

## **Effects of Project Management on the Performance of a Construction Firm in Nigeria**

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### **Abstract**

*This study evaluates the effect of project management on the performance of a construction firm in Nigeria using Blackstone Construction Industry as a study area. A survey research design was adopted and copies of questionnaire were administered on 40 top and middle management staff of the company, using simple random and judgmental sampling techniques. The data collected were analyzed using descriptive statistics and chi-square statistical analysis. The questionnaire was validated using content validity. The reliability of the questionnaire was confirmed by determining the correlation coefficient of the data collected at two different periods. The study discovered that project quality management has significant relationship with business success; project quality has significant relationship with technical success and it was therefore recommended among others that measures should be taken to ensure that project management skills and strategies are adequately considered in the planning and execution of construction projects.*

**Key Words:** Project Quality, Technical Success, Business Success, Project Management

### **Introduction**

Managing projects is one of the oldest and most respected accomplishments of mankind highlighted by the achievement of the builders of pyramids, the architects of ancient cities, the mason and craftsmen of Great Wall of China and other wonders of the World. Project make up around fifty percent of all work carried out and as a result is deemed the vehicle for the execution of organizational growth. The accomplishment of project through the application and integration of the project management process of initiation, planning, executing, monitoring, controlling and closing, is known as project management (Peter, 2005).

Project management integrates these functions progressively through the project life cycle with the aim of satisfying the stakeholders and constituents according to the project's established requirements. Stakeholders are those who have a direct stake in the project while the project's constituents are those who may be impacted by the consequences of the project. Project success is typically generated when the stakeholders and constituents express their collective satisfaction according to the degree of their involvement. Project management also includes planning, organizing, directing and controlling activities in addition to motivating what are usually the most expensive resources on the project. Project management is essentially about managing a project from its conception to its completion and needs to be discussed in terms of various stages of a project life cycle.

A project could be viewed as a system, which is dynamic and ever changing from on stage to another in a life cycle (Atkinson, 1999). Considering a generic project, its status changes from that of an idea or a concept through to feasibility studies, execution and finally completion. (Peter, 1918). Also projects are nowadays far more complicated than ever before. They involve large capital investments and embrace several disciplines, widely dispersed project participants, tighter schedules, stringent quality standard and so on. This coupled with high speed development in Information and Communication Technology (ICT), these factors have greatly influenced project management practices in taking advantages of newly developed management tools and the latest technology. The creative concept of project management is universal and generic. This cut across all cultural, natural and logistic barriers, Some corporate cultures are much more supportive of project techniques than others. Top managers who plan to introduce the project management discipline, or who wish to improve existing project performance, needs to take cognisance of cultural, structural, practical and personal elements.

Since project management demands quality information, discipline, goal orientation and requires steam working skills, rather than rigid functional divisions. Its primary focus is on what is yet to be done, and who will do it, rather than the achievements of the past. It is much about mobilizing the energies of diverse team members as it is about procedures, tools and techniques (Harvey, 1999). For the benefit of project management to be realized, the researcher examined the relevant project management variable on the performance of a construction firm in Lagos using Blackstone construction firm as a study area.

### ***Conceptual Framework***

A project is a group of tasks, performed in a definable time period, in order to meet a specific set of objectives. Project has the following characteristics. It is likely to be a onetime programme, it has a life cycle with a specific start and end date, it has budget and likely to require the use of multiple resources, most of which may be scarce and have to be shared among others. It may require the establishment of a special organization or the crossing of traditional organizational boundaries (Harvey, 1999).

Akarakiri (2007) defines project as any scheme, or part of a scheme for investing recourse which can reasonably be analyzed and evaluated as independent unit. Spinner (1997), also defines project as series of task or activities that have several distinguishing characteristics. Such as:

- Having specific starting and ending date
- Achieving a specified result on product
- Well defined objectives
- A unique, non-repetitive endeavor

Chapman (2003) defines project as the investment of capital in a time bound intervention to create assets. Hamburger (1990), further define project as an assignment that has to be undertaken and completed within a set time, budget, resources and performance specification designed to meet the needs of stakeholders and beneficiaries. Although there are numbers of general definition of the term project; it must be recognized at the outset that projects are distinct from other organizational processes. As a rule, a process refers to ongoing, day-to-day activities in which an organization engages, while producing goods and services, processes use existing systems properties and capabilities in a continuous, fairly repetitive manner.

Projects, on the other hand, take place outside the normal, process oriented world of the firm. Certainly, in some organizations, such as construction, day-to-day processes center on the creation and development of project. Nevertheless, for the majority of organizations project management activities remain unique and separate from the manner in which more routine, process driven work is performed (Kerzner, 2003). Project work is continuously evolving, established its own work rules, and is the antithesis of repetition in the work place. As a result, it represents an exciting alternative to business as usual for many companies.

The challenges are great, but so are the rewards of success. First, we need a clear understanding of the properties that make projects and project management so unique. Consider the following definitions of projects:

- A project is a unique venture with beginning and end, conducted by people to meet established goals within parameters of cost, schedule and quality.
- Projects are goals oriented, involve the co-ordinate undertaking of interrelated activities, are of finite duration, and are all, to a degree, unique.

A project is also considered to be any series of activities and tasks that have a specific objective to be completed within certain specifications, with defined start and end dates that consume human and non human resources which are multi functional. (Turner, 1993)Organized work towards a predefined goal or objective that require resources and effort, a unique (and therefore risky) venture having a budget and schedule.

Probably the simplest definition is found in the project management Body of Knowledge (PMBOK) guide of the Project Management Institute (PMI). PMI is the world's largest professional project management association, with over 200,000 members' world wide as of 2005. In their PMBOK guide, a project is defined as "a temporary endeavor undertaken to create a unique product or service (PMI, 2005).

**Research Methods**

The study was based upon a survey of middle and top level of Blackstone International Civil Works Limited located in Lagos. The choice of the company is premised on its strategic position as one of the market leader in terms of its market share in the industry and its location in Lagos which is regarded as the hob of commercial activities and industrial centre in Nigeria. The sample selected for this study consisted of 40 management staff of the company. The questionnaire was found to be valid using content validity. The respondents are managers from information technology, Accounts, Human Resource, Engineering, and Operations departments.

The research instrument used was a structured questionnaire, test-retest was used in order to ascertain the research instrument used. The analysis of the data was done using descriptive statistic and chi-square statistical analysis.

**Test of Hypothesis 1**

Ho: There is no significant relationship between project quality management and business success.

Hi: There is significant relationship between project quality management and business success

**Chi-Square Test**

	Observed N	Expected N	Residual
2.00	24	100.0	-76.0
3.00	24	100.0	-76.0
4.00	51	100.0	-49.0
5.00	301	100.0	201.0
Total	400		

	businesses and project quality
Chi-Square	543.540 <sup>8</sup>
Df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 100.0. The degree of freedom is 3 at the significance level of 0.05

**Decision Rules**

As the calculated ( $X^2$ ) 543.54 is greater than tabulated value ( $X^2$ ) 12.84, we reject the null hypothesis (Ho) and accept the alternative hypothesis (Hi) which says there is a significance relationship between project quality and business success.

**Testing Of Hypothesis 2**

Ho: There is significant relationship between project quality management and technical success

Hi: There is no significant relationship between project quality management and technical success

	Observed	Expected	Residual
1.00	1	80.0	-79.0
2.00	26	80.0	-54.0
3.00	30	80.0	-50.0
4.00	56	80.0	-24.0
5.00	287	80.0	207.0
TOTAL	<b>400</b>		

	Technical success and Project Quality.
Chi	688.525 <sup>8</sup>
Df	4
Asymp.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 80.0

## **Decision Rules**

As the calculated ( $X^2$ ) 688.53 is greater than tabulated value ( $X^2$ ) 14.86, we reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_1$ ) which says there is a significance relationship between project quality and technical success.

## **Discussion of Findings**

The discussion of findings was based on major Issues raised in the hypothesis of this study.

All findings were held at a significant level,  $p < 0.05$

## **Hypothesis**

Hypothesis one states that project quality management has no significant relationship with business success the null hypothesis was rejected and the alternative was accepted because in the cause of this research it was revealed that in this organization, project management team has a reputation for using considerable time and resource to manage the perceived benefits from investing in the management of the system, during the research it was discovered that there was an increase in the awareness of both perceived and actual benefits of standardization of project.

One way in which this can be improved is by increasing awareness of the benefits of good project management. It was also discovered that increasing level of innovation on the improvement of quality of service delivery of this organization will enhance a better market share in terms of total revenue growth of the organization which will also ensured profitability and client loyalty for the construction firm.

## **Hypothesis II**

Hypothesis two states that project quality has no significant relationship with technical success.

The null hypothesis was rejected and the alternative was accepted. In the cause of this research it was revealed that there were many reasons why an organization (particularly a multi site organization) failed in standardizing their activities and set out what the organization regards as best practice. It was discovered that improvement on inter-site communication and ensuring that everyone is talking the 'same language' in project management team will minimizes duplication of effort and waste. For example by having common resources, documentation and training.

Also, in an effort to create some degree of standardization across an organization, project management approaches often end up being very prescriptive based on a series of checklists, guidelines and mandatory reporting forms. Furthermore, in trying to create a common standard across the company no allowance is made for local or cultural variations which, in a multinational, multi-cultural company can be substantial. Some sites may have no clear idea of how their performance relates to the 'standard' in addition; some may have had a greater exposure and a longer history of project management than others. For those with little experience or skills in project management, having to adopt a corporate standard is a daunting prospect.

## **Conclusion**

The most important step towards project management maturity is to set up project management operations that can best be developed and utilized. Skilled personnel and direct efforts are used via a set of project management practices. In the construction industries, some components and practices include work scope, time, resources, costs, quality, communication, risk and contracts procurement. Out of all these practices this study found out that if these management practices are well managed, there is a very high possibility of having a viable project that will guarantee a sound business success.

This is associated with the corresponding increase with the cost of production. The reduction in the number of indigenous construction companies competing actively within the last few years could be attributed to the rising cost of production and other environmental factor. The erratic and most times unavailable supply of energy experience in the country is responsible for the lack of power needed in the industry.

### **Recommendations**

1. Government should support industrial researchers by rehabilitating existing research facilities in institutions of higher learning and research institutes in order to make research effort more result oriented.
2. To ensure competence of the professionals, the society of project manager, the Nigeria society of Engineers (NSE), the council for Relation of Engineering in Nigeria (COREN), the Nigeria institute of building (NIOB), the Nigerian institute of Architects, the civil Engineering Society (CES) and the government should jointly work together.
3. To preserve the construction projects after its completion, the quality of materials used in construction projects must not be compromised.

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