

Dispute Resolution in the Construction Industry

Mr. Bhushan Chaudhari¹, Prof.Dr.A.S.Pote²

¹PG Student, ²Professor and Head Of Department

¹Department of civil engineering

¹JSPM's Imperial College of Engineering and Research, Wagholi, Pune, India

Corresponding Author: Mr. Bhushan Chuadhari.

ABSTRACT: The method of the study was literature survey from different sources. The purpose of the study was to investigate the causes and effects of disputes on construction projects. The disputes in construction projects are inevitable throughout the world. However, the extent of disputes is more in developing countries like India as compared to others. The study found that disputes are increasing in the construction industries due to its uncertainty, complexity, and involvement of different categories of project participants. The lack of information in the construction industries leads to many disputes during the construction process. Disputes predominantly arise from complexity and magnitude of works, multiple prime contracting parties, poorly prepared contract documents, inadequate planning, financial issues and communicating problem. If disputes are not resolved promptly, then it tends to drag on, escalate and can cause project delays, lead to claims, require litigation proceedings for resolution and ultimately destroy business relationships. Ultimately, it may degrade the quality of the work.

KEYWORDS: Disputes in Construction, Resolution of Disputes.

I. INTRODUCTION:

This Project introduces the dispute resolution techniques that are frequently encountered in the construction industry. The focus is the UK domestic market, but international dispute adjudication boards are also considered. Arbitration has been the traditional method for the resolution of construction disputes for many years, until the introduction of a range of ADR techniques, adjudication and the introduction of pre-action protocols in litigation.

The three core processes of dispute resolution are considered before introducing the range of frequently encountered techniques. Each of the main dispute resolution techniques is then considered in turn. The purpose is not to delve into the detail of each technique, but to provide an overview and draw out the main distinctions between the processes, whilst setting out the key characteristics of the techniques.

1.1 The spectrum of dispute resolution techniques

The “conventional” model of dispute resolution is one of an adjudicative process, most frequently fulfilled by the courts. According to Schapiro the ideal court, or more properly the prototype of the court, involve:

- (1) An independent judge applying
- (2) pre-existing legal norms after
- (3) adversarial proceedings in order to achieve
- (4) a dichotomous decision in which one of the parties was assigned the legal right and the other found wrong.

II. LITERATURE REVIEW:

1. An analysis of causes of disputes in the construction industry using analytical network process, Emre Cakmak , Pinar Irlayici Cakmak , Okan University, Istanbul, 34959, Turkey Istanbul Technical University, Istanbul, 34437, Turkey, Procedia - Social and Behavioral Sciences 109 (2014) 183 – 187

This paper aims to analyze the main causes of disputes which occur in the construction industry. In order to reach this aim, a literature review was undertaken to identify the common construction disputes. The disputes derived from a cross-section of the literature, were classified into main categories and the main causes of construction disputes were determined. Finally, an analysis was carried out using the analytical network process (ANP) approach to determine their relative importance.

There are confusion among construction professionals about the differences between conflict and dispute, and these terms have been used interchangeably especially in the construction industry (Acharya et al., 2006). However, according to Fenn et al. (1997) conflict and dispute are two distinct notations. Conflict exists wherever there is incompatibility of interest. Conflict can be managed, possibly to the extent of preventing a dispute resulting from the conflict. On the other hand, disputes are one of the main

factors which prevent the successfully completion of the construction project. Disputes are associated with distinct justiciable issues and require resolution such as mediation, negotiation arbitration, etc.

In this paper, the main causes of dispute causes in the construction industry were analyzed. First of all, the main causes of construction disputes were determined with a comprehensive literature review. Then, the disputes derived from the literature, were classified into main categories. According to the classification, main disputes categories were found as; owner related disputes, contractor related disputes, design related disputes, contract related disputes, human behavior related disputes, project related disputes and external factors. All these disputes categories have their own sub-dispute causes. The analysis reveals that the contractor related disputes and their sub-dispute categories are the most common ones in the construction industry.

2. An expert system to manage dispute resolutions in construction projects in Egypt, A.A. Elziny , M.A. Mohamadien , H.M. Ibrahim , M.K. Abdel Fattah, Petrojet Company, Port Said, Egypt Faculty of Engineering, Suez Canal University, Ismailia, Egypt Faculty of Engineering, Port Said University, Port Said, Egypt, Petrojet Company, Cairo, Ain Shams Engineering Journal(2015) Page No. 1-15

This study attempts to shed a great deal of light on the problem of construction disputes in the Egyptian projects. This paper presents a comprehensive review of the available literature on analysis of disputes. The objective of this paper was to provide an expert system can evaluate the overall dispute settlement procedures at company's projects. A questionnaire has been used to study dispute sources and resolution methods. Four case study applications have been provided to check the validity of the proposed system. Results confirmed that the most important source of disputes was contract management 74.04%, the second was contract documents 71.49%, the third was financial issues 67.80%, the fourth was project related issues 63.92%, and the lowest one was other sources (such as force majeure) 61.58%. Finally, the expert program facilitates dispute resolution by using alternative dispute resolution methods instead of going direct to arbitration or litigation.

- The research illustrates that the most used dispute resolution methods are negotiation, mediation and arbitration respectively.
- The study proposes a reliable and accurate method to quantify and analyze sources of construction disputes. The most important source of disputes was “contract management (74.04%)”, the second was “contract documents (71.49%)”, the third was financial issues (67.80%), the fourth was “project related issues (63.92%)”, and the lowest one was “other sources” such as force majeure, and loose of construction laws, (61.58%).
- The study indicates that the contract management can be considered the main factor that can affect the existence of disputes due to many reasons such as the issues related to the owner and the contractor, their management of the contract, time schedule prepared by the contractor and required update.
- The proposed program “DRExM” is capable of presenting ADR techniques. The program results matched with actual ones of the case studies with simplified presentation of results.
- The benefits of the “DRExM” program confirmed that the companies should have program to facilitate the dispute Management and to assess the current status of the dispute then propose the alternative settlement procedure instead of going direct to arbitration or litigation.

3. Customers' perceptions on the dispute resolution clauses in Islamic finance contracts in Malaysia, Umar A. Oseni , Abideen Adewale , Nor Razinah Binti Mohd Zain, IIUM Institute of Islamic Banking and Finance, International Islamic University Malaysia, P.O. Box 10, 50728, Kuala Lumpur, Malaysi, Ahmad Ibrahim Kulliyah (Faculty) of Laws, International Islamic University Malaysia, Kuala Lumpur, Malaysia, Review of Financial Economics xxx (2016), Page No. 1-10

This empirical legal study examines the perceptions of retail customers on the dispute resolution clauses contained in the governing law and jurisdiction clauses in Islamic finance contracts in Malaysia. Since Islamic financial institutions and their customers are more likely to opt for litigation in the event of a dispute, this study explores ways of providing for unambiguous dispute resolution clauses that are well understood by the parties. Such clauses are expected to incorporate effective dispute resolution processes such as mediation and arbitration through a multi-tiered mechanism. Primary data collected through survey questionnaire administered on 160 Islamic bank customers is analysed using both factor analysis and structural equation modelling.

Consistent with the extant literature and apparent practise in general dispute resolution practises among Malaysians, this study also empirically finds evidence for the preference of litigation over other dispute resolution alternatives. This study thus concludes that the provision of contractual obligation clauses enriches the legal awareness and understanding of the customers and also possesses significant practical implication for the customers' choice of dispute resolution channel. Consequently, this study has proposed the integration of the existing dispute resolution mechanisms in the Islamic financial services industry in Malaysia through the interlinking of the initiatives in a way that would allow for the adoption of multi-tiered clauses of dispute resolution in Islamic finance contracts.

4. Experience mining based on case-based reasoning for dispute settlement of international construction projects, Junying Liua, Huiling Lia,, Martin Skitmoreb, Yubin Zhanga Department of Construction Management, College of Management and Economics, Tianjin University, 92 Weijin Road, Tianjin 300072, China, School of Civil Engineering and Built Environment, Queensland University of Technology (QUT), Garden Point Campus, 2 George St., Brisbane, QLD, 4000, Australia, Automation in Construction 97 (2019) 181–191

Considering the experience-orientation of the construction industry, the valuable experience of similar historical cases is important reference to resolve new problems, while research concerning this issue in dispute settlement is still relatively scarce. The objectives of this study are to (1) propose a pragmatic method for generating dispute settlement for international construction projects based on Case-Based Reasoning (CBR); and (2) validate the CBR model by a specific dispute case. To achieve the research objectives, successful historical cases are collected, and attributes that influence dispute-related problems are derived. A two-step refinement process is then conducted to extract similar cases. Finally, a dispute case in Ethiopia is used to demonstrate the application of developed model.

Considering the experience-oriented nature of the construction industry, this study provides a new perspective to resolve international construction disputes using the CBR method. The outputs of the similar retrieved case are mainly in three parts: (1) the dispute resolution method; (2) the contract-terms or lawbasis referenced in the dispute resolution; and (3) the outcome of the dispute settlement. Finally, an international construction project of Ethiopia is selected as an example, and the scheme of dispute settlement for the test case is derived. Hence, the CBR dispute settlement model considers the causes, factors, and ADR together, which provides an effective reference in resolving new dispute problem and reducing the transaction costs involved.

5. Prediction of outcome of construction dispute claims using multilayer perceptron neural network model, N.B. Chaphalkar , K.C. Iyer , Smita K. Patil , Department of Civil Engineering, College of Engineering, Shivajinagar, Pune 411005, India, Department of Civil Engineering, Indian Institute of Technology Delhi, Hauz Khas, New Delhi 110016, India, Received 18 April 2015; received in revised form 3 August 2015; accepted 3 September 2015, International Journal of Project Management (2015), Page No. 1-9.

The occurrence of disputes in Indian construction contracts results in damaging the relationship between the parties apart from the time and cost overruns. However, if the parties to a dispute can predict the outcome of the dispute with some certainty, they are more likely to settle the matter out of court resulting in the avoidance of expenses and aggravation associated with adjudication. Dispute resolution process is mainly based upon the facts about the case like conditions of the contracts; actual situations on site; documents presented during arbitral proceedings, etc., which are termed as 'intrinsic factors' in this research. These facts and evidences being intrinsic to the cases have been explored by researchers to develop dispute resolution mechanisms. This study focuses on determining the intrinsic factors for construction disputes related to claims raised due to variation from 72 arbitration awards through Case Study approach and furthermore statistically proving their importance in arbitral decision making by seeking professional cognizance through a questionnaire survey.

The study identified sixteen intrinsic factors, which influence the decision making of the arbitrators in resolving the claims related to variation in Indian construction contracts. The study explored the feasibility of using the NN model for the prediction of the outcome of disputes related to variation. Several test runs were conducted by varying the training parameters. It was observed that the MLP network gave better results as compared to GFF. This framework can offer a more cost-effective solution to dispute resolution than existing methods. The methodology can be expanded for the resolution of construction disputes arising out of other dispute prone claims and when fully developed, the proposed NN model may be consulted by contractors, owners, or arbitrators to facilitate their decision-making process.

6. Selection and use of Alternative Dispute Resolution (ADR) in construction projects — Past and future research, Chia Kuang Lee , Tak Wing Yiu , Sai On Cheung, Faculty of Engineering, Department of Civil and Environmental Engineering, The University of Auckland, Private Bag 92019, Auckland 1142, New Zealand Department of Architecture and Civil Engineering, City University of Hong Kong, 83 Tat Chee Avenue, Hong Kong, International Journal of Project Management 34 (2016) 494–507

Research on Alternative Dispute Resolution (ADR) selection and use has been gaining prevalent interest from project practitioners and researchers. This study presents a systematic review of the factors influencing ADR selection and use in construction projects for the last 32 years. A total of 446 articles from 21 construction project-related journals were identified and reviewed. Among these, only 13 articles focused on the factors influencing ADR selection and use. These 13 articles were then analysed, synthesized, and summarized in terms of the research methods used, distribution across countries and citation influences. The studies on the selection and use of ADR were mainly based on utility. Utility factors offer less conceptual basis to explain decision making. To address this deficiency, this study reclassified ADR selection and use with reference to Theory of Planned Behaviour (TPB) based framework. The potential development and research avenues of using the TPB framework were also discussed.

The main purpose of this study is to synthesize the factors influencing ADR selection and use in construction projects, and accordingly propose future directions on ADR selection and use. To achieve this, this study has conducted systematic review of related articles published in 21 selected construction project-related journals. A systematic visual examination has been performed on all ADR related articles based on Title, Article, and Abstract, with the aim to synthesize the factors influencing ADR selection and use.

III. ALTERNATIVE DISPUTE RESOLUTION (ADR)

The term ADR has attracted a great deal of attention in legal and quasi-legal fields since the mid-1980s. However, the 1990s appear to have witnessed an enormous growth in the "ADR debate" with an ever-increasing sphere of academics, lawyers and consultants entering the arena. Although the concept of dispute resolution techniques which are an alternative

to the court system is not new, the more recent advent of the acronym is essentially taken to describe the use of a third-party mediator who assists the parties to arrive at a voluntary, consensual, negotiated settlement. Whilst the origins of mediation may be ancient and Eastern, the recent more formalized technique has principally developed in the USA.

The literature available indicates that ADR is a widely discussed discipline within the jurisprudence of construction disputes. Many writers provide an anecdotal review of the subject matter. Few writers venture beyond the normative to consider the reality of ADR, and many assume that this term relates only to mediation. In fact, many writers reveal their attitude towards the subject by suggesting that ADR may be taken to mean any of the following:

- Alternative dispute resolution;
- Appropriate dispute resolution;
- Amicable dispute resolution;
- Another damned rip-off;
- Another disappointing result;
- Another drink required.

IV. MEDIATION AND CONCILIATION

To mediate means to act as a peacemaker between disputants. It is essentially an informal process in which the parties are assisted by one or more neutral third parties in their efforts towards settlement. Mediators do not judge or arbitrate the dispute. They advise and consult impartially with the parties to assist in bringing about a mutually agreeable solution to the problem. A mediator does not impose a decision on the parties in dispute but assist them to reach their own settlement.

The origins of mediation and conciliation can be traced to China some 3,000 years ago. More specifically, China has used these techniques as a primary dispute resolution process whilst other parts of the world have resorted to some form of adjudicative process. State courts have been used as a mechanism to support socialist ideals and, as such, have performed a controlling function with regard to activities considered as criminal. On the other hand, activities relating to commerce fall outside of socialist ideals, as do non-criminal matters relating to private individuals. The resolution of these disputes by informal processes was encouraged in order to maintain “harmony” in the community.

V. ADJUDICATION

The term adjudication can be misleading. In its general sense it refers to the process by which the judge decides the case before him/her or the manner in which a referee should decide issues before him or her. More specifically, adjudication may be defined as a process where a neutral third party gives a decision, which is binding on the parties in dispute unless or until revised in arbitration or litigation. This narrow interpretation may refer to the commercial use of an adjudicator to decide issues between parties to a contract. The use of an adjudicator is found in a variety of standard forms of contract used in the construction industry.

Until recently, adjudication in the construction industry has displayed certain characteristics. First, the adjudicator is a neutral individual who is not involved in the day-to-day running of the contract. He or she is neither an arbitrator, nor a state-appointed judge. Second, the adjudicator enjoys his or her powers by virtue of the agreement between the parties. In other words, the parties have agreed by contract that the decision of the adjudicator shall decide the matter for them. Third, the adjudicator's decision is binding on the parties, and therefore, unlike mediation, the process does not require the co-operation of both parties. Fourth, adjudicators decisions are usually expressed as being binding until the end of the contract when either party may seek a review of the decision, most commonly by arbitration. Finally, adjudication is not arbitration and is therefore not subject to the Arbitration Act 1996.

VI. DISPUTE RESOLUTION ADVISER (DRA)

The basic concept of a Dispute Resolution Adviser involves the use of a neutral third person who advises the parties to a disagreement or dispute and suggests possible settlement options. This concept is clearly similar to that of the Early Settlement Adviser. According to Wall the idea stemmed from Clifford Evans who, in 1986, suggested the use of an “independent intervener”.⁽⁴¹⁾ The independent intervener would be paid for equally by the employer and contractor to settle disputes as they emerged, rather than wait until the end of the contract. The decision would be binding until the end of the project when either party could commence arbitration proceedings. Unlike the independent intervener the DRA does not make interim binding decisions but advises on the means by which settlement could be achieved. The power to settle ultimately rests with the parties.

VII. DISPUTE REVIEW BOARDS (DRB)

The concept of the Dispute Review Board appears to have developed in the USA. It is essentially a process where an independent board of three people evaluates disputes as they arise during the project and make settlement recommendations to the parties. The board is constituted at the commencement of the project, much like a panel of three

arbitrators. Each party selects one board member. The parties may then agree on the third or, if they fail to do so, the two board members will select the third. The board periodically visits the site and receives project information to ensure familiarity with the project and the parties. The board meets regularly to discuss problems or disputes, hears presentations from the parties and suggests solutions.

VIII. BENEFITS:

- Suitable for multi-party disputes
- Lower costs
- Likelihood and speed of settlements
- Flexibility of process
- Parties' control of process
- Parties' choice of forum
- Practical solutions

IX. DISADVANTAGE:

- A need for precedent
- A need for court orders
- A need for interim orders
- A need for evidential rules
- A need for enforcement
- Power imbalance between parties

X. ACKNOWLEDGEMENT

The author thankfully acknowledged to Dr. A.S.Pote, Head of Department of JSPM's Imperial college of Engineering and Research, Wagholi and Prof. A.N. Bhirud PG Coordinator (Construction & Management) Civil Engineering Department of JSPM's Imperial college of Engineering and Research, Wagholi for their motivation and infrastructural support to carry out this review paper.

XI. REFERENCES

1. , A.A. Elziny , M.A. Mohamadien , H.M. Ibrahim , M.K. Abdel Fattah," An expert system to manage dispute resolutions in construction projects in Egypt", Petrojet Company, Port Said, Egypt Faculty of Engineering, Suez Canal University, Ismailia, Egypt Faculty of Engineering, Port Said University, Port Said, Egypt, Petrojet Company, Cairo, *Ain Shams Engineering Journal*(2015) Page No. 1-15
2. Chia Kuang Lee , Tak Wing Yiu , Sai On Cheung," Selection and use of Alternative Dispute Resolution (ADR) in construction projects — Past and future research", Faculty of Engineering, Department of Civil and Environmental Engineering, The University of Auckland, Private Bag 92019, Auckland 1142, New Zealand Department of Architecture and Civil Engineering, City University of Hong Kong, 83 Tat Chee Avenue, Hong Kong, *International Journal of Project Management* 34 (2016) 494–507
3. Emre Cakmak , Pinar Irlayici Cakmak , Okan University, Istanbul, 34959,Turkey," An analysis of causes of disputes in the construction industry using analytical network process", Istanbul Technical University, Istanbul, 34437, Turkey, *Procedia - Social and Behavioral Sciences* 109 (2014) 183 – 187
4. Junying Liua, Huiling Lia,, Martin Skitmoreb, Yubin Zhanga," Experience mining based on case-based reasoning for dispute settlement of international construction projects", Department of Construction Management, College of Management and Economics, Tianjin University, 92 Weijin Road, Tianjin 300072, China, School of Civil Engineering and Built Environment, Queensland University of Technology (QUT), Garden Point Campus, 2 George St., Brisbane, QLD, 4000, Australia, *Automation in Construction* 97 (2019) 181–191
5. N.B. Chaphalkar , K.C. Iyer , Smita K. Patil ," Prediction of outcome of construction dispute claims using multilayer perceptron neural network model", Department of Civil Engineering, College of Engineering, Shivajinagar, Pune 411005, India, Department of Civil Engineering, Indian Institute of Technology Delhi, Hauz Khas, New Delhi 110016, India, in revised form 3 August 2015, *International Journal of Project Management* (2015), Page No. 1-9.
6. Umar A. Oseni , Abideen Adewale , Nor Razinah Binti Mohd Zain," Customers' perceptions on the dispute resolution clauses in Islamic finance contracts in Malaysia", IIUM Institute of Islamic Banking and Finance, International Islamic University Malaysia, P.O. Box 10, 50728, Kuala Lumpur, Malaysi, Ahmad Ibrahim Kulliyah (Faculty) of Laws, International Islamic University Malaysia, Kuala Lumpur, Malaysia, *Review of Financial Economics* (2016), Page No. 1-10