

The Role of Effective Contract Documentation in the Administration of Dispute Nigerian Construction Industry

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Abstract

The nature of conflict in the construction industry is so complex that if not properly addressed can reduce productivity or increase; litigation. This is due to varieties of people involved in execution of any project. The study identified factors responsible for errors in contract documentation and aimed at examining the role of effective contract documentation in dispute resolution in the Nigerian construction industry. The data were collected using primary and secondary methods. Information was obtained from respondents in six construction industries in Anambra State. The statistical methods used for analysis were frequencies, percentage and mean scores. The data were tested using student Z test. The study revealed that effective contract documentation provides basis for settling dispute in the construction contract mostly between the client and the contractor by means of arbitration and litigation. The finding also revealed the role of effective documentation during pre and post contract stage to facilitate the smooth processes of production in project management. The study concludes that effective contract documentation is indispensable to the record keeping which forms the basis for the resolution during the progress or after execution of the project. It is recommended that construction industry in Nigeria should standardize its system of contract documentation in construction project, since it forms the basis of dispute resolution in project management.

Keywords: Contract Documentation, Dispute Resolution, Construction Industry, Nigeria.

Introduction

Nigeria is a developing nation and her construction industry is still struggling with a lot of intrinsic challenges ranging from inadequate technical and managerial know-how to sufficient financial, material and equipment capital base (Ofor, 2001). One of the major factors threatening construction project is dispute between project participants (Fenn et al., 1997 and Emmitt, 2003). Managing a project without any form of misunderstanding, ill-feeling and crisis is almost impossible in the developing countries because of lack of proper documentation. The construction industry is a vital growth and development to any country. Construction activities forecasts the general direction of an economy and for this reason, the industry is described as a

leading economic sector for both the developed and developing nations. This indicate the significant of construction industry across generation and developmental stages (Fenn, et al, 1997).

Construction is a complete service industry whose duty is to convert the plan and specification into completed project as prepared by the architect and accepted by the client. A lot of details and inter-relationship exist among client, quantity surveyor, architect, engineers' main contractors, sub contractors, government bodies and others for efficient and effective completion of construction project (Emmitt, 2003). One of the major factors threatening construction project is dispute between project participants (Gardiner et al, 1992). Managing a project without any form of misunderstanding, ill-feeling and crisis is almost impossible because misunderstanding is natural to human being in every sphere of life. Nasir, (2013) reported that construction industry is well known for high level of inter-personal and inter-governmental dispute. Hence dispute is inevitable in the project environment as changes seems to be. According to Mba (2013), the word dispute brings to the mind images such as antagonism, struggle between parties, opposition processes and threats to co-operation. In construction industry most dispute come in form of need to be met or desires to be satisfied, disagreement to be settle and ideas to be shared (Verma, (2007). Dispute may sometimes be pertinent to the progress of construction project because the issue that affects the project and what lead to the dispute are effectively discussed and manage to avoid delay.

According to Mbumai (2000) other factors the contributed to the creation of dispute in construction industry include task, interdependence, scare resources, goal incompatibility, communication failures, individual indifference and poorly designed project,

Contract documentation id defined as all document which when combined, forms the basis of contract, including all pre-tender, tender and contractual documentation. It is any communicable material that is used to describe, explain or instruct regarding some attribute of an object system or procedure such as its part, assembly installation, maintenance and used (Mba, 2013).

In construction industry, the architect is responsible for the design and erection of building. Due to complex nature of building other professionals who would measure the work at it inception stage to determine the cost implication of the project, to achieve the important or essential

details, the quantity surveyor prepares a bill of quantities (BOQ). The bill does not only enable the client to know the cost of the project, but also allow the contractor to tender on the same basis for justice and fair play. Apart from the bill of quantities (BOQ) prepared by the quantity surveyor, other forms of contract document is introduced to explain issues as contractual obligations, settlement of dispute and legal tender.

In Nigeria construction industry, quit number of arbitration panel processes had not been smooth due to incomprehensive and improper documentation. The problem of improper or incomprehensive contract documentation will not only bring confusion in the project management but could lead to a great loss to parties too construction contract. Therefore this research study is aim at evaluating the impact of contract documentation in construction industry in as it affects dispute resolution in Nigeria.

Study Area

This study was carried out I building construction firms in Anambra State of Nigeria. Anambra state is located in the South-eastern part of Nigeria. It is the most popular of the south –eastern states in Nigeria due to its location and positioning as it connects all other south-eastern states. Anambra state is also noted for its political and commercial endowment. It also has the largest market in West Africa, the Onitsha Main Market. It is bounded by Delta to the west, Imo to the south, Enugu to the East and Kogi. It has a total land mass of 4,416 Km² and situates on the eastern side of the River Niger. It comprises of three major towns namely: Awka, Nnewi and Onitsha town. According to 206 National Population Census, Anambra State has a population of 4,182,032 which makes it the 9th most populous state nationwide (NPC, 2006). Though most population is rural, the state is experiencing rapid urbanization and because of its relatively small land mass, the state is virtually becoming one huge urban area.

Source of data Collection

The data used for this study were obtained from both primary and secondary sources.

The primary source of data was obtained through designed questionnaire and in-depth interview. This was done during the study in the course of administration of questionnaire to the respondents. This was to enable the respondents express his opinion freely on the effectiveness of contract document in administration of dispute in construction industry.

Research design

The design used for the study was a survey design. This involves gathering of data that describes events and then organizes, tabulate, depicts, interpret and describes the data (Hopkin, 2004). This design help to collect data on the perceptions and opinions of the construction professionals in the construction firms on the role of effective contract documentation in administration of dispute

Target Population

The population of the study consists of six (6) registered building construction companies in Anambra state. The study comprise of all the members of staff of the firms such as engineers, contractors, consultants, architects, quantity surveyors, builders and other staff of the building construction industry.

Data Collection Instrument

The instrument used for data collection was a structured questionnaire. The instrument has a 4-point Likert scale options of, strongly Agree – 4, Agree – 3, disagree – 2 and strongly Disagree - 1

Method of Data Presentation/ Analysis

The data obtained from the study were subjected to analyses using the mean method and standard deviation. The raw data were presented in tables showing relative frequencies and percentage of responses to each item in the questionnaire. A cut-off point of 2.50 as a mean of options were used for determine the extent of the responses covered by the items.

The mean score formula was given as:

$$\frac{4N_4 + 3N_3 + 2N_2 + 1N_1}{n}$$

Where N = number of respondents to a particular scale

n = total number of the respondents and

$$\frac{4 + 3 + 2 + 1}{n} = 2.50 \text{ (positive decision)}$$

Result and Discussion

Distribution of questionnaire among the target population

The questionnaires were distributed among six (6) construction companies. Paul B Nigeria limited has the highest number of professionals and 51.7% of the questionnaire were distributed there and Derasco Building construction service have the lowest number of professionals and 2.5% of the questionnaire were distributed there. The number and percentage distribution of the questionnaires is shown in table one below.

Table 1: Showing the distribution of questionnaire among the six (6) construction industry

Construction Industry	Number	percent (%)
Consolidation Construction Company, Awka North	15	12.5
Paul-B Nigeria Limited, Awka South	62	51.7
Ferdyn Construction Work Limited, Nnewi, Ihiala	15	12.5
Infrastructure Development Company, Awka South	15	12.5
C E O G Nigeria Limited, Onitsha South	10	8.3
Derasko Building Construction Service, Mkpor, Idemili	3	2.5
Total	120	100

Table 2: showing the number of questionnaire returned

Construction Industry	Number	percent(%)
Consolidated Construction Company, Awka North	15	13.1
Paul –B Nigeria Limited, Awka South	60	52.2
Ferdyn Construction Work Limited, Nnewi, Ihiala	14	12.2
Infrastructure Development Company, Awka South	13	11.3
C E O G Nigeria Limited, Onitsha, Onitsha South	10	8.7
Derasko Building Construction Service, Mkpor, Idemili	3	2.6
North		
Total	115	100

Years of experience of the respondents

The years of experience of the respondents is shown in table three with 26.1% percent of the respondents having between 16-20 years of experience which is the highest percentage and 13.9% having between 0-5 years of experience as the lowest.

Table 3: showing respondent years of experience in the construction industry

Years	Number	Percentage
0-5	16	13.9
6-10	27	23.5
11-15	22	19.1
16-20	30	26.1
20 above	20	17.4
Total	115	100

Educational qualification of the respondents

Table 4: Showing the educational qualification of the respondent

Qualification	Number	Percentage
ND	24	20.9
HND/BSc	78	67.8
MSc	7	6.1
PhD	2	1.7
Others	4	3.5
Total	115	100

Professional Qualification

Professional qualification of the respondent with about 43.5% as the highest percentage having COREN while the least number had NIA with 5.2%.

Table 5: showing the professional qualification of the respondents

Professional qualification	Number	Percentage
MNIOS	14	12.2
NIA	6	5.2
COBBON	30	26.1
COREN	50	43.5
Others	15	13.0
Total	115	100

Research Question 1:

Does effective contract documentation have impact on dispute management in the Nigeria construction industry?

Means and standard deviation of the responses by the respondents on the impact effective contract documentation on dispute management in the construction industry is shown in table six. The respondents agree with item 3,4, and 7 with mean of 3.2, 3.6 and 3.0, standard deviation of 1.8, 1.9 and 1.7 respectively while item 1,2 ,5,6 falls on the negative decision rule with mean of 1.3, 1.6,1.4 and 1.3; standard deviation of 1.1, 1.3, 1.2 and 1.1. Table 6: Mean responses and standard deviation of construction staff on impact of contract documentation dispute management in the construction.

S/N	ITEMS	SA	A	D	SD	Mean(X)	S.D	Decision
1	Effective contract Documentation has no influence On the resolution of dispute in The construction industry.	1	2	34	78	1.3	1.1	Negative
2	contract documentation helps Arbitrator in setting dispute in Arises in a similar contract.	5	10	45	55	1.61	1.3	Negative
3	Contract documents helps in Providing evidence on Construction agreement which helps in setting dispute in Construction industry.	70	30	10	5	3.2	1.8	positive
4	JCT standard form of building Contract is relevant in setting dispute in the construction industry.	90	20	4	1	3.6	1.9	Negative
5	Bills of quantities, specification, And article of agreement do not Play a the vital role in setting Dispute in the construction Industry.	3	6	36	70	1.4	1.2	Negative
6	poor contract documentation Can cause delay which may lead To dispute in the execution of The contract.	1	4	35	75	1.3	1.1	Negative
7	Contract documents serve as a Guidelines and standard Proceeding in solving problems That arises in construction Industry.	45	55	5	10	3.0	1.7	positive

Research Question 2:

What are the processes involved in contract documentation?

The mean response and standard deviation of the construction staff on the processes yielded positive decision with 3.6 and 3.5 means; 1.9 and 1.9 standard deviation; this is shown in table seven.

Table 7: mean responses and standard deviation of the construction staff on the processes involved in contract documentation.

S/N	ITEMS	SA	A	D	SD	Mean(X)	S.D	Decision
8	Contracts documentation Involves the development of Complete and appropriately Coordinated documents Including working drawings And specification, suitable For tendering and construction.	80	30	4	1	3.6	1.9	Positive
9	cost range of a contract is an Important procedure in the Contract document.	85	2	4	1	3.5	1.9	positive

Research Question 3:

What are the problems that arises when complete team of professionals who are to carry out the contract documentation from an early stage of the project are not provided

The problems arising from in documentation carrying out contract complete team of professionals had five positive responses in items 11, 12,13,14,15, and a negative response on item 10 with the mean of 3.7, 3.7, 2.8, 3.9, 3.9, with standard deviation of 1.9, 1.9, 1.7, 2.0, 2.0, respectively while the negative decision is 2.0 mean and standard deviation is 1.4.This is shown in table eight.

Table 8: mean responses and standard deviation of construction industry staff on the problem that arises when there is incomplete teams of professionals carrying out contract documentation.

ITEMS	SA	A	D	SD	Mean(X)	S.D	Decision
Inadequate contract documentation rubs off on the project management team and they perform badly in the case any dispute arising the construction industry.	3	8	97	7	2.0	1.4	negative
Unskilled contractor Are not aware of JCT standard which Serves as a guideline For controlling dispute In the construction Industry.	100	11	4	1	3.7	1.9	positive
The project of work will not be Up to quality as a result of non-Involvement of professionals.	100	13	1	1	3.5	1.9	Positive
Cost of the project given by the Unskilled contractor will Exceed the budget of the Client.	5	20	15	30	2.8	1.7	positive
Bills of quantities will not be Prepared as a result of non Involvement of a professional	100	15	0	0	3.9	2.0	positive
Delays in construction will arise as a result of non-involvement of professionals in the Construction industry.	100	15	0	0	3.9	2.0	positive

Research Question 4:

What are the common causes of dispute in the construction industry?

The construction staff responses on the causes of dispute in construction industry were positively on item 16, 18, 19,20 and negatively in item 17 with mean of 3.2, 3.9, 3.7, 3.3 and the standard deviation is 1.8, 1.7, 1.9, and 1.8 respectively, while the negative decision have the mean of 1.8 and standard deviation of 1.8.

Table 9: mean responses and standard deviation of the construction staff on the common causes of dispute in construction industry.

ITEMS Decision	SA	A	D	SD	Mean(X)	S.D	
Dispute in the construction Industry can be as a result of Delays.	50	35	10	20	3.2	1.8	positive

HYPOTHESIS

Using table 6: which contain response of respondents on the impact of effective contract documentation on dispute resolution? The number of respondents that agreed that contract documentation is highly effective in dispute resolution was 112 with mean of 1.5 and standard deviation of 1.1 and those that disagreed was 3 with mean deviation of standard deviation of 0.3.

Therefore using student Z-test = $\frac{\overline{X}_1 - \overline{X}_2}{SE}$

$$\frac{\sqrt{\sigma_1^2 + \sigma_2^2}}{\sqrt{\frac{n_1}{n_1} + \frac{n_2}{n_2}}} = \frac{(0.3)^2 + (1.1)^2}{\frac{3}{3} + \frac{112}{112}} = 0.03 + 0.01$$

SE = $\sqrt{0.04} = 0.2$

Z-test = $\frac{1.3 - 0.1}{0.2} = \frac{1.2}{0.2} = 6$

At P- value <0.05 which implies that it is statistically significant

FINDINGS

According to Idoro (2009). Construction document is define as contract drawings, schedules and specification prepared by registered architects and registered engineers; priced bill of quantity prepared by surveyors;. Quality management plan construction programmed and project health and safety plan prepared by registered builders; conditions of contract and all-risk insurance for building works, personnel and equipment. The study was a survey research with the study population made up of six construction companies in Anambah. However sample size was limited to 120 constructions professionals in the companies. A direct observation was made by the researcher and also a constructed questionnaire was developed and distribute to the respondents. It was certified for face and content validity and its reliability was also ascertained using the spearman's rank order correlation coefficient. The coefficient reliability computed from the rankings of the two time intervals of the administration yielded a coefficient reliability of 0.889. This was high enough for instrument to be considered reliable for the study. The instrument for study contained twenty (20) items, out of which six (6) was negative and the remaining fourteen (14) had a positive responses. The mean and standard deviation was used for data analysis. The decision was that mean score from 2.50 and above was to be classified as a positive response while below 2.50 was regarded as a negative response and it was adhered to, from such decision result were analyses.

The findings indicated that: The contract documents have great impact in construction industry; this was shown with 87% of respondents that contract documents help in providing evidence on construction agreement which helps in settling dispute in construction industry. The further opined that were it is given adequate attention reduces greatly conflict, misunderstanding among parties to a contract and create a room for valid and effective references as the project progresses.

65% of the respondents pointed out that dispute in contract have not been their portion all through the years of their construction. This they attribute to proper understanding among the professionals and parties to the contract through effective contract documentation and proper exhibition of the ethics of professionalism. However, 35% of the respondents had accepted of having faced with one form of dispute or the other in their process of contract management. This they said has been result from ineffective documentation and lack of friendliness among parties to the contract. They also pointed out that the saving grace of any dispute to any contract or

project management is the proper and effective documentation as it serves a preference point in addressing any misunderstanding among the parties to a contract as well as the professionals involved in the project management. About 96% of the respondents confirmed that contract documentation involves the development of complete and appropriately coordinated documents working drawings and specifications, suitable for tendering and construction. Therefore the professionals involved should re-engineer the process of contract documentation so as to minimize dispute that can defer the progress of construction project. Over 98% of the total respondents opined that every professionals in construction and project management team have significant role to play in contract documentation as construction project progresses. Some respondents further added that, the quantity surveyor who is in charge of construction cost, management keeps records of cost, the architects keeps records of all instruction issued, so also the contractor keeps records of all instruction issued and effected in black and white (Kolawole, 2002). The respondents further said that the quantity surveyors and architects play more significant role when it comes to proper contract documentation. Reference to question number 16 to 20 of the well-structured open ended questionnaire, using the ranking to categorize the identified likely factors that when occurred could lead to dispute in contract and project management . Table 9 shows the level of degree to which the factors identified could contribute to dispute in project management. It was identified by 87% of the respondents that error in design can lead to delays and additional costs that become the subject of disputes in the construction industry. This analysis shows that with effective contract documentation in project management, dispute in contract cannot only be minimized but can be prevented. This is because effective contract documentation is always a point for any form of misunderstanding ion process of project management. The respond on the effect of contract documentation in dispute resolution was subjected to statistical.

The documentation of a project by a professional is bases on the nature of the project, which gives the true picture of the processes and procedure of tendering to make the document effective. In this study, the researcher study the effective contract documentation, cause of dispute in project management and processes and procedures involved in tendering which eventually lead to contract documentation. Hence the researcher has laid more emphasis on the methods of dispute resolution where arbitration and conciliation is said to be the best of the entire resolution methods to avoid the frequent occurrence of disputes.

Conclusion

The study aimed at identifying the significant factors that are responsible for errors in the construction documents that are prepared in Nigeria. Unlike other studies (Mohammed, 2007; Love *et al.* 2009, Suther, 1998), the opinions of both the consultants and contractors were used for this study so that comparisons can be made between them. The study suggests that, although errors in construction document are mostly related to consultants, contractors are also aware of the factors responsible for errors in construction documents, hence there are included in the study population. Also, the study compared the respondents that engaged in public projects with those that engage in private projects. The results of this research show that the consultants are mostly responsible for the errors in Nigerian construction documents. This results is found to be consistent with that of Choy and Sidwell (1991) and contrary to Diekman and Nelson (1985) who found out the clients are responsible for large proportion of change orders in federally funded projects.

Contract with effective documentation are more successful because it allows for transparency, probity and accountability even the auditing of financial background of the project after execution. The documentation of a project by the professionals is based on the nature of the project, which gives the true picture of the processes and procedures of tendering to make the document effective. To achieve effective contract documentation, there should be uniform descriptions in every contract documents relevant to the project. In a nutshell, to avoid the basis for dispute resolution in management, processes and procedure should be written properly as effective contract documentation plays a vital role project execution in Nigeria construction industry.

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