements into a team effort for project completion. Large projects normally will have a full-time project manager who is a member of the firm's top management or who reports to a senior executive of the company.

The manager may have a project team to assist him, or he may be supported by a central office functional group. When smaller contracts are involved, a single individual may act as project manager for several jobs simultaneously. An important aspect of a project manager's position is that his duties normally are separate from those of field supervision. The day-to-day direction of field operations is handled by a site supervisor or field superintendent whose duties involve working with the foremen, coordinating the subcontractors, directing construction operations, and keeping the work progressing smoothly and on schedule. The fact is that construction project authority is a partnership effort between the project manager and the field superintendent, who work very closely together. Nevertheless, centralized authority is necessary for the proper conduct of a construction project, and the project manager is the central figure. According to Sears K. S., Sears G. A. & Clough R. H (2008), the effective Project Manager must possess four essential attributes:

- First, he must have a considerable background of practical construction experience.
- Second, he must have, or have available to him, persons with expertise and experience in the application of specialized management techniques.
- Third, he must have the capacity to step back from the complex details of daily construction operations and look into the future problem areas.
- Fourth, he must have the personality and insight that will enable him to work harmoniously with other people, often under very strained and trying circumstances.

## 2.2. Skills Required of a Project Manager

- Leadership: a project manager must possess leadership skills. Leadership skill is the ability to influence the behaviour of others. In order to influence the behaviour of others a leader should possess qualities of sympathy, empathy, generosity, broad-minded, honesty, integrity, sincerity, fair-play, affection towards fellow human beings etc so that his team members will repose their confidence in him and will be willing to carry out his instruction. Once he wins the confidence of this team members, communication both upwards and downwards, (formal and informal) will flow freely and this help to make right decisions
- Team Building Skills: the team building skills of a project manager acquired]s more important role in bringing about synergy and for building an effective team the project manager must create a working atmosphere that is informal and free from conflicts. He should inculcate among the team members, the habits of listening and understanding the views of other teams' members, make all the team members aware of the team's goal and objectives and extract whole-hearted commitment of all the team members towards achievement of the objectives.
- Conflict resolution skills: conflict in organisations is common occurrence. A project manager must act diligently and prudently to resolve conflicts. He must have the patience to listen to the conflicting views of the parties to the conflicts and take rational unbiased decisions.
- Technical skills: the project manager should possess appropriate technical skills for handling projects effectively. The choice of production process technical know-how, equipment, can be correctly made only if the project manager has technical knowledge and his skill in handling technical problems will be highly useful especially for engineering projects.

- **Managerial skills:** the project manager shall have the managerial skills of planning, organising delegating and controlling, effective planning skills in the area of resource allocation, scheduling, cost control, information processing. Planning for the negotiation and allocation of resources required for the execution of projects in an important activity of a project manager. Once the required resources are organised the project manager should direct the resources towards accomplishment of the project objectives. The project manager should have necessary skills for carrying out the control functions effectively.

## **2.4. PROJECT PERFORMANCE**

Project performance is evaluated by performance measurement which can be defined as the process of evaluating performance relative to a success in terms, time, cost and quality which are the basic criteria to project success, (Walker, 1997). Saleh Samir Abu Shaban (2008) observed that many previous researches had studied performance of construction projects. Dissanayaka and Kumaraswamy (1999) remarked that one of the reasons for the construction industry's poor performance has been attributed to the inappropriateness of the chosen procurement system. Reichelt and Lyneis (1999) remarked three important structures underlying the dynamic of a project performance which are: the work accomplishment structure, feedback effects on productivity and work quality and effects from upstream phases to downstream phases. Thomas (2002) identified the main performance criteria of construction projects as financial stability, progress of work, standard of quality, health and safety, resources, relationship with clients, relationship with consultants, management capabilities, claim and contractual disputes, relationship with subcontractors, reputation and amount of subcontracting. Chan and Kumaraswamy (2002) stated that construction time is increasingly important because it often serves as a crucial benchmarking for assessing the performance of a project and the efficiency of the project organization. Successful construction project performance is achieved, when stakeholders meet their requirements, individually and collectively. However, in order to meet their requirements and continual participation, it is important for the stakeholders to address and distinguish the three orientation criteria that exist in the life cycle of a project. The study by Ogunde, A.O.; Olaolu, O.; Afolabi, A.; Owolabi, J. and Ojelabi, R. (2017) on Challenges Confronting construction Project Management System for Sustainable Construction in Developing Countries: Professionals Perspectives (A Case Study of Nigeria) recommended the institutionalization of construction project management practice, compulsion of adequate training and skill modification programs for construction professionals to aid the sustainability of construction project management systems in Nigeria

## **2.5. Project performance criteria for construction projects**

Lianying Z., 2013 stated that project success is an abstract concept, and there is not a generally accepted definition. He cited Müller and Turner (2007) on the development of a composite project success measure of ten criteria to figure out the correlation between project success and Project Managers' leadership style. These ten criteria were mainly used to measure the performance of engineering projects, information projects and organizational projects. Also cited Chan et al. (2002), project success criteria varied in fields, and then the indicators of time, cost, health and safety, profitability and quality, technical performance, functionality, productivity, satisfaction, environmental sustainability were categorized into "objective measures" and "subject measures," and were stressed especially for design/build projects of construction industry. As presented in Ogunde et al, (2017) below, the Project Performance criteria for construction projects were according to the attributes of construction projects:

1. Meeting project's overall performance includes: Time, Cost, Quality
3. Meeting owner's requirements
4. Meeting project's multiple goals Includes: Health and safety and environment, Absence of conflicts, Risks management, Claim management
5. Stakeholders' satisfaction Includes: Owner's satisfaction, Project team's satisfaction, End-user's satisfaction; Suppliers' satisfaction; Other stakeholders' satisfaction

### 3. RESEARCH METHOD

Specifically, a cross-sectional survey research design was used where samples were drawn from the population of study at one point in time. This study was carried out through questionnaire survey to elicit data on the project managers on improving performance of construction projects. The study was conducted in Ogun state. The targeted population were professionals in the construction industry. Random sampling technique was adopted in order to arrive at the sample size for the study. Out of the 50 of research questionnaire distributed, 32 were completed and returned representing 64% response rate. The returned were scrutinized for errors, omissions, completeness and inconsistencies. 32 questionnaires were found to be adequately completed. The sample frame for the study therefore contain 14 Architects, 7 Builders, 4 Quantity Surveyors and 7 Engineers a total of 32 respondents. Respondents were requested to measure the level of agreement they attach to identified challenges facing the implementation of the provision of Public Procurement Act on a five-point scale (1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= agree).

The statistical tools used are descriptive statistic via ranking and mean score. The mean score was obtained using this formula:

$$\text{Mean score} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{5(n_5 + n_4 + n_3 + n_2 + n_1)}$$

Where:  $n_5$ =no of respondents with strongly agree;

$n_4$ = no of respondents with agree

$n_3$ = no of respondents with somewhat agree;

$n_2$ = no of respondents with disagree

$n_1$ = no of respondents with strongly disagree

**Table 1** Background information of the respondent

<b>Personal characteristics of respondents</b>	<b>N</b>	<b>Percentage</b>
<b>Type of Organisation</b>		
Private organization	12	37.6
Government organisation	7	21.9
Consulting organization	6	18.8
Contracting organisation	7	21.9
<b>Years in working experience</b>		
5-10 years	14	43.8
11-15 years	12	37.5
16-20 years	4	12.5
Above 20 years	2	6.3

**Academic qualification**

OND	-	-
HND	4	12.5
B.Sc.	9	28.1
M.S	19	59.4
Ph.D		

**Professional background**

Builders	7	21.9
Civil /service Engineer	7	21.9
Architect	14	43.8
Quantity Surveyor	4	12.5

**Sources:** Field survey, 2016

The background information of the respondents shows that 59.4 % of the respondents possess a higher degree of M.Sc, while 28.1% possess minimum of B.Sc., they therefore have the intellectual capacity to respond to the study.

**Table 2** the Role of Project Manager on Projects

<b>Roles of project managers Mean Score Rank</b>		
Coordinating the preliminary stages of projects	4.78	1
Ability to interpret client’s requirements	4.05	2
Project manager authority to take day to day decisions	3.62	3
Coordinating the activity of other parties to the project	3.62	3
Project manager ability to make financial decision	3.48	5
Ensuring adequate communication of job expectations through planning, monitoring and appraising job contributions	3. 20	6
Coordinating ability on construction works to achieve quality	3.09	7
Technical ability of Project manager’	2.80	8
Positive attitude of Project Manager, and project participants	2.45	9
Training the human resources in the skill demanded by the project	2.22	10
Effects of undertake inspections of the activities at Construction site to improve quality	2.11	11
Effect of leadership quality on projects practice in order to direct the progress of work	2.11	11
Evaluate communicate and implement change alteration orders	1.83	13
Meetings control on construction projects	1.75	14

**Sources:** Field survey, 2016

Table 2 shows the various roles of a project manager on a project. The highest ranked role of a project manager by all respondents was “Coordinating the preliminary stages of projects” (4.78). The next in ranking were “interpret client’s requirements” (4.07) in the second position

while “Project manager authority to take day to day decisions and Coordinating the activity of other parties to the project” (3.62) tie at third position. Evaluation communication and implement change alteration orders and meeting control on construction projects were ranked lowest by all respondents at 13<sup>th</sup> and 14<sup>th</sup> positions. The roles of project managers are important at understanding the projects goals, Clients requirements.

**Table 3** Evaluating the Effects of Project Manager on Improving Construction Works

<b>Improving construction</b>	<b>Mean Score</b>	<b>Rank</b>
Adequate planning, monitoring and organizing of all accept of project works	5.10	1
Projects are executed to meet set goals and objectives	4.67	2
Eliminate conflicts on project	4.32	3
Adhering to planned programmes	4.30	4
Effective communication to the relevant Project team member on the progress	4.30	4
Avoidance of misconception and interpretation of project	3.82	6
Avoidance of delay in any aspect of the project	3.78	7
Ensuring that the health and safety rules are adhered	3.42	8
Prompt checking, estimating and allocating of resources at all stages of works	3.33	9
Ensuring that regulatory laws are enforced	3.28	10
Project manager effectiveness at monitoring and feedback	2.76	11
Effective monitoring and feedback by the project team Members	2.76	11
Commitment of all parties to the project	2.50	13
Prompt response to complaints, queries or alterations	1.84	14
Training the human resources in the skill demanded by the project	1.75	15

**Source:** Field survey, 2016

Table 3 shows the effects of project manager on improving construction works. The highest ranked on improving construction by all respondents was “Adequate planning, monitoring and organizing all accept of project works” (5.10) bringing it to the first position. The next in ranking were “Projects are executed to meet set goals and objectives” (4.67) in the second position and “Eliminate conflicts on project” (Mean = 4.32) in the third position. Prompt response to complaints, queries and alterations and training the human resources in the skill demanded by the project” were ranked lowest by all respondents at 14<sup>th</sup> and 15<sup>th</sup> positions. The success of projects can be improved by adequate management by a project manager.

#### 4. CONCLUSION

This study aimed at examining the effect of project managers on improving the performance of construction projects in Nigeria, with a view to enhancing the success of projects. The stated objectives are to identify the roles of project manager on construction projects and evaluate the effects of project manager on improving construction projects. Based on the aim and findings of this study, the following conclusions can be made.

The project manager plays a vital role in achieving successful project goals. They ensure that quality time and cost are achieved promptly, adhering to policies and procedures, interpret project documents, regulations and codes of practice in order to direct the progress of work, undertake inspections of the activities at the construction. From the findings in this study, roles must be demonstrated by a project manager ensure effective project performance in the construction industry

#### 5. RECOMMENDATION

In light of the research findings, the following recommendations were made to improve the influence of Project Manager on project performance in Nigeria.

- There should be continuous training and evaluation of project managers in private and public firms. This would ensure that the project manager has adequate technical skills require for their duties and effectively management of projects.
- Project manager should also improve on their communication skills for adequate and effectiveness communication. Improve on inspections of project.

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