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Practical Investigation of Factors Affecting Selection of Dispute Resolution Methods in Construction Projects

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Abstract - *Construction projects are increasingly complex, resulting in complex contract documents. Complex construction can likewise result in complex claims and disputes. 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. This study provides an insight into the factors which impact upon the selection of dispute resolution methods for construction in the Indian industry. The 12 factors used Bindingness, Economy, Confidentiality, Control, Remedy, Enforceability, Fairness, Flexibility, Privacy, Speed, Relation, Creative etc. Through questionnaire survey, the relative importance of these factors in the selection of dispute resolution methods is examined and through interviews, the efficiency of the current alternative dispute resolution methods operating in India is compared with each other.*

Key Words: Disputes, Dispute Resolution Methods, Litigation, Arbitration, Dispute Resolution Board, SPSS, Principal component Analysis, etc.

1. INTRODUCTION

Today, India is the second fastest growing economy in the world. The Indian construction industry is an integral part of the economy and a conduit for a substantial part of its development investment, is poised for growth on account of industrialization, urbanization, economic development and people's rising expectations for improved quality of living. In India, construction is the second largest economic activity after agriculture. Construction accounts for nearly 65 per cent of the total investment in infrastructure and is expected to be the biggest beneficiary of the surge in infrastructure investment over the next five years. Investment in construction accounts for nearly 11 per cent of India's Gross Domestic Product (GDP). $239.68 billion is likely to be invested in the infrastructure sector over the next five to 10 years - in power, roads, bridges, city infrastructure, ports, airports, telecommunications, which would provide a huge boost to the construction industry as a whole. 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. In the construction industry, since differences in perceptions among the participants of the projects, conflicts are inevitable. If conflicts are not well managed, they quickly turn into disputes. Disputes are one of the main factors which prevent the successfully completion of the construction project. Thus, it is important to be aware of the causes of disputes in order to complete the construction project in the desired time, budget and quality. 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. 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.

1.1 OBJECTIVES

i. To identify the factors affecting selection of dispute resolution method in construction project.

ii. To identify current dispute resolution methods in use.

1.2 PROJECT BACKGROUND

i. Data collected with the help of questionnaire survey from contractors, consultants and client based companies.

ii. Then by using SPSS software principal component analysis is done.

iii. Then interpretation of results is carried out

2. LITERATURE SURVEY

In Emre Cakmak [1] proposed a An analysis of causes of disputes in the construction industry using analytical network process. This system 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.

A.A. Elziny et al.,[2], concentrated on problem of dispute management in Egyptian construction projects. This study presents a comprehensive review of the available literature on analysis of disputes. The objective of this study was to provide an expert system can evaluate the overall dispute settlement procedures at company's projects. The most important source of disputes was ''contract management'', the second was ''contract documents'', the third was financial issues, the fourth was ''project related issues'', and the lowest one was ''other sources'' such as force majeure, and loose of construction laws 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 Zhang Yang [3], contracts are main part of dispute management system. Constructional project contracts are the agreements made by construction project owners (contract issuing parties) and construction enterprises (contractors) according to basic construction procedures in order to complete specific construction and installation projects and to define the rights and obligations of both parties.

Mitkus S. et al., [4] analyzed the causes of conflicts arising between client and contractors in the construction industry. Having analyzed publications addressing disputes in construction projects, the researchers arrived at the conclusion in this study that externally visible circumstances of conflict are usually identified in the contemporary scientific literature as the causes of conflicts. In this study, a construction contract agreement is analyzed as a product of communication between the parties to a construction contract agreement. The research has revealed that a contract allowing a room for being differently (subjectively) interpreted by the parties constitutes the main cause of conflicts in construction projects. It means that the most frequent cause of construction conflicts is unsuccessful communication between the parties to a construction contract agreement. Due attention to the drawing up of construction contract agreements would create strong immunity against pandemic conflicts and disputes. Other causes of conflicts in the construction industry identified in this article include unfair behavior of construction participants and psychological defense mechanisms.

The main goal of A. H. Abdul Tharim et al., [5] was to overview the factors of conflict in construction industry. The study highlighted three types of conflict factors which are conflict factors due to behavioral problems, contractual problems and technical problems. Factors of conflict due to behavioral factors includes reluctant to check for constructability, clarity and completeness and poor communication among project team. Meanwhile the factors of conflict which is due to contractual problems are such as late giving of possession, delay interim payment from client and unclear of contractual terms. Whereas, contractor fails to proceed in a competent manner and late instructions from architect or engineer are the factors of conflict which arise due to technical problems.

Output of study made by K.C. Iyer et al., [6] is the issues which prompted to develop the current system are mainly the gaps in contract documents leading to disputes. While a foolproof contract document might reduce the issues drastically, it is practically near to impossible to have such a foolproof contract. There are reasons for inconsistencies and discrepancies in large contracts which are beyond the control of the drafter of the contract.

3. Factors Considered for Study

- Economy
- Speed
- Relation
- Flexibility
- Confidentiality
- Enforceability
- Privacy
- Fairness
- Bindingness
- Control
- Remedy

4. RESULT

Table 1 : Rotated Component Matrix calculation

Rotated Component Matrix				
	Factors			
	1	2	3	4
Fairness	.677	-.204	-.267	-.010
Confidentiality	.583	-.012	.411	.271
Privacy	.580	.101	.095	-.140
Economy	.266	.770	.054	.002
Control	.219	-.714	.232	-.100
Bindingness	.310	-.375	-.720	.138
Enforceability	-.047	-.084	.645	-.091
Flexibility	.184	-.264	.624	.046
Remedy	-.170	.190	-.049	.748
Relation	-.101	.473	.052	-.642
Creative	.465	.131	-.207	.513
Speed	.352	.314	-.191	-.353

KMO and Bartlett's Test

Following table shows Kaiser-Meyer-Olkin Measure of Sampling Adequacy test results greater than 0.5 that is 0.507 and signifivance 0.000 hence data is acceptible.

Table 2: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.507
Bartlett's Test of Sphericity	Approx. Chi-Square	119.653
	Df	66
	Sig.	0.000

Mean Score Analysis

Table shows descriptive statistics of twelve components in that economy, speed, relation and flexibility components shows higher values and remedy and creative components shows lower values.

Table 3: Mean Score Analysis

Component	Mean	Std. Deviation	Analysis N
Economy	4.5224	0.58668	67
Speed	4.2687	0.68716	67
Relation	4.0149	0.66270	67
Flexibility	3.8358	0.68749	67
Confidentiality	3.6567	1.21296	67
Enforceability	3.6418	0.68978	67
Privacy	3.5970	0.87143	67
Fairness	3.4478	0.72370	67
Bindingness	3.3433	0.47839	67
Control	3.2239	0.79431	67
Remedy	2.8209	0.86909	67
Creative	2.7015	0.95370	67

5. CONCLUSION

In this study twelve componentes which affects the selection of dispute resolution methods were identified. Principal component analysis tool of SPSS analysis software was uesd to study them. According to descriptive statistics of study which shows mean frequencies for each component in which economy, speed, relation and flexibility shows higher frequencies and remedy and creative shows lower frequencies. Four factors were extracted using principal component analysis that is factor analysis. Factor 1 contains fairness, speed, bindingness, confidentiality and privacy which is related to nature of proceeding of dipute resolution methods, so it is named as factor nature of proceeding of DRM. Factor 2 contains economy and relation which is related to benefit of dispute resolution method, so it is named as benefit. Factor 3 contains enforceability, flexiability and control which is related to settlement of agreement, so it is named as settlement of agreement. Factor 4 contains remedy and creative which is related to outcome of process, so it is named as outcome of process.

So four factors that are extracted from the study are

Fcator1 : Nature of proceeding of DRM

Fcator2 : Benefit

Factor3 : Settlement of agreement.

Factor4 : Outcome of process.

6. REFERENCES

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