



## **I**nternational **J**ournal OF **E**ngineering **S**ciences & **M**anagement **R**esearch

### **DELAY OF BUILDING CONSTRUCTION PROJECTS IN NIGERIA-A REVIEW OF CAUSES, EFFECTS AND SOLUTIONS**

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**KEYWORDS:** Delay, Building construction, causes, effects, solutions.

#### **ABSTRACT**

This study examined the causes, effects and solutions to the delayed of completion of building projects in Nigeria. Many projects are either abandoned or neglected in Nigeria due to many reasons and its effects on developmental projects. Delay of building construction projects posed challenges to the building professionals, clients, consultants and the contractors. Information was collated through personal contact, administration of questionnaire and review of existing literature and journals which formed the data base. Data collected were analyzed using percentages. The findings reveal that the causes of delay of building construction projects in Nigeria are lack of funds (8.8%), lack of materials, incomplete drawings and poor communication ranked second (8.4%) while lack of tools and equipment, absenteeism of workers on site, incompetent workers and government policy were ranked third (8%). These were followed by poor site condition, labour, political instability, weather condition and safety on site. The effects of delay of building construction projects in Nigeria are caused due to loss of wealth ranked first (13.20%), waste of time ranked second (12.80%) and negotiations ranked third (12.00%). Followed by disputes between parties, abandonments of building projects, lawsuits to claim damages, litigations to claim rights, over-cost of the contract sum, overtime of workers and inadequate capacity.

The main causes, effects and solution to the delay in view of building professionals in the building industry are described.

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#### **INTRODUCTION**

A construction project is defined by costs, delivery time and quality. These factors are all strongly dependent on the contractor that has been selected to execute the project [1]. The goal of this selection process is to select a contractor capable of delivering the proposed result within the predefined delivery time, in acceptable quality and within budget [2]. With the economic development currently taking place in Nigeria, building construction contributes to a large portion of the construction sector. Therefore, the objective of this paper is to determine the most important causes, effects and solutions to the delay of building construction projects in Nigeria.

The construction delay is a universal evident reality not only in Pakistan as applicable to Nigeria however all the countries faced this global fact [3]. Construction delay can be defined as execute later than intended planned, or particular period, or letter than specific time that all the concerned parties agreed for construction project [4]. Delay in project is counted as a common problem in construction projects [5]. On large level there is no suspicion that the development of country depends upon its achievement of its advance plain with elevated construction contents [6].

Choosing an inappropriate contractor could not only lead to delay, but to disputes, budget overruns and even bankruptcy. It is therefore essential for clients willing to outsource a construction project to select potential contractors by assigning attributes of importance on several selection criteria.

The main goal of a project is that it is completed successfully.[7]cited by [8] stated that, construction is being used to control the economies of nations; it is always strongly related to politics, economics, sociology and the legal framework. Political contribution in construction planning is obligatory in the current world democracies. Construction cannot grow in a weak and docile economy.

#### **OBJECTIVES OF THE STUDY**

This research work intends to investigate factors that lead to delay in building construction projects through the following stated objectives:

1. To study the causes of delay of building construction projects.



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2. To identify the effects of delay of building construction projects in Nigeria.
  3. To proffer workable solutions to forestall the problems of delayed of building construction projects.
- This research work is important in other to reduce or to eliminate delay in building construction projects in Nigeria. Building or housing is a basic need for all human beings, irrespective of socio-economic satisfaction and it is one of the three basic needs of mankind and it is the most important for the physical survival of man after the provisions of food.

### LITERATURE REVIEW

Definition of delay in the study of [3] cited by [9] construction delay was defined as “the time overrun either beyond completion date specified in a contract, or beyond the date that the parties agreed upon for delivery of a project.” Delay was also defined as an “act or event which extends required time to perform or complete work of the contract manifests itself as additional days of work” by [10] and cited by [9]. [11] which define three factors that determine the success of a project: Quality, costs and time, also called the iron triangle [12]. There is consensus among researchers that combining these three measures is the best way to operationalize construction project success [13] and [14]. Costs, quality and time are specific standards for measuring project success, because all of them can relatively easily be statistically measured.

Many articles, studies, seminars and conferences had been conducted on causes, effects and solution to the delay of building construction projects in Nigeria. The study of [15] was carried out to determine the causes of delay in the construction process in the United States. The next study was by [16] which investigated the causes of delay and cost overruns that affect completed highway projects in Nigeria. Like other developing countries, such as in Saudi Arabia where [17] studied the main causes of delay in large building projects, Libya [18] and Malaysia [19]. The survey covered a random sample of contractors, consultants, and owners. As a case study regarding the Nontaburi bypass road project, [20] carried out a study to identify the major causes of delays in building construction in Florida, and then allocated the responsibilities and types of delays for each cause. Regarding commercial construction projects, [21] studied the causes that affect time overrun. Many building owners, consultants and contractors views have been collected who either completed their assigned project in profit or loss.

[22] identified political instability, lack of quality and materials availabilities, poor communication, weather conditions, poor site conditions, non-utilization of building construction professionals among others.

Effects of delay can be define as a change or change state occurring as a direct result of action by the time overrun either beyond completion date specified in a contract, or beyond the date that the parties agreed upon for delivery of a project. Several factors cause the overall delay in the construction project such as some within contractor’s liability and some are within owner’s liability [23] and [24]. It is hard to distinguish due to overlapping nature of the events that which party or parties are responsible and what ingredients of the delay cause. It is mostly seen that delay problems are cause of dispute, negotiation, lawsuit, total desertion, litigation and abandonment. We can say that the parties included in contract through claims agree on the additional capital and extra time linked with construction delay. The consequences of delay are different for different parties.

The general consequences are the loss of wealth, time and capacity. For owner, delay means the loss of income and unavailability of facilities. For contractor, delay means the loss of money for extra spending on equipment and materials and hiring the labour and loss of time [25].

Time and cost overrun have been a major recurring problem in construction industry [26]. Brief reasons for time overruns as reported by various project implementing agencies are delay in land acquisition, delay in equipment erection, inadequate mobilization by the contractor, delay in forest clearance, fund constraints, change in scope of work, cancellation of tender, law and order problem, delay in supply of equipment, slow progress of civil work, escalation in cost [26].

Delay means the loss of income and unavailability of facilities to the owners and it means the loss of money for extra spending on equipment and materials and hiring the labour and loss of time to the contractors. In view of this the owners of the project must be mentally and financially strong for starting a new project due to which we can minimise delay in projects completion within the time frame.



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### METHODOLOGY

A well structured questionnaire was developed to sample professional opinions on the probable causes, effects and solution to the delay of building construction projects in Nigeria. Three hundred (300) questionnaires were distributed, two hundred and fifty (250) were collected back for analysis. The data collated were presented in tabular form and simple statistical tools were used for the analysis to include percentage among other methods.

### DATA PRESENTATION AND ANALYSIS

This research work was based on three main possible contributory factors whose causes, effects and solution to the delay of building construction projects in Nigeria were subsequently identified and scored within the identified causes, effects and proffer solutions to the delay of building construction projects.

#### Professions of the respondents

*Table I: Professions of the respondents*

	Frequency	Percentage
Builders	82	32.80
Quantity Surveyors	37	14.80
Architects	41	16.40
Estate Surveyor and Managers	25	10.00
Engineers	65	26.00
<b>Total</b>	<b>250</b>	<b>100.0</b>

Table I showed respondents' occupation. It showed that 32.80 are builders, 26 percent are engineers, 16.40 percent are architects, 14.80 percent are quantity surveyors and 10 percent constitutes estate surveyors and valuers.

#### Causes of delay of building construction projects in Nigeria.

*Table II: Causes of delay of building construction projects*

S/N	Causes Of Delay	Responses	Percentage	Rank
1	Lack of material (late delivery, shortage of material, changes in quality of materials)	21	8.4	2
2	Lack of tools and equipment	20	8	3
3	Absenteeism of workers on site	20	8	3
4	Poor site condition	19	7.6	4
5	Poor communication	21	8.4	2
6	Lack of funds (money)	22	8.8	1
7	Incomplete drawings	21	8.4	2
8	Incompetent workers	20	8	3
9	Weather conditions	16	6.4	6
10	Safety(Accident during construction)	14	5.6	7
11	Government policy	20	8	3
12	Political instability	17	6.8	5
13	Labour(Low productivity, lack of punctuality, shortage of skilled labour)	19	7.6	4

Table II showed the causes of delay of building construction projects in Nigeria. Lack of funds (money) ranked first, lack of materials, incomplete drawings and poor communication ranked second while lack of tools and equipment, absenteeism of workers on site, incompetent workers and government policy were ranked third. Followed by poor site condition, labour, political instability, weather condition and safety on site.

#### Effects of delay of building construction projects in Nigeria.

*Table III: Effects of delay of building construction projects.*

S/N	Effects	Response	Percentage	Rank
1	Abandonments	27	10.80	5
2	Loss of wealth	33	13.20	1
3	Over-cost	19	7.60	7
4	Disputes	28	11.20	4
5	Lawsuits	22	8.80	6
6	Overtime	19	7.60	7



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7	Litigations	22	8.80	6
8	Inadequate capacity	18	7.20	8
9	Waste of time	32	12.80	2
10	Negotiations	30	12.00	3

Table III showed the effects of delay of building construction projects in Nigeria. Loss of wealth ranked first (13.20%), waste of time ranked second (12.80%) and negotiations ranked third (12.00%). Followed by disputes between parties, abandonments of building projects, lawsuits to claim damages, litigations to claim rights, over-cost of the contract sum, overtime of workers and inadequate capacity.

### DISCUSSION OF FINDINGS

Thirteen factors were considered as the causes of delay of building construction projects in Nigeria. Lack of funds (money) in relation with the lack of materials contributed to the delay of building construction projects. Poor communication, lack of tools and equipment, absenteeism of workers on site, incompetent workers and government policy were identified. Poor site condition, political instability, weather condition and safety of workers on site are considered.

Ten factors are considered as the effects of delay of building construction projects in Nigeria. Loss of wealth, waste of time and negotiations. Disputes between parties, abandonments of building projects, lawsuits to claim damages, litigations to claim rights, over-cost of the contract sum, overtime of workers and inadequate capacity.

### CONCLUSION

The above causes and effects of delay of building construction projects in Nigeria have been discussed. The data was collected from the building professionals in the building industry viz: Builders, Engineers, Architects, Quantity surveyors and Estate surveyors and valuers. The data about causes and effects of delay building construction projects was collected through questionnaire. The main causes and effects of delay in view of building professionals in the building industry are described.

### RECOMMENDATION

Many factors are accounted for causes and effects of delay of building construction projects in Nigeria. However, the following recommendations are put forward to resolve and proffer solution to the delay of building construction projects in Nigeria.

1. There should be adequate and proper communication among parties involved in
2. There should be a good contract management.
3. There should be owner's financing capacity for the payment for completed work.
4. Design modifications during construction should be avoided.
5. There should be enough materials for the completion of the project.
6. Adequate provision of funds by building owners to consultants and contractor during construction.
7. Delays in contractor's payment by owner,
8. Avoid changes of design during construction,
9. Partial payments during construction should be avoided.

Adequate use of building professionals during construction and contractual management

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