

Development of Strategies for the Prevention of Claims and Disputes in the Construction Sector

Rajalekshmi G R¹, Sreeja V²

¹PG Student, Sivaji College of Engineering and Technology, Manivila, Kanyakumari Dist., Affiliated to Anna University, Tamil Nadu, India

²Assistant Professor, Sivaji College of Engineering and Technology, Manivila, Kanyakumari Dist., Affiliated to Anna University, Tamil Nadu, India

Abstract: A combination of environmental and behavioural factors can lead to construction disputes. Presently India is in the developing phase which brings tremendous growth of construction industry. Construction industry is witnessing all kinds of projects across the country. Many projects are suffering from major issues like conflict between parties, claim generations and dispute occurrence. These claims are undesirable because they require significant time and resource to resolve. Identifying common claim type and their causes is essential to minimize and hopefully avoid them in future projects. Identifying the clauses and disputes affecting project performance by the data were collected using questionnaire surveying the owners, contractors and consultants on representing the construction in Thiruvananthapuram district. The statistical methods used for analysis. The recommendations to prevent/reduce claims in construction projects are presented. It is expected that the findings of this research will help construction firms avoid the main causes of claims and, accordingly, minimize delays and cost overruns in construction projects.

Keywords: Claims, Disputes, Causes, Types, Construction

1. Introduction

The construction industry is a complex and competitive environment in which participants with different views, talents and levels of knowledge of the construction process work together. In this complex environment, participants from various professions, each has its own goals and each expects to make the most of its own benefits

Construction Claim can be defined as a request by either party to the contract, usually the Contractor, for compensation for damages caused by failure of the other party to fulfil his part of obligations as specified in the contract. The compensation is usually in the form of the additional payment or an extension of time (EOT).

Construction claims are measured by many project participants to be one of the most worrying and unpleasant events of a project. The high competition has forced contractors to submit projects with minimum profits in order to stay in business. In addition to their multiparty nature, projects are becoming more complex and risky. This has placed an added burden on contractors to construct increasingly sophisticated and risky projects with less resources and profits. Under these circumstances, it is not shocking that the number of claims within the construction industry continues to increase.

Knowledge of the different construction claim types allows owners to recognize potential claims situations. This recognition can protect the owners from incurring losses and assist in recovering compensation. In this research paper the Construction claims types are divided into mainly eight different types, most of the claim types discussed are interrelated, frequently occurring and most of them may pertain to a particular situation.

During the execution of a project, several issues arise that cannot be resolved among project participants. Such issues typically involve contractor requesting for either time extension or for additional cost, or sometimes both. Such requests by the contractor are referred as Claims. However if the owner does not agree to the claims put out by the contractor and there are differences in the interpretations, the issue takes the form of dispute. Claims are becoming an inevitable and unavoidable stress in modern projects involving new technology, specifications and high expectations from the owner. Construction claims are defined as "a request for compensation for damages incurred by any party to a contract" (Semple et al, 1994). Construction dispute are defined as "any contract question or controversy that must be settled beyond the jobsite management" (Diekmann and Girard, 1995).

There are many reasons for claims time, machinery, material, manpower, money, price escalation, accident on site, change in design and many other are major reasons for dispute between two parties which results into disputes, if the disputes are Claims and Counterclaims.

The basic factors that drive the development of construction disputes are uncertainty, contractual problems, and behavior, design etc.

Uncertainty: Uncertainty is the difference between the amount of information required to do the task and the amount of information available

Contractual problems: Standard forms of contract clearly prescribe the risks and obligations each party has agreed to take. Such rigid agreements may not be appropriate for long-term transactions carried out under conditions of uncertainty.

Design: Errors in design can lead to delays and additional costs that become the subject of disputes. Often no planning

Volume 6 Issue 3, March 2017

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

or sequencing is given to the release of design information, which then impacts on construction.

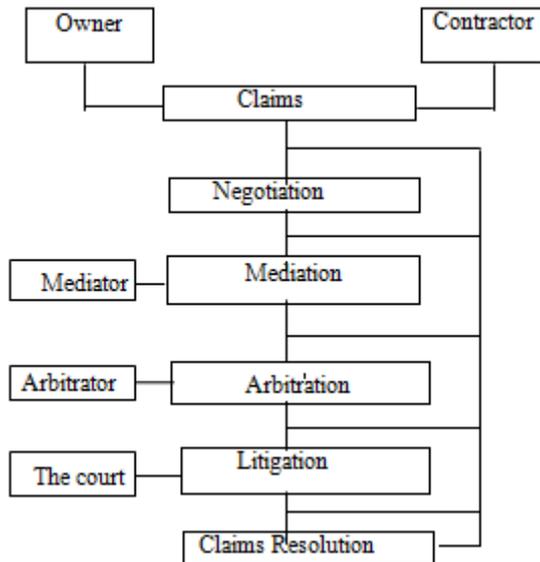


Figure 1: Claim settlement method

To solve this Claims there are certain dispute resolution techniques are available like arbitration, conciliation, mediation dispute resolution board. In this paper authors have listed 17 different causes for occurrence of disputes in construction industry. Further 8 different issue matters are listed which are created in project scenario as an impact of dispute occurrence. Total 8 different methods are found which are prevailing as on today among construction stakeholders for dispute resolution. Objective of this paper is to develop ranking of causes, impact on issues and use of DRM's through statistical techniques.

2. Objectives

The main purpose of this research is to find which causes of claims are important and which types of claims are more common in different construction projects. A study of all types of construction claims is done to identify the main types and causes of construction claims in construction projects. These objectives include:

- Undertake a comprehensive analysis of construction claims in construction projects.
- Identify and analyze the types of claims and their causes in construction projects
- To give conclusions and recommendations for future researches based on the analysis and severity of claims in construction projects.

3. Literature Review

As per study carried out by Zaneldin.E.K (2006), "Changes" and "Extra work" are the two major causes for dispute generation in UAE. They concluded that „change orders“ are the most frequent cause of claims while „delay caused by owner“ was ranked second. „Planning errors“ were ranked last, indicating that it is the least frequent cause of claims. Cakmak.E and Cakmak.P.I (2014) carried out the study of causes of disputes in construction industry of Turkey by Analytic Network technique. They have classified

the causes under seven different categories as: Owner related, Contractor related, Design related, Contract related, Human behavior related, Project related and External factors. Edwin H.W. Chan and Henry C.H. Suen (2004) found that arbitration is the most popular dispute resolution mechanism, after negotiation, for resolving disputes in international construction disputes in China.

4. Research Methodology

In this paper tried to work out ranking of causes of disputes in construction industry along with ranking of impacts of these disputes. Further this work includes the ranking of various methods used by construction industry for dispute resolution. The survey questionnaire was designed to get the ranking of above three issues by suitable technique. The survey questionnaire is made of four sections. Section A includes demographic information of respondents. Section B includes questions about causes of construction disputes. Section C includes Impacts of disputes and Section D includes ranking for dispute resolution methods. Respondents has to tick mark any one option for each row under the category of Strongly disagree(1), Disagree(2), Neutral(3), Agree(4) and Strongly Agree(5).

It was planned to collect the feedbacks from various stakeholders of construction industry from Thiruvananthapuramcity of Kerala state of India. The survey has included Architects, Contractors and Developers. This research work includes use of Weighted Average Method (W.I) and Relative Importance Index method (R.I.I).

5. Data Analysis

This research work has used following two methods for carrying out ranking work.

5.1. Weighted average method

Data of all this table were analyzed by a weighted average was calculated for each type of claims as follows:

Weighted Average Index = $(\sum W_i * X_i) / N$;
 where W_i is the weight assigned to the with option; X_i is the number of respondents who selected the with option; and N is the total number of respondents (70 in this study).

5.2. RII Index method

Data of all these tables were analyzed by a RII Index was calculated for each type of claims as follows:

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

Where, W = weighting given to each factor by the respondents which ranges from 1 to 5, A = highest weight (i.e. 5 in this case) and N = total number of respondents.

According to above two methods ranking of causes of construction disputes are found as per table 1 given below

Table 1: Rank of causes of disputes by different methods

Sl.	Cause	Rank as per W.I Method	Rank as per RII Method
1	Finance and payment issues	1	1
2	Time overrun	7	7
3	Cost overrun	6	6
4	Price escalation	14	14
5	Work change orders	5	5
6	Poor communication	12	12
7	Design errors	4	4
8	Inclement weather	17	17
9	Extra work Items	3	3
10	Unforeseen site condition	13	13
11	Poor work quality	2	2
12	Incomplete information in Tender or specification	9	9
13	Delay in issuing Drawings, Specifications, Materials	8	8
14	Return of Security Deposit	16	16
15	Unfair allocation of risk	15	15
16	Delay in clients response	11	11
17	Mistakes in Contract Document	10	10

Regarding Impact of causes of disputes on various situations of construction project, ranking by respondents is given in

Table 2: Ranking for Impact on various issues by WI and RII methods

No	Impact matter	Rank as per W.I Method	Rank as per RII Method
1	Damaged business relationship	2	2
2	Increased project cost	3	3
3	Project Delays	6	6
4	Undermine team spirit	7	7
5	Damaging company reputation	1	1
6	Dispute escalation	8	8
7	Poor client satisfaction	5	5
8	Delay in project completion	4	4

Regarding ranking of dispute resolution techniques, findings are given below in table

Table 3: Ranking to use of DRM by WI and RII method

No.	Dispute Resolution Methods	Rank as per W.I Method	Rank as per R.I.I method
A	Adjudication	5	5
B	Arbitration	6	6
C	Dispute Review Board	7	7
D	Expert Determination	3	3
E	Litigation	8	8
F	Mini-trial	4	4
G	Mediation	2	2
H	Negotiation	1	1

6. Results and Discussion

From present study it is found that “Finance and payment issues” is having first rank among all causes for generation of dispute. Second rank was given to “Poor work quality” by the respondents. “Extra items” is having third rank and “Design errors” is having fourth rank in causes of disputes. “Inclement weather” is having lowest rank. 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. Further, respondents have given lowest rank to “Dispute Escalation” matter. Respondents have given first rank to “Negotiation” method for dispute resolution and last rank is given to “Litigation” method.

7. Conclusion

Present study focuses on study of causes of construction disputes, its impact on various aspects and different methods used for dispute resolution. Weighted average method [W.I] and Relative importance index methods [RII] were used to work out ranking of various factors. Total 70 feedbacks were analyzed through above two techniques. It is found that “Finance and payment issues”, “Poor work quality” and “Extra items” are the three major causes which lead towards occurrence of disputes. So, contractors and clients must try to create an environment during project executions such that above causes are avoided. As far as use of a various DRM’s, it was found that Arbitration is not much popular among construction industry. Looking to the benefits and legal backing available with Arbitration, construction industry should go for arbitration rather than mini-trials.

References

- [1] Zanelidin.E.K. (2006), “Construction claims in United Arab Emirates: Types, causes, and frequency”, International Journal of Project Management , 24, 453–459
- [2] Cakmak.E and Cakmak.P.I (2014), “An analysis of causes of disputes in the construction industry using analytical network process”, Procedia - Social and Behavioral Sciences 109,183 – 187
- [3] 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. 4pp. 589-602
- [4] Semple, C., Hartman, F., and Jergeas, G. (1994). “Construction claims and disputes: causes and cost/time overruns”, ASCE Journal of Construction, Engineering and Management, 120(4), pp.785-795
- [5] Diekmann, J.E., Girard, M.J. (1995). “Are contract disputes predictable?”, ASCE Journal of Construction Engineering and Management, 121(4), pp.355363
- [6] ASCE Technical Committee on Contracting Practices of the Underground Technology Research Council (1991), “Avoiding and resolving disputes during construction: successful practices and guidelines”, ASCE, New York.
- [7] Building Contract Claims, second edition by Author Dr Vincent Powell-Smith and John Sims Publisher: BSP Professional. 1988.
- [8] Construction Delay Claims, Authors: Bany B. Bramble and Michael T. Callahan Publisher John Wiley & Sons, 1987
- [9] Chester, M and Hendrickson, C (2005) ,“Cost impacts, scheduling impacts, and the claims process during construction”, Journal of Construction Engineering and Management, 131(1), 102-107.

Author Profile



Mrs. Rajalekshmi G holds a diploma and AMIE graduation in Civil Engineering. She is currently a PG student of Master of Engineering (ME) in Construction Engineering and Management, at Sivaji College of Engineering and Technology, Manivila, Kanyakumari Dist., Tamil Nadu, India.



Mrs. Sreeja V holds a Bachelor of Engineering (BE) in Civil Engineering and Master of Technology (MTech) in Structural Engineering. She has presented technical paper in two international conferences. She is currently the Head of the Department of Civil Engineering at Sivaji College of Engineering and Technology, Manivila, Kanyakumari Dist., Tamil Nadu, India.

