

Examination of Major Causes of Disputes and Dispute Resolution Methods Used in the Nigerian Construction Industry

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Abstract - This study examines the major causes of disputes and dispute resolution methods used in the construction industry with a view towards suggesting possible ways through which dispute can be controlled, mitigated, or eliminated. The random sampling technique was used to sample construction stakeholders and professionals (Clients, Contractors, Quantity Surveyors, Builders, Architects, Civil Engineers) identified in the study area. Data analysis was carried out using frequencies, percentile, and Mean Item Score (MIS) through the use of a well-structured questionnaire. Result of this study proved that irrespective of the fact that disputes and dispute resolution methods are not new philosophy in the construction industry, undefined channel of communication, diversity in expertise of project participants, and difference in interests, concerns, training and perceptions of individuals involved in the construction project has proven to be the major causes of construction dispute. Therefore, this research outlined excellent planning with the project team members before works begin to ensure that you will finish on time, careful understanding and negotiation of the contract terms and conditions with the client, and documentation of daily report of defects that may arise during project execution as the best possible ways of mitigating construction dispute in the construction industry. The study recommends among others that strict adherence to the outlined possible ways of mitigating construction disputes be practiced amongst construction participants and stakeholders in order to eliminate the negative effects of disputes in the Nigerian construction industry.

Keywords: Construction Industry, Dispute, Dispute Mitigation, Dispute Resolution.

I. INTRODUCTION

To make items, systems, or organizations, one could characterize construction as an art and science of structural development (Oxford University Press, 2009). Building, according to Motwani (2001), is the process of allocating, coordinating, supervising, and managing manpower, supplies,

and tools to complete a construction project. Creating, renovating, and updating structures or buildings are all parts of a construction project. Building a structure for a specific place involves fitting together various components according to a carefully thought-out design and plan (Dina El, 2020). Large construction projects such as railroads, power plants, and dwellings are all heavy construction projects. However, Safa, Sabet, Mac Gillivray, Davidson (2015) posited that residential building construction, institutional and commercial building construction, specialized and heavy construction, and industrial/infrastructural construction are the three subheadings under which projects can be categorized. Their research further explained that residential building construction has to do with the construction, renovation, and refurbishment of existing buildings. They argued that Institutional and commercial buildings has to do with the construction, renovations, and repairs of schools, hospitals, shopping centers, stadiums, etc. Furthermore, Adams (2014) outlined that roads, trains, water and waste water distribution and purification systems, dams, and bridges are examples of specialized and heavy construction, while refineries, pipelines, power plants, manufacturing facilities, and telecommunications infrastructure are all built as part of industrial / infrastructural projects.

Conflicts quickly develop into disagreements if they are not handled properly. One of the biggest things that prevent building projects from being successfully completed and delivered is disputes. Ofori (2012) stated that the lack of precise and comprehensive data on the construction industries in developing nations creates a barrier to the evaluation of those industries' strengths and limitations, which would serve as a foundation for developing countries' programmes for improvement. Construction disputes may result from this. However, according to Egwunatum, Anumudu, Eze, and Imoleayo (2021), disagreements in building projects arise as a result of poor communication, inaccurate information dissemination, misunderstandings, claims and modifications, etc. Lack of communication can result in waste, poor planning, and sluggish work progress. Cakmak and Irlayici (2014) stated that client-related disputes might arise as a result

of payment delays, scope changes, client-initiated alterations, etc. In addition, disputes can be contractor-related, which involves delays in the flow of work and the contractor's technical deficiency. In their research, Prasad, Vasugi, Venkatesan, and Nikhil (2019) discovered that disputes might be design-related and involve issues such as inadequate specifications, design flaws, inadequate knowledge, unforeseen events, site conditions, legal and economic issues, lack of team spirit, etc., which can all contribute to construction disputes.

Furthermore, it is no doubt that breach of contract is a major influencer of construction dispute. This occurs when one party violates the terms previously agreed upon in the contract, when the contractor does not meet the standard of work specified in the contract documents, and when project abandonment becomes the source of claims and variations in a construction project contract (Chipo, 2017). In addition, disputes cause construction projects to take longer time to complete than expected (time overruns), cost more money to complete (cost overruns), and destroys existing cordial relationships between project participants, among others. Therefore, cooperation between projects participants will be essential if conflicts are to be avoided (Kumaraswamy, 2009). Based on these premises, this study examines the major causes of disputes and dispute resolution methods used in the construction industry with a view towards suggesting possible ways through which dispute can be controlled, mitigated, or eliminating them.

II. LITERATURE REVIEW

The construction industry is a vast organization where many different construction participants work together with different backgrounds, abilities, and perspectives (Soni, Pandey, Agrawal, 2017). This discrepancy in mentality, background, and expertise leads to clash of ideas, thoughts, and perceptions. Conflicts therefore seem inevitable or unavoidable. In relations to this, Owolabiet al. (2014) argued that disagreement is a significant factor that prevents the excellent completion of project tasks. Acharya et al. (2006) identified the primary contributors to conflicts as being modifications to the site circumstances, interruptions by humans, modifications to the evaluation technique, and subpar design. The clients and consultants are most likely to spark a quarrel out of the many diverse elements at the least provocation. Chan and Suen (2005) connected production challenges to legal, cultural, and contractual problems as contract related elements play a significant role in the occurrence of disputes, claim (Cakmak and Cakmak, 2014).

It is agreed upon by Agwu (2013) and Vaux (2014) that conflict cannot be totally avoided in organizational operations.

Agwu (2013) opined that this is because despite the fact that the project team's backgrounds and areas of expertise are varied, each project member has personal aspirations that occasionally should collide with the organization's overarching goals. When those conflicts are not actively and unequivocally handled at the appropriate level according to Mbatha, Alkizim, et al. (2021), the outcomes include a perception of threat to one's dreams from others, blame recreation among the mission people, and occasional control fulfillment. Conflict or difficulty between occurrences is referred to as a dispute. Cheung, Henry, and Lam (2002) therefore contend that conflicts should be resolved as soon as possible to prevent them from worsening and causing delays in projects, claims, and perhaps legal action. More so, dispute according to Zaneldin (2006) begins when one party presents a claim and the other party rejects it, and the rejection is unfavorable without the consent of the party who initially filed the claim.

Causes of Construction Disputes

The main contributors to disagreements and disputes in construction projects, according to Mitkus and Mitkus (2014), include mental defensive mechanisms, bad construction worker attitudes, and inadequate viewpoint or mental switching among participants. The overall success of construction development within the bounds of cost, schedule, quality, and safety regulations is the responsibility of the project managers. Any organization's ability to succeed depends on the caliber and expertise of its personnel (Owolabiet al., 2012). Despite the vast amount of knowledge that has been amassed regarding the reasons for disagreements, conflicts still occur and disturb the construction process at a cost. Based on this, it's crucial to be aware of potential conflict in order to complete the project on time, within set budget, and to the standard of quality expected (Soniet al., 2017).

Client Related: According to Soniet al. (2017), issues like irrational expectations, payment delays from the client's side, client's initiated variations, changes to the project's scope, late site possession, irrational expectations, and payment delays are the major causes of disputes in a construction project. However, payment delays according to Anumudu, Eze, and Egwunatum (2020) is one of the main reasons for conflicts and disputes in the construction industry.

Contractor Related: Soniet al., (2017) argued that delay in work progress, time extensions, monetary failure of the contractor, technical inadequacy of the contractor, tendering, quality of works, etc., are a number of the elements responsible for dispute from the contractor's side. Contractor is one of the numerous factors which play a massive function

in the accomplishment or the miscarriage of any construction project. Jaffer, Tharim and Shuib (2011) posited that a wrong choice of contractors can result in a major trouble such as under-pricing the tender without understanding completely the design, specification, and standards expected of the project.

Consultant Related: Design, drawing and specification falls under the category of consultant related issues. Thus, a minor error in drawing and design poses the treat of negative effects on the whole project as this introduces delay in the project which may certainly lead to conflicts and dispute (Soni, et al., 2017).

Third Party and Human Behaviour Related: Third Party and Human Behaviour elements are divided into controllable and uncontrollable factors. According to Jaffer, Tharim, and Shuib(2011),Controllable factors are those that can be managed in any way possible. These include human-related issues such as participant disunity, poor communication, and participant misunderstandings. Uncontrollable factors on the other hand are those that are related to third parties such as unforeseen or unpredictable events, protests, and weather conditions. Although they can be prevented, it is impossible to fully control them. Conflicts and disagreements over it are therefore inevitable.

Design and Contract Related: Soniet al., (2017) argued that bespoke terms are used in contract terms to allow project participants make profit at the time of project completion when these bespoke terms are presented with their second meaning. This process of making profit results in the occurrence of conflicts and dispute in the construction industry. Lack of available information included in design related factor also result in creating dispute in on-going construction project. Different interpretations of the contract provisions and risk allocation can also cause dispute (Ashok and Patil, 2014).

Method of Construction Dispute Resolution

Method of Construction Dispute Resolution is explained under the following headings.

Arbitration: With the exception of the fact that in arbitration the principle of privacy is upheld and outsiders are not permitted, unless with the approval of the parties and the arbitrator to be present during the hearing, arbitration is a method of dispute resolution that focuses on the parties' legal rights (Sujal and Patel, 2017). The benefits of arbitration include privacy, confidentiality, cost effectiveness, quick resolution, flexibility, finality, and, specifically with regard to construction contracts, the arbitrator's authority to access, review, and amend the certificates of the architects, engineers, and architects' and engineers' decisions.

Negotiation: Sujal and Patel (2017) posited that this is a typical approach to dispute resolution in which the parties to the disagreement, or their representatives, attempt to resolve the conflict without the involvement of a neutral third party. They added that it is a voluntary and unstructured process that has been discreetly and confidentially agreed to by all involved. The characteristics of direct negotiation that make it successful include avoiding taking sides in a conflict and instead pursuing solutions that satisfy the needs and interests of both parties. However, the parties' ability to communicate with one another during the entire process is crucial to the success of the negotiation process.

Mediation: In this process, the disputing parties ask the mediator (a neutral third party) to attempt to mediate a resolution. Thus, mediation as a method of dispute resolution entails negotiation between the two parties to the conflict with the mediator serving as the facilitator (Sujal and Patel, 2017). A mediator does not make decisions on behalf of the parties, unlike arbitration or litigation where the arbitrator or the judge would state the legal rights of the parties in the form of an award or a judgment. As a result, the parties must reach a compromise that is at least somewhat acceptable to them before a mediator can rule on the rights or wrongs of the parties and their conflicts.

Adjudication: According to Sujal and Patel (2017), arbitration clauses in construction contracts are written in such a way that a reference to arbitration is most effective when it occurs after the completion or purported completion of the work. This is due to the adversarial nature of the arbitral procedure; the arbitration's behavior might interfere too much with the continuing construction. There is some merit for this motive. However, it cannot be said that the reality that some issues should wait until the end of the project before trying to be resolved has any basis. This disagreement includes the retention of certificates and the deposit of retention funds in a different bank account. Additionally, and from the standpoint of the contractor, their cash flow can be severely and negatively impacted. In this case, adjudication can prove to be a useful tool for settling construction-related conflicts.

Conciliation: According to Sujal and Patel (2017), conciliation and mediation are used interchangeably. Conciliation entails a form of shuttle diplomacy in which a disinterested third party listens to both sides of the conflict and facilitates resolution. Additionally, he doesn't meet with any of them in private as is customary in mediation. Instead, he conducts formal conciliation court proceedings where all communication occurs in front of each party's legal counsel and representative. The conciliator puts forth the suggested resolution in writing after taking into account the proceedings in all court cases.

Litigation: Litigation is a technique of dispute resolution which makes a specialty of the legal rights of the parties and may include a face to face challenge among parties involved. It is similar to washing dirty linens in public (Sujal and Patel, 2017). This is to a massive degree unavoidable if one resorts to litigation given the adverse nature of the (common regulation) litigation process. However, litigation is the very last approach of resolving disputes. The disadvantages of litigation includes technical factors of regulation that does not having direct relevance to the issues in disputes can be raised; technical and complicated rigid regulations of proof will want to be adhered to; the common postponements of instances already constant for listening leads to delays; judges not satisfied with contract information because of the excessive technical nature of the disputes and the issues involved; and lots of others tend which disadvantaged litigation as a way of resolving disputes.

III. RESEARCH METHODOLOGY

This research was carried out to examine the major causes of disputes and dispute resolution methods used in the construction industry with a view towards suggesting possible ways through which dispute can be controlled, mitigated, or eliminated. It is expected to cover construction projects under dispute within the country but due to limitations caused by financial strength and location of the researchers, focus of this study is limited to Owerri in Imo State. Owerri is the confluence town of Imo State of Nigeria and the major revenue hub of the Government of Nigeria owing to the presence of several on-going construction projects in the region. Kothari (2004) pointed out that research design is the structuring of investigation aimed at identifying variables and their relationship to one another.

This study therefore employed a survey research method in determining the number of construction projects under dispute in the study area. The random sampling technique was used to sample construction stakeholders and professionals (Clients, Contractors, Quantity Surveyors, Builders, Architects, Civil Engineers,) identified in the study area. Thus, a well-structured questionnaire was administered to only top management and construction professionals of these categories to help in eliciting the necessary information for data analysis. The questionnaire used was structured to addresses the background information of respondents, causes of construction disputes, and dispute resolution methods used in the construction industry. The questionnaire was developed with information gathered through a review of related literatures on the subject area.

A total of One hundred and fifty-nine (159) questionnaires were administered to the respondents and a

total number of 106 were retrieved. Since this is considered adequate, the whole questionnaire retrieved was analyzed and discussed. Data analysis was carried out on collected data using frequencies, percentile, and Mean Item Score (MIS) was used in determining the ranking on a 5 Likert scale in order to validate the research, while Statistical Package for Social Sciences (SPSS) was used in coding and processing the data.

IV. FINDINGS AND DISCUSSIONS

Characteristics of Questionnaire Respondents

The most represented professionals are the Engineers and the Quantity Surveyors with about 24% and 22% responses respectively. This shows that the most dominating construction professionals employed by construction firms are engineers and quantity surveyors with approximately 50% of the total respondents. This is followed by Builders and Architects with about 18% and 16% responses rate respectively.

This is common to the general knowledge that construction works and the construction industry is an engineering profession since it is being dominated by the engineers. Thus, any professional associated with the construction industry or who works in the field of construction is mostly referred to as an engineer. However, most of the respondents sampled possess HND (39%) and B.Sc / B.Tech (35%) while about 14% and 12% have PGD and M.Sc / M.Tech degree respectively. This agrees with the current level of education in Nigeria since most graduates, after completing their tertiary education jumps into job hunting before thinking of furthering their education.

This therefore implies that the result obtained from the respondents can be relied upon as answers were given based on experience and an indication of the level of respondents understanding of Construction disputes that arise in the Nigerian Construction Industry. Furthermore, the most registered professional body represented by the respondents is the Nigerian Society of Engineers – NSE (28.3%). This also confirms that the Nigerian construction industry is viewed as an engineering profession. Following the engineers are the Nigerian Institute of Quantity Surveyors – NIQS (20.8%), the Nigerian Institute of Architects – NIA (14.2%) and the Nigerian Institute of Builders – NIOB (13.2%) respectively. This shows a total number of 81 (76.4%) respondents registered with their professional bodies and a missing 25 (23.6%) respondents who are not registered with their professional bodies.

Table 1: Summary of Characteristics of Questionnaire Respondents

Category	Classification	Frequency	Percentage
Field of specification	Clients	8	7.55
	Contractors	14	13.21
	Quantity surveyors	23	21.70
	Builders	19	17.92
	Architects	17	16.04
	Engineers	25	23.58
	Total	106	100.0
Academic Qualification	HND	41	38.7
	B.Sc/M.Tech	37	34.9
	PD	15	14.2
	M.Sc/M.Tech	13	12.3
	Total	106	100.0
Practicing Experience	0 - 5years	30	28.3
	6-10years	33	31.1
	11-15years	22	20.8
	16-20years	13	12.3
	21-25years	6	5.7
	25-30years	1	0.9
	Above 30years	1	0.9
Total	106	100.0	
Membership of Professional Bodies	NIQS	22	20.8
	NIOB	14	13.2
	NIA	15	14.2
	NSE	30	28.3
	Total Members	81	76.4
	None Members	25	23.6
	Total	106	100.0

The finding of this research proves that disputes and dispute resolution methods is not a new philosophy in the

construction industry. This is in line with the findings of Sujal and Patel (2017) which proved that there is a high level of awareness of risk involved in construction projects under dispute among construction firms. When assessing risk factors associated with construction projects under dispute, this result is also in agreement with the concept of Heinonem (2016) and Renuka et al. (2014) which states that "Risk assessment and management of construction projects under disputes are fast becoming routine in civil engineering as well as most of the organizations, companies, construction firms, financial institutions for capturing, assessing and planning for risks on their projects".

Causes of disputes in the Construction Industry

The identified causes of dispute in the construction industry ranged from a mean score rating of 2.87 to 4.16 among construction firms. Results gathered from respondents' shows that undefined channel of communication are the highest cause of dispute in the construction industry with a mean score of 4.16. This means that a well-defined and specified communication channel among the project participants can help reduce dispute in the construction industry. Results also proves that differences in interests, concerns, training and perception of individuals involved in the construction project, diversity in expertise of project participant, discrepancies in Bills of Quantities, misinterpretation of client's requirement are all ranked above 3.40 mean score. Furthermore, it was observed that unforeseen site condition, Project manager's low level of authority and Change of scope due to design errors were ranked the lowest frequency with their mean score at 2.87, 2.98 and 3.00 respectively.

Table 2: Respondents ranking on the causes of Construction disputes

S/N	Causes of Construction disputes	Mean	Ranking
1	Undefined channel of communication	4.16	1
2	Difference in interests, concerns, training and perceptions of individuals involved in the construction project.	4.09	2
3	Diversity in expertise of project participants	3.77	3
4	Discrepancies in Bills of Quantities	3.61	4
5	Misinterpretation of client's requirements	3.45	5
6	Ambiguity in specifications	3.15	6
7	The complexity of contract documents	3.09	7
8	Change of scope due to design errors	3.00	8
9	Project manager's low level of authority	2.98	9
10	Unforeseen site conditions	2.87	10

Results gathered from this research shows that causes of dispute in construction projects are highly influenced by differences in interests, concerns, training and perception of individuals involved in the construction project. This is in line

with the findings of Soni, et al. (2017) which states that "with these differences in mentality, background and knowledge results in clashing of ideas, thoughts and perception in any decision, hence, conflicts in such situation become

inescapable or inevitable". This is a negative factor which revealed that though there is an increase in the practice of risk assessment by construction firms', diversity in expertise of project participant, project manager's low level of authority, undefined channel of communication, ambiguity in specification seen as causes of dispute in construction industry. This brings about risk to the construction project. On the other hand, the Institution of Civil Engineers (ICE) states that dispute occurs when one of the parties raises a claim and the other rejects it, and the rejection is opposed with no consent by the party that submitted the claim (Zaneldin, 2006). A considerable amount of knowledge has been accumulated on dispute causation but, unfortunately, disputes continue to prevail and disturb construction processes with substantial costs. This research further observed that unforeseen site condition, discrepancies in Bills of Quantities, misinterpretation of client's requirement, the complexity of contract documents, and change of scope due to design errors also causes dispute in construction industry.

Ways of Controlling / Mitigating Construction Disputes

Analysis in Table 6 shows that Ways through which dispute can be controlled or mitigated in construction ranges

from a mean score rating of 3.36 to 4.34 among construction firms. Excellent planning with the project team members before works begin to ensure that you will finish on time proves to be the greatest way of controlling dispute in the construction industry with a mean score of 4.34. However, results also show that careful understanding and negotiation of all the contract terms and conditions with the clients, documentation of daily reports for any defects that may arise during project execution, To follow the contract and insist that the other party do so to avoid construction litigation on the two parties' legal rights are also great ways of controlling or mitigating dispute with a mean score of 4.32, 4.28, and 4.23 respectively. Data retrieved also proves that performance of any contractual obligation as scheduled, adopting of technology systems that increase effective communication and information transparency between the project participants, following risk management strategy and consult specialists in each technical field are all positive ways of controlling or mitigating dispute in the construction industry. This objective therefore proves that controlling or mitigation of dispute is achievable in the construction industry if the under-listed suggestions are put into considerations by construction firms / organizations in Nigeria.

Table 3: Respondent Ranking on Ways of Controlling / Mitigating Construction Disputes

S/N	Ways of Controlling / Mitigating Construction Disputes	Mean	Ranking
1	Excellent planning with the project team members before works begin to ensure that you will finish on time	4.34	1
2	Careful understanding and negotiation of the contract terms and conditions with the client.	4.32	2
3	Documentation of daily report of defects that may arise during project execution	4.28	3
4	To follow the contract and insist that the other party do so to avoid construction litigation on the two parties' legal rights	4.23	4
5	Performance of any contractual obligations as scheduled	4.16	5
6	Adopting of technology systems that increase effective communication and information transparency between the project participants	4.06	6
7	Following risk management strategy and consult specialist in each technical field	3.77	7
8	Keep your communication mail formal and reasonable	3.61	8
9	Make sure schedules are realistic and flexible enough to include and defects or anticipated disruption	3.45	9
10	Ensure critical problems are discussed in meetings, not mails	3.36	10

Results gathered from this research shows that excellent planning with the project team members before works begin to ensure that you will finish on time proves to be the greatest way of controlling or mitigating dispute in the construction industry. This is to justify the works of Soni, et al. (2017) which states that "the construction industry itself is a huge organization in which several construction participant with different background, different knowledge and different mentality about the construction industry works together". It is important that the project team members stick to the contract rather than bringing in a contradicting knowledge. These innovations can be seen as positive ways of improving

the operations of Construction Firms towards achieving peace during the progress of the work. These can be achieved by following the contract and insist that the other party do so to avoid construction litigation on the two parties' legal rights. It was also observed through the responses obtained from the respondent's data Documentation of daily reports for any defects that may arise during project execution, Adopt technology systems that increase effective communication and information transparency between the project participants, Follow risk management strategy and consult specialists in each technical field, are all positive ways of controlling or mitigating dispute in the construction industry. Kin interest

should therefore be given to causes of dispute in the construction industry as these causes prove to be the driving force behind the successful completion of projects. More focus should be placed on making sure schedules are realistic and flexible enough to include any defects or anticipated disruptions.

V. CONCLUSION

In conclusion, this research examines the major causes of disputes and dispute resolution methods used in the construction industry with a view towards suggesting possible ways through which dispute can be controlled, mitigated, or eliminated in the Construction Industry in Imo State, Nigeria. The study observed that the causes of disputes are on the increase due to undefined channel of communication among the project participants. Project team members don't work in line with each other due to lack of proper dissemination of information. These effects range from delay in project delivery, possible increase in the cost of materials due to of delay in project delivery, damage or theft of equipment and tools caused by negligence, negligence of the project, cost overruns for the reconstruction of works that does not conform to the standard in the contract. These factors have great negative effect on construction projects delivery in the construction industry.

Recommendations are made based on the findings of this research that construction participants and stakeholders should adhere to strict documentation of daily report of defects that arise during project execution, ensure careful understanding and negotiation of the contract terms and conditions with the client before commencement of project, and uphold excellent planning with the project team members before works begin on site. However, further studies are encouraged to bridge the gaps of this present research.

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