

Causes And Effects Of Conflict In The Nigerian Construction Industry

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ABSTRACT: The nature of conflict in the construction industry is so complex that if not properly managed can reduce productivity or escalate to litigation, this is due to varieties of people involved in its execution. Hence, Nigeria is not an exemption due to diverse religion, ethnicity and tribes which makes conflict inevitable in the Nigerian construction industry. This paper however analyzed the effects and causes of these conflicts in the Nigerian construction industry with the aim of proffering a recommendation based on previous study. A questionnaire survey was conducted to identify the causes and effects of conflict from the project managers and contractors. This study identified 10 most important causes of crisis among other important factors and five (5) most severe effects of conflict in the Nigerian construction industry. The ten most important causes of conflicts were: (1) win-lose scenario (2) failing to share credit (3) questioning others motives (4) disgruntled client (5) diverse perspectives (6) Arrogance (7) assumption (8) competitive personality and feeling judged while the five (5) most severe effects of conflict are (1) damaged and psychological wellbeing (2) complaint and blaming (3) dissatisfactions and stress (4) insubordination (5) withdrawal and miscommunication. The study recommends that conflict should be expected, planned, faced, surface, resolved with adequate conflicts management strategies in order to minimize or prevent it from occurring.

Keywords: conflict, conflict management, construction, execution

1.0 INTRODUCTION

Most people can recount an uncomfortable group experience when negative interaction of another person is used against them. Such experiences can mean that "avoidance is more comfortable than conflict". Unfortunately, both engaging in conflict and avoiding it can put a strain on professional relationships and induce stressful experiences for the individuals involved. John and Belbin (1993:66, 2000; cited in Christopher, 2003). One of the major factors threatening construction projects is conflict between project participants (Gardiner et al., Fenne et al., 1992, 1997, 2003; cited in Natalie and Loose more, n.d). 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. According to Nasir and Khamid (2013) the important fact remains that the construction industry is well known for its high level of inter-personal and inter-organizational conflict. Hence conflict is as inevitable in a project environment as change seems to be. When project team members interact during the course of completing their tasks and responsibilities, there is always a potential for conflicts (Verma, 1998). According to Mba (2013) the word conflicts brings to the mind images such as antagonism, struggles between parties, opposition processes and threats to cooperation but not all conflicts come in these forms especially in the construction industry, they come in form of need to be met or desires to be satisfied, disagreements to be settled and ideas to be shared that eventually leads to change of attitude feelings and perception. Conflicts may sometimes be pertinent to the progress of a construction project because the issue that affects the project and what led to the crisis are effectively discussed and managed to avoid delay. As observed by Lee (2011, cited in Ogunbayo, 2012) conflict is as indispensable as peace since the only reason for seeking peace is because there is a conflict, which is inevitable in the construction industry as in other areas of human endeavors. In a related development Deutsch (1973, cited in Mba, 2013) explained that conflict inevitably means that people are working against each other, in such a manner that what one wants is incompatible with that which the other wants. (Okechukwu, 2013) further reveals that it could bring about competition in the pursuit of goals because what the

competitor gets comes at the expense of the others or job. It is therefore counterproductive, disruptive, unnatural, and produces a deviation from the free flow of events. In the opinion of Borvon (2011) there is no project which can be considerably shielded from conflict such conflict can lead to financial damage. There is therefore this saying that if there are no conflicts there would never be a solution; it is natural that humans engage in a negative disagreement and end up with a positive agreement in order to make progress. Conflict can therefore be said to be inevitable because it is the only solution to an accomplishment. Okechukwu (2013) observed that there are two sides to conflicts, one is destructive and unhealthy and the other has a problem solving base where those involved are willing to sublimate personality differences, to listen to others' views and to be open and candid to each other, to be supportive and helpful whereas the formal defeats cooperation. Often times, the construction project brings together individuals or organizations that are separate and disparate to form what has been termed a temporary multi-organization or a temporary project coalition (Murray et al., 1999; Rawlinson, 1999 cited in Martin, 2013). In project management a project is always explained as an endeavor that must be successfully accomplished, that accomplishment is therefore the roles and duties of the parties involved in the construction, which means in a project individuals from all works of life, cultures and background are expected to come together and work as a team to achieve the set goals and objectives; therefore conflicts are likely to be imminent among the parties involved in any project because of the difference in characters, ethnics and religion. Ogunbayo (2012) argues that the fact that individuals involved are from different background, orientation and values are to work on those complex issues on the project to have the expected outcome that satisfy all stakeholders is adequate to resolve conflict within the limits of the project. Hence, project success is typically generated when the stakeholders express their collective satisfaction (Irefin, 2013). Mgbekem (2004, cited in Agwu, 2013) stated that there are other factors that contribute to the creation of conflict in organizations like task interdependence, scarce resources, goal incompatibility, communication failures, individual indifference and poorly designed reward system and also the way budget are being

allocated to public works yielded several impediments, such as financial, skilled engineers and labours, materials particularly for large infrastructural project which involved the very complex phasing planning and designing, financing; these brings an overlapping and interrelation between parties involved which can results in conflict. Construction conflicts are not too common in domestic and international funded projects unlike the public work where politics was involved in the awarding of contracts. Borvan (2011) found that the degree of conflict is depends on its nature of cause, content and complexity of contract agreement. He further explained that the key objective to study conflict problem was to identify the conflict problem that frequently occur during construction phase from the respective parties. Nwankwo (2013) conclude that conflict is an inherent element of socio-human relations, efforts should be made to ensure that it should not be dysfunctional. In lieu of the subsequent analysis conflict becomes an impetus to examine the causes and effects in the Nigerian construction industry.

1.2 STATEMENT OF PROBLEM

The fact that a project consist of varieties of people from different background, ethnicity and religion or belief defines conflict itself. Often times, the construction project brings together individuals or organizations that are separate and disparate to form what has been termed a temporary multi-organization or a temporary project coalition (Murray et al., 1999; Rawlinson, 1999 cited in Martin, 2013) it therefore means that people are working against each other, in such a manner that what one wants is incompatible with that which the other wants. Deustch (1973, cited in Mba, 2013), Hence, it is virtually impossible for people with diverse background skills and norms to work together; make decisions, and try to meet project goals and objectives without conflict. Although conflict is one of the things most of us dislike intensely, it is inevitable. Most often when we try to avoid conflict, it will nevertheless seek us out. Some people wrongly hope that conflict will go away if it is ignored. In fact, conflict ignored is more likely to get worse, which can significantly reduce project performance. The best way to reduce conflict is to confront it, (Verma, 1998). The nature of construction industry is such that there is an inherent conflicting issue between the major construction project stakeholders, participants, owners, design professionals, consultants, and contractors. Given the inevitability of conflicting interests of human nature, one must be wondering whether there is a hope for the industry for reducing the intensity and extent of such interests. Because naturally it is impossible for humans to get entire satisfaction in any aspect of any works, no matter how advanced and sophisticated the technology becomes, the scheduling methods improve, and construction methods become hi-tech, the never ending war of interests between the major roles of a construction project are likely to affects the potential performance of the industry (Shafia and Khamidi, 2013).

2. LITERATURE REVIEW

2.1 What is conflict?

According to Mba (2013) the word conflicts brings to the mind image such as antagonism, struggles between parties, opposition processes and threats to cooperation but not all conflicts come in these forms especially in the construction industry, they come in form of need to be met or desires to be

satisfied, disagreements to be settled and ideas to be shared that eventually leads to change of attitude feelings and perception. Conflict was also expressed as a struggle between at least two interdependent parties who perceive that incompatible goals, scarce resources and interference from others are preventing them from achieving their goals (Wilmot & Hocker, 2001). Conflict can also be described as an occasion where an individual or group feels negatively affected by another individual or group.

2.2 Escalation of conflict.

According to 'Karming conflict' which contends that it is crucially important to prevent conflicts and disputes arising rather than concentrating on dispute resolution, and suggests that improvements could be made by considering the notions of peoplism and Karma. When conflicts get to a stage where it escalates into dispute, then the progress of a project been undertaken will be hampered or delayed. Dispute, on the other hand, only develops when conflict is not properly managed; therefore, dispute is the unnecessary or dysfunctional element. It is therefore important to try and solve any grievance among parties involve in a conflict before it escalate into dispute. According to Yiu and Cheung (2006, cited in Abdullah, 2012) such disagreements can lead to an event or a series of circumstances that result in one or both parties having a grievance against the other. Olu and Abosede (2003) found that conflicts have become part and parcel of human organizations and world over which indeed is a paradox because of the amount of energy and resources expended by organizations to prevent and resolve conflicts. Conflicts may involve two parties or several parties for the same reason or for a diversity of reasons. For example, a construction project may trigger out conflicts between the contractor and the client for lack of quality and excessive cost of the output, between the public administration and both the promoter and the contractor for noise impact and between the contractor and the site neighbours for lack of parking places on the surrounding area Helder Moura and José Cardoso Teixeira (n.d). Construction has a built-in recipe for conflict but good management is the preventive medicine of dispute". (Hellard, 2005) concludes. According to Totterdill (1997, cited in Abdullah, 2012), for a conflict to escalate into a specific dispute, a certain sequence of events must have taken place as follows: (1)Something happened: an instruction, query, unexpected natural event or other problem. (2) Someone suffered: from either an additional direct cost or a delay that would cause additional cost. (3) The person who suffered (or thought he had suffered) asked for compensation. (4) The request for compensation was denied; the person who suffered did not accept the rejection.

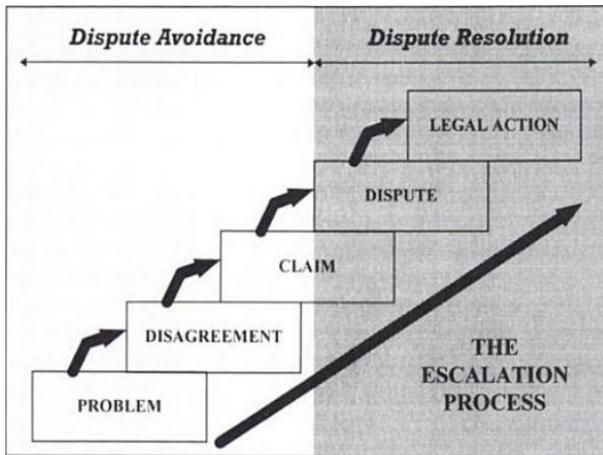


Figure 2.2: Conflict Escalation Process (Source Cox and Thompson, 1998: p250, adapted from **Abdullah Mohammed Alshehri, 2012**)

2.3 LEVEL OF CONFLICTS

There are five levels of conflicts as observed by Hellriegel et al (1986; cited in Abdullah, 2012) which includes: intra-personal, inter-personal, intra-group, inter-group and intra-organizational.

2.3.1 Intra-personal Conflict

Intrapersonal conflict is the conflicts we face in our day to day activities, that is, the kind of conflict human face within themselves this occurs within an individual possess some form of conflicting goals, such as when an action involves both positive and negative outcomes. Intra-personal conflicts occur when a decision need to be taken, it is a conflict of the mind.

2.3.2 Inter-personal Conflict

This form of conflict occurs between two or more individuals who have divergent or opposite outcomes (goals), attitudes, values or behavior and fail to share the same views, and have different interest or goals. Interpersonal conflicts also arise in a workplace due to natural differences in human personality, beliefs or work ethics. Co-workers may disagree over problem-solving tactics or shared resources, or employee may enter conflict with customers and clients, managers and supervised employees can also fall into routine disagreements over managerial style or workplace expectation.

2.3.3 Intra-group Conflict

This involves more people than intra-personal and inter-personal conflict: it is conflict between some or all of a group's members within the organization. It can also refer to conflicts between members of the same group or team. There are two main types of intra-group conflict: task conflict and relationship or emotional conflict.

2.3.4 Inter-group Conflicts

This is conflict that involves two or more groups within an organization. It is occurs between groups of people based on race, religion, ethnicity or levels of decision-making. These groups could be formal or informal, and the members of these groups interact with each other for different purposes. These groups differ in goals, work activities, power, and prestige.

2.4.5 Intra-organizational Conflict

Intra-organizational conflict varies from organization to organization. Intra-organizational conflict occurs between parties within an organization. It can concern the structure of the organization, the location of formal authority and the way in which jobs are designed. Majority of inter organizational conflicts result in productivity of an organization rather than deterioration in performance.

2.4 CAUSES OF CONFLICT IN THE NIGERIAN CONSTRUCTION INDUSTRY

Construction of major public infrastructure in the Nigeria is a notorious cauldron for conflict. Conflict may arise in many ways you see contractors making claims against owners, designers fight blame for errors which he may or not responsible for, and the public often feels left out of decision-making forums. Builders may face environmental challenges that the designers didn't consider, or nearby residents may object only after the project begins. These and a hundred other scenarios play out in the construction industry every day. They lead to cost overruns, delays, safety issues, and inconvenience to the public and time-consuming litigation. In the work of Henry (2009, cited in Agwu, 2013) found out that in any organization, there are many causes of conflicts, however, conflicts within an individual usually arise when a person is uncertain about what task is expected to do, if not clearly defined by the supervisor or the person in charge. In such circumstances, if the task is carried out wrongly when what transpire to the task is not clearly stated then conflict sets in, the supervisor becomes over-aggressive toward the individual while the individual becomes penurious towards subsequent task given to him, the results is simply a non accomplishment of task while conflict begins. Kululanga etal(2001, cited in Borvorn, 2011) identifies four sources of conflict in construction which are errors, defects and omissions in contract documents, underestimating the real cost of the project in the beginning, and changing condition and stakeholders involved in the project. According to verma (1998) lack of respect, breakdown in communication, defective listening skills and perception difference are also some of the causes of conflict in projects. He further explained that these can lead to serious communication problem. Conflict can also results from wrong priorities, delays, variation and political and cultural differences on a construction project which makes it compulsory for any project manager to possess the basic management skills because the success and failure of any projects depends on is own leadership attributes and style. Sambasivan and soon(2007) however categorized the causes of conflict in the construction industry as client/owner related factor which are improper arrangement of funds, late payments, owner interference, slow process of decision making and approval, unrealistic time durations, frequent design change; consultant related factors- delay in approval of variation statements, discrepancies between contract documents, delay preparation and approval of drawings, quality assurance and waiting time for approval of test and inspection; contractor related factors: poor site management, improper construction methods, improper planning, error during construction, inadequate experience of the contractor, level of labour and staff hired, lack of procurement schedules and organizational structure. (Thamham and wilemon, 1975 and keszbom, 1992) also identify the following source of conflict in a project: project

priorities, administrative procedures, technical opinions and performance trade-offs manpower resources, cost, schedule and personality. Others are: communication, reward, structure/performance appraisal, politics, leadership, ambiguous role and unresolved prior conflicts.

2.5 EFFECTS OF CONFLICT ON THE NIGERIAN CONSTRUCTION INDUSTRY

The works of Walton and Dutton (1969) founds that conflict results in low trust and low respect which in turn has an adverse effects on performance. When conflicts are not well managed it can also results in the reluctance of individual to continue to participate in a task. Although conflict may have a negative impact on a project but this is dependent on the nature and level of the conflict. According to verma (1998) conflict is unavoidable as it is a natural phenomenon in any organization and its response determines whether the results will be positive or negative. According to martins dada (2013) in Nigeria the direct loses due to litigation on construction project is not known, yet what is known is that conflict occur on project and sometimes degenerates into lawsuit. Kassab etal (2010) maintains that conflict remain a challenge in the construction industry with the potential to leading to project failures, litigation and outright project abandonment. Sometimes, when there are conflicts among the workers or project team on site it could result in frustration that can manifest a tripartite effects of communication break, unnecessary annoyance and aggressive behavior. Conflict also affect the accomplishment of organizational goals due to their attending stress, hostility and other undesirable factors when poorly managed.

3. METHODS

The data collection process involves two stages. The first stage consists of the literature reviews information on the causes and effect of crisis in the Nigerian construction industry and non structured interview of two key players involved in the management of project in the construction industry which is project managers and contractors. The purpose of the interview was to validate a preliminary set for the causes and effect of crisis in the industry. This stage resulted in the identification of seventy-two causes of crisis and eighteen (18) effects of crisis. The second stage involved the development of questionnaire consisting of the 72 causes and 18 effects of the crisis in the Nigerian construction industry. Based on the response of the survey, a severity index was used to ascertain the degree of severity effect of the factors identified. The results of the survey are shown in Table 5. The index was calculated as follows (Assaf, 1995)

$$\text{Severity Index} = \frac{\sum_{i=0}^4 a^i x^i}{\sum_{i=0}^4 x^i} \times 100\% \quad (1)$$

Where

a_i = constant expressing weight given to i th response's = 0,1,2,3,4, x_i = variable expressing frequency of i The response for $i = 0, 1, 2, 3, 4$ illustrated as follows: x_0 = frequency of very often response and corresponds to $a_1 = 4$; x_1 = frequency of often response and corresponds to $a_2 = 3$;

x_2 = frequency of moderate response and corresponds to $a_3 = 2$; x_3 = frequency of not often response and corresponds to $a_2 = 1$; x_4 = frequency of response and corresponds to $a_1 = 0$; Equation 1 was used to calculate the severity index for the effects of crisis in the Nigerian construction industry. The index was ranked based on the ranking of the project managers and the contractors. The severity index was categorized into five levels (Assaf, 1995). The range of 0-25% was categorized as none severe; 25- 50% is categorized as slightly severe; 50-75% is categorized as moderately severe; and 75-100% is categorized as most severe. The categorizations reflect the scale of the respondents answer to the questionnaire. The results of the survey are shown in Table 4.

Relative importance index (RII) was also used to determine the project managers and contractors perceptions of the relative importance of the Nigerian construction industry

Where

$$\frac{\sum W}{A \times N} \quad (2)$$

Where W is the weighting given to each factor by the respondents (ranging from 1 to 5), A is the highest weight (i.e. 5 in this case), and N is the total number of respondents. The RII was used to rank (R) the different causes of crisis in the construction industry. These rankings made it possible to assess the relative importance of the factors as perceived by the two (2) groups of respondents (i.e. project managers and contractors). Each individual cause's RII perceived by all respondents were used to assess the general and overall rankings in order to give an overall idea of the causes of crisis in the Nigerian construction industry.

3.1. Rank agreement

The spearman's rank correlation, coefficient r_s was used to measure the degree of agreement in the ranking of project managers and contractors regarding the effects of crisis in the Nigerian construction industry. These results were used to test the significance level at 5%. The coefficient can be computed as follows:

$$R_s = 1 - \frac{6 \sum d^2}{N(N^2-1)} \quad (3)$$

Where

r_s = Spearman's rank correlation coefficient. d = Difference in ranking between the project managers and contractors. N = Number of variables. The agreement between parties regarding the ranking of the causes of crisis in the Nigerian construction industry is determined according to Kendall's coefficient of concordance. The degree of the agreement can be determine by the following

$$W = \frac{12U - (n-1)^2}{M^2 n(n-1)} \quad (4)$$

Where $U = \sum_{n=1}^{\infty} (R)^2$ N = number of factors, M = number of groups, J = the factors 1, 2..... n

Hypothesis tested

H₀: there is no significant relationship between the opinion of project managers and contractors on the causes of conflicts in the Nigerian construction industry

H₀: there is no significant relationship between the opinion of project managers and contractors on the effects of conflicts in the Nigerian construction industry

H₁: there is a significant degree of agreement among the project managers and the contractor's opinion regarding the factors

4.0 ANALYSIS OF DATA

Table 1 show the demographic characteristics of the respondents

4.1 Causes of crisis in the Nigerian construction industry

Data (primary data) collected was analyzed based on the perception of the project managers and the contractors. Each factors identified were computed as overall analysis. The relative importance index, RII was computed for each sub-group to identify the most significant causes of crisis in the Nigerian construction industry. From the ranking assign to each sub-group the most important causes of crisis in the Nigerian construction industry was identified. Referring table 2, the five(5) most important causes of crisis as perceived by the by the project managers are: (1) win lose scenario (RII= 0.974), (2) failing to share credit (RII= 0.973), (3) Questioning others motive (RII= 0.960), (4) disgruntled client(RII= 0.933), (5) diverse perspective(RII= 0.920) and also the five most important causes of crisis in the Nigerian construction industry as perceived by the contractors are: (1) Arrogance (RII= 1.000), (2) Assumptions (RII= 0.992), (3) failing to share credit(RII= 0.960), (4) competitive personality and competitive culture (RII= 0.952).

Table 1
Demographic characteristics of respondents

Demographic characteristics	Frequency N=40	Percent
Age		
Less≤20 years	-	-
20-29 years	-	-
30-39 years	5	12.50
40-49 years	17	42.50
50 and above	18	45.00
Sex		
Male	37	92.50
Female	3	7.50
Qualification		
Hnd	5	12.50
BSc	10	25.00
PGd	10	25.00
Msc/Mpm	15	37.50
Largest project involved based on contract sum		
Less than N10 million	7	17.50
N10million-N50million	15	37.50

Above 50million	18	45.00
Working experience		
Less than 2years	-	-
2-5 years	-	-
6-10 years	19	47.50
Above 10 years	21	52.50

Based on the top ranking questioning others motive is common between the ranking of the project managers and the contractors which implies that crisis can occur in the industry when other person's motive is questioned. Humans naturally disagree especially when someone under look or question other parties motives. Table 2 gives the summary of the ranking of the causes of crisis in the Nigerian construction industry.

Table 2: Ranking of the causes of crisis

Ranking of the causes of crisis in the Nigerian construction industry

Causes of crisis	Project managers	Contractors
	RII Rank	RII Rank
Task related causes	0.724 2	0.670 2
Competing goals	0.772 19	0.720 23
Incompatible interest	0.812 15	0.768 20
Differing principles	0.426 41	0.648 29
Incongruent values	0.386 42	0.232 45
Disagreement about strategy	0.746 20	0.768 20
Disagreement about execution	0.840 12	0.504 42
Diverse perspective	0.920 5	0.744 22
Lack of focus	0.666 24	0.744 22
Unclear objectives	0.800 16	0.760 21
Poor planning	0.880 9	0.760 21
Missed deadlines	0.720 22	0.720 23
External influence	0.819 1	0.788 1
Struggle for resources	0.734 21	0.644 27
Limited resources	0.734 21	0.920 9
A failing project	0.734 21	0.776 19
Win-lose scenario	0.974 1	0.632 31

Disgruntled client	0.933 4	0.880 13	personality	18	5
Budget allocation	0.866 10	0.880 12	Demeaning	0.827	0.952
Lack of information	0.893 8	0.608 33	language	13	5
Interdependence	0.600 29	0.776 19	Patronizing	0.827	0.928
Ineffective process	0.906 6	0.960 4	language	13	8
Emotional trigger	0.713 3	0.765 3	Condescending	0.814	0.936
Mixed feeling	0.920 5	0.912 10	Undermining	14	7
Expectation	0.880 8	0.792 18	expertise	0.827	0.928
Prejudice	0.800 15	0.808 17	Arrogance	13	8
Perception of injustice	0.626 27	0.808 17	Assumption	0.787	1.000
Jealousy	0.547 32	0.616 32	Assumption	17	1
Retaliation	0.493 41	0.648 30	Assumption	16	2
Anger	0.680 23	0.840 15	Complacency	0.547	0.936
Non verbal signals	0.480 39	0.832 16	Hostility	31	7
Stress buildup	0.920 5	0.680 25	Hostility	0.533	0.616
Burnout	0.414 42	0.536 41	Passive	35	32
Fear	0.574 31	0.592 35	Aggressiveness	0.467	0.584
Harsh feedback	0.414 42	0.416 44	Avoidance	40	36
Feeling unappreciated	0.880 8	0.944 6	Avoidance	0.800	0.936
Distrust	0.814 14	0.904 11	Perfectionism	16	7
Dissatisfaction	0.894 7	0.952 5	Perfectionism	0.480	0.528
Feeling judged	0.894 7	0.960 4	Inconsiderable behavior	39	42
Being isolate	0.626 27	0.696 24	Inconsiderable behavior	0.494	0.536
Lack of trust	0.974 1	0.840 15	Abusing authority	38	41
Behavioral antecedent	0.675 4	0.736 4	Abusing authority	0.507	0.544
Miscommunication	0.626 27	0.944 6	Desire to be right	37	40
Risk aversion	0.814 14	0.552 38	Desire to be right	0.520	0.552
Self centered	0.866 10	0.984 3	Overdependence on others	36	39
Sarcasm	0.534 34	0.600 34	Overdependence on others	0.534	0.560
Competitive culture	0.854 11	0.856 14	Blaming or pointing fingers	34	38
Competitive	0.774	0.952	Blaming or pointing fingers	0.547	0.568
			Power struggle	37	33
			Power struggle	0.560	0.496
			Interrupting	32	43
			Interrupting	0.574	0.552
			Accusing	39	31
			Accusing	0.586	0.592
			Rudeness	30	35
			Rudeness	0.600	0.592
			Unreliable	29	35
			Unreliable	0.614	0.632
			Failing to share credit	28	31
			Failing to share credit	0.973	0.984
			Micro financing	2	3
			Micro financing	0.640	0.648
			Incompetence	26	29
			Incompetence	0.654	0.656
			Complaining	25	28
			Complaining	0.666	0.664
			Slow to adapt	24	27
			Slow to adapt	0.680	0.672
			No work no talk	23	26
			No work no talk	0.666	0.680
			Questioning others motive	24	25
			Questioning others motive	0.960	0.984
			Questioning others motive	3	3

Source: Okuntade Tope Femi (2014)

The ranking of the causes of crisis in the Nigerian construction industry were based on the perception of the respondents (project managers and contractors). **Table 3** summarizes the RII and Ranking of the categories of the

causes of crisis in the construction industry as perceived by the respondents (Project managers and contractors), Based on the ranking of **table 3**, external influence group was ranked highest i.e. first by the respondents. Which means the respondents perceived that the factors in the group has the highest influence on the cause of crisis in the Nigerian construction industry (RII=0.804). In order to test the degree of agreement between the two groups of respondents based on the causes of crisis, correlation analysis using Kendall's coefficient of concordance were used to test the analysis. **Table 4** gives the results of the test which implies that for task related causes, external influence, emotional trigger and behavioral antecedence, the P-value (sig) are less than $\alpha=0.05$, therefore the Null hypothesis(Ho) is rejected and the alternative hypothesis is accepted, H1. Hence, it can be concluded that there is a significance agreement among the project managers and the contractors regarding the causes of crisis in the Nigerian construction industry.

4.2 Effects of crisis in the Nigerian construction industry

Just like the causes of crisis in **section 4.1** above, data were collected from the questionnaire to analyze the perception of the project managers and contractors. Severity index, SI was computed to identify the most severe effects of crisis in the Nigerian construction industry. Based on the ranking the most severe crisis in the construction industry was identified. Based on table 5 the five most severe effects of crisis as perceived the project managers are: (1) damaged emotional and psychological wellbeing (SI=95.67%), (2) complaints and blaming (SI=95.24%), (3) dissatisfaction and stress (SI=92.87%), (4) insubordination (SI=90.87%), (5) withdrawal and miscommunication (SI=86.67%) while according the contractors perspectives (1)Quality of work(SI=98.85%),(2)poor decision making(SI=95.24%), (3) wasted resources(SI=93.33%), (4) attitudes of distrust and hostility(SI=90.91%) and (5) complaints and blaming(SI=86.67%) were ranked the most severe effects of crisis in the Nigerian construction industry. Hence, spearman rank correlation was used to test the agreement between the two (2) groups of respondents. **Table 5** show the results of the analysis of severity index based on the responses of the respondents (project managers and contractors) the spearman rank correlation value is 0.285, the t_{cal} 0.443 is less than the tabulated value of 0.414, however we conclude that we reject the alternative hypothesis(H₁) and accept the null hypothesis(H₀). Therefore, there is no significant relationship between the opinion of the project managers and that of the contractors on the effects of crisis in the Nigerian construction industry while there was a significant relationship in the opinion of both professionals on the causes of crisis in the Nigerian construction industry

Table 3

RII and ranking of categories of causes of crisis in the Nigerian construction industry

Category	Project		contractors		Overall	
	RII	R	RII	R	RII	R
Task related cause	0.724	2	0.670	2	0.697	4
External cause	0.819	1	0.788	1	0.804	1
Emotional trigger	0.713	3	0.765	3	0.739	2
Behavioral antecedence	0.675	4	0.736	4	0.706	3

RII= relative importance index, R= ranks factors

Table 4
Kendall's coefficient of concordance

Field	W	chisquare	Pvalue	Decisions
Task related cause	0.583	134.520	0.000	Reject Ho
External influence	0.568	130.130	0.000	Reject Ho
Emotional trigger	0.468	122.148	0.008	Reject Ho
Behavioral antecedent	0.507	132.327	0.001	Reject Ho

*The agreement is significant at level of significant $\alpha=0.05$

Table 5
Ranking of effects of crisis in the Nigerian construction industry

Category	Project managers		Contractors		Overall	
	SI (%)	R	SI (%)	R	SI (%)	R
Increased costs(time, money)	75.45	11	81.33	6	78.39	11
Wasted resources	64.45	15	93.33	3	78.89	10
Decreased productivity	68.45	13	65.10	14	66.78	15
Lowered morale	84.77	6	77.14	8	80.96	8
Poor decision making	86.67	5	95.24	2	90.96	1
Withdrawal and miscommunication	86.67	5	77.15	18	81.91	4
Complaints and blaming	95.24	2	86.67	5	90.96	1
Backstabbing and gossip	78.09	9	72.73	9	75.41	12
Attitudes of distrust and hostility	83.81	8	90.91	4	87.36	2
Erosion to personal relationship	71.43	12	68.67	11	70.05	14
Harm to others not directly involved in the conflict	57.15	16	67.63	12	62.39	17
Damaged emotional and psychological wellbeing	95.67	1	66.67	13	81.17	5
Dissatisfaction and stress	92.93	3	66.67	13	79.80	9
Insubordination	90.87	4	71.43	10	81.15	6
Lack of direction	75.75	10	86.67	5	81.21	7
Fragmentation	66.67	14	61.75	16	64.17	16
Lack of new ideas	81.85	7	64.54	15	73.20	13
Quality of work	75.75	10	98.85	1	87.30	3

Source: Okuntade Tope Femi (2014). 75-100 most severe, 50-75 moderately severe, 25-50 slightly severe, 0-25 non severe, SI-severity index factors, R-rank factors.

Table 6

Results of spearman correlation coefficient for the Effects of crisis in the Nigerian construction industry

Effects of crisis	Rho	T _{tab}	t _{cal}	df	Decision	Sig
	0.285	0.443	0.414	17	Accept H ₀	0.05

Rho= spearman rank correlation, t_{tab}-t tabulated, H₀-null hypothesis, t_{cal}-t calculated, p-value-probability that reject the null hypothesis.

5. DISCUSSIONS OF RESULTS

This section discusses the results obtained previously. First, the results are obtained by analyzing the causes the crisis in the Nigerian construction industry. Likewise, the results obtained from the analysis of the effects of crisis in the Nigerian construction industry are also discussed. The ten most important causes of crisis (based on the ranking of both the project managers and contractors) as shown in table 2 are: (1) win lose scenario (RII = 0.974) (2) failing to share credit (RII = 0.973) (3) Questioning others motive (RII = 0.960) (4) disgruntled client (RII = 0.933) (4) diverse perspective (RII = 0.920) (5) Arrogance (RII = 1.000) (6) Assumptions (RII = 0.992) (7) lack of trust (RII = 0.974) (8) feeling judged (RII = 0.960) (9) competitive personality (RII = 0.952) (10) competitive culture (0.952).

5.1 win lose scenario

Win lose scenario or No win scenario is ranked first as one of the major causes of crisis in the Nigerian construction industry as perceived by the project managers. When you are manipulated into choosing between two bad options, win lose scenario sets in. from the word "win lose" when in a project someone felt is lose is of benefits to another person, conflict sets in which may require a dispute resolution for settling the differences, hence voluntary acceptance of the resolution are likely not to be accepted.

5.2 Failing to share credit

It is natural for humans to feel cheated or neglected when you put all efforts, resources and strength toward an accomplishment of a project, though a collective work but at the end, the credit is given to another person. This can cause a serious conflict among the project participants. The results of this research indicated that both the project managers and the contractors both agree that "failing to share credit" is among the prominent causes of crisis in the construction industry because both professionals are very well on ground when it come to the construction industry, hence seeing yourself as the only success to a project can bring down a project through crisis.

5.3 Questioning others motives

This is another serious cause of crisis in the Nigerian construction industry. The results reveal that humans don't like being questioned based on their motives. Though the approach really matters, trying to questions others motive in lieu of your own can results in an unresolved and harmful conflicts.

5.4 Diverse perspectives

The fact that individuals from different race, ethnicity, gender, socio economic status, sexual orientation and religious belief

are involved in a project, various kinds of perspectives are expected, it is now the responsibility of the project manager or contractors to effectively manage the varieties of ideologies without offending anyone. The concept of diversity encompasses acceptance and respect. It mean understanding that each individual is unique, and recognizing our individual difference in a safe, positive and nurturing environment. It is about understanding each other and moving beyond simple tolerance. When the above is missing, the project is expected to end with crisis.

5.5 Competitive personalities

In a construction project some personality possess a competitive attributes that if they lose or they see others performing better than they do, crisis sets in. in the concept of personality theory two types of personality are identified according to a Wikipedia report(n.d).

- (1) Type A personality- is an individual with ambitious, rigidity organized, highly status, conscious, sensitive, truthful, impatient, always trying to help others, take on more than they can handle and hate to lose
- (2) Type B personality- live a lower stress, enjoy achievement but not becoming stressed when they do not achieve, when faced with competition they do not mind losing and either enjoy the game or back down. Hence, understanding this two personality can prevent crisis

5.6 Damaged emotional and psychological well being

Based on the perspective of the project managers, one of the serious effects of crisis identified in the construction industry is that of damaged emotional and psychological wellbeing. The individuals involved in the crisis are mentally dejected; they tend to struggle to continue with the project because they are affected psychologically by the crisis. There emotions can affect the progress and productivity of the projects.

5.7 Complaints and blaming

Majorly in most construction project, once a project is involved in any form of crisis the outcome of the project is usually a failed and stagnant project, hence the project participants will began to shed blames on who is responsible, how it's started, instead of concentrating on how to prevent such crisis from re-occurring. In a project complaints and blame is inherent, but how to manage it is the problem.

5.8 Withdrawal and miscommunication

The effects of crisis in a construction project can results in withdrawal and miscommunication. Communication is very imperative in any construction project because once communication is hampered between the projects there is a crisis which can lead to withdrawal of the team member's for further participations.

5.9 Wasted resources

Based on the perception of the contractors "wasted resources" were ranked high because of the role a contractor play during the construction stage of a project. Conflict can results in a waste of resources which can be from the resources spent on dispute resolution or not paying workers salary as at when due which can results in a neglect of an on going work due to protest. This kind of issue can waste resources on site

5.10 Lack of trust

Another important effect of crisis is lack of trust. The issue that lead to the crisis which the others parties disagree can results in a lack of trust between both parties

5.11 Insubordination

Insubordination is a serious effect of crisis in most construction industry. Due to crisis workers will no longer obey their superiors, disregarding of orders given to them by a project leaders. These kinds of problem can be very difficult to control especially when it is allowed to escalate to that stage.

6. STRATEGIES FOR AVOIDING CONFLICTS AND ITS EFFECTS IN THE NIGERIAN CONSTRUCTION INDUSTRY

According to Verma (1998) the following are the steps and strategies that can be adopted to minimize conflicts in the Nigerian construction industry

- (1) **Expecting conflict:** the sources of conflicts, technical issues, administrative personality, and cost) will vary with the phase of the project. With an experienced team, the focus of conflict is within the team itself. If the project goals are vague and loosely defined, the focus of the conflict will likely be between team and upper management or between the project managers and the client. The project managers should analyze the reasons or sources of the conflict
- (2) **Planning ahead to handle conflict:** after analyzing the source, intensity and focus of conflicts, how to deal with conflict should be plan which involved developing a frame work within to view conflict objectively.
- (3) **Facing the conflict:** Although conflict is one of the things most of us dislike intensely, it is inevitable. Most of then when we try to avoid conflict, it will nevertheless seek us out. Some people wrongly hope that conflict will go away if it is ignored. In fact, conflict ignored is more likely to get worse. The best way to reduce conflict is to confront it.
- (4) **Surface the real issues:** conflicts that remain below the surface can have negative impacts on a project in many ways, such as distorted or withheld information, slipped schedules, unplanned absence from project meeting, lack of initiatives to solve problem. Surfacing the real issue can be accomplished by getting all the background information associated with the conflict. This process may uncover important aspects of the project that will lead to serious consequences.
- (5) **Resolving the conflict;** due to dynamics and sometimes nature of projects, a substantial amount of management tome is dedicated to resolving conflicts. In some cases, disagreement can be handled by straight forward decisions. All project participants involved in a conflict situation must work together to achieve a win-win situation for everyone.
- (6) **Look for win-win alternative:** of the inter-personal conflict resolution styles, confronting(negotiating and problem solving) is the most effective approach because it started with an understanding by both parties that they must search for solution that satisfy everyone
- (7) **Cut your loses when necessary:** sometimes a project may have gotten too deep in a hole, which leads to conflicts. Should the project continue or should someone

review the situation, try to estimate the bottom-line to completion, and make a rational decision on whether to abandon the project.

- (8) **Formulate conflict management strategies:** conflicts can be resolved or kept under control by using a proactive approach that anticipates conflict and its impact. When using this approach, it is important to understand the project leader's relationship with other project stakeholders.

7. CONCLUSION

The causes and effects of crisis in the Nigerian construction industry were investigated. A structured questionnaire was designed and distributed among the two(2) major players in the construction industry(project managers and contractors) the 10 main causes of crisis was identified as perceived by the respondents which were:

- (1) Win-lose scenario
- (2) Failing to share credit
- (3) Questioning others motives
- (4) Disgruntled clients
- (5) Diverse perspectives

Arrogance (7) Assumptions (8) Competitive personality (9) competitive culture (10) Feeling judged. Likewise 5 major effects of crisis in the Nigerian construction industry were also identified which are:

- (1) Damaged and psychological well being
- (2) Complaints and blame
- (3) Dissatisfaction and stress
- (4) Insubordination
- (5) Withdrawal and miscommunications

However, these research works study the relationship between the opinion of the project managers and that if the contractors regarding the effects and causes of crisis in the Nigerian construction industry which statistically are related.

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