CAUSES OF CONFLICTS IN CONSTRUCTION PROJECTS IN NIGERIA: CONSULTANT'S AND CONTRACTOR'S PERSPECTIVE

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ABSTRACT

Conflicts are an inevitable component of construction projects. Conflicts in construction projects, tend to affect project outcomes if not properly managed. Thus, the need to improve project outcomes make research into conflicts important. Thus, this study is aimed at identifying and assessing causes of conflicts in Nigeria based on the perception of consultants and contractors. To achieve the study objectives a 64-item questionnaire survey in a five point Likert scale was carried out to collect professionals' experience on causes of conflicts in Nigerian construction projects. Responses from 69 professionals working for consultants and contractors were analysed. Seven significant causes of conflicts in the Nigerian context were identified. An independent T-test at 5 per cent significance level showed that there are no differences in the perception of consultants and contractors.

Based on the survey results, poor financial projections on the client's side was identified as the most significant cause of conflicts. Furthermore, it was found that there are no difference in the perception of both groups of respondents. It was concluded that finance is the most important factor in reducing conflicts. Thus, it is recommended that clients engage experienced consultant so as to reduce the likelihood of conflicts in projects.

Keywords: Conflict, construction projects, consultants, contractors, Nigeria.

INTRODUCTION

Construction projects involve several actors. These actors can be classified as internal (e.g. consultant, client and contractor) or external (stakeholders who do not partake in the construction process such as users). Research has shown, risks is inherent in construction projects are more when compared with projects in other industries (Flangan and Norman, 1993; Ajayi et al 2012). However, it must be noted that unmanaged risk results into conflicts (Acharya et al 2006). Thus, conflict are due to the fragmented nature of the construction industry. Gardiner and Simmons (1992) views conflicts as "any divergence of interests, objectives or priorities between individuals, groups, or organisations; or non-conformance to requirement of a task, activity or process". Several authors have operationalized conflicts in various ways.

However, the common theme shows that conflicts is any disagreements which arise amongst individual due to non-convergence of ideas, interest and concerns. It is evident that conflicts in construction projects arise due to due to differences in interest, concerns, training, and perception of individuals (Acharya et al 2006; Lester, 2007). Thus, human interactions in construction projects (design, planning and construction phase) portends conflicts. This is supported by assertions from various studies which show that conflicts arise in construction projects due to adversarial relationships, multi-disciplinary nature and differences in interest of project participant in the construction industry (Fenn et al 1997; Kumaraswamy, 1997; Jaffar et al 2011).

There is a general consensus that conflicts yield dysfunctional project outcomes. Empirically, it has been shown project actors have great impact on project performance. Thus, breakdown of relations amongst project actors results in poor performance (Meng, 2012). The evident implication of which is low productivity, low morale, distrust, communication problems, requirement instability, rework and disputes (Love & Edwards, 2004; Liu et al 2011). However, Leung et al, (2005) argued that conflicts can yield functional project outcomes in terms of improved decision making, trust, team creativity, stakeholder satisfaction and group performance. Furthermore, evidence suggest conflicts must be managed (i.e. keeping conflicts within allowable limits) so as to make optimize its functional outcomes (Awakul & Ogunlana, 2002).

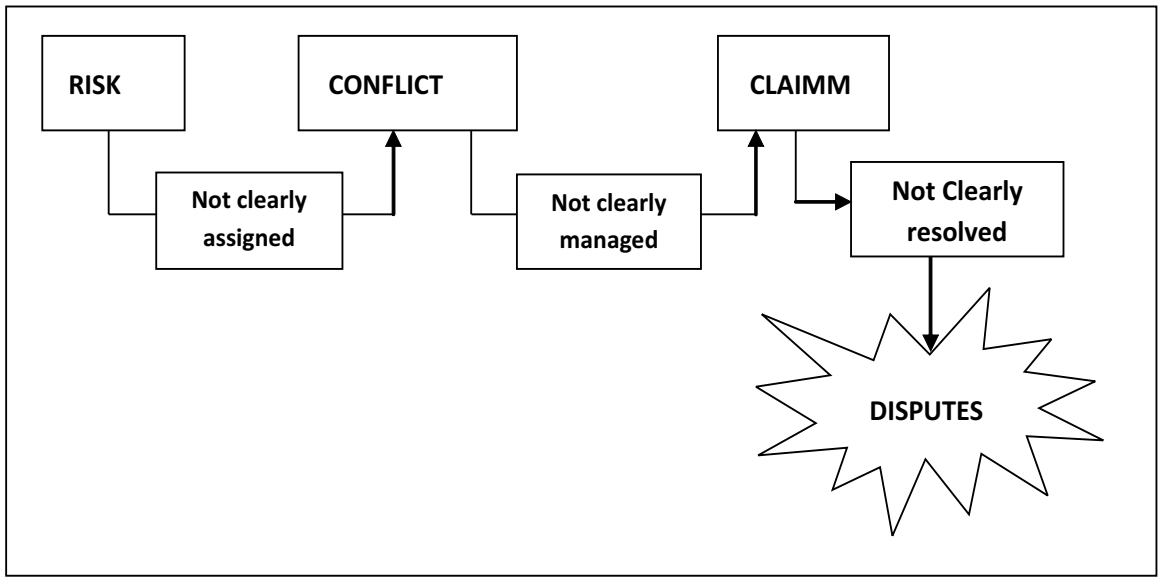
Based on the foregoing, it is evident that conflicts and its management are essential components for improving project outcomes. Awakul and Ogunlana (2002) emphasizes that need to identify causes of conflicts, as this will improve conflict avoidance and resolution and thus improve project performance. Several studies have been conducted to identify causes of conflicts in Hong Kong (Kumaraswamy, 1997; Kumaraswamy, 1998); Thailand (Awakul, & Ogunlana, 2002); and Korea (Acharya et al 2006). However, Dada (2012) analysed conflicts in traditional and integrated project procurement methods in Nigerian construction industry. Thus, it is imperative to identify common causes of conflicts in Nigerian construction industry.

Thus, this study aims to identify causes of conflicts in construction projects in Nigeria, based on the perspective of two project stakeholders (consultant and contractors). Therefore, this study will address the following questions: what are the significant causes of conflicts in Nigerian construction industry? What is the level of agreement on causes of conflict based on the perception of contractors and consultants?

LITERATURE REVIEW

Concept of conflict, claim and disputes

Several authors have used the term conflict, claim and dispute interchangeably in construction-related literature. Acharya et al (2006) points out the differences in conflict, claim and disputes; which is presented in Figure 1.



Source: Acharya *et al. (2006)*

Based on Figure 1, it can clearly be seen that conflict and conflict management is an essential ingredient in construction management. Thus, in order to reduce the negative impact of claims and disputes on construction projects, there is a need to identify causes of conflicts in construction projects in Nigeria.

Categories of conflicts

The term "conflict" has been operationalized in several contexts in construction management literature. Often, the term "conflict", "claim" and "dispute" are used interchangeably. However, authors such as Acharya et al. (2006) have delineated (Figure 1) the differences in the terms "conflict", "claim" and "dispute". Because there is no generally accepted definition of "conflict" in construction literature, there is a need to identify key words used to qualify the term in order to fully understand it. According to Tjosvold (1998), conflicts are incompatible activities amongst team members, where the actions of one member tend to interfere and obstruct the actions of another. Acharya et al. (2006) asserts that conflicts within project teams arise due to divergence in interest amongst team members. Similarly, Lester (2007) asserts that conflicts results from differences in aspirations, attitudes, views, opinion and interest amongst project teams. From these views presented by different authors, it is evident that lack of co-ordinationamongst project teams which results from non-convergence of ideas, opinions, interest and training can be termed as "conflict". Conflicts are critical components of project lifecycle which arose due to human interactions and its management is paramount for project success. Therefore, there is a need to understand the causes of conflicts as so to improve its management.

Causes of Conflicts in Construction Projects

Several studies have identified causes of conflicts in projects. Early studies such as Wilemon (1973) cited in Kerzner (2001) identified causes of conflicts to include: diversity in expertise of project participant, project manager's low level of authority, undefined project goals, undefined roles among project teams, undefined project

priorities, fear to losing relevance among project team due to implementation of project management, and undefined channel of communication. In a similar vein, Williamson (1979) categorised causes of conflicts into three classes namely behavioural; contractual; and technical problems which arise due to uncertainty. In recent studies, there have been an increased number of causes of conflicts and this is due to changes in project size, environment, complexity and requirement.

METHODOLOGY

In order to achieve the study objectives. The study methods used literature search, semi-structured interviews and questionnaire surveys. A literature review was undertaken to identify causes of conflicts in construction projects. Furthermore, semi-structured interviews were conducted with three professionals in the construction industry to validate the causes identified from literature. These 3 individuals selected had varying Nigerian construction industry experience of not less than 5 years. Questionnaire surveys was used because it can be used to gather information from Large samples. This is similar to methods used in earlier studies (Awakul & Ogunlana, 2002; Acharya, et al 2006; Ntiyakunze, 2011). However, Consoli (2006) study used a qualitative approach because its main focus was private prison projects in Australia. Thus, in order to carry out an industry wide study a questionnaire survey is the preferred option.

Furthermore, unlike previous studies such as Acharya et al (2006) and Ntiyakunze (2011) which covered clients, consultants and contractors. This study focuses on contractor and consultants. This is because most client organisations are usually one-off and as such may not have specialized in-house construction professionals. Thus, most clients engage consultants as their agents.

Questionnaire design

The study's instrument was designed based upon literature survey to obtain causes of conflicts in the Nigerian construction industry. Based on extensive review of related literature, semi-structured interviews (3) and authors' construction field experience, 64 causes of conflicts were identified as study's variables. Respondents were asked to rate the causes of conflict according to the following scale: 1=very low, 2=low, 3= moderate, 4=high, 5= very high.

The questionnaire was contained in two parts. The first part was about demographical data of respondents and the second part was about identifying causes of conflicts. The questionnaire was designed in a five-point Likert scale to get the perception of professionals involved in construction (contractor's and consultant's).

Questionnaire distribution

Two major project participants (i.e. consultant and contractor group) were the target population of this study. The respondents were identified through personal contact and referrals. The questionnaire were delivered directly to respondents. The filled questionnaire were retrieved two weeks after the initial administration.

One hundred and fifty questionnaires were distributed to the subjects in the construction industry. Out of 150 questionnaires administered, 69 usable responses were received, this represents 46 percent response rate. The results of the biographical data are presented in Table 1. The information shown in Table 1 shows that the respondents were relatively qualified and experienced professionals. Thus, the quality of data and results obtained is believed to be of good quality.

Table : Demographic data of respondents

	Consultant		Contractor		Overall	
	Nr	**%**	**Nr**	**%**	**Nr**	**%**
Educational training						
Project manager	*8*	*11.6*	*14*	*20.3*	*22*	*31.9*
Others	*9*	*13*	*5*	*7.2*	*14*	*20.3*
Architect	*7*	*10.1*	*5*	*7.2*	*12*	*17.4*
Civil/Structural Engineer	*2*	*2.9*	*8*	*11.6*	*10*	*14.5*
Quantity Surveyor	*5*	*7.2*	*2*	*2.9*	*7*	*10.1*
Surveyor	*0*	*0*	*3*	*4.3*	*3*	*4.30*
Services Engineer	*0*	*0*	*1*	*1.4*	*1*	*1.4*
Highest qualification obtained						
OND	*2*	*2.9*	*2*	*2.9*	*4*	*5.8*
HND/BSc.	*25*	*36.2*	*21*	*30.4*	*46*	*66.7*
PGD	*0*	*0*	*4*	*5.8*	*4*	*5.8*
MSc.	*4*	*5.8*	*11*	*15.9*	*15*	*21.7*
Respondent's years of experience						
Less than 5 years	*12*	*17.4*	*5*	*7.2*	*17*	*24.6*
6-10 years	*7*	*10.1*	*18*	*26.1*	*25*	*36.2*
11-15 years	*5*	*7.2*	*9*	*13.0*	*14*	*20.3*
16-20 years	*0*	*0*	*4*	*5.8*	*4*	*5.8*
More than 20 years	*7*	*10.1*	*2*	*2.9*	*9*	*13.0*
Overall	*31*	*55.1*	*38*	*44.9*	*69*	*100*

Source: Field study(2013)

Data Analysis

The mean scores obtained from Statistical Package for Social Scientist (SPSS) were ranked and used to address survey questions. Furthermore, inferential statistics was used to test, the level of agreement between the two sets of respondents (contractor and consultant).

Based on the mean scores the factors are classified as follows, "important" (significant) factors have mean score higher than 4.0, 4.0-3.0 were considered as moderately important. However, factors with mean score less than 3.0, were considered as unimportant.

The independent t-test at 5 percent significance level was further conducted to confirm the difference in the perception of contractors and consultants.

Results of survey

The mean score of all 64 perceived causes of conflicts are presented in Tables 2-4. Table 2 shows mean scores and ranking of significant causes of conflicts in Nigerian construction projects. Table 3 shows mean score and ranking of unimportant factors. While, Table 4 shows mean scores and ranking of moderately important factors.

Significant causes of conflicts

Seven significant causes of conflicts in Nigerian construction industry, have been identified based on the survey results. The significant factors are presented in Table 2 are: poor financial projections on the client's side; poor public relationship between the project people and the public; lack of funds; change of scope of works due client requirement instability; deliberate blockage of information flow; cheap design hired instead of quality and inadequate contract provisions for enforcement of timely payments. The factors have corresponding mean score of 4.33, 4.26, 4.16, 4.10, 4.04, 4.04 and 4.04 respectively.

However, six conflict factors were identified as unimportant. The mean values were less than 3.0 value, this results indicates that these factors are unimportant causes of conflicts in Nigerian construction industry as perceived by construction professionals. The unimportant factors are: superficial investigation of site conditions (2.91), inadequate contract administration (2.90), wrong interpretation of site investigation (2.83), tendency of contractor claiming high prices (2.78), unsuitable contract type (2.75) and inexperience of the designer (2.65).

Next section present results of independent T-test, which has compared the perception of the population groups on their difference in perception of the seven significant causes of conflicts

Table 2: Significant causes of conflicts

Causes of conflict	Overall		Consultant		Contractor	
	Mean	Rank	Mean	Rank	Mean	Rank
Poor financial projections on the client's side	*4.33*	*1*	*4.36*	*1*	*4.32*	*2*
Poor public relationship between the project people and the public	*4.26*	*2*	*3.77*	*10*	*4.66*	*1*
Lack of funds	*4.16*	*3*	*4.19*	*2*	*4.13*	*6*
Change of scope of works due client requirement instability	*4.10*	*4*	*3.97*	*4*	*4.21*	*3*
Deliberate blockage of information flow	*4.04*	*5*	*3.97*	*4*	*4.11*	*8*
Cheap design hired instead of quality	*4.04*	*5*	*4.10*	*3*	*4.00*	*12*
Inadequate contract provisions for enforcement of timely payments	*4.04*	*5*	*3.94*	*6*	*4.13*	*6*

Source: Field study(2013)

Table 3: Unimportant causes of conflicts

Causes of conflict	Overall		Consultant		Contractor	
	Mean	Rank	Mean	Rank	Mean	Rank
Superficial investigation of site conditions	*2.91*	*59*	*2.84*	*57*	*2.97*	*59*
Inadequate contract administration	*2.90*	*60*	*2.58*	*62*	*3.16*	*54*
Wrong interpretation of site investigation	*2.83*	*61*	*2.84*	*57*	*2.82*	*62*
Tendency of contractor claiming high prices	*2.78*	*62*	*3.10*	*50*	*2.53*	*64*
Unsuitable contract type	*2.75*	*63*	*2.68*	*61*	*2.82*	*62*
Inexperience of the designer	*2.65*	*64*	*2.42*	*64*	*2.84*	*61*

Source: Field study(2013)

Table 4: Moderately important causes of conflicts

Causes of conflict	Overall		Consultant		Contractor	
	Mean	Rank	Mean	Rank	Mean	Rank
Unethical practices by contractors to deviate from specified materials	*3.94*	*8*	*3.68*	*14*	*4.16*	*4*
Wrong design data	*3.93*	*9*	*3.74*	*12*	*4.08*	*9*
To offset unrealistic tender price	*3.87*	*10*	*3.84*	*8*	*3.90*	*17*
Errors in drawings	*3.87*	*10*	*3.77*	*10*	*3.95*	*16*
Negligence (Specification)	*3.87*	*10*	*3.52*	*19*	*4.16*	*4*
Non-adherence of communication procedures set	*3.84*	*13*	*3.84*	*8*	*3.84*	*18*
Negligence (Communication)	*3.81*	*14*	*3.58*	*17*	*4.00*	*12*
Delays in evaluation of works by consultant	*3.78*	*15*	*3.87*	*7*	*3.71*	*34*
Lack of communication procedures	*3.77*	*16*	*3.42*	*27*	*4.05*	*10*
Bureaucracy in the payment process on the client's side	*3.74*	*17*	*3.68*	*14*	*3.79*	*26*
Vested interest	*3.74*	*17*	*3.42*	*27*	*4.00*	*12*
Change of scope due to design errors	*3.73*	*19*	*3.36*	*33*	*4.03*	*11*
Errors in bill of quantities	*3.68*	*20*	*3.52*	*19*	*3.82*	*21*
Errors in specifications	*3.68*	*20*	*3.32*	*36*	*3.97*	*15*
Carelessness of project team towards site investigation	*3.65*	*22*	*3.71*	*13*	*3.61*	*38*
Lack of resource to execute site investigation	*3.64*	*23*	*3.42*	*27*	*3.82*	*21*
Excessive claims made by the contractor	*3.62*	*24*	*3.39*	*30*	*3.82*	*21*
Incomplete tender information	*3.62*	*24*	*3.39*	*30*	*3.82*	*21*
Public resistance	*3.61*	*26*	*3.58*	*17*	*3.63*	*36*
Deadlines for design completion is too short	*3.59*	*27*	*3.36*	*33*	*3.79*	*26*
Use of out-dated specifications	*3.58*	*28*	*3.39*	*30*	*3.74*	*32*
Poor feedback system	*3.58*	*28*	*3.26*	*39*	*3.84*	*18*
Social and professional organisations e.g Trade unions	*3.57*	*30*	*3.52*	*19*	*3.61*	*38*
Misinterpretation of client's requirements	*3.55*	*31*	*3.45*	*23*	*3.63*	*36*
Unclear method of pricing in the contract	*3.55*	*31*	*3.19*	*44*	*3.84*	*18*
In-effective means of communication	*3.53*	*33*	*3.45*	*23*	*3.61*	*38*
The project involves displacement of people	*3.52*	*34*	*3.45*	*23*	*3.58*	*41*
Inexperience and incompetence of site investigator	*3.35*	*35*	*3.16*	*47*	*3.79*	*26*
Inadequate contract documents	*3.39*	*36*	*3.13*	*48*	*3.79*	*26*
Misinterpretation of contract information	*3.46*	*37*	*3.13*	*48*	*3.74*	*32*
Inexperience of personnel involved in preparation of documents	*3.45*	*38*	*3.03*	*52*	*3.79*	*26*
Resistance from local trade and industry	*3.44*	*39*	*3.48*	*22*	*3.40*	*50*
Inexperience of specification writer	*3.44*	*39*	*3.29*	*38*	*3.55*	*43*
Dubious claims by contractors	*3.42*	*41*	*3.32*	*36*	*3.50*	*45*
Preparation of project documents by incompetent personnel	*3.42*	*41*	*3.26*	*39*	*3.55*	*43*
Peculiar / complicated project	*3.42*	*41*	*2.94*	*54*	*3.82*	*21*
Tendency of consultants / clients to under-value executed works	*3.41*	*44*	*3.45*	*23*	*3.37*	*51*
Low consultancy fee	*3.41*	*44*	*3.19*	*43*	*3.58*	*41*
Unfair compensation for displaced people	*3.39*	*46*	*3.36*	*33*	*3.42*	*48*
Adversarial industry culture e.g. strikes, mass resignations, etc	*3.36*	*47*	*3.23*	*42*	*3.47*	*46*
Language problem	*3.36*	*47*	*2.97*	*53*	*3.68*	*35*
Professional culture problems	*3.29*	*49*	*3.26*	*39*	*3.32*	*52*
Inadequate time for document preparation	*3.25*	*50*	*2.58*	*62*	*3.79*	*26*
Problems with statutory agency such as PHCN, Physical planning, etc.	*3.23*	*51*	*3.65*	*16*	*2.90*	*60*
Working norms problem	*3.19*	*52*	*2.90*	*56*	*3.42*	*48*
Negligence (Project documentation)	*3.15*	*53*	*2.74*	*60*	*3.47*	*46*
Cut and paste tendency	*3.12*	*54*	*3.19*	*44*	*3.05*	*57*
Unclear risk allocation	*3.09*	*55*	*3.19*	*44*	*3.00*	*58*
In-adequate brief	*3.09*	*55*	*3.07*	*51*	*3.11*	*55*
Media	*3.04*	*57*	*2.84*	*57*	*3.21*	*53*
Incompetent designer	*3.02*	*58*	*2.94*	*54*	*3.08*	*56*

Source: Field study(2013)

Independent t-test

A test for reliability of data was performed before T-test; a Cronbach alpha value of 0.951 indicates the results of the survey were reliable and can be used for further statistical analysis. An independent t-test at 5 percent significance level was performed to detect the difference in significant causes of conflicts between the perception of contractors and consultants.

According to Table 5, the mean scores are not significantly different statistically (all $p > 0.05$) with respect to all seven factors. Thus, the T-test results supports that the seven factors are significant as per criteria from previous section.

Similarly, while observing the mean score results presented in Table 2, the result shows that for top two ranks, rank 1 "Poor financial projections on the client's side" (mean scores are 4.36 and 4.32), and rank 2 "Poor public relationship between the project people and the public" (mean scores are 3.77 and 4.66), the two organisational groups tended to agree with the statement.

Table 5: Independent T-test results

Significant Causes of Conflict	Levene's Test for Equality of Variances		T-Test		Null Hypothesis (at 95% significance)
	F	Sig.	t	Sig.	
Poor financial projections on the client's side	*2.83*	*0.97*	*-0.18*	*0.86*	*Accept*
Poor public relationship between the project people and the public	*1.33*	*0.25*	*0.99*	*0.33*	*Accept*
Lack of funds	*1.20*	*0.28*	*-0.16*	*0.88*	*Accept*
Change of scope of works due client requirement instability	*0.63*	*0.43*	*1.05*	*0.30*	*Accept*
Deliberate blockage of information flow	*0.09*	*0.77*	*0.46*	*0.64*	*Accept*
Cheap design hired instead of quality	*10.65*	*0.02*	*-0.36*	*0.72*	*Accept*
Inadequate contract provisions for enforcement of timely payments	*0.08*	*0.93*	*0.81*	*0.42*	*Accept*

Discussion of results

The survey results presented in Tables 2-4 shows many interesting insights. It can be seen that there are no differences in perception of contractors and consultants about the significant causes of conflicts. Poor financial projections on the client's side, poor public relationship between the project people and the public, lack of funds, change of scope of works due client requirement instability, deliberate blockage of information flow, cheap design hired instead of quality and inadequate contract provisions for enforcement of timely payments were identified as the most significant causes of conflicts in construction projects. The results are similar to the results of Acharya et al. (2006) which found that differing site condition, public interruption, differences in change order evaluation, design errors, excessive contract quantities variation and double meaning of specifications were the significant causes of conflict in Korean construction industry. There are also similarities with Dada (2012) results,

which identified administrative issue, resources for project execution and personality issues are the most frequent source of conflict in Nigeria. However, there is a contrast with Acharya et al. (2006) result which showed there are differences in perception of client, consultant and contractor. This difference might have occurred, because this study's participant (consultant and contractors) and study area.

Additionally, the contractor and consultants respondents agreed that there was no significant difference in the means scores of the critical causes of conflicts in construction projects. Most of the respondents acknowledged finance as a source of conflicts in construction projects. The themes that emerged from further interrogation of the data generally pointed to the factors identified by the contractors. In particular, the contract manager observed that for government funded projects, "most of the designs for dam projects were re-designed at construction phase and this could increase cost of project by about 300%". This leads to conflicts amongst project teams which results in delays and increased cost. However, the project manager in the local contracting firm mentioned that "cases of inter-statutory authority clashes occur". This primarily results from overlapping statutory duties. The professionals representing the client (i.e. assistant director and junior partner) mentioned that contractors often exploited gaps in project documents to detriment of the project.

Conclusion

Conflict is commonplace in the construction sector. This is even more severe in environments without institutional frameworks for tendering and executing projects.

There is a general consensus that construction projects are plagued with risk. In order to manage conflicts properly, there is a need to identify causes of conflict. Thus, this necessitated this study. Acharya et al. (2006) asserts unmanaged conflicts results into claims and counterclaims which ultimately affects project success. Thus, this study was to identify the causes of conflicts in Nigerian construction industry. A survey instrument was developed and responses from 69 respondent were collected. Sixty-four factors causing conflicts were identified from literature review, interviews and authors' experience.

Based on the survey results, seven significant causes of conflict in Nigerian construction industry were identified. The result seemed to be consistent with results of other similar studies though there might be differences in ranking. An independent T-test at 5 percent significance level showed that there are no differences in the perception of consultants and contractors. The findings showed that poor financial projections on the client's side as the main causes of conflicts. Furthermore, it will enable decision makers like project managers manage conflict better since the ability to manage conflict depends on how well they can recognize remote causes of conflict. Furthermore, finance-related, relationship and communication problem, client requirement instability, design-related and contract related problems are the major categories of factors leading to conflicts. Thus, the findings shows that poor financial projections on the client's

side and poor relationship between project people and public are the main sources of project conflict. It is imperative for clients and professionals in the construction industry to address this factors so as to improve project success.

Regarding other conflicting factors, and while taking cognisance of the data size, it is recommended that clients engage project consultant based on experience rather than pricing. This will ensure that project conflict are reduced to barest minimum and kept within acceptable limits. Additionally, there would be need for future studies to evaluate the impact of project types and magnitude on conflict.

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