

## Dispute Causation In Construction Projects

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**ABSTRACT:** Disputes have become an endemic feature of the Indian construction industry. If they are not resolved promptly they can escalate causing schedule delays, lead to claims that require litigation proceedings for resolution and destroy business relationships. The competitive nature and contractual complexity inherent within construction can aggravate the incidence of disputes. Research over the last two decades has revealed that factors such as scope changes, poor contract documentation, restricted access, unforeseen ground conditions, and contractual ambiguities are contributors of disputes. While this is widely known, disputes still prevail over such issues. Before disputes can be avoided an understanding of what the underlying conditions that contributes to their occurrence needs to be determined so that mechanisms can be put in place to prevent them from arising. In this paper the literature is examined and a series of models are developed to demonstrate the interdependency between key variables that contribute to disputes. The developed models are used to identify a number of strategies that can be adopted to reduce the immediate incidence of disputes in construction.

**Keywords** - Claims, Contract documentation, Dispute, Litigation

### I. INTRODUCTION

During the last two decades the Indian construction industry has been in an intense period of introspection, specifically examining how it can improve its performance and productivity. Time and cost overruns in construction projects has become a ubiquitous feature of the industry (Love et al., 2005) <sup>[1]</sup>. Significant factors that have been identified as contributing to time and cost overruns in Indian construction projects are rework, variations, incorrect design and incomplete documentation, and late authority approvals. As a result of such issues arising in projects, conflict and disputes may occur, which can lead to the disruption of construction schedules, increased project costs, and even adversely influence relationships between project participants. If a dispute is not resolved promptly, then it may escalate, and ultimately require litigation proceedings, which can be extremely costly for the parties concerned (Cheung et al., 2004) <sup>[2]</sup>.

Research into determining the causes of disputes has reached saturation point; consistently the same variables are identified and continue to manifest in projects. Because most of the studies undertaken have been based upon questionnaires or derived from case law, the factors identified lack contextual meaning. For example, poor communication has been identified as a cause of disputes (Kumaraswamy, 1997) <sup>[3]</sup>. Simply improving communication practices by improving information flow with technology or using Computer-Aided-Design will not reduce per se the incidence of disputes in construction. Fundamentally, work processes, policies, and procedures as well behaviors need to change in concert if disputes are to be reduced in construction.

### II. CONFLICT, CLAIM AND DISPUTE

A plethora of definitions as to what constitutes a dispute can be found in the normative literature. The terms conflict, claim and dispute are often used interchangeably, but their meanings are very different. Figure 1 identifies the relationship between these terms. Examples of how each of these terms has been defined include:

- Conflict – “serious disagreement and agreement about something important” (Collins, 1995) <sup>[4]</sup>. Willmot and Hocker (1998) <sup>[5]</sup>, on the other hand, provide a detailed definition of conflict as “an expressed struggle between at least two independent parties who perceive incompatible goals, scarce resources, and interference from other achieving those goals”.

- Claim – “for the assertion of a right to money, property or remedy”(Powell- Smith and Stephenson, 1993) <sup>[6]</sup>. Likewise, Semple et al. (1994) <sup>[7]</sup> define a claim as “a request for compensation for damages incurred by any party to a contract”.

- Dispute – “any contract question or controversy that must be settled beyond the jobsite management” (Diekmann and Girard, 1995) <sup>[8]</sup>.

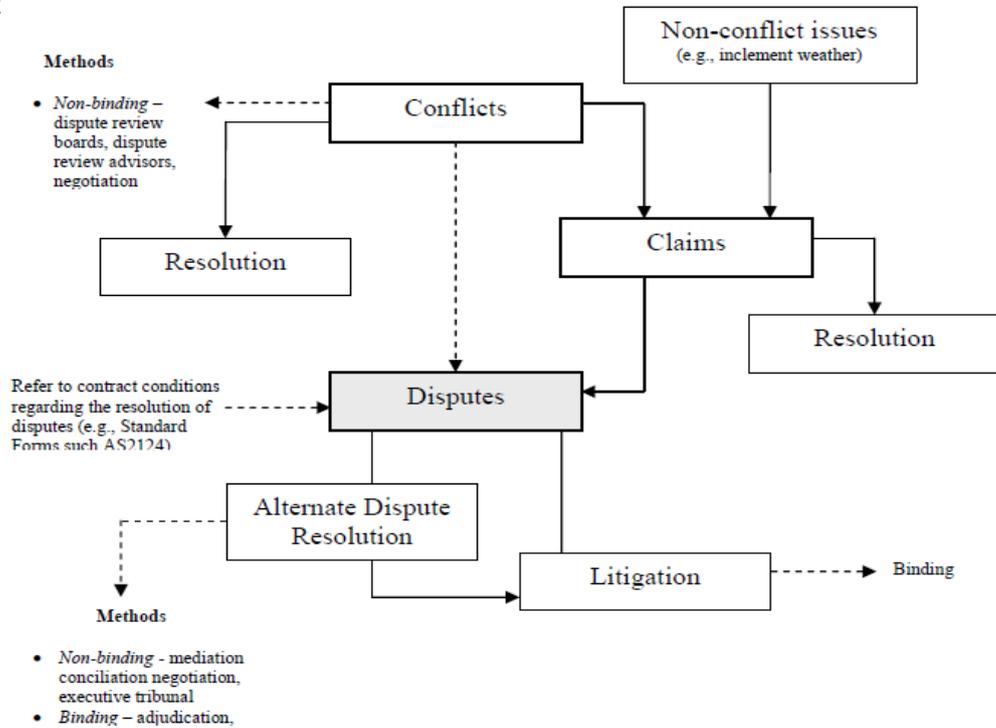


Figure 1. Conflict, claims and disputes (Adapted from Kumaraswamy, 1997)

In an attempt to reduce the incidence of conflicts and disputes; strategies to build ‘trust between parties’ and improve ‘teamwork’, ‘communication’, ‘joint problem solving’ and ‘inter-organizational relationships’ in projects have been utilized including; alliancing, and partnering arrangements (Kumaraswamy, 1997). The use of alliancing and partnering arrangements can enable conflict between parties to be managed to the point of preventing a dispute from emerging (Fenn et al., 1997) <sup>[9]</sup>.

Yet claims are unavoidable and necessary to accommodate unforeseen changes in project conditions in a contractual sense. Essentially, claims in this context are the administrative processes required to handle construction events that take place where the contract “leaves off”– changed conditions, design changes, defective specifications, quantity variations, delays, disruptions and accelerations. While many claims can be resolved harmoniously, the prior presence of conflict between parties may initiate an unnecessary dispute (Kumaraswamy, 1997).

According to Carnell (2000) <sup>[10]</sup> disputes should not be demonized, as resolution mechanisms have their place in the construction process. This is especially the case when onerous and one-sided amendments to standard forms, often drafted by lawyers with the objective of improving their clients’ position at the exception of fairness; or when the only way in which a party can actually protect their position because the contract conditions promote conflict. Inappropriate risk allocation through disclaimer clauses in contracts is a significant reason for increasing total construction costs. The most common exculpatory clauses used in construction are uncertainty of work conditions, delaying events, indemnification, liquidated damages, sufficiency in contract documents (Zaghoul and Hartman, 2003) <sup>[11]</sup>.

### III.DISPUTE CAUSATION

In an attempt to examine the causality of disputes, Kumaraswamy (1997) sought to determine the root (the underlying reason of the problem and if eliminated, would prevent recurrence) and proximate (immediately precedes and produces the effect) causes. Root causes identified by Kumaraswamy (1997) include: unfair risk allocation, unrealistic time/cost/quality targets by the client, adversarial industry culture, inappropriate contract type, and unrealistic information expectations. Proximate causes identified included: inadequate brief, slow client responses, inaccurate design information, inaccurate design documentation, inappropriate contract form, inadequate contract administration, and inappropriate contractor selection.

Mitropoulos and Howell (2001) <sup>[12]</sup> suggest that a combination of factors of uncertainty, contractual problems and opportunistic behavior can lead to disputes. The inherent degree of uncertainty that prevails within construction projects can result in planning being a problematic issue, especially when information is not available. When uncertainty is high, initial drawings and specifications will invariably change, and the project team will have to solve problems as they arise during construction. When parties enter into a contract and a specific clause fails to account for an unforeseen event or it is interpreted to suit the particular circumstances that have arisen, then there is a potential for opportunism. In this instance there is likelihood for a party to exploit or delay another to maximize their own gain.

#### **IV. SYSTEMIC VIEW OF DISPUTES**

To understand the mechanisms that contribute to the underlying problems that arise in projects, such as delays, rework, and scope change, a systems perspective can be used. Such a perspective provides a fundamental shift in thinking and can encourage the 'dispute problem' to be visualized in a holistic manner. The environment within which construction projects are procured can be categorized as being comprised of the following systems:

- Project management, which includes the procurement strategy (design and production management), contract arrangement, selection processes and technology implemented to deliver a project.
- Organizational, which includes the practices, policies, procedures, culture and social responsibility of the firm; and
- People, which includes the underlying values, attitudes, personality, education, training, experience and motivation of individuals that can influence organizational and project outcomes.

##### **Change of Scope**

Additions, deletions, omissions, or changes in the nature of the work to be undertaken lead to changes in scope being made. Most change orders that occur are at the request of the client and are generally in the form of design changes. Zeitoun and Oberlander (1993) <sup>[13]</sup> found that the median cost of change orders were 5.3% of contract value for 71 fixed price projects and 6.8% contract value for 35 cost reimbursable projects. The procurement method adopted for a project can influence cost and schedule growth in projects. Similarly, Cox et al. (1999) <sup>[14]</sup> have revealed that cost of design change orders initiated by clients to range from 5% to 8% of contract value even when projects are managed effectively. Love (2002) <sup>[15]</sup> has revealed that design change orders initiated by clients account for 79% of rework costs that arise in projects, with the remainder costs being attributable to omissions errors and construction changes. Scope uncertainty arises because of client inexperience, their requirements, stakeholder needs, physical location and the prevailing economic environment.

##### **Contract Documentation**

Design consultants (such as architects and engineers) are expected to use reasonable and ordinary care in the practice of their profession. Architects and engineers cannot guarantee the results of their service. Their liability for errors and omissions, however, can be determined by whether they have performed their services with the standard of care consistent with other professional designers within their community. Even when a standard of care is agreed upon pre-contract, any financial recovery may hinge on whether the mistake was an error (mistakes made by the designer) or omission (omitted from the contract). As a result, design related documentation produced often contains errors and omissions and often leads to contractual claims and disputes (Diekmann and Nelson, 1985) <sup>[16]</sup>.

Errors can arise because of poor knowledge, carelessness and negligence, and intent. Poor knowledge is often a result of insufficient education, training, and experience. Carelessness and negligence include errors in calculations and detailing and incorrect reading of drawings and specifications. Regardless of the skill level, experience or training that individual's possess, errors may be made at any time during a project's life cycle. The later design errors are identified in the project cycle the more costly they are to rectify, especially once construction has commenced. Many design firms, however, fail to undertake design audits, verifications and reviews of the documents that they produce prior to tendering (Love et al. 2005).

##### **Behavioral Adaptations of Individuals**

It has been suggested that the personality differences between architects and construction managers can lead to conflict as they may have diametrically opposed goals, objectives and values. When an issue arises power struggles can emerge between different groups who seek to offload responsibility for its occurrence. Such power struggles are often exasperated in times of recession when margins are particularly tight. When a power struggle does emerge there is a reluctance to accept responsibility, contractual clauses may be interpreted differently or the contract may fail to cover an unexpected event (Loosemore and Hughes, 1998) <sup>[17]</sup>.

The way that individuals interact with one another is fundamental to resolving issues. Aggressive and passive forms of communication between individuals can trigger conflict and thus discourage open, frank or democratic discussion which is needed when addressing issues that have arisen. An individual's emotional intelligence is also integral to the problem solving process. Being emotionally intelligent involves being actively able to identify, understand, process and influence one's own emotions and those of others to guide feeling, thinking and action. Individuals who possess a high degree of emotional intelligence are able to make informed decisions, better cope with environmental demands and pressures, handle conflict in an effective manner, communicate in interesting and assertive ways and make others feel better in their work environment (Mayer and Salovey, 1997) <sup>[18]</sup>.

#### **V. DISPUTE MITIGATION**

The literature reviews illustrate the complexity surrounding the causes of disputes. No single variable can be considered to the sole cause of a dispute. Considering the nature of causes dispute of that have been identified

some key strategies can be used to reduce their occurrence: project management, organizational and people perspective.

### **Project Management**

The minimization of scope changes is fundamental to dispute mitigation. Initially focusing on obtaining scope certainty and providing adequate time to plan and develop the contract documentation can reduce the probability of scope changes. Clients and stakeholders (e.g., end-users) need to be kept constantly informed and integrated within the design process. Design by its very nature is an iterative process and as the design evolves and materializes through various developmental phases then the client should be required to ‘sign-off’ after each phase is completed so as to acknowledge their requirements are being met and translated into a workable solution. Tools such as quality function deployment can be used to extract detailed requirements during the scope development process, though their use in practice has been limited (Love et al., 2003) <sup>[19]</sup>.

The procurement strategy and the selection of contractors and consultants is an area that requires attention. The identification, allocation and proactive management of risk are central to dispute mitigation. Standard forms of contract should be used, as both parties are generally familiar with the obligations assumed by each party. The use of competitive tendering often results in the lowest ‘price’ being accepted by a client. Lowest price does not necessarily result in best value for money. Often the contractor with the lowest bid will have the smallest margin. If this margin is depleted then there is a possibility they may adopt opportunistic practices to recover any losses that may have been made. The use of negotiated or selective tendering with a policy whereby contractors openly present their margins and how they priced the project could potentially breakdown any ‘them and us’ barrier that is perceived to prevail. In addition, the sharing of knowledge through the establishment of inter-organizational communities of practice would encourage joint problem solving and possibly reduce the incidence of conflict between parties.

### **Organization**

From an organizational perspective, the key issue contributing to disputes relates to the production of contract documentation. Research suggests that a major factor contributing to poor contract documentation is the level of fees paid to consultancy firms and the resultant managerial practices that are implemented (Love et al. 2003) <sup>[19]</sup>. Tendering for consultancy services has typically resulted in sub-optimal design solutions and contract documentation being produced. In addition, the business environment within which client’s operate has resulted in increasing demands being placed on consultants to design and document within tight and often unrealistic timeframes.

To improve the quality of documentation that is produced, firms must initially adhere to policies and procedures, especially those embedded within quality assurance. Consultants should be paid a realistic level of fees for the work they undertake. For example, initially through the process of negotiation a lump sum and then additional work paid on a cost-plus basis. Consultants have an obligation and a responsibility to produce documentation that can be used effectively to construct a building that is required by the client. Undertaking design verifications, reviews and audits is a necessity. In fact, in large complex projects the use of a third party auditor to review the design and documentation could prevent scope changes, omissions errors, and design errors manifesting downstream on-site thereby reducing the likelihood of rework and a dispute.

### **People**

Firms need to make conscious decisions about the people they use to procure their projects. Differing personality types are needed for specific types of project because of the client’s nature and the team they are working with. Firms need to select personnel who have the emotional intelligence to deal with the challenges that are imposed upon them. Thus, it is imperative that firms have a sound understanding of their staffs’ personality type, their emotional intelligence and how they are able to cope with the pressures associated with their role in the specific project. Personality tests should be undertaken, as part of the recruitment process to determine how individuals fit with the affective context of the organization and the projects they will be involved with. For complex projects, for example, consideration should be given to the composition of the project team in terms of their personalities and how they could potentially solve problems that may arise. The development of an emotionally intelligent team that is able to stimulate creativity and solve problems that arise during design and construction will be able to manage conflict more effectively and resolve issues through negotiation as a project progresses.

## **VI. CONCLUSION**

A considerable amount of research has been undertaken with regard to the dispute causation within construction. Despite calls for the construction industry to improve its performance through the adoption of principles and techniques associated with lean production and supply chain management; poor contract documentation, scope changes and adverse behavioral adaptations of individual still prevail. A client who understands their scope should be able to select a procurement option that best meets their needs. The requirement of contractor involvement during the design process can improve constructability and reduce the probability of design changes. When there is scope uncertainty and no contractor involvement during design then the likelihood of scope changes increases, which may increase project costs and time and lead to claims and disputes. Issues associated with uncertainty may not have been identified during the planning, omission errors arise within

contract documentation, which may not be identified until construction is well underway. The time to rectify the error may affect the progress of the work or even require a design change and thus lead to a claim being made for additional payment or an extension of time. The organizational system is the interface between the individual and the project. Here practices, policies and procedures are put into place and tasks are performed in accordance to the organization's role in the project. Project scope, contractual conditions, particularly the allocation of risk and responsibility and procurement strategy are key elements to be considered by the organization as this will influence their planning and resourcing and their ability to achieve project outcomes. The organization needs to examine how it can best deliver client's requirements with the resources available and within the parameters specified. Changes in an individual's attitudes and disposition and changes in an individual's behavior can adversely influence their decision-making capacity, relationships, and their ability to solve problems and negotiate, especially over contractual claims. Thus, it would appear that there is a lack of understanding about the dynamics of disputes. With this in mind, this paper has attempted to identify the underlying influencing disputes and suggest some key prevention strategies. Further empirical research is required to determine the recurring conditions that contribute disputes.

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