

The Effects Of Construction Delayson The Contractor's Reputation In Nigeria - The Perception Of Professionals

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Abstract- The ultimate aim of this paper is to evaluate the effect of construction delay in Nigerian construction industry. The paper identifies various effects and their subsequent consequences, thus establishing the problems caused by delay in construction. It gives prominence to the issue of delay in construction through the established body of knowledge. However, the literature critically reviewed in order to establish the need for a study on the effects caused by construction delay. The paper concluded that contractors are part of the key players in the construction industry and all the stakeholders are negatively affected by delay in construction. Construction is a critical factor in the development of any nation. Evidently, delay in construction affects these developments. The paper is beneficial to stakeholders in the construction industry. The paper is established based on literature review on effects of delay on contractor's reputation. Therefore, the paper is non-empirical paper. The position of the paper is set to study the direct effect of delay and its consequences on the reputation of the contractor based on the perception of builders and QS. It also establishes a ground for further research as most of the research carried out only mentioned that delay in construction affects the reputation of the contractor but did not elaborately mention how the contractor is affected.

Keywords—construction delay, construction industry, contractor's reputation, development

I. INTRODUCTION

Development of economy in every nation is achieved through construction projects that are carried out through contracts. Construction encompasses all civil engineering works and all types of new building projects as well as the maintenance and repairs of existing facilities [25]. However, construction industry is plague with delay in construction. Delay can cause problem from prolonging of schedules, additional cost of the project and endangering the quality of the workmanship [12].

Delay in construction affects the key players in the construction industry comprising the contractor, client and the consultant globally. About seventy eight factors were identified through the literature and result findings revealed that design problems, materials and site management, and construction defects appeared to be the most common, [17].

[30] identified construction industry as a sector consists of housing, commercial and infrastructure development. NASA USA and CBServ (Construction Benefits Services) defined construction industry as the subdivision of manufacture and trade based on the building, maintaining, and repairing structures. Building and construction industry is the industry of erecting, analyzing, restructuring, renovating, changing, demolishing, relocating, maintaining or repairing any form of building constructed weather on or off site [11].

II. THE CONCEPT OF CONSTRUCTION DELAY

Construction delay is the action or situation that fallouts in finishing the project later than agreed in the contract. A delay can also affect to starting or finishing a specific activity later than planned [21]. However, the definitions above captured time and cost but has to be related to the one agreed in the contract or in the inception stage. [18] defines project delay as the accrued effect of the delays in the individual activities. Though delay to progress does not unavoidably end up to project delay but most of the time this progress delay leads up to project delay [17]. Definition of project delay given here lack many terms. Budgeted cost and contract initial period are the most important terms that supposed to be mentioned, because the factors of delay affect them first before anything else in the construction industry. Amongst the key players of construction industry, contractor normally became the prime victim of delay factors.

Worldwide, various scholars conducted several researches on factors that contributed to construction delays in the construction industry. Malaysia, Indonesia, India, Egypt Libya, Iran, Pakistan, Benin and Nigeria are among the few countries where these researches are carried out. In all the research conducted, different perceptions of definitions were

given to delay. Table 1 consist some of the definitions by various scholars.

Delay in construction project can be described as any situation that can lead to extension of scheduled project period or increase on initially budgeted cost of

the project due to human or natural causes during design or/and construction processes.

Table 1: Various definition of delay by different scholars

No	Author	Year	Definition
1.	[7]	2008	Loss of output and revenues in construction projects.
2.	[15]	2009	Events that will have an impact on the final date for completion of the project.
3.	[20]	2010	The time overrun either beyond the contract date or outside the date that the parties agreed upon for delivery.
4.	[6]	2010	Situation where the project cannot be completed under the planned time.
5.	[2]	2011	Late completion of works as compared to the planned scheduled on the contract.
6.	[15]	2011	Situation when the contractor and project owner jointly or severally contribute to the non-completion of the project within the original or the stipulated or agreed contract period.
7.	[3]	2011	Situation in which a project due to some causes related to the contractor, client, client's consultants or other causes has not been finished in contractual or agreed period.
8.	[16]	2012	Time overrun either beyond the contract date or beyond the date that the parties have agreed upon for the delivery of the project.
9.	[14]	2012	Time overrun or extension of time for completion of a project.
10.	[6]	2013	Deviation from the originally planned period.
11.	[12]	2013	The actual time of project completion frequently exceeds the planned time is known as delay or overrun.

III. GLOBAL ISSUES IN CONSTRUCTION DELAYS

Worldwide, various researches were conducted on factors that contributed to construction delays in construction industries in the world. Malaysia, Indonesia, India, Egypt Libya, Iran, Pakistan, Benin and Nigeria are among the few countries. [13] stated that delay in construction is associated with three main causes. The delay caused by contractor, employer or his representatives and those by events that are out of both the contractor and employers and it is termed as 'act of God'. This grouping was justified by [23].

Ali, *et al.* (2010) concluded in their research that three out of the seven factors identified from literature were common. They are the labor shortage, contractors' financial difficulties, construction mistakes and defective works. In the research they mention effects of delays on

construction industry as cost overrun, extension of time, late payment, rescheduling, affect company reputation and loss of productivity and efficiency. The most common in their findings are cost overrun and extension of time. However, the company reputation, in spite of it preciousness in nature and as one of the intangible assets, but it did not fall in to one of the common factors that has effect on contractor in their research. Therefore, looking further to investigate and substantially justify the effects of constructions delays on contractor's reputation become very much important.

Table 2 outlines the factors of construction delays from various researches in the world. The table was restricted on the client related and consultant related causes of delays. There are various effects caused by delay in construction. These have a streamline effects on the stakeholders.

Table 2: Client and Consultant related Delay factors

N	Author	Location	Client-related Factor	Consultant-related Factor
1.	[9]	Indonesia	<ul style="list-style-type: none"> - Poor planning and scheduling, - Poor provision of information to project participants, - Poor coordination among project participants and - Slow in decision making 	<ul style="list-style-type: none"> - Poor quality site documentation, - unclear specification, - unclear site drawings supplied, - slow drawing revision and distribution, - design changes and poor design, - poor distribution of labour, - late supervision and - inexperienced inspectors

2.	[1]	Egypt	<ul style="list-style-type: none"> - Delay in contractor's payment by owner, - partial payment during construction, - slowness of the owner decision making process, - obtaining permits from municipality, - excessive bureaucracy in project owner operation 	<ul style="list-style-type: none"> - Design changes by owner or his agent during construction, - changes in materials types and specification during construction, - waiting for approval of shop drawings and materials samples, - design errors/incomplete made by designers, - inspection and testing procedures used in the project, - unexpected foundation conditions , - mistakes in soil investigation
3.	[23]	Dubai (UAE)	<ul style="list-style-type: none"> - Regular interference and poor communication, - Variation order and late approval for payment, - Late supply of information and late decision making, - Project objectives are not very Clear, - Nomination of Subcontractors and suppliers, - Many provisional sums and prime cost, - Duration is not enough for constructing the project, - Irregular payments and disturbed cash flow of main contractor, - Routine of government authorities and approvals, - And Irregular attending of weekly meetings. 	<ul style="list-style-type: none"> - Incomplete contract Documents, - Incomplete drawings, - Poor design management, - Slow response, - Delayed approval of drawings and BOQ for construction, - Inadequate duration for Inspection, - Experience of staff in management and technical inspection, - Delay in submittal and Approval, - Poor communication between consultant staff and - Poor quality control
4.	[21]	Jordan	<ul style="list-style-type: none"> - Delays in site preparation, - Delay in contractor's work - Suspension by the owner, - Too many change orders from owner, - Slow decision making from owner, - Interference by the owner in the construction operations, - Delay in progress payments by the owner, - Financial constraints faced by the owner, - Insufficient coordination among the parties by the owner. 	<ul style="list-style-type: none"> - Poor qualification of consultant engineer's staff assigned to the project, - Ambiguities and mistakes in specifications and drawings, - Delay in the approval of contractor submissions by the engineer, - Poor coordination by the consultant engineer with the parties involved, - Slow response by the consultant engineer to contractor inquiries.
5.	[28]	Thailand	<ul style="list-style-type: none"> - Confusing and ambiguous reqmt, - Improper project feasibility study, - Lack owner's reps, - Lack clear bidding process, - Delay payment by client, - Too many scope changes and constructive changed orders, - Slow responses from the client organization, - Wrong choice of contractor or consultant 	<ul style="list-style-type: none"> - Inadequate experience of staff, - Slow response , - Lack of consultation with client, - Lack of responsibility, - Failure to utilize tools to manage the project symmetrically, - Poor leadership on part of the project manager, - Lack of timely decisions and corrective actions, - Large number of participants of project, - Involvement of several foreign designers and contractors, - Unrealistic project schedule, - Poor project planning and control, - Bureaucracy at the workplace, - Lack of top management commitment, - Lack of project manager's experience and - Unreasonable risk allocation

IV. EFFECTS OF DELAY FACTORS

Delay in completion of projects includes an increased overheads and loss of opportunity of taking on other profit-earning projects with the resources tied down on the delayed project [22]. [28] stated that delays can have serious effect on construction organizations which results to increase in cost of the project, loss of opportunity cost, damage in reputation, arbitration, litigation and even to the worse situation of

abandonment of the project. However, scholars are much concern on the effects of delays on construction organization in general, but there is need to look at the effect on the reputation of the organizations since reputation is an intangible asset and can affect future business also it is at stake in case of delay.

Table4 summarizes the effects of delay in construction industry various studies.

Table 3: Effects of Delay

S/N	Author	Year	Location	Effects of Delays
1.	[29]	2009	Libya	Lawsuits between owners and contractors, Increased costs, Loss of productivity, Revenue and Contract termination.
2.	[20]	2010	United Arab Emirate	Time overrun, Cost overrun, Dispute, Arbitration, Litigation and Total abandonment
3.	[10]	2010	Iran	Increased in the rate of dispute, Increased in cost (labour, Material and overhead), Loss of outputs, Create social problems to government, Affect the social and economic conditions in which the project is being built.
4.	[8]	2010	Oman	Delay completion date of projects, Variations would result in claims and disputes, Cost overruns, Adversely affect the performance and moral of labor, Most contractors incur additional costs due to variations and Adversely affect work quality
5.	[20]	2010	Malaysia	Increased costs, Loss opportunity costs, Reputation damage, Arbitration, Litigation, and Total abandonment of projects.

V. CONSTRUCTION DELAY IN NIGERIAN

Factors responsible for construction delays phenomenon differs in some cases according to countries and regions. Delay factors in Nigerian construction industry particularly contractor's related are improper planning, lack of effective communication, , shortage of supply like steel, financial issues, shortage of material, cash flow problems during construction, increase in quantities and mismanagement by the contractor, conflicts in work schedules of subcontractors, contractors regarded contractual relationships, site accidents, negligence, late deliveries of materials and equipment, liquidated damage and disputes [19].

Similarly, 44 causes of delay are listed among the factors responsible for construction delay in Nigeria [4]. In Nigeria, the problem of delays is severe especially when one considers the present economic condition of the country.

In addition, [26] carried a research on the causes of delay in Nigerian construction industry, they mentioned poor coordination of subcontractors, inappropriate construction methods, inadequate planning,

Table 4: Effects of delay factors in Nigerian inadequate experience, mistakes during construction stage, incompetent site management, wrong choice of bankers, unskilled site manpower, improper

equipment selection and faulty equipment, labour disputes, poor quality materials and material shortages as delay factors related to contractor. However, construction industry is a critical sector in Nigerian economic growth, hence the need to understand the extent of damage it caused to the stakeholders with a view to overcome the issue.

VI. EFFECTS OF CONSTRUCTION DELAY IN NIGERIAN CONSTRUCTION INDUSTRY

Effects of delay are always unbearable on construction projects running into cost and time

overruns, interest accumulation on capital to finance, wastage and under-utilization of man power resources, claims, under-utilization of equipment, loss of confidence on the contract (therefore jeopardizing the reputation of contractor in the case of future tendering chances), late returns of income, reduction of employment opportunities, dispute between parties involved, aids the decrease in the tempo of economic activities according to [5]. The table below illustrates the effects of delay in Nigeria.

N	Author	Location	Contractor-related Factor	Research Approach	Findings
1	[4]	Nigeria	-	Quantitative Approach Relative importance index	<ul style="list-style-type: none"> ○ Time overrun, ○ Cost overrun, ○ Dispute, ○ Arbitration, ○ Litigation and ○ Total abandonment
2	[23]	Nigeria	Bankruptcy of contractor, inadequate cost control,	Questionnaire (quantitative approach) Analysis Relative Importance Index	<ul style="list-style-type: none"> ○ Disappointment of the populace, ○ Lowering of living standard, ○ Wastage/underutilization of resources, ○ Reduction of employment opportunities, ○ Decrease in the tempo of economic activities, ○ Decrease in the revenue accruing to government and ○ Difficulties in attracting foreign loans.
2	[5]	Nigeria	Financial difficulties faced by the contractors, Failure to pay for completed works, shortages of resources, Escalations of material prices, Late delivery of materials, Fluctuations in resources cost, poor contract management, Resource management problems, Inadequate contractor's experience, Lack of communication, Inaccurate site inspection, "lowest bid wins" system, Labour disputes and strikes, Poor technical performance/workmanship Subcontracting systems	Questionnaire (quantitative) Analysis Ranking based on the (Average Mean Score)	<ul style="list-style-type: none"> ○ Cost and time overruns interest accumulation on capital to finance, ○ Wastage and under-utilization of man power resources, ○ Claims, under-utilization of equipment, ○ Loss of confidence on the contract (therefore jeopardizing the reputation of contractor in the case of future tendering chances), ○ Late returns of income, ○ Reduction of employment opportunities, ○ Dispute between parties involved, ○ Aids the decrease in the tempo of economic activities in the nation, ○ Additional insurance charges, ○ Extra taxes and dues due to delay, ○ Insolvency of the contractor, inability to meet the living standard, ○ Arbitration/litigation and total abandonments.
3	[26]	Nigeria	Poor coordination of subcontractors,	Questionnaire (quantitative)	Time overrun, <ul style="list-style-type: none"> ○ Budget overrun, and

			Inappropriate construction methods, inadequate planning, Inadequate experience, mistakes during construction stage, Incompetent site management, Wrong choice of bankers, Unskilled site manpower, Improper equipment selection and faulty equipment, Labour disputes, poor quality materials, Material shortages.	Analysis Factor analysis, ANOVA and t-test	○ Disputes and claims
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The significance of construction industry in Nigerian economic growth should be accorded the prominence it deserves. Considering the precarious situations caused by delay in construction. Research on the issue of construction delay is very essential to the key players in the construction industry. However, the findings on the effects of delays in the construction projects were mostly from the southern part of Nigeria. Therefore, this establishes a ground to carry out a research on delay in construction in northern region of Nigerian.

The phenomenon can be examined using the variables used in the southern Nigeria which might have the same impact or otherwise. There may be other key variables which might exist in the northern Nigeria but not in the southern Nigeria due to regional differences, culture or even tradition. The research is significant to government in terms of regional development, economy and also stakeholders in the construction industry.

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