

Building Information Modeling in Conflict Management and Document Management

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ABSTRACT

The construction industry suffered by the Conflict (Dispute) in construction contract. The greatest challenges facing by many Organizations. How to resolve dispute arising in the contract which is extremely affected on time, financial ratio, end result of the project. This study focuses on the identification and evaluation of factors of causes and efforts of conflicts. Actually we concentrate survey to finding up with several conflict issues related to project time, cost, quality, safety, scope and personal etc. The results can be useful for construction practitioners by taking alternative approaches for reducing the miscommunication between both parties. BIM and The research methodology is adopted based on various type of survey and method is used by preparation of Questionnaires related to any organization and focusing the Indian construction project. The survey is most effective methods to significant factors causing conflicts in the construction industry .Due to conflict and dispute occurring the serval problems have become widespread feature on construction industry like loss of time and money, effect on quality of works. Since the Conflict and dispute are the reason worry because a well planned construction project cannot run smoothly, so It should be manage or resolve by suitable methodology according level of conflict or intensity of conflict. At present , the Arbitration and conciliation act, 1996 (India) is the foundation for all dispute resolutions in sectors governments sectors and private sectors, provisions are made in contract documents for Dispute Review Expert (DRE) and Dispute Review Board(DRB).

This project related to study of causes of conflict in existing project and planning of conflict management on conflict or dispute in upcoming project in Pune region. BIM is considered as an best concept to control and manage conflict occurrence, but selection of the appropriate with BIM function to solve a particular type of conflict may not be subjective in industry.

1. Introduction

Construction and Infrastructure projects are most important element of any country in which includes mass housing, Commercial, industrial growth. The Construction industry have complex and competitive environment in which may types of talents , different views and levels of knowledge of the construction process works together smoothly. In this Environment the participants who's from various professions, each have own goals and each expects to rich own goal and try to best for more benefits. The mainly related to this process many people's are meets together from various types of cultural and state therefore the dispute and conflict generated by interaction various phase in construction process. Conflict is the main issue in which condition of the occurrence of the mismatch between the values or goals to be achieved, both in the individual and in relation to others.

In this situation includes the factor of owners, consultants, contractor, availability of resource, fund, Project scope. The main dispute or conflict will occurred due to the main factor in the contract which is the agreement between owner and contractor in various works like Rework of any Projects, incorrect design, arising the amount of projects.

“The conflict is one of the greatest challenges facing the construction industry during the last couple of decades has

been how to resolve conflict in construction contract” in time efficient with minimization financial cost without any hindering the preplanned end results of construction project.

As a results of such types of issue arising in the projects, conflicts and disputes may occurs which can be lead to disruption of increased project cost, construction schedules and adversely influence relation between project participants. If Dispute is not resolved properly and in time it may escalate and ultimately litigation proceeds which are extremely costly for parties which are participated concern projects. In running situations specific causes which are responsible to occur conflict like as changes in condition, labor disputes, inadequate designs, These are the effects on finance condition, time of completion, and Quality of work. By systematic research of organization study the main internal causes and external causes which are responsible for conflict by study of paper or documents related to the dispute. And study of Level of conflict and impact on performance of organization.

We will also show the major issue and points to avoid the step while contracting process ad its documentation. We study to find out remedial to minimize the issue related to contract and development of organization by reducing the causes and factors which are responsible.BIM is one of the latest platforms that promote a high level of collaboration, information sharing,

and coordination where its implementation ranges from project initialization to completion stage.

1.1 Conflict:

- Conflict is the word which used in the construction industry (at least in communications between parties).The word 'conflict' and the idea of conflict is critique on dispute and the resolution of dispute.
- conflict is requisitioning, opposition, incompatible behavior, controversy or antagonistic interaction and disputes is one of the range of events considered as conflict
- Conflict is miscommunication between both parties due to changes in any condition of contract, any changes in design those are affect on overall cost of project due to time spend due to conflict.

1.2 Causes of internal conflict in construction industry:

- Scope changes/ changes order or condition of contract by designer or contractor.
- Errors and changes in drawings. (Design Change due to Variations of Builders)
- Error in estimating of total project cost.
- Improper Contracting practices such as Contract familiarity.
- Faulty preplanning Scheduling of site work process.
- Improper Project management procedures implementation.
- Lack of Administration powers.
- Time of sanctioning Payment and budget.
- Lack of quality of workmanship.
- Lack of Knowledge of local contractors.
- Poor communications between participants.
- Misunderstandings between client, contractor, owner.
- Failure of participants to deal promptly with changes

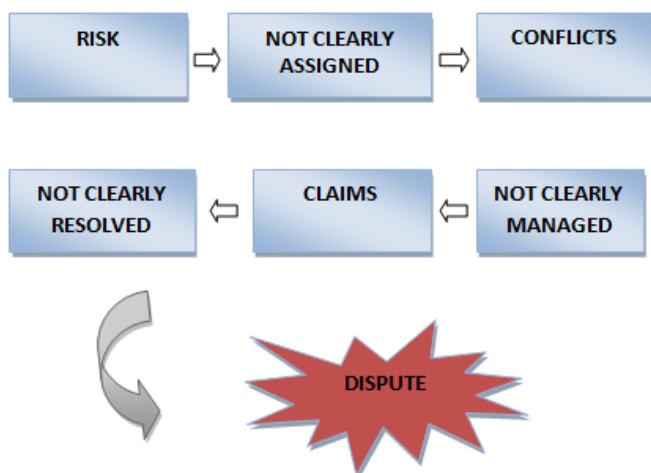


Fig.1.2 Risk, Conflict, Claim And Dispute Continuity

1.3. Types of internal conflict in construction industry:

- Construction Related Causes of Dispute:
- Financial/Economical Causes of Disputes:
- Management Related Causes of Disputes:
- Contract Related Causes of Disputes:

1.4 Problem Statement:

- Conflict management is the most important system which should be implementing during the project operations because conflicts in construction projects commonplace. Conflict management is mechanism that designed to manage the conflict which will cause of negative effect. Personal knowledge and experience is need to identifying the causes and predicting the conflicts in construction projects which will be come during the projects. Conflict prediction is more important for upcoming project to avoid any dispute during project will be run.
- This research aims to study the causes of conflict in 2 medium scale private organization and 2 to 3 organization which works in government sectors. Understand their past conflict and suggest remedial on it. As well as we introduced the documents management related to contracts which terms clear and overcome the issues which will identify after contracts agreements.

1.5 Scope of study:

- To generate the questionnaires and pilot study to determine level of conflict and increase the knowledge about conflict in organization and their contract and find out the solution to settle down by available conflict management methods.
- To suggest the precautions should be carried out for the new projects or any construction related work with contract agreement bonded by different two parties.

1.6 Project Objectives:

- To study of the causes of internal and external conflict in construction industry.
- To determine the relationship between causes and effects of conflict in construction industry.
- To identify the internal conflict with related factors.
- To determine the causes leading to conflicts encountered on the construction projects.
- To generate questionnaires and collect data from expert and relative organization. It can achieved by reviewing existing literature review which is available for study and obtain the solution or management techniques for overcome on it.
- The goal of this research is to increase the knowledge about conflict in organization and their contract and find out the solution to settle down.

2. Research Methodology

This research going on To find out the conflicting factors which are influence on Indian construction industry , actually this study outcome is the research methodology will be used to carry out the research in which the data collecting by generating the various questionnaires and analysis, after that according to analysis report we suggest the conflict management method for best precaution rule or suggestion which should be considered at the time of contract agreement of work between two different parties

2.1 Questionnaires Research

The main objective of Questionnaires Survey often typically question and answer includes which related the factors of conflict. As well as we will study about the past conflict and their factor which faced again and again by same organization.

2.2 Data Analysis:

According to data analysis we can measure the level of conflict of any organization and give the solution on conflict according its level. According to questionnaires and pilot survey of such organization in which conflict or dispute are occurred by miscommunication between builder and contractor or two

parties which are including in project or contract agreement. Following the factors are responsible for conflict.

Factors of conflicts and effects of conflicts in construction projects:

- a) Lack of Quality of workmanship.
- b) Delay of activity (Not task completed according to scheduling)
- c) Design Changes by Architecture and Client.
- d) Faulty scheduling of site work.
- e) Miscommunication between contractor and client.
- f) Lack of availability of material.

Variables	Indicators
Owner	Failure of respond to issues in a timely
	Lack of communication among the team members
	The mechanism is not clear in providing information
	Poor management, control and coordination
Consultant	Failure in determine responsibility in accordance with the contract or client
	Estimation error
	Delayed in providing information
	Design errors and specifications
	Pictures and specifications are incomplete
	Calculation of incorrect work progress
	Lack of experience of consultants
	Lack of contractor coordination, management, supervision,
	Delay of jobs
	Failure of plan and implement change of work
Fail in understand the price of the work or the offer price correctly	
Contracts and specification	lack of construction documents
	lack of clarity of document the distribution according workflow
	confusing of terms in the contract documents
	double meaning in the contract documents
	Unable to understanding of contracts in foreign languages

Conflict management implementation is most important in such case as above. According to existing literature (1) This management addressing the problem of conflict with several methods as follow:

1. Force
2. Smoothing
3. Withdrawing
4. Compromise
5. Problem Solving

Common factors are found in the survey as follow:

Sr.No	Common Factors
1	People interruptions
2	Communication barriers
3	Personality conflicts(ego)
4	Priority of goal/objective
5	Outside people interruptions
6	Communication breakdown
7	The project team has responsibilities
8	problems Cost estimation
9	Uneven commitment
10	Variations
11	Management procedures and administration
12	Late instructions
13	The project team members impose unrealistic time demands to perform respective tasks
14	Relationship problem
15	Lack of information
16	Design errors
17	Delay caused by person from any organization

18	Miscommunication of each other
19	Late delivery of materials of materials by employer/vendor
20	Opening for inspection
21	dissatisfies the work progress of the main contractor
22	Manpower resources
23	Change of site condition or rescheduled
24	Insufficient efforts to keep partnering going
25	Inconsistent demands from clients, architects or engineers
26	No any Input or instruction from leader
27	Lack of continuous improvement
28	Common Factors

3. Conclusions

In this report consist A strategy of study of conflict in construction industry, and conflict resolution by BIM techniques. According to survey and data collection findout common factors of conflict in all level of project , We suggest the remedial on conflict during various stages of project. and To give suggestion on documentation techniques about contract agreement between two parties of new project. The mainly effects of conflicts are like as quality of works, disputes,

arbitration, time overrun, quality of work, wasted resources, lack of new idea, , effect on productivity, poor quality of work due to time limitation, negative social impact, poor decision making of responsible person, cost overrun of company, dissatisfaction and stress, increased costs , if conflict is not resolved permanently then it allow to invite the main costly litigation.

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