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Identifying the Challenges Affecting Contractors Performance in the Execution of Building Projects

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Abstract

The aim of this research work is to assess to the challenges affecting contractors in public sector the execution of public sector building projects in Bauchi Local Government of Bauchi State. To identify the challenges facing the execution of projects in Bauchi Local Government through literature review and personal experiences of contractors. To evaluate the extent to which these challenges affect the execution of public building projects in Bauchi. Structured questionnaires were distributed to specialist practitioners and companies. It was discovered that due to the nature of public sector building projects, contractors have a remote relationship with the client. Hence, delay in payments was found to substantially pose a challenge to the contractor when executing public sector building projects. It was also found corruption of government officials to be a great challenge during execution as discovered here. Theft of materials, fluctuation of prices, and poor workmanship were also discovered to generally pose a challenge to the process of executing works.

Keywords: corruption, material waste, structures', construction, monitoring.

1. Introduction

The construction industry is that sector of the National economy of Building and Civil engineering structures for the development of both structures and infrastructures. It embraces a wide range of loosely integrated organizations that collectively construct alter and repair a wide range of different range of Building and Civil engineering structures (Seeley, 2011).

The construction industry globally is an array of professionals, operatives, technicians, laborers' as well as clients and contractors working together towards the realization of a specific goal. It represents nearly 70 % of the capital base of the National economy and it is an indication of the significance of the industry within the economy (Bmpiu, 2012).

Sani (2011) discovered that government is the Quantity surveyors major client having a percentage of 87.10% with building projects as the project type with 80.65 % and the highest contract size of 74.19 %.

While some construction projects are realized through direct labor, the bulk is contracted to independent construction firms.

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According to Sani (2011), cited by Oxford advanced learner's dictionary defines challenges as a statement or action that disputes something'. Challenges may also be regarded as problems that stimulate or objects efforts (Onwusonye, 2014).

The execution of a project involves the mobilization of plants and materials to site and recruitment of the human resources necessary for the construction of buildings.

A contractor is an individual or group of individuals that contract with these organizations or individual (the client) for the construction, alteration or repair of structures. They produce the primary product of the industry Buildings. Over time, the sector appears to have lost grip of the traditional core values and in a bid to eliminate corruption, reduce poverty, and rebuild our institution and systems, the federal government of Nigeria in 2001 created the Budget Monitoring and Price Intelligent Unit to implement Public Procurement Reforms.

Various challenges such as inflation, changes in scope of work, changes in Government, improper pre-contract planning etc. have been identified as those that are faced during building project execution in Nigeria (Abdulwahab, 2011)

Huge amounts of money being spent on the building of schools, Hospitals, houses and other public buildings and the standard of living of the people deteriorates rapidly (Akintoye, 2011). In his work, Sani (2013), identified that parties to a contract pose greater challenge than time, payment, and economy-related challenges to construction firms during execution. The contractor is responsible for the finished product of the industry.

Windapo and Yakubu (2011) present a gloomy picture of dismal performance in the sector. Windapo (2012) documented 62 cases of reported building collapse in Nigeria between 2011 and 2012.

Carnell (2010), in his book postulated that the scope for disputes is at its greatest at the point of day to day contact between the contractor and employer and/or contractor and subcontractor.

Projects which do not get executed or are haphazardly executed leave the people yearning for the same needs or they do not have maximum utility from the existing ones. In a nutshell, the significance and need of this study to the construction firms, contractors, subcontractor and the general public in order to affect a lasting impact on their lives cannot be overemphasized.

2. Relevance

Jonathan (2010) stated that the importance of assessing the current state of all the federal government projects to provide accurate information on their status has become not only necessary but critical to National development. We have received reports of non-performance of some contracts. Jonathan (2010) listed the terms of reference of the committee to include "To examine the reason given if applicable why the projects were not executed in accordance with the terms of agreement at the time of the award and to make appropriate recommendations to Government on how to fast track the completion of the projects.

3. Materials and Methods

A descriptive research approach was used for the study; the study was carried out through a field survey involving the propriety and administration of structured questionnaire, as the instant of the research and source of primary data.

A total of 38 questionnaires were administered out of which 32 (84.21 %) were returned and 6 questionnaires (15.78 %) were withheld. The questionnaire listed out the challenges affecting the execution process under 7 sub headings with a rating done on a 1-5 scale, not serious to very serious as they affected each respondent.

The sample was drawn from a list of construction companies in Abuja and Kaduna metropolis due to larger construction activities there. The population study was made up of 38 different construction companies.

The data obtained from questionnaires was analyzed using descriptive statistics, in form of mean score value, standard deviation, standard errors. They were arranged from the most important challenge to the least important challenge.

4. Discussion

Table 1. Administration of questionnaires

NUMBER OF QUESTIONS	NO. OF COMPANIES	PERCENTAGES
Total number of questionnaire distributed	38	100%
Number returned	32	84.21%
Number not-returned	6	15.79%

Table 1 above shows the administration of questionnaires. A total of 38 questionnaires were administered out of which 32 questionnaires (84.21 %) were returned and 6 questionnaires (15.79 %) were withheld.

Statistical analyses were undertaken using the statistical package for social sciences (SPSS) version 17.0. The ranking of the challenges affecting the contractor were done based on the arithmetic mean value scores. A high value indicates a high level of importance and vice versa.

Table 2. Challenges posed by the contractors

S/N	Contractors Factors Identified in Order of Importance	RESPONSE			
		Mean Score	Rank	Standard	Standard Deviation
1	Relationship with the client	3.72	1 st	0.202	1.143
2	Poor communication	3.37	2 nd	0.182	1.030
3	Delay caused by sub-contractor	3.31	3 rd	0.171	0.965
4	Inexperience of contractor	3.01	4 th	0.225	1.270
5	Mistake during construction	3.00	5 th	0.191	1.078
6	Nature of work	2.97	6 th	0.193	1.092

Table 2 above shows the list of the factors as they relate to the contractor such that; Relationship with the client with mean score value of 3.72 is the most ranked with a standard deviation of 1.143 (i.e. most critical factor), while poor communication, with mean score of 3.37 is the second most critical factor with standard deviation 1.030 and ranked second.

Other factors like delay caused by subcontractor, inexperience of contractor, mistakes during construction, where ranked 3rd, 4th and 5th respectively, in accordance with their mean score values, while “nature of work” was ranked 6th as being the least critical factor with mean value of 2.97 and standard deviation 1.092. For standard deviation, the smaller the value, the more closely the opinions of respondents than a factor with larger standard deviation.

Table 3. Challenges posed by the employers

S/N	Employers Factors Identified in Order of Importance	RESPONSE			
		Mean Score	Rank	Significant effect	Standard Deviation
1	Delay in payment	3.84	1 st	0.156	0.884
2	Slow response to request	3.59	2 nd	0.145	0.837
3	Variation of works	3.41	3 rd	0.195	1.103
4	Change orders	3.34	4 th	0.183	1.035

5	Under valuation	3.28	5 th	0.230	1.301
6	Over valuation	3.25	6 th	0.233	1.320

Table 3 shows the challenges posed by employers to the contractor, ranked in order of importance. Delay in payments is ranked first with mean score value of 3.84 and standard deviation of 0.884, followed by slow response to requests, with mean score value of 3.59 and standard deviation of 0.837, as being the second critical challenge. Variation of works is ranked 3rd with mean score value of 3.41, change order is fourth with 3.34 mean, while under-valuation is the fifth critical challenge with mean value of 3.28. The low level of difference between the mean score value shows the significant effect of all the listed challenges caused by the employer to the execution of building projects.

Table 4. Challenges posed by the social environment

S/N	Social challenges	RESPONSE			
		Mean Score	Rank	Significant effect	Standard Deviation
1	Theft of materials	3.56	1 st	0.174	0.836
2	Vandalization	3.19	2 nd	0.188	0.621
3	Area boys syndrome	3.03	3 rd	0.198	0.150
4	Community fracas	2.88	4 th	0.205	0.143

Table 4 shows the respondents view on challenges posed by the social environment that affect the execution of a building project. Theft of materials, is ranked first, having mean score value of 3.56, the second ranked challenge is vandalization, while area boys' syndrome, is ranked third and community fracas, is the least ranked challenge on the table with a mean score of 2.88 and a standard deviation of 4.

Table 5. Challenges posed by the political and regulatory environment

S/N	Political and regulatory challenges	RESPONSE			
		Mean Score	Rank	Significant effect	Standard Deviation
1	Corrupt government officials	4.19	1 st	0.138	0.780
2	Unstable politics	3.75	2 nd	0.206	1.164
3	Long procedure for approval of work and payment	3.63	3 rd	0.154	0.871
4	Instability of policies	3.59	4 th	0.210	1.188
5	Statutory amendments	3.16	5 th	0.163	0.920
6	Problems with land acquisition	3.09	6 th	0.208	1.176
7	Custom and import restriction	2.75	7 th	0.162	0.169

Table 5 shows the challenges posed by the political/regulatory environment affecting the execution of building projects, ranked according to their level of impact on projects from the highest and the least in order of decreasing mean score values. Corrupt government officials is the first ranked challenge with mean value of 4.19 and standard deviation of 0.780, while unstable politics ranked second has a mean score value of 3.75 and standard deviation of 1.164. Last on the list is custom and import restrictions which is ranked 7th with mean score value of 2.75 and standard deviation of 0.196. long procedures for approval and payment, instability of policies,

statutory amendments and problems with land acquisition are ranked 3rd, 4th, 5th and 6th respectively in order of decreasing mean score values.

Table 6. Challenges posed by the economic and financial environment

S/N	Economic and Financial Challenges	Response			
		Mean score	Rank	Significant effect	Standard deviation
1	Fluctuation of prices	3.66	1 st	0.172	0.971
2	Inflation	3.65	2 nd	0.183	1.035
3	High interest rates	3.38	3 rd	0.205	1.157
4	Lack of capital	3.38	4 th	0.219	1.238
5	Exchange rate	3.22	5 th	0.189	1.070
6	High local and national tax effects	2.94	6 th	0.185	1.045

Table 6 shows the challenges posed by the economic/financial environment affecting the execution of building projects. Fluctuation of prices is ranked first with mean score value of 3.66 and standard deviation of 0.971, while inflation is ranked second on the table with mean score value of 3.65 and standard deviation of 1.035. High local and national tax effects are ranked least (6th) as having mean score value of 2.94 and standard deviation of 1.045.

Table 7. Challenges posed by the Infrastructure environment

S/N	Environment and Infrastructure Challenges	Response			
		Mean score	Rank	Significant effect	Standard deviation
1	Poor infrastructure e.g roads etc	3.53	1 st	0.149	0.842
2	Site location and access	3.19	2 nd	0.152	0.859
3	Unfavorable site conditions	3.06	3 rd	0.179	1.014

Table 7 is a representation of challenges posed by the infrastructural factors affecting the execution of building projects. The table shows poor infrastructure as the highest ranked challenges by respondents with mean score value of 3.53 and standard deviation of with mean of 3.19 and standard deviation of 0.859. Unfavorable site conditions are ranked third and least with mean score value of 3.06 and standard deviation of 1.014.

Table 8. Challenges posed by the Management environment

S/N	Management Challenges	RESPONSE			
		Mean score	Rank	Significant effect	Standard deviation
1	Corruption and Fraud	3.94	1 st	0.190	1.076
2	Poor planning and organization	3.84	2 nd	0.136	0.767
3	Poor financial management	3.63	3 rd	0.178	1.008
4	Poor communication between users developers	3.28	4 th	0.163	0.924

5	Coordination problems	3.19	5 th	0.138	0.780
6	Dispute between team members	3.16	6 th	0.186	1.051

Table 8 above represents the challenges posed by the managerial environment affecting the execution of building projects; ranked in order of decreasing mean score value. Corruption and fraud is ranked highest with mean score value of 3.94 and standard deviation of 1.076, poor planning and organization is second ranked with mean score value of 3.84 and standard deviation of 0.767, while dispute between team members has the least mean score value of 3.16 and standard deviation of 1.051.

Table 9. Challenges posed by the technical and labor environment

TECHNICAL AND LABOUR CHALLENGES		RESPONSE			
S		Mean score	Rank	Significant effect	Standard deviation
1.	Poor workmanship	3.44	1 st	0.233	1.318
2.	Low productivity of labor	3.41	2 nd	0.200	1.132
3.	Lack of technological improvement	3.31	3 rd	0.193	1.091
4.	High cost of labor	3.22	4 th	0.178	1.008
5.	Design failure/errors	3.13	5 th	0.232	1.314
6.	Construction failure	3.06	6 th	0.195	1.105
7.	Shortage of labor	2.94	7 th	0.224	1.268
8.	Volume of work	2.78	8 th	0.184	1.039
9.	Labor strikes	2.59	9 th	0.195	1.103
10.	Difficulty in acquisition of plant	2.44	10 th	0.190	1.076
11.	Collapse of building	2.41	11 th	0.173	0.979

Table 9 above shows the challenges posed by the technical/labor environment that affect the execution of building projects, with poor workmanship as the most critical challenge ranked the first with a mean score value of 3.44 and standard deviation of 1.318. Low productivity of labor is second with a mean of 3.41, lack of technological improvement, 3.31. Collapse of buildings is the least and ranked eleventh with a mean score value of 2.41 and standard deviation of 0.979.

5. Conclusion

Due to the nature of public sector building projects, contractors have a remote relationship with the client. Hence, delay in payments was found to substantially pose a challenge to the contractor when executing public sector building projects. This fact was reiterated by Maryam (2009). Sani (2008) disagreed as he highlighted bureaucracy to post the greatest challenge followed by delay in payments during the execution of public sector building projects. He also found corruption of government officials to be a great challenge during execution as discovered here. Theft of materials, fluctuation of prices, and poor workmanship were also discovered to generally pose a challenge to the process of executing works. Under economic factors, Maryam (2009) highlighted material fluctuations as a problem affecting contractors' cash flow.

From the foregoing analysis and findings of this study, it is obvious that a lot of challenges faced during the execution of building projects have severe impact on the execution stage of such projects. These challenges are caused by all parties involved in the project and their respective employers, while others were caused by neither parties nor their employers. The environment is affected mostly in terms of esthetics and beautification. Where low grade materials are used, it is most likely to cost havocs in terms of structures collapsing, and drainages overflowing and hazardous gases when bad roofing materials are used. The aforementioned anomalies can be corrected when a lot of bureaucracy and hitches by governments and policy makers are removed. When the

professionals maintain high ethics in their work, on site and off site during designs. Materials of high quality should also be procured.

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