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Effects of Disputes on the Delivery of Construction Projects in Abuja

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Studies have globally revealed that disputes are an endemic feature in the construction industry. When not properly resolved, they may escalate and ultimately require litigation proceedings, which can be costly for the parties concerned because disputes cause delay in completion time of a project and increase in cost which in turns causes dissatisfaction among parties involved. This study evaluated the effects of disputes on construction project delivery with a view to suggesting strategies for eliminating disputes in construction projects. Data were collected from selected construction firms based in Abuja through the use of structured questionnaires in which 74 copies of questionnaire were distributed and 49 retrieved. Relative Importance Index (RII) and Mean Item Score (MIS) were employed for the analysis of data. Findings from the research revealed ambiguity in the formulation of contract as the most severe cause of disputes (MIS = 4.79); extended or more complex award process was the major effect of dispute in construction projects (MIS = 4.79), and understanding contractual document before proceeding into agreement was the most effective strategy for controlling the effects of disputes on construction projects for improved construction project delivery (RII = 0.98). It was concluded that disputes have a significant effect on the delivery of construction projects in Abuja. It was thus recommended that parties to a contract should ensure that mechanism is put in place to effectively implement the identified strategies for controlling the effect of disputes so as to prevent ambiguity in the formulation of contract, contract administration, error in pricing or costing, and improper project scheduling by the contractor for the avoidance of disputes in construction projects.

Keywords: Construction, Delivery, Disputes, Effect, Projects.

Introduction

The construction industry is one of the major sectors that enhance the growth of a nation in terms of employment and wealth generation. Projects are imagined and pictured with the prevision of achieving the primary objective of timely completion. Disputes in construction projects are considered an inevitable problem in a construction project. As discussed by Ghada *et al.* (2015) that being a very complex and competitive industry in which participants with different expertise, talents, and levels of knowledge work together to achieve set objectives, conflicts become inevitable in

the construction industry. Ghada *et al.* (2015) further emphasised that if conflicts are not well managed and resolved promptly, they quickly turn into disputes, which prevent the successful completion of the construction project. Disputes are therefore an endemic feature in the construction industry. When not properly resolved, they may escalate and ultimately require litigation proceedings, which can be costly for the parties concerned (Thobakgale *et al.*, 2014).

Disputes can cause delay in completion time of a project, increase in cost which in turns

causes dissatisfaction among parties involved. Disputes often result in drawbacks and disharmony in completing the construction projects with considerable cost (Ayudhya, 2011). Prasad *et al.* (2019) reported that finance related causes are the most critical causes of drawbacks in construction projects. Disputes between contractors and client often lead to cost and time overruns (Karthikeyan *et al.*, 2017). It was emphasised that conflict brings breakdown of relationships between project participants and results to project delays, claims and disputes which are the main shortcomings in completion of the project within objectives and goal. Effects of delays are the consequences that will occur when the causes of disputes are not identified and resolved in time. Project can be regarded as successful when it is timely completed to satisfy the customers with no problems in terms of time, quality and budget allocation. Thobakgale *et al.* (2014) reported that disputes in the construction industry are often lengthy, complex and expensive to resolve. Their effects are that they can cause long term damage to the commercial relationship between the parties. Clients and main contractors should take careful steps in order to minimize disputes that are likely to occur. The key objective to prevent disputes is to identify dispute problems that frequently occur during construction phase from each party involved. In view of this, Ayudhya (2011) categorized disputes into four main dispute problems which are, contract and specification, financial, environmental and other common disputes.

In Nigeria, it was observed that the performance of the construction industry in terms of time was poor (Owolabi *et al.*, 2014). Chan and Kumaraswamy (2014) emphasised that timely delivery of projects within budget and to the level of quality standard specified by the client is an index of successful project delivery. It was also noted that failure to achieve targeted time, budgeted cost and specified quality result in various unexpected negative effects on the projects. Therefore, from the works of Owolabi *et al.* (2014) and Chan and Kumaraswamy (2014), the main problem is

that disputes in construction project results in additional cost, time and abandonment of projects which give rise to dissatisfaction to all the parties involved in the construction project. It is as a result of this background that this study is evaluating the effects of disputes on construction project delivery. To achieve this aim, the study identified the factors responsible for disputes in construction projects; examined the effect of disputes in construction projects; determined the effects of disputes on cost and time performance of construction projects; and examined the major strategies for minimising the effect of disputes on construction projects.

Literature Review

Concept of Dispute in the Construction Industry

Cheung and Pang (2010) defined construction dispute as the incompatibility of two (or more) people's (or groups) interest, needs or goals. Kehakale and Funtase (2015) defined dispute as the assertion of a claim by one party and repudiation thereof by another. Kehakale and Funtase (2015) further asserted that a claim can neither be called a claim without repudiation, nor can it be referred to as a pair of claim and counter claim. Chen *et al.* (2014) reported that "interaction-ism" posits that all social structures have inherent conflicts within them that can yield positive or negative effects on the organisation's performance. In the construction industry, disputes become inevitable due to the complex, multidisciplinary relationships which exist among different stakeholders, and also due to the lengthy processes involved from design to construction phases of projects (Nwakor *et al.*, 2017). The construction industry world over is a complex and competitive environment in which participants have different views, talents and levels of knowledge of the construction process work together (Owenaze, 2016). Therefore, in this complex environment, participants from various professions each has its own goals and each expects to make the most of its own benefits in the construction industry, since differences in perceptions among the

participants of the projects, conflicts are inevitable (Owenaze, 2016). If conflicts are not well managed, they quickly run into disputes (Khekale *et al.*, 2013). Claim is another source of dispute in the construction industry. According to Khekale and Futane (2015), during the execution of a project, several issues arise that cannot be resolved among project participants. Such issues typically involve the contractor requesting for either time extension or reimbursement of an additional cost, or sometimes both. Such requests by the contractor are called 'claim'. If the client accedes to the claim of the contractor and grants him an extension of time or reimbursement of additional cost, or both, the issue is sorted out. However, if the client does not agree to the claim put out by the contractor and there are differences in the interpretations, the issue takes the form of dispute.

Types of Disputes

Dispute may be considered in three levels namely: intrapersonal dispute, interpersonal dispute and intra-group dispute (Opata *et al.*, 2015). Intrapersonal dispute is the dispute that takes place within the individual, interpersonal dispute is the dispute experienced between individuals in the same group or unit for example coworkers, roommates, unit members and etc. Such disputes exist whenever people interact or come together to accomplish a common goal or objective. Intra-group dispute is the conflict between groups in the same organisation, team or command. The interpersonal and intragroup disputes can further be categorized into three types: the relationship, task and process dispute (Carmen *et al.*, 2013).

Relationship or emotional dispute is a perception of interpersonal incompatibility and typically includes tension, annoyance, and animosity among group members (Opata *et al.*, 2015). Opata *et al.* (2015) stressed further that conflict negatively affects group decision quality in three ways. First, it limits information processing ability of the group because the group members spend most of the time and energy focusing on each other rather than on the group

problems. Second, it limits group members' cognitive functioning by increasing their stress and anxiety levels and third, it encourages antagonistic, or sinister attributions for other group members' behaviour, which can create a self-fulfilling prophecy of mutual hostility and conflict escalation.

Task or cognitive conflict is a perception of disagreements among group members about the content of their decisions and involves differences in viewpoints, ideas, and opinions. Simons and Peterson (2000). They further noted that task conflicts run a substantial risk of triggering detrimental relationship conflict. And that task conflict leads to relationship conflict through a process of misattribution. Carmen *et al.* (2013) defined process conflict as an awareness of controversies about aspects of how task accomplishment will proceed. It pertains to issues of duty and resource allocation such as: who should do what or how much one should get. This may happen when for instance group members disagree about whose responsibility is to carry out and complete a specific duty.

Factors Responsible for Disputes in Construction Projects

There are specific factors which have been identified to be responsible for disputes in the construction industry. Thobakgale *et al.* (2014) categorised disputes into the following groups as follows: construction related causes, financial/economical, management and contract related causes of disputes. Construction related causes of dispute according to Farooqui *et al.* (2014), depicts that unrealistic information expectations, unclear risk allocation, and unfair risk allocation are those causes occurring most frequently and contributing in arising of disputes in the projects. According to Thobakgale *et al.* (2014), financial/economical causes of disputes elaborate that project participant's default is the most frequent cause of dispute and rising value of national currencies is the most severe cause of disputes in construction projects, also their severity and frequency is respectively high. Whereas inadequate

financial strength of the project participants is also very severe and frequent cause of dispute in the construction projects described by most construction professionals (Thobakgale *et al.*, 2014).

Management related causes of disputes are also common (Thobakgale *et al.*, 2014). Applying construction management tools and techniques and observing a sound project management system, majority of the causes of disputes can be avoided thereby reducing the chances that any dispute arises in the first place and if such thing come about it does not escalate to such a level that it is converted into a major conflict or breach of contract (Thobakgale *et al.*, 2014). According to Bielefeld & Rusch (2006), a building contractor is responsible for supervising the quality of the building work. Disputes may occur if the contractor does not have adequate contractor's management, supervision and coordination and fails to plan and execute the changes of works. Reluctance to seek clarification can lead to serious disagreements between the construction team as the final product will not be achieved as specified (Thobakgale *et al.*, 2014).

Contract related causes of disputes is another common causes of disputes (Thobakgale *et al.*, 2014). Contracts often represent a tool that companies use to safeguard their resources. If there are flaws in the formulation of contract documents, ambiguous language of the contract can be a cause of dispute. These causes and many others relevant to the domain of contract have a high potential to be the source of diverse types of disputes (Thobakgale *et al.*, 2014). Nwakor *et al.* (2017) identified issues bothering on variation, the extension of time, payments, quality of technical supervision, availability of adequate information, administration and management, unrealistic clients' expectations and determination. Kathleen (2003) identified other factors such as insufficient resources of time, materials, labour and/or equipment. Cheung & Seun (2002) noted that delay in the execution of projects by either the contractor or the client

is a major cause of dispute in the industry. He also noted that delayed interim payments from the client, improper project scheduling by the contractor, delayed response from the Architect during application of extension of time by the contractor, poor or perceived poor quality of work, error in pricing or costing, discrepancies in contract documents and documentation; disagreements over the nature, extent and scope of work, poor valuation of variations by the quantity surveyor and late instruction from the Architect or Engineer causes disputes. Oladipo and Onabanjo (2009) noted that incessant contractor's claims and client's reluctance to settle monies due to contractors generate more crises. Turner (2005) identified several conditions that can cause disputes namely: whether or not work is done to the specified standards, whether work is or not a variation, pricing variation, whether instructions are adequate or late, whether a valuation or financial certificate is adequate or late, whether completion is likely to be delayed, whether regular progress is being disrupted and ascertainment of loss and/or expense.

Effects of Disputes on the Performance of Construction Projects

Disputes generate several negative consequences both to the industry and the national economy at large (Nwakor *et al.*, 2017). Kathleen (2003) identified the breakdown in communication and professional relationship; reduction in productivity, tension and dampness of team spirit as some of the negative consequences of disputes in the construction industry. According to Mashwama *et al.* (2014), the effects of construction dispute can cripple a company and bring it to its knees, and the effects are additional expense in managerial and administration, Possibility of litigation cases, time delays and cost overruns, extended or more complex award process, diminution of respect between parties and deterioration of relationship and break down in cooperation. While Love *et al.* (2007) claims that loss of company reputation, loss of profitability and perhaps business viability, loss of professional reputation, rework and relocation cost for men,

equipment and materials, time and cost overruns are the effects of construction dispute. Conflict brings breakdown of relationships between project participants and results to project delays, claims and disputes which are the main shortcomings in completion of the project within objectives and goal (Karthikeyan *et al.*, 2017). Construction conflicts affect the interests of many stakeholders in connection with big investments, they reduce profits and are therefore very expensive and unprofitable (Awakul & Ogunlana, 2002). The construction industry is dynamic in nature due to the uncertainties in technology, budget and development process. If disputes are not resolved promptly, they drag on and escalate and can cause project delays, lead to claims, require litigation proceedings for resolution and ultimately destroy business relationships (Karthikeyan *et al.*, 2017).

Strategies for Controlling the Effect of Disputes on Construction Projects

Nwakor *et al.* (2017) noted that the management of construction disputes is a decisive test of the emotional and intellectual maturity of construction stakeholders. Therefore, Nwakor *et al.* (2017) concentrated on those factors which will eliminate or reduce construction disputes to the barest minimum in order to improve contract administration. Some precautions need to be adopted to reduce the incidence and prevalence of construction disputes. These measures are supported by Turner (2005), Ryan (2015), Chen *et al.* (2014) and Oke and Lawal (2013). They include: (1) specifying the method(s) of resolving disputes favourable the parties in the contract from the outset, (2) documents intended as contract documents must be stated and signed by the parties to the contract; (3) contractors/subcontractors should keep good adequate and continuous site diaries, (4) the architect should keep a log of things that are going on as well as items that are present on site; (5) the quantity surveyor should annotate dimensions, notes and figures (with dates) gleaned for the purposes of interim valuations or final measurement; (6) if an Architect's Instruction is not intended as a

variation, it should be clarified; (7) it is better to seek acknowledgment; (8) it is better to talk, not argue as argument flares temper which could lead to later regrets; (9) always refer back to notes and contract to check the authenticity of your claims; (10) resolve each issue rather than dissolving the relationship; (11) if a change of product or of execution is suggested by the contractor, it should be made clear whether this is a variation or not; and (12) when applying for the extension of time, the applicant should think in terms of the provision of the relevant conditions of contract. Ramonu *et al.* (2018) identified the following strategies to prevent disputes in construction projects: (i) understanding contractual document before proceeding into agreement; (ii) designing contract conditions that are fair to all parties (allocating projects risks fairly to all parties); (iii) proper planning and organisation of payment and schedule; (iv) maintaining a good relationship between the clients, professionals and workers; (v) payment as at when due; (vi) engaging the organisation trained artisans/labourers; and (vii) engaging the organisation professionals.

Research Methodology

This study adopted the quantitative approach with the use of well-structured questionnaire survey to collect data from professionals directly involved in construction projects within Abuja. The population for this study constituted top professionals in building construction firms within Abuja. This research used a population size of 289 construction firms registered with Federal Inland Revenue Service (FIRS) as at 2018. The number of firms that were considered for the study from the population size of the 289 construction firms registered with FIRS were chosen with the use of purposive sampling technique. The criteria for the selection is the possession of active construction sites by the firms. In view of this, 74 construction firms with active construction sites were considered for the study. Therefore, 74 copies of questionnaire were distributed across the targeted construction firms. A total of forty-nine (49)

copies of questionnaire were retrieved at the end of the survey. This gives a response rate of 66.20%.

Data collection for the study was carried out using well-structured questionnaire divided into five sections (A, B, C, D and E). Section A considered the respondents' profile and some information related to the firms. Sections B - E addressed the research objectives respectively. The questionnaire was designed on a five-point Likert scale format. The descriptive method of analysis was adopted to analyse the data collected using Mean Item Score (MIS) and Relative Importance Index (RII). The decision rule adopted for the RII and MIS are summarised in Table 1.

Results and Discussion

Respondents' Profile

This section shows the demographic characteristics of respondents that contributed to the research. Highlight of the respondents' demographics are given in Tables 2 and 3. Table 2 presents information on the profession of the respondents while

the years of experience of respondents is presented in Table 3.

From Table 2, it was shown that 33% of the respondents are Architects, 39% are Quantity Surveyors, 10% are Builder and 18% are Civil Engineers. Majority of the respondents are Quantity Surveyors with 39%. Therefore, the respondents are experts who can provide reliable data.

Table 3 showed that 18% of the respondents have less than 5 years of experience, 37% of the respondents are between the years of experience of 5 and 10 years, 31% of the respondents have their years of experience ranging from 10 - 15 years and 14% of the respondents have 15 years above experience. In summary, it is noted that the years of experience of most (68%) of the respondents range from 5 - 15 years. This shows that majority of the respondents have reasonable experience in order to be able to provide reliable information required to manage disputes on site.

Table 1: Decision Rule for Data Analysis

SCALE	Cut-Off Point		Interpretation		
	RII	MIS	Level of Importance	Level of Significance	Level of Effectiveness
5	0.81 - 1.00	4.51 - 5.00	Very Important	Very Significant	Very Effective
4	0.61 - 0.80	3.51 - 4.50	Important	Significant	Effective
3	0.41 - 0.60	2.51 - 3.50	Fairly Important	Fairly Significant	Fairly Effective
2	0.21 - 0.40	1.51 - 2.50	Less Important	Less Significant	Less Effective
1	0.00 - 0.20	1.00 - 1.50	Least Important	Least Significant	Least Effective

Source: Adapted and Modified from Shittu *et al.* (2015)

Table 2: Profession of Respondents

Category	No of Respondent	Percentage%
Architects	16	33
Quantity Surveyor	19	39
Builder	5	10
Civil Engineer	9	18
Total	49	100

Factors Responsible For Disputes in Construction Projects

Table 4 revealed sixteen (16) factors responsible for dispute in construction projects identified from review of literature. It was shown that the most important factors responsible for disputes in Construction Projects in Abuja are: ambiguity in the formulation of contract; poor contract administration; error in pricing or costing; and improper project scheduling by the contractor with MIS of 4.79, 4.71, 4.61 and 4.59 respectively. Eleven (11) other factors were also shown to be important. These range from discrepancies in contract documents and documentation to delayed response from the

Architect during application of extension of time, in descending order with MIS ranging from 3.69 – 4.40. The least ranked item was unrealistic information expectations with MIS of 3.47 and it was shown to be fairly important. On the average, the identified factors responsible for dispute in construction projects in Abuja are important (average MIS = 4.20). The finding here is in line with the findings of Thobakgale *et al.* (2014), Farooqui *et al.* (2014) and Nwakor *et al.* (2017) where it was also affirmed that all these identified factors responsible for dispute in construction projects are important.

Table 3: Respondent Years of Experience

Years of Experience	No of Respondent	Percentage%
Less than 5 years	9	18
5 – 10 years	18	37
10 – 15 years	15	31
15 years above	7	14
Total	49	100

Table 4: Factors Responsible for Dispute in Construction Projects in Abuja

S/No	Factors Responsible For Dispute in Construction Project	MIS	Rank	Decision
1	Ambiguity in the formulation of contract	4.79	1 st	Very Important
2	Poor contract administration	4.71	2 nd	Very Important
3	Error in pricing or costing.	4.61	3 rd	Very Important
4	Improper project scheduling by the contractor	4.59	4 th	Very Important
5	Discrepancies in contract documents and documentation	4.40	5 th	Important
6	Insufficient resources of time, materials, labour and/or equipment.	4.33	6 th	Important
7	Late instruction from the Architect or Engineer	4.20	7 th	Important
8	Inadequate financial strength of the project participants	4.18	8 th	Important
9	Delayed interim payments from the client.	4.16	9 th	Important
10	Disagreements over the nature, extent and scope of work	4.08	10 th	Important
11	Poor valuation of variations by the quantity surveyor	4.00	11 th	Important
12	Delay in the execution of projects by either the contractor or the client	4.00	11 th	Important
13	Unclear risk allocation	3.96	13 th	Important
14	Poor or perceived poor quality of work	3.96	13 th	Important
15	Delayed response from the Architect during application of extension of time	3.69	15 th	Important
16	Unrealistic information expectations	3.47	16 th	Fairly Important
Average MIS		4.20		Important

Effects of Disputes in Construction Projects

It was shown in Table 5 that the most significant effects of disputes in construction projects are: extended or more complex award process; additional expense in managerial and administration; and time delays and cost overruns with MIS of 4.79, 4.69 and 4.69 respectively. The other effects identified are also shown to be significant. These are deterioration of relationship and break down in cooperation; tension and dampness of team spirit; reduction in productivity; breakdown in communication and professional relationship; loss of company reputation; loss of professional reputation; and loss of profitability and business viability with MIS of 4.39, 4.33, 4.20, 4.10, 3.98, 3.92 and 3.71 respectively. On the average, all the effects of disputes in construction projects in Abuja identified are significant (average MIS = 4.28).

Effects of Disputes on Cost Performance of Construction Projects

Table 6 shows that, of the five (5) effects identified, the most significant effect of disputes on cost performance of construction projects is increase in project costs with MIS of 4.79. The other effects which are wastage and under-utilization of man-power and resources; tying down of client capital due to non-completion of the project; erosion of both profit and confidence; and delay in the progress of work with MIS of 4.41, 4.39, 4.29 and 3.89 respectively are also significant. On the average, all the identified effects of disputes on cost performance of construction projects in Abuja are significant (average MIS = 4.35).

Table 5: Effect of Disputes in Construction Projects in Abuja

S/No	Effect of Dispute in Construction Projects	MIS	Rank	Decision
1	Extended or more complex award process	4.79	1 st	Very Significant
2	Additional expense in managerial and administration	4.69	2 nd	Very Significant
3	Time delays and cost overruns	4.69	2 nd	Very Significant
4	Deterioration of relationship and break down in cooperation.	4.39	4 th	Significant
5	Tension and dampness of team spirit	4.33	5 th	Significant
6	Reduction in productivity	4.20	6 th	Significant
7	Breakdown in communication and professional relationship	4.10	7 th	Significant
8	Loss of company reputation	3.98	8 th	Significant
9	Loss of professional reputation	3.92	9 th	Significant
10	Loss of profitability and business viability	3.71	10 th	Significant
<i>Average MIS</i>		4.28		<i>Significant</i>

Table 6: Effects of Dispute on Cost Performance of Construction Projects

S/No	Effects of Dispute on Cost Performance of Construction Projects	MIS	Rank	Decision
1	Increase in project costs	4.79	1 st	Very Significant
2	Wastage and under-utilization of man-power and resources	4.41	2 nd	Significant
3	Tying down of client capital due to non-completion of the project	4.39	2 nd	Significant
4	Erosion of both profit and confidence	4.29	4 th	Significant
5	Delay in the progress of work	3.89	5 th	Significant
<i>Average MIS</i>		4.35		<i>Significant</i>

Effects of Disputes on Time Performance of Construction Projects

It was revealed in Table 7 that, of the five (5) effects of dispute on time performance of construction projects identified from literature review, three (3) are very significant. These are: delay in the progress of work (MIS = 4.89), wastage and under-utilization of man-power and resources (MIS = 4.59) and tying down of client capital due to non-completion of the project (MIS = 4.51). Erosion of both profit and confidence with MIS of 4.06 and increase in project costs with MIS of 3.59 are also shown to be significant. On the average, all the identified effects of dispute on time performance of construction projects in Abuja are significant with mean MIS of 4.33. The findings of this study on the effects of disputes in construction projects, the effects of disputes on the cost performance of construction projects; and the effects of disputes on the time performance of construction projects are in line with the studies of Mashwama *et al.* (2014), Nwakor *et al.* (2017) and Karthikeyan *et al.* (2017). This is because these studies revealed that conflict brings breakdown of relationships between project participants and results to project delays, claims and disputes which are the main shortcomings in completion of the project within objectives and goal.

Strategies for Controlling the Effect of Disputes on Construction Projects

Table 8 revealed nine (9) strategies for controlling the effect of disputes on construction projects identified from literature review. It was shown that all the identified strategies for controlling the effect of disputes on construction projects are effective. These range from understanding contractual document before proceeding into agreement (RII = 0.98) to engaging the organisation professionals (RII = 0.84) with an average RII of 0.89. The

research findings here agree with the findings from the studies of Turner (2005), Ryan (2015), Chen *et al.* (2014), Oke & Lawal (2013) and Nwakor *et al.* (2017) where it was found that these strategies can eliminate or reduce construction disputes to the barest minimum in order to improve contract administration.

Conclusion and Recommendations

It was found that the most important factors responsible for disputes in construction projects in Abuja are: (i) ambiguity in the formulation of contract; (ii) poor contract administration; (iii) error in pricing or costing; and (iv) improper project scheduling by the contractor. The most significant effects of disputes in construction projects are: (i) extended or more complex award process; (ii) additional expense in managerial and administration; (iii) time delays and (iv) cost overruns. The most significant effect of disputes on cost performance of construction projects is increase in project costs. The most significant effects of dispute on time performance of construction projects are: (i) delay in the progress of work; (ii) wastage and under-utilization of man-power and resources; and (iii) tying down of client capital due to non-completion of the project. Finally, it was found that all the identified strategies for controlling the effect of disputes on construction projects are effective. It is therefore concluded that disputes have a significant effect on the delivery of construction projects in Abuja.

Table 7: Effects of Dispute on Time Performance of Construction Projects

S/No	Effect of Dispute in Time Performance of Construction Projects	MIS	Rank	Decision
1	Delay in the progress of work	4.89	1 st	Very Significant
2	Wastage and under-utilization of man-power and resources	4.59	2 nd	Very Significant
3	Tying down of client capital due to non-completion of the project	4.51	2 nd	Very Significant
4	Erosion of both profit and confidence	4.06	4 th	Significant
5	Increase in project costs	3.59	5 th	Significant
	Average MIS	4.33		Significant

Table 8: Strategies for Controlling the Effect of Disputes on Construction Projects

S/No	Strategies for Controlling the Effect of Disputes on Construction Projects	RII	Rank	Decision
1	Understanding contractual document before proceeding into agreement	0.98	1 st	Very Effective
2	Designing contract conditions that are fair to all parties	0.94	2 nd	Very Effective
3	Contractors/subcontractors should keep good, adequate and continuous site diaries	0.94	2 nd	Very Effective
4	Proper planning and organization of payment and schedule	0.94	2 nd	Very Effective
5	Engaging the organization trained artisans/labours	0.86	5 th	Very Effective
6	The architect should keep a log of things that are going on as well as items that are present on site	0.84	6 th	Very Effective
7	Maintaining a good relationship between the clients, professionals and workers	0.84	6 th	Very Effective
8	Payment as at when due	0.84	6 th	Very Effective
9	Engaging the organization professionals in dispute resolution	0.84	6 th	Very Effective
<i>Average MIS</i>		<i>0.89</i>		<i>Very Effective</i>

In view of the findings and the conclusion reached, the following recommendations are made:

- i. Parties to a contract should ensure that mechanism is put in place in order to implement the measures for preventing ambiguity in the formulation of contract; poor contract administration; error in pricing or costing; and improper project scheduling by the contractor, so as to avoid disputes in construction projects.
- ii. Parties to a contract should ensure that the identified strategies for controlling the effect of disputes on construction projects should be implemented to avoid extended or more complex award process; additional expense in managerial and administration; and time delays and cost overruns.

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