

Construction Claim Factors in the Nigerian Built Environment

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Abstract

Claims are contentious issues and any of the parties in the contract can file claim against another. However, claims are not bad *per se*, as it purportedly meant to address contentious among the parties to the contract. This paper aims to identify claim factors in the Nigerian built environment. To achieve this aim, this paper combined literature reviews and survey questionnaire. 58 claim factors were identified and addressed to professionals in the Nigerian built environment in order to indicate the extent at which each of the factors contribute to a claim. About 70% of the respondents agreed that the factors could leads to a claim. The results also found that 37 of the factors are very critical to claim issues in Nigeria. Late payment, delayed approvals of schedule and change order and delay costs were the factors respondents ranked extremely influential while the least were offsite and onsite storage charges, loss of productivity and claim preparation costs. The major conclusion drawn from the survey was that; although there are many different variables that causes claim, they can be categorized. It is recommended that clients need to reduce the issuance of change order and to reduce their unnecessary interference at the construction phase.

Keywords

Claim management; Nigeria, Built environment, Construction contract

1. Introduction

Construction claim is continues to be an area of great significance and interest to stakeholders in an effort to improve service delivery. Parties for a construction contract are becoming more conscious of claim, apparently because of it consequences on productivity, profits, satisfactions and the final cost of the projects. Claims exist between all parties. It can occur between architect and client, quantity surveyor and contractor, contractor and engineer or main contractor and subcontractor or as the case may be. While this paper is not concern with the procedure of managing claims, the first step after a claim is file, which is for the project manager (as so appointed by the clients) to review the claim. Based upon the review, the project manager can either recommend the settlement of the claim or reject it in part or in whole. Management of claim is synonymous to managing disputes and conflict, though, as the major issue in disputes or and conflict is claim. Claim management involves planning, organizing, directing, controlling the causes and consequences of the claims.

However, on the one hand, there are no clear approaches for managing construction claims in Nigeria. On the other hand, in order to make more informed and unbiased decisions, parties for construction contract need to provide vital information on the construction claim issues. In order to achieve this

need, a study was conducted to identify and quantify the causes of claims encountered on construction projects in Nigeria. 58 claim factors were identified and addressed to professionals in the Nigerian built environment to indicate the extent at which each of these factors lead to a claim. This paper collected primary data through questionnaire survey. Data obtained were analyzed using SPSS to produce some descriptive results. The results indicate that the most dominant causes are late payment, delayed approval of schedules and change order by client and delayed cost and the least are claim preparation cost, loss of productivity and offsite and onsite storage charges. The reminder of the paper is organized as follows.

2. Literature Review

The construction industry comprises of the construction firms and the various professional bodies that operate within it and under the influence of some relevant aspect of the legal framework especially those relating to land and property law, the law of torts, the law of contract, insurance and arbitration. Shariah construction procurement has now come on board. Researchers at the International Islamic University Malaysia are seriously taking programmatic approach towards the development of construction procurement that aligns with the Shariah provisions. Contract for construction or construction contract, as it is sometime called is legally enforceable promise or agreement between the client and the contractor in which the contractor agrees to construct the building (or any other described project) in accordance with the contract terms and conditions and within a specified time frame upon consideration to be paid by the client. Contract set out the tasks, rights, obligations and duties of all parties to the contract. It also include other important details like the completion time, contract sum, quality of materials and component and the overall quality standard, the project must achieve as well as the level of workmanships. The contractual agreement ensures that all obligations and duties are dually and diligently carried out either before, during or after the completion or the combination of the either.

However, in the construction industry, disputes and conflicts are inevitable. Claims are the major causes of disputes and conflicts in the construction contract. Claims are issues that remain unaddressed during and after the life of a project. Construction claim is a wide and complex subject even to the senior attorneys. While many attorneys consult the construction professionals for expertise advice, some of them have actually returned to university to obtain degree in engineering discipline (Mubarak, 2005). This is to be able to meet the unique nature of the discipline. In Nigeria, quite a few construction professionals especially the quantity surveyors have being returning to university to obtain degree in laws and arbitration.

Claims occur when there is disagreement on an issue on contractual matter. Claim can be filed for loss and expense, liquidated damages and extension of time. An unresolved claim became disputes (Numally, 2007), which are then referred to arbitration, mediation, adjudication or litigation for determination. In Nigeria, the courts have not been able to address up to 10% of claims suit before them. If any of the methods of claim resolving techniques failed, the only alternative left is litigation. But it is unfortunate if the situation degenerate to this level. Litigation often leads to deterioration in relationship. However, trust among parties is a very important requirement in a construction contract. Therefore, parties to the construction contract should do all possible to see that the claim issue is not referred to the court for resolution. According to Gould and Joyce (2009), construction claim arise as result of disagreement as to whether a specific item was covered under the contract document due to unknown condition and issues relating to delay. While standard construction contract documents outlined the procedure on the formality that the contractor must notify and addressed claims. The intention of this paper is to identify and quantify factors leading to claims in Nigeria.

While, most claims are found under the contract, claim that falls outside that contract rarely incurred but they also happened. Claims usually reflect an actual loss or expense to any of the party (Ashworth and Hogg, 2007). However claim often arise due to the client attitudes (Sears, Sears, and Clough, 2008). Broadly claims may arise due to: 1) extension of time, 2) changes to the nature of project, 3) disruption to the regular progress of the work by the client or their agent, 4) variation to the contract, 5) disagreements.

3. Method of Data Collection and Analysis

A survey questionnaire approach was used to collect primary data. Prior to the primary data collection, the questionnaire was piloted among selected participants who have experience in construction projects. The questionnaire was divided into two sections. Section A is concerns with the respondent's demographic while section B, aims to rank the factors that leads to a construction claim in Nigeria. The questionnaires were directed to the professionals in the Nigerian Built Environment. The questionnaire was modified after (Ahuja and Walsh, 1983; Taylor, 2000; Fisk, 2003; Twort and Rees,, 2004 and Mubarak, 2005) together with series of discussions with those concerned with the construction projects in Nigeria. Arising from pilot survey, a total of 58 factors that leads to a construction claims were identified and addressed to the respondents. Empty spaces were also provided for the respondents to add any other causes of claims. The data was collected between July 2010 and September 2010. The respondents were asked to grade each of the claim factors on a five points continuum scale such as: (1) strongly disagree; (2) disagree; (3) some what disagree; (4) agree; (5) strongly agree. The first of these categories, i.e. strongly disagree, involves a situation where the respondent does not agree at all that a variable could lead to a claim or have not lead to a claim on the projects they were involved in while the last of the categories (strongly agree), which indicates that the respondent believes the variable could lead to claims or has lead to claim on the projects they are involved in. The degree of agreement with each of the causes was determined by the weight-age mean. From the individual mean score tests, the average mean score was computed.

4. Data Analysis, Results and Discussion

100 questionnaires were administered on respondents through convenience sampling. However, out of the 100 sent out, 98 were returned. From the 98, one is invalidated due to incomplete data. This leaves valid response at 97, which were used for this study. All the valid responses were analyzed and used for this study. Thus, the response rate for this study is 97%, which is consistent with research in engineering and technology management.

4.1 Demographic of Respondents

Table 1, reveals that majority of the respondents are from the engineering discipline (34.4%), then quantity surveying (26%) and the architecture (24%). Table 2; contains the respondents' working experience. Many of the respondents have more than five year working experience (42.3%).

Table1: Latest Professional Qualification

Professional background	Quantity surveying	Engineering	Building surveying	Architecture	Facility management	Other s	Total
Frequency	25	33	4	23	2	9	96
Percentage	26.00	34.40	4.20	24.00	2.10	9.40	100.0

Table 2: Respondents' industrial experience

Year	Less than 5 years	5 - 10 years	10 - 15 years	15 - above	Total
Frequency	56	26	11	4	97
Percentage	57.70	26.80	11.30	4.10	100.0

The survey results indicated that most of the respondents have completed less than 10 projects in the last ten years. The mean scores for the number of projects completed in the last ten years is 1.1290 and the standard deviation is 0.39634. These results imply that about 70% of the respondents completed about one or two projects in a year.

Table 3: Number of projects completed in the last ten years

Year	Less than 10	Ten to twenty	Twenty to thirty	Total
Frequency	83	8	2	93
Percentage	89.20	8.60	2.20	100.0

The survey results indicated that most of the respondents had experienced claims in less than ten of the project they have completed (Table 4). The mean scores for the number of projects that experienced claim in the last ten years is 1.5474 and the standard deviation is 0.80910. However, there is a relationship between the mean and standard deviation. This relationship can be cited. In general, when the mean score is zero the standard deviation is equal to 1. Furthermore, 68.26% of all cases lie between ± 1 standard deviations, 95.44 of all cases lie between ± 2 standard deviations and 99.74 of cases lie between ± 3 standard deviations from the mean. Thus, one of the implications of the results (1.5474 ± 0.80910) is that about 70% of the respondents experienced between 1 to 2 claim cases in a year. Another implication of these results is that the actual mean score of the size of claims is higher than for the number of projects completed. Therefore, in every project, the respondents experienced at least one or two claims.

Table 4: How many times claim arises

Size of claim	Less than 10	10 – 20	20 -30	30 - 40	Total
Frequency	58	26	7	4	95
Percentage	61.10	27.40	7.40	4.20	100.0

Table 5 contains the results of the cross tabulation between projects completed and claims. Most of the claims arise among the respondents that completed less than ten projects in the last ten years.

Table 5: Cross-tabulation between number of claims that arises and number of projects completed in the last ten years

		Number of projects completed in the last ten years			Total
		Less than 10	Ten to twenty	Twenty to thirty	
How many times claim arises	Less than 10	54	0	1	55
	Between 10 and 20	21	5	0	26
	Between 20 to 30	6	0	1	7
	Between 30 to 40	2	2	0	4
Total		83	7	2	92

5. Analysis and Discussion on the Factors leading to Construction Claims in Nigeria

Prior to the main analysis, the reliability of the factors that results into a claim was computed. The combined average Cronbach's Alpha is 0.916. The reliability of the factors ranges from 0.912 to 0.923. Therefore, the data is highly reliable and consistent with the research standards in engineering and technology management. A summary of the descriptive statistics is displayed in Table 6. The range mean, minimum and maximum scores of the summary item indicate that the preference of the respondents is not very much different. Considering the relationship between the mean score and the standard deviation, the results of scale statistics imply that about 70% of the respondent's opinion ranges from somewhat (3) to agreed (4). This is interpreted to means that, most of the respondents agreed that factors lead to construction claims in Nigeria.

Table 6: Summary Items and Scale Statistics

	Summary Items				Scale statistics		
	Mean	Minimum	Maximum	Range	Mean	Variance	Std. Deviation
Item Means	3.26	2.72	3.98	1.26	189.06	889.19	29.82

Table 7 reveals the distribution of factors that leads to a claim. The opinions of respondents spread across the five categories. In general, 7.66% of the respondents strongly disagreed that the factors could lead to claims. But while about 17% did not agree, and about 25% somewhat agreed. Furthermore, 50% of the respondents either agreed or strongly agreed. 37 of the factors have their individual mean scores more than the average mean score. For instance, the 37th factors measured 3.27 (Table 7), whereas the combined average mean score is 3.26 (Table 6). What this implies is that; the 37 factors are more critical in claim's management. In other words, they are potential factors that most frequently lead to project claims in Nigeria. The most highly ranked factor is late payment, with a mean score of 3.84. Specifically, 85% of respondents believed that claim could result from delay payment. This is indicated in the results, as 18.3% agreed, 45.2% agreed strongly and 20.40% extremely agreed. This is followed by delayed approval of schedules and change order by client (mean score of 3.83), which is also followed by delayed cost, with the mean score of 3.76. However, the least factor that could result to a claim is cost of preparing claim (2.78). The other two are loss productivity (2.84) and off-site and onsite storage charge (2.95) and financial charges (2.95). Because of space constraints, detail discussions are not provided.

These outcomes are not surprising, however. It is common when clients delay paying contractors particularly for works the contractors have done, it is a potential ground for the contractor to claim for an extra fee and sometimes also included extension of time. If the contractor is not paid as when due it affects their progress as they may not be able to pay their staff and order for materials. In fact, some materials also required advance payment. Cash flow is very important to the contractors toward the successful completion of the projects. The respondents ranked delaying the approval of schedules and change order by client, which are the second most critical factors. This is equally not surprising, however, as this will retard the contractors' progress. When discovered facts that differ from specification, the contract requires the client or his agent for approval in order for the work to move on. However, if it is not settled on time, the contractor cannot progress to the next stage. Consequentially, if the delay is as a result of the client inability, the contractor can file for claim.

Delay cost is ranked third. Delay occurs if project is not moving as scheduled or not completed as planned. Project delay results to a claim and delay cost are claims that result from change in speed/space of work. Delay is of two kinds, namely: excusable and non-excusable delay. The non-excusable are those caused by the contractors and for which the client can file for liquidated damage. In fact, he can even terminate the contract. On the other hand, the contractors can file for equitable claim for excusable delay, because the cause of such delay is not within the contractor control. Though, it may not often be in terms of cost, but it certainly entitles the contractor to claim for time extension. Naturally, when a project is delayed, it is associated with disputes and conflicts. In other words, delay has multiple effects. The fourth element that leads to claim according to the survey is the unforeseen costs due to adjoining properties. This problem is mostly associated with project in cities where existing development could obstruct the use of certain plants and equipment, construction methods. The nature of business of adjoining will also affect contractor's productivity. All these could lead to an increase in cost of a project.

The respondents also strongly agreed poor project management could easily cause a claim. Effective project is very important in successful completion of any project. The completion of a project no doubt depends very much of how the project is planned, organized, controlled and implemented. Although, this is mostly a post design issue, it has much to do with design management. The project management team must be competent otherwise the projects could be overruns in terms of costs of time or even outright abandonment. Project management is

serious issue in Nigeria with most of the contract are based on the traditional procurement system that allows the designer to be the management contractors. And to underscore the respondents' opinions is the fact that the sixth element that leads o a claim is procurement method. Times have change, although previous studies have shown that quantity surveyors are the best project managers in Nigeria, the modern procurement system is seriously challenging the architect traditional duties as the project managers.

Table 7: Statistical Distribution of factors that leads to claim

Factor	Frequency					SD	Mean	Ranking
	1	2	3	4	5			
Late payment	7.50	7.50	18.30	45.20	20.40	2.21	3.84	01
Delayed approvals of schedules and change order by client	6.10	6.10	16.30	41.80	29.60	1.11	3.83	02
Delay costs	3.30	19.60	16.30	40.20	20.70	1.12	3.76	03
Unforeseen costs due to adjoining properties	3.20	13.80	18.10	39.40	25.50	1.10	3.70	04
Poor project management	5.40	9.80	15.20	44.60	25.00	1.11	3.74	05
Procurement methods	7.50	14.00	30.10	36.60	11.80	1.10	3.74	06
Escalation of material rate	2.10	12.60	17.90	45.30	22.10	1.05	3.73	07
Time / cost overrun	5.40	6.50	19.60	46.70	21.70	1.04	3.73	08
Changes in fees	3.20	7.50	20.40	48.40	20.40	0.98	3.75	09
Change in order of works	1.10	12.90	25.80	45.20	15.10	0.93	3.60	10
Patent fees and royalties (not included in contract)	9.80	19.60	30.40	28.30	12.00	1.18	3.56	11
Competence of project manager	6.30	12.50	22.90	36.40	21.9	1.15	3.55	12
Bill of quantities errors	6.50	12.90	22.6	34.40	23.70	1.12	3.55	13
Extra tests	5.30	9.50	25.30	45.30	14.70	1.03	3.55	14
Client / consultants withholding vital information from contractor	7.40	13.70	15.80	44.20	18.90	1.17	3.54	15
Replacement of subcontractors	5.30	12.60	28.4	33.70	20.00	1.11	3.51	16
Competence of engineers	7.20	13.40	20.60	40.20	18.60	1.16	3.50	17
Changes in law or statutory requirements	3.20	15.10	24.70	43.00	14.00	1.02	3.50	18
Differing site conditions	6.40	16.00	20.20	38.30	19.10	1.16	3.48	19
Client's failure to meet local requirements / regulations	6.40	11.70	24.50	43.60	13.80	1.08	3.47	20
Escalation of labour rate	5.40	17.40	22.80	34.60	19.60	1.15	3.46	21
Long line of authority in project organization by client	5.20	16.70	28.10	30.20	19.80	1.14	3.43	22
Error in setting out	16.50	18.70	18.70	33.00	13.20	2.33	3.41	23
Lack of expertise	7.40	21.10	22.10	24.20	25.30	1.27	3.39	24
Competence of architect s	6.30	12.50	22.90	36.10	21.50	1.20	3.37	25
Joint occupancy	5.40	13.00	31.50	39.10	10.90	1.02	3.37	26
Sub-contractor delay	7.40	16.80	25.30	33.70	16..8	1.17	3.36	27
Adjustment for insurance costs	3.20	22.60	35.50	35.50	3.20	1.16	3.36	28
Defective works	6.50	23.9	18.50	33.70	17.40	1.20	3.32	29
Disputes	12.90	16.10	25.80	33.30	11.80	1.10	3.31	30
Contractor reluctance to cooperate	7.50	19.40	26.9	26.90	19.40	1.21	3.31	31
Escalation of plant rate	4.20	19.80	27.10	39.60	9.40	1.03	3.30	32
Pending claims	6.60	19.80	26.40	31.90	15.40	1.15	3.30	33
Drawings not indicating interfaces	5.30	18.90	27.40	37.90	10.50	1.06	3.30	34
Accelerate works because of client requests	8.40	20.00	23.20	30.50	17.90	1.21	3.30	35
Cost arising from employment of others on builder's defaults	6.70	21.30	24.70	32.60	14.60	1.16	3.27	36

Table 7: Statistical Distribution of factors that leads to claim (Cont'd)

Factor	Frequency					SD	Mean	Ranking
	1	2	3	4	5			
Meeting client specific requirements (i.e. on method of construction)	8.40	13.70	32.6	32.60	12.60	1.12	3.27	37
Noncompliance with specifications	13.80	19.91	16.00	33.00	18.10	1.33	3.22	38
Failure to meet milestone dates	8.40	23.20	22.10	31.60	14.70	1.20	3.21	39
Slow changes order processing	5.60	20.00	34.40	30.00	10.00	1.05	3.19	40
Competence of quantity surveyors	10.80	21.50	21.50	31.20	15.10	1.24	3.18	41
Adjustment of prime cost and provisional sum	9.70	12.90	22.60	41.90	12.90	1.10	3.16	42
Implementation of specifications	12.00	21.70	19.60	31.50	15.20	1.26	3.16	43
Time extension	6.30	8.40	13.70	46.30	25.30	1.22	3.15	44
Failure to obtain permits	7.50	23.70	28.00	28.00	12.90	1.15	3.15	45
Interpretation of specifications	8.40	21.10	25.30	37.90	7.40	1.10	3.15	46
Deduction for uncorrected works	8.70	16.30	32.60	34.80	7.60	1.16	3.13	47
Opening up work for inspection	10.10	25.80	30.30	22.50	11.20	0.91	3.13	48
Suspension of works	7.60	13.00	28.30	32.60	18.50	1.31	3.08	49
Project organization structure	6.70	24.70	39.30	18.00	11.20	1.07	3.02	50
Finding fossil or relics on site	11.40	18.00	23.90	34.10	12.50	1.03	3.00	51
Protection of work by separate contractor	5.60	27.00	37.10	22.50	7.90	1.16	2.99	52
People interruption	10.60	19.10	40.40	22.30	7.40	1.07	2.97	53
Loss of profit	10.50	27.40	29.50	21.10	11.60	1.18	2.96	54
Financial charges	10.60	28.70	23.40	29.8	7.40	1.15	2.95	55
Offsite and onsite storage charges	11.70	24.50	29.80	25.50	8.50	1.15	2.95	56
Loss of productivity	19.80	17.60	30.80	23.10	8.80	1.24	2.84	57
Claim preparation cost	15.40	30.80	23.10	22.00	8.80	1.21	2.78	58

Other factors that result to a claim as indicated by some of the respondents includes inclement weather, force majeure, civil disorder, programme of works, methods of construction, experience of contractor, kidnapping, community disputes. While most of the factors are not peculiar, it is however, interesting that some of the respondents revealed that kidnapping is a threat to construction progress in Nigeria. With the current spate of kidnapping construction workers in Nigeria, this factor gradually making mess of project schedule. Some workers could be kidnapped for a month or more. This does not only affect the workers' concern but the fellow workers could also be discouraged to work on the site until when their safety are guaranteed. And often those that chose to work on such site or project usually demand for extra fees. It is gradually becoming a norm for contractors to engage the service of the police for the protection of their employee on site.

However, in theory, force majeure, inclement, civil disorder, kidnapping and community disputes might not lead to claim *per se*. These issues are beyond the control of both the client and contractors. Claims occur when there is disagreement on an issue on contractual matter. However, they can lead to extension of time as may be agreed upon by both parties. However, except, where these factors are identified as contractual issues that they are capable to lead to a claim. The contractors can only file for a claim under such situation if they diligently illustrate how each of these factors result to loss to them, if not the client would welcome claim.

6. Conclusion and Observations

The study has been able to identify and ranked factors that lead to construction claims in Nigeria. Virtually not a project is completed in Nigeria without a claim. However, while claim could not be entirely avoided in a project, it can be positively managed. To manage a claim requires the efforts of all parties to the contract. However, it can be concluded that the major factors that leads to claim

based on this study are as a result of client's attitudes to projects. Factors that could lead to a claim must adequately be addressed and agreed upon in order to avoid unnecessary increase in cost due to delay cost. To reduce in claim, the clients will need to be educated on how construction business operates. The contract should provide adequate protection and relief for all parties concern. Another follow up paper to this will present a case study on how claims are manage in Nigeria.

7. Reference

- Ashworth, A., and Hogg, K. (2007). "*Willis's Practice and procedure for quantity surveyor*". 12th Edition. Oxford: Blackwell Publishing Limited
- Ahuja, N. H., and Walsh, A. M. (1983). "*Successful methods in cost engineering*". USA: John Wiley Son, Inc.
- Fisk, R W. (2003). "*Construction project administration. Seventh Edition*". New Jersey: Prentice Hall
- Numally, S. W. (2007). "Construction methods and management". 7th Edition. New Jersey: Pearson Education Inc.,
- Mubarak, S (2005). "*Construction Project Scheduling and Contro*"l. New Jersey: Prentice hall
- Sears, S. K., Sears, G A and Clough, R H (2008) *Construction project management: a practical guide to field construction management* 5th Edition. John Wiley and Son Inc.,
- Taylor, M. (2000). "*Avoiding claims in building design: risk management in practice*". 1st Edition, Oxford: Blackwell Science Limited,
- Twort, A. C and Rees, J G (2004). "*Civil engineering project management*". 4th Edition, Elsevier Oxford: Butterworth Heinemann,
- Taylor, J.M., and Carn, W (2010). "Dispute Resolution in U.S. Commercial Construction: A Practical Approach" *CIB 2010 World Congress Proceedings*. Edited by Peter Barrett, Dilanthi Amaratunga, Richard Haigh, Kaushal Keraminiyage and Chaminda Pathirage. The Lowry, Salford Quays - United Kingdom 10 -13 May 2010
- Sears, S. K., Sears, G. A., and Clough, R. H. (2008). "*Construction project management: a practical guide to field construction management*". 5th Edition. John Wiley and Son Inc.,
- Gould, F., and Joyce, N. (2009). "*Construction project management*" 3rd Edition. New Jersey: Pearson Practice Hall New