



# CONSTRUCTION DISPUTES IN CONSTRUCTION WORK SITES AND THEIR PROBABLE SOLUTIONS

**Asif Equbal**

Student M. Tech (Construction Technology & Management),  
Department of Civil Engineering, Integral University Lucknow, Uttar Pradesh

**Rajeev Banerjee**

Associate Professor, Department of Civil Engineering,  
Integral University, Lucknow, Uttar Pradesh

**Zishan Raza Khan**

Associate Professor & Head of department of Civil Engineering,  
Integral University, Lucknow, Uttar Pradesh

**Raj Bandhu Dixit**

Assistant Professor, Department of Civil Engineering,  
Integral University, Lucknow, Uttar Pradesh

## ABSTRACT

*All over the world the developing and developed nations are spending billions of dollars each year to improve their existing infrastructure in order to bring it to next level. Construction projects are generally considered as the back bones of each nation be it any format. So when we talk about construction then it's not alone generally it involves different sectors such as electrical, mechanical and off course the civil sector in order to work together as a single unit under one firm or organization. Here work is divided into different small segments due to which different parties gets involved. The construction projects requires highly specified designs , specifications and plans with full detail not leaving a single scope of error. So being lengthy and complicated process it undergoes through various phase which involves a hindrance popularly known as disputes. It is nothing but a stage where contractor and client have different view or prospective on any matter which needs to be sorted as soon as possible so as to maintain smooth flow of work. So whenever there arise dispute it is followed by claims raised by one or the other party which needs to be sorted out.*

**Key words:** Construction Work, Financial Problem.

**Cite this Article:** Asif Equbal, Rajeev Banerjee, Zishan Raza Khan and Raj Bandhu Dixit, Construction Disputes In Construction Work Sites and Their Probable Solutions. *International Journal of Civil Engineering and Technology*, 8(3), 2017, pp. 74–81. <http://www.iaeme.com/IJCIET/issues.asp?JType=IJCIET&VType=8&IType=3>

---

## 1. INTRODUCTION

India has been a developing nation over a long period of time due to lack of world class infrastructure. So in order to achieve the tag of developed nation ours infrastructure has to be of the same standard of developed nations. So to achieve that our construction industry should reach a stage of minimum loss due to disputes followed by claims. Construction claims arises when one party be it contractor or client fail to fulfil the parameters set in contract. Claims are generally made to compensate the loss caused by failure of one party to another party. Construction work generally involves client, contractor, sub contractor, developer, architects, structure designer etc. together work as a team on the project.

## 2. LITERATURE REVIEW

### 2.1. Dispute-conflict concept

Survey of the literature on conflicts and disputes in construction reveals confused usage of the terms. The terms “conflict”, “dispute”, and “claim” are used separately or in pairs and frequently without clear indication of the precise meaning of each use. There is often lack of clarity as to whether the researcher is referring to “claims”, or to “disputes”, or conflict that is not either appeared as claim or dispute.

Is there a difference between conflict and dispute? Some authors interchange the two terms, others point to conceptual differences, even if they are blurred. However, ‘conflict’ and ‘dispute’ are two distinct notions. Conflict, it is proposed, exists wherever there is incapability of interest, and therefore is pandemic. Conflict can be managed, possibly to the extent of preventing a dispute resulting from the conflict. Dispute is associated with distinct justifiable issues. Generally the process of dispute resolution lends itself to third party intervention. It is concluded that effective management of conflicts and disputes would be furthered by separating the two fields, and particularly by applying a more stringent structuring.

### 2.2. Data required for making Claim

It is essential that for every claim, the contractor provide to the engineer appropriately documented claims, which sets out the name and brief description of the claim, the provisions of the contract on which the claim is based, details of any additional work undertaken or costs incurred, valuation of the claim supported by sufficient details and details of any delay and time extension due to support the claim.

### 2.3. Types of construction disputes

There are several types of construction claims out of which major ones are delay claims, price acceleration claims, change of work order claims, extra item and variation claims, damage claims, loss of profit claims and etc.

Cakmak et al. has aimed to analyze the main causes of disputes which occur in the construction industry. In order to reach this aim, a literature review was under taken by him to identify the common causes of construction disputes. In this paper there are mainly seven categories of construction disputes are listed down they are mainly owner related, contractor related, design related, contract related, human behaviour related, project related and lastly

external factors. In each of these categories of construction disputes there are several causes of claims and also listed down by the owner.

Love et al. has analyzed the reason for disputes in Australian construction industry and says that dispute are become an endemic element of the Australian construction industry. If they are not resolved quickly then they can escalate causing schedule delays, lead to claims that require litigation proceedings for resolution and destroy business relationships.

Lian et al. has said that Extension of time (EOT) has become a common construction action in many construction projects, particularly when ordinary forms of contract is applied, and it has been treated as an allowable delay in ordinary construction contract. Contractor and supervising engineer often spend considerable time to verify and evaluate the delays. The purpose of study was therefore to analyze different EOT evaluation techniques used in Malaysia, and to probe reasons for delays in the submission and assessment of EOT. Issues such as treatment of float time and concurrent delay, agreed programmes, scheduling software and late payment had also been pointed out.

#### **2.4. Claims settlement methods**

When the contractor discovers the problem, he should try to eliminate or avoid it. If he cannot do so, then he should write a letter to the owner to make a formal claim. This is the first step in claim procedure. The problem is approached during regular meetings, or a special meeting may be arranged to settle or discuss this dispute. If all that did not succeed, then mediation could be friendly way for settling the claim. Otherwise, arbitration or litigation could be other ways to solve the claims. Arbitration is a process where a third party who is independent of parties, but may be selected by them, makes an award determining the dispute. The award is binding and can be enforced by courts. Litigation (used when all other venues failed) is a dispute resolution method that is inquisitorial and adversarial, where by the disputant initiate legal action against the other party by going to court. However, the benefit of litigation is that the court has authority to find out the “truth” from the parties and the enforcement of the order or judgement is supported by other law enforcement agencies. Another process involving neutral third party in a dispute is the mini-trial. In mini-trial, the case is heard not by judge, but by the professional or other high-level business people from both sides. The representative should have full settlement authority. A third party neutral usually joins the party representative listening to the proofs and argument and can make any necessary decision to regulate the process. Mediation is private, quick, cheap process where a third party makes possible dialogue between the parties in order that the parties can reach their own decision that is initially non-binding. The parties can however, agree to be bound by their final decision.

### **3. RESEARCH METHODOLOGY**

It has been planned to carry out the work by study o claims through survey questionnaire and after collecting the data, are analyzed by two different methods, First is Weighted Average Method and second is Relative Importance Index method.

#### **3.1. Data collection method**

Two methods were used to collect the necessary data. Field work research is the primary data collection method followed by desk study which is considered as secondary data collection.

#### **3.2. Desk study**

According to Naoum (2007), desk study approach also called as secondary data collection method because the data are obtained from other sources. Which mean they are not obtained first hand. Secondary information can be stored either in a statistical or descriptive format

(Naoum 2007). Naoum (2007) defines statistical format as the official statistics collected by state and its agencies, and these statistics are normally available in public libraries in most university libraries.

### 3.3. Questionnaire design

All the useful and necessary data was collected through the medium of survey in which questionnaire form was distributed to different firms, organizations, clients, contractors, subcontractors by hand and by the means of technology using mail service.

The whole questionnaire is divided into three segments namely section-A, section-B, section-C, and section-D containing total 8 questions. Section-A contains general information such as name of organization, years of experience, type of job whereas section-B contains view or opinion of respondent regarding main causes or reasons of disputes. Section-C holds the information regarding the impact of the disputes on their work. Section-D holds information regarding resolution techniques or methods. Likert scale approach has been adopted for the following questions to receive responses from the respondents.

### 3.4. Weighted average method

Data of all these tables were analyzed by a weighted average was calculated from each type of claims as follows.

$$\text{Weighted average index} = (W_i * X_i) / N; \quad (1)$$

where,  $W_i$  is the weight assigned to the  $i^{\text{th}}$  option;  $X_i$  is the number of respondents who selected the  $i^{\text{th}}$  option; And  $N$  is the total no of respondents (85 in this study).

### 3.5. Relative Importance Index (RII) method

Data of all these tables were analyzed by a RII index was calculated from each type of claims as follows.

$$RII = \sum W / (A * N) \quad (2)$$

Where,  $W$  = weight given to each factor by the respondents, ranges from 1 to 5.  $A$  is the highest weight (5 in this case) and  $N$  is total no of respondents.

### 3.6. Data collection

Through the medium of survey which involved collection of distributed questionnaire involving various designatories involved in construction industries such as clients, developers, contractors, architects from capital city of Uttar Pradesh which is Lucknow. During the data collection stage, total 113 questionnaires were distributed out of which 70 feedbacks were received back. Out of the total responses, 36 were from contractors, 23 from developers and 11 were architects.

**Table 1** Rate of responses

Sr. No	Respondent	Questionnaire distributed	Responses received	Percentage of responses
1	Owner	52	36	69.23%
2	Contractor	38	23	60.52%
3	Architect	23	11	47.83%
Total		113	70	61.95%
4	By mail	38	0	0%

### 3.7. Data analysis

From present study it is found that “Finance and payment issues” is having first rank among all causes for generation of dispute and least ranking determinant is “Inclement weather” as given in table 2. Respondents felt that disputes in construction industry damages the reputation of both the parties. This is found by getting first rank for “damaging company reputation” in impact matters and respondents have given lowest rank to “dispute escalation” determinant as seen in table 3. From table 4, it can be seen that negotiation is the most common method for dispute resolution and the least method is litigation.

**Table 2** Rank to causes of construction dispute

No	Determinants	Weighted average index	Weight average rank	R □□	R □□ Rank
A	Finance and payment issue	4.68	1	0.935	1
B	Time overrun	4.41	7	0.89	7
C	Cost overrun	4.47	6	0.90	6
D	Price escalation	3.62	14	0.724	14
E	Work change orders	4.48	5	0.895	5
F	Poor communication	3.94	12	0.786	12
G	Design errors	4.57	4	0.912	4
H	Inclement weather	3.12	17	0.623	17
I	Extra items	4.61	3	0.93	3
J	Un for seen site condition	3.72	13	0.744	13
K	Poor work quality	4.64	2	0.927	2
L	Incomplete information in tender	4.3	9	0.857	9
M	Delay in issuing site, drawings, materials	4.38	8	0.875	8
N	Return of security deposit	3.21	16	0.64	16
O	Unfair allocation of risk	3.27	15	0.652	15
P	Delay in clients response	4.18	11	0.835	11
Q	Mistakes in contract documents	4.24	10	0.847	10

**Table 3** Rank to causes of construction dispute

No	Determinants	Weighted average index	Weight average rank	RII Index	RII Rank
A	Damaged business relationship	4.64	2	0.929	2
B	Increased project cost	4.49	3	0.897	3
C	Project delays	4.39	6	0.877	6
D	Undermine team spirit	3.54	7	0.709	7
E	Damaged company reputation	4.67	1	0.934	1
F	Dispute escalation	3.37	8	0.674	8
G	Poor client satisfaction	4.41	5	0.883	5
H	Delay in project completion	4.49	4	0.897	4

**Table 4** Rank to dispute resolution method used

No	Determinants	Weighted average index	Weight average rank	RII Index	RII Rank
A	Adjudication	2.8	5	0.56	5
B	Arbitration	1.99	6	0.4	6
C	Dispute review board	1.4	7	0.28	7
D	Expert determination	4.37	3	0.87	3
E	Litigation	1.27	8	0.25	8
F	Mini-trial	3.36	4	0.67	4
G	Mediation	4.53	2	0.91	2
H	Negotiation	5.2	1	1	1

#### 4. RESULT AND DISCUSSION

It has been discussed the results of causes of construction dispute, impact of construction dispute and dispute resolution method.

**Table 5** Percentage and rank to causes of construction dispute

Major causes of dispute	Percentage	Rank
Finance and payment issue	93.43	1
Time over run	88.00	7
Cost over run	89.14	6
Price escalation	72.29	14
Work change order	89.43	5
Poor communication	78.57	12
Design errors	91.14	4
Inclement weather	62.29	17
Extra items	92.00	3
Un for seen site condition	74.29	13
Poor work quality	92.57	2
Incomplete information in tender	85.71	9
Delay in issuing site, Drawings, Materials	87.43	8
Return of security deposit	64.00	16
Un fair allocation of risk	65.14	15
Delay in clients response	83.43	11
Mistakes in contract document	84.57	10

**Table 6** Percentage and rank to impact of construction dispute

No	Determinants	percentage	RII Rank
A	Damaged business relationship	92.86	2
B	Increased project cost	89.71	3
C	Project delays	87.71	6
D	Undermine team spirit	70.86	7
E	Damaged company reputation	93.43	1
F	Dispute escalation	67.43	8
G	Poor client satisfaction	88.29	5
H	Delay in project completion	89.71	4

**Table 7** Percentage and rank to dispute resolution method used

No	Determinants	Percentage	RII Rank
A	Adjudication	56.00	5
B	Arbitration	39.71	6
C	Dispute review board	28.00	7
D	Expert determination	87.43	3
E	Litigation	25.43	8
F	Mini-trial	67.14	4
G	Mediation	90.57	2
H	Negotiation	98.88	1

## 5. CONCLUSION AND RECOMMENDATION

Based on the results of this work, it can be concluded that finance and payment issues are the important cause of claims because they result in a financial problem and disputes between the owner and the contractor. The most serious and harmful impact of construction dispute is damaging company reputation. Negotiation is the most frequently using method to resolve the construction dispute. Documents are very important part in the contract. At the time of writing the agreement, everything is usually acceptable for all parties but the problem come during the project when they cannot make any changes to the contract. Owners usually try to deduct money from the last payment and the reason they give is that the quality of work is not good or there are some errors in execution. Such execution errors or quality depend on how skilled the labours and management are. It is recommended that the clauses in the contract related to the payment should divide the total pieces of the contract into smaller, more numerous payments. This may make it easier to be paid by the owner on time. This may reduce delay in payment. If there is a financial institution that is funding the project, the contractor is recommended to have direct contact with it. The contractor may collect the payments directly from the financial institutions after getting approval from the owner's representative. The owner is recommended to use the experience of the consultant before signing the contract. The best solution to claim lies in establishment of partnership between the owner and the contractor. Each party should try to solve the problems from the first moment they arise.

## REFERENCES

- [1] Ashwini ArunSalukhe, Rahul S Patil, "Effect of construction delays on Project Time Overrun: Indian Scenario, IRJET: International Journal of Research in Engineering and Technology eISSN: 2319-1163/pISSN: 2321-7308.
- [2] Brown. H., &Marriott.A.(1993) . ADR Principles and Practice. London Sweet and Maxwell.
- [3] Burton. J. (1990). Conflict: Resolution and Prevention. Besingstoke/ Newyork: Macmillan/ St. Martin's Press.
- [4] Collins (1995). Collins Cobuild English Dictionary. Harper Collins London.
- [5] Diekmaan, JE. Girard. MJ (1995). Are Contract Disputes Predictable? ASCE Journal of Construction Engineering and Management, 121(4), pp. 355-363.
- [6] Easton. G. R.(1989). "Construction Claims" Dept. of Civ. Engg.. Loughborough university. U.K.
- [7] Edwin H.W. Chan and Henry C. H. Suen (2004) "Dispute Resolution Management for International Construction Projects in China" Emerald Management Decision Vol 43 No. 4, pp. 589-602.

- [8] EmreCakmak and Cakmak. P.I (2014), “AN Analysis of Causes Of Disputes in the Construction Industry Using Analytical Network Process”, *Procedia- Social and Behavioural Sciences* 109, 183-187.
- [9] Fenn, P., Lowe. D.& Speck, C. (1997). Conflict and dispute in construction. *Construction management and Economics*, 15(6), 513-518.
- [10] K.C.Iyer, Nitin Chapalkar,” Factors Influencing Decisions on Delay Claims in Construction Contract for Indian Scenarion”, *Australasian Journal of Construction Economics and Buildings*.
- [11] Lew Yoke Lian, S. Hassim, R.Muniandy, and tan Mee- ling, “The Assessment of application for Extension of Time Claims in Malaysian Construction Industry” *IACSIT International Journal of Engineering and Technology* , Vol. 4, No.4, August 2012.
- [12] Wilmot, W.W., and Hocker, J.L. (1998). *Interpersonal Conflict*. McGraw-Hill, Boston
- [13] Mohd Asim, Shumank Deep and Dr. Syed Aqeel Ahmad, Time ImpactStudy of Real Estate Sector Construction Projects Post Application of Lean Principles for Delay Resolutions. *International Journal of Civil Engineering and Technology*, 8(2), 2017, pp. 89–99.
- [14] Mohd Asim, Shumank Deep and Dr. Syed Aqeel Ahmad (2015). Analysis of delays in Indian real estate sectors and their impacts on overall project performance, *NICMAR International Conference*.
- [15] Shumank Deep, Mohd Bilal Khan, Sabih Ahmad and Adeeba Saeed, AStudy of Various Factors Affecting Contractor’s Performance in Lowest Bid Award Construction Projects. *International Journal of Civil Engineering and Technology*, 8(2), 2017, pp. 28–33.
- [16] Deep, S., Singh, D. and Ahmad, S.A. (2017) A Review of Contract Awards to Lowest Bidder in Indian Construction Projects via Case Based Approach. *Open Journal of Business and Management*, 5, 159-168.<http://dx.doi.org/10.4236/ojbm.2017.51015>