Causes Leading To Conflicts in Construction Projects: A Viewpoint of Pakistani Construction Industry

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Abstract---Conflict seems very synonym with construction projects and leading to the impression of problems including project cost overrun, time overrun, productivity loss, loss of profit and damage in business relationships. This study focuses on the identification of different direct and indirect causes leading towards conflicts which are usually taking place in construction industry of Pakistan. The direct and indirect causes of conflicts were identified through a detailed literature review and later on, shaped in to a questionnaire to get the expert opinion. The results of this study shows that Delay in payment, Contractual claims, Public interruption, Poor communication, Differing site conditions, Lack of funds, Unclear risk allocation are the direct causes leading to the conflicts followed by the indirect causes. It is concluded that special attention should be given to these factors during the life cycle of the construction project so as to avoid conflicts.

Keywords---Conflict, Dispute, Construction Industry, Average Index Method

I. INTRODUCTION

THE construction industry often focused as a project based industry that is assigned by the unique characteristics of each project and the involvement of the various parties within the project life cycle. Due to the diversity of the industry and the involvement of various parties, conflicts and disputes do take place [1]. Conflict is a serious disagreement between parties due to various reasons, i.e. payment, communication, public interruption etc. It can give rise to problems including, project cost overrun, project delay, reduce productivity, loss of profit and damage in business relationships. Conflicts do take place in the public and private sector projects, the construction industry of Pakistan is not exceptional [2]. Conflicts and disputes in construction projects affect the performance of all stakeholders, such as owners, design and supervision of the consultant team, contractors and subcontractors. Meaning that construction sector involves four groups or large parties and their actions can lead to the conflict [3].

The efforts of all these four major parties are essential to the project to become a reality and a success story. Project cost, quality and timeliness depends on several factors. These four major parties work for completing the general interest of the project objectives. The owners have an interest in obtaining a quality structure of most economic quality. Designers design for owner via detailed drawings and specifications. Designers may be interested in showing the creativity and it may account more cost and time. Builders (contractor/sub-contractors) are interested in working with hustle with minimum cost and transfer of the entire final structure to satisfaction level for the owner. Labour force turns directions shown in the drawings and specifications into reality through their skills and efforts, working individually or in teams led by foremen [4-6]. Conflict rooted in construction continued conflict management, which should focus on the strategy to avoid or minimize conflict as soon as possible. This is due to the fact that, despite the different methods of conflict management and conflict resolution techniques have been identified and these are continue to be explored but still the industry is experiencing tremendous growth in conflicts [7]. This raised questions about the effectiveness of conflict and dispute resolution approaches, which now tend to solve problems rather than preventing them. It is expected that any attempt to resolve conflict or disputes quickly, cheaply and effectively should start as soon as possible in the chain of events that causes the situation in that focusing on opportunities for prevention rather than cure [8-9]. Therefore, based on this argument, this paper has materialized to assess the views of the professionals on the basis of their experience and expertise in relation to the potential of innovative methods of procurement markets as a mechanism for management and conflict resolution for the construction industry.

II. PROBLEM STATEMENT

It is essential for a successful project to be completed in scheduled time and within estimated cost and of specified quality. For this purpose project should be well planned, properly designed and above all agreeable construction. Among several factors which influence success of a construction project, one of them is art of dealing with Conflicts. It is most common problem in working team of a project. It gives rise to the problems including increasing project cost, project delays, reduce productivity, loss of profit and damage in business relationships. In this paper, an effort has been made to deal such situation. It was found necessary to study the direct and indirect causes leads conflicts in detail for the construction industry of Pakistan.

III. RESEARCH OBJECTIVES

The aim of this research was to develop a mechanism to deal

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with conflict and disputes in the construction industry. To reach up to the main theme of the research following research questions were important to answer.

Identification of Direct and Indirect causes of conflicts
Investigate the priority rank of the identified causes of conflicts

IV. DATA COLLECTION & ANALYSIS

A detailed literature review has been carried out through [10-12] to identify different causes of conflicts normally takes place in the construction industry of Pakistan. The identified causes were placed in a set of questionnaire to get the experts’ opinion. The questionnaires were sent via email and mail to various construction companies in Pakistan. Finally, the data were analyzed using Average Index Method (AIM).

A. Profile of Respondent
A total number of 100 questionnaires were sent to various clients, consultants, contractors and sub-contractors within construction companies. A total number of 70 participants duly completed and returned the questionnaires. Whereas 25 respondents were from the clients side which is 36% of total, 20 respondents were from consultants which is 28% of the total, 7 respondents were from contractors which is 10% of total, 2 respondents were from architects side which is 3% of total and 16 respondents were others which is 23% of the total respondents. Fig.1 is showing the pie chart of the respondents.

B. Respondents Experience
Respondents experience is very important for qualitative studies. Conflict analysis depends on respondent experience. Fig.2 is showing the bar chart of the respondents’ experience.

V. RESULTS AND DISCUSSION
The respondents were asked to rank the direct and indirect causes of conflicts on the given scale. The following section highlights the results of the direct causes of conflicts.

A. Rank of the Direct Causes to Conflict
The main focus of the survey is to identify the areas (main groups) of conflicts. For each conflict group, the respondents were requested to judge the significance level by selecting one of six grades, namely, not applicable, very low, low, moderate, high and very high. The results are summarized in Fig.3

Fig.3 Ranking of Direct Causes of Conflicts
Fig.3 shows that “Delay in Payment”, “Contractual Claims” and “Public Interruption” is ranked as first, second and third with an average mean value of 3.12, 2.90 and 2.72 respectively. These are the major areas (groups) of causes which lead to the major conflict or disputes in the construction industry of Pakistan. Whereas, the “Multiple Meaning of Specifications” and “Cultural Differences” are ranked at number 10 and 11 with an average mean value of 2.17 and 2.15 respectively as the major or direct cause of the conflict.

B. Ranking of Indirect Causes of Conflict
This focuses on identification of different indirect factors which cause conflicts. The survey results are summarized as follows.

i. Ranking of Indirect Causes of Conflicts due to Delay in Payment
Conflict due to delay in payment is important area of conflict occurrence. This group cause serious conflict. Fig.4 shows the average mean values and rank of the indirect causes of the conflicts due to delay in payments.

Fig.4 Ranking of the Indirect Causes of Conflicts due to Delay in Payment
Fig.4 shows that “Lack of Funds” and “Poor Financial Projection on the Client Side” is ranked as first and second indirect cause of the conflicts due to delay in payments with an average mean value of 3.12 and 3.08 respectively. Whereas, the “Inadequate Contract Provision for Enforcement
of Timely Payment” and “Delays Originating from Evaluation Process of the Contractors by the Consultants” are ranked at number 5 and 6 with an average mean value of 2.58 and 2.55 respectively as the minor or indirect cause of the conflict due to delay in payments.

### ii. Ranking of Indirect Causes of Conflicts due to Contractual Claims

Conflict due to contractual claims is important area of conflict occurrence. This group cause serious conflict. Fig.5 shows the average mean value and rank of the indirect causes of the conflicts due to contractual claims.

![Fig.5 Ranking of the Indirect Causes of Conflicts due to Contractual Claims](image)

Fig.5 shows that “Unclear Risk Allocation” and “Inadequate Contract Administration” is ranked as first and second indirect cause of the conflicts due to contractual claims with an average mean value of 2.75 and 2.54 respectively. Whereas, the “Inadequate Contract Document” and “Incomplete Tender Information” are ranked at number 5 and 6 with an average mean value of 2.24 and 1.98 respectively as the minor or indirect cause of the conflict due to contractual claims.

### iii. Ranking of Indirect Causes of Conflicts due to Public Interruption

Conflict due to public interruption is important area of conflict occurrence. This group cause serious conflict. Fig.6 shows the average mean value and rank of the indirect causes of the conflicts due to public interruption.

![Fig.6 Ranking of the Indirect Causes of Conflicts due to Public Interruption](image)

Fig.6 shows that “Unfair Compensation for Displaced People” and “Poor Public Relationship between the Project People and the Public” is ranked as first and second indirect cause of the conflicts due to public interruption with an average mean value of 2.78 and 2.62 respectively. Whereas, the “Public Resistance due to Pollution of the Environment to be Caused by the Project” and “Non Adherence to Public Authorities” are ranked at number 4 and 5 with an average mean value of 2.52 and 2.44 respectively as the minor or indirect cause of the conflict due to public interruption.

### iv. Ranking of Indirect Causes of Conflicts due to Poor Communication

Conflict due to poor communication is important area of conflict occurrence. This group cause serious conflict. Fig.7 shows the average mean value and rank of the indirect causes of the conflicts due to poor communication.

![Fig.7 Ranking of the Indirect Causes of Conflicts due to Poor Communication](image)

Fig.7 shows that “Poor Feedback System” and “Negligence” is ranked as first and second indirect cause of the conflicts due to poor communication with an average mean value of 2.7 and 2.65 respectively. Whereas, the “Lack of Communication Procedures” and “Non Adherence of Communication Procedure Set” are ranked at number 4 and 5 with an average mean value of 2.38 and 2.34 respectively as the minor or indirect cause of the conflict due to poor communication.

### v. Ranking of Indirect Causes of Conflicts due to Differing Site Conditions

Conflict due to differing site conditions is important area of conflict occurrence. This group cause serious conflict. Fig.8 shows the average mean value and rank of the indirect causes of the conflicts due to differing site conditions.

![Fig.8 Ranking of the Indirect Causes of Conflicts due to Differing Site Conditions](image)

Fig.8 shows that “Lack of Money, Time and Experts in Site Investigation” and “Lack of Knowledge of Site Conditions” is ranked as first and second indirect cause of the conflicts due to differing site conditions.
to differing site conditions with an average mean value of 3.11 and 2.98 respectively. Whereas, the “Ignorance of Client and Consultant on Importance of Site Investigation” and “Wrong Interpretation of Site Investigation” are ranked at number 5 and 6 with an average mean value of 2.77 and 2.74 respectively as the minor or indirect cause of the conflict due to differing site conditions.

vi. Ranking of Indirect Causes of Conflicts due to Contract Variations

Conflict due to contract variations is important area of conflict occurrence. This group cause serious conflict. Fig.9 shows the average mean value and rank of the indirect causes of the conflicts due to contract variations.

Fig.9 shows that “Change of Scope of Works as a Result of Changes in Requirement Ordered by the Client” and “Change of Scope of Works as a Result of Design Errors” is ranked as first and second indirect cause of the conflicts due to contract variations with an average mean value of 2.91 and 2.78 respectively. Whereas, the “Errors in Bill of Quantities”, “Errors in Drawing” and “Errors in Specifications” are ranked at number 4 with an average mean value of 2.52 each as the minor or indirect cause of the conflict due to contract variations.

vii. Ranking of Indirect Causes of Conflicts due to Errors in Project Documentation

Conflict due to errors in project documentation is important area of conflict occurrence. This group cause serious conflict. Fig.10 shows the average mean value and rank of the indirect causes of the conflicts due to errors in project documentation.

Fig.10 shows that “Incompetent personnel in preparation of project documents” and “Inexperience of personnel involved in preparation of document” is ranked as first and second indirect cause of the conflicts due to errors in project documentation with an average mean value of 2.7 and 2.61 respectively. Whereas, the “Negligence” and “Inadequate Time for Document Preparation” are ranked at number 4 and 5 with an average mean value of 2.45 and 2.28 respectively as the minor or indirect cause of the conflict due to errors in project documentation.

viii. Ranking of Indirect Causes of Conflicts due to Design Errors

Conflict due to design errors is important area of conflict occurrence. This group cause serious conflict. Fig.11 shows the average mean value and rank of the indirect causes of the conflicts due to design errors.

Fig.11 shows that “Cheap Design Hired Instead of Quality” and “In-adequate Brief” is ranked as first and second indirect cause of the conflicts due to design errors with an average mean value of 2.62 and 2.6 respectively. Whereas, the “Inexperience of Designer” and “Misinterpretation of Clients Requirements by the Designer” are ranked at number fourth with an average mean value of 2.14 each as the minor or indirect cause of the conflict due to design errors.

ix. Ranking of Indirect Causes of Conflicts due to Difference in Evaluation

Conflict due to difference in evaluation is important area of conflict occurrence. This group cause serious conflict. Fig.12 shows the average mean value and rank of the indirect causes of the conflicts due to difference in evaluation.

Fig.12 shows that “Dubious Claims by Contractors” and “Tendency of Contractor Claiming High Prices” is ranked as first and second indirect cause of the conflicts due to difference in evaluation with an average mean value of 2.82 and 2.74 respectively. Whereas, the “Unclear Method of Pricing in the Contract” and “Tendency of Consultant/Client under Valuing” are ranked at number 4 with an average mean value of 2.38 and 2.28 respectively.
value of 2.58 each as the minor or indirect cause of the conflict due to difference in evaluation.

x. **Ranking of Indirect Causes of Conflicts due to Multiple Meaning of Specifications**

Conflict due to multiple meaning of specifications is an important area of conflict occurrence. This group cause serious conflict. Fig.13 shows the average mean value and rank of the indirect causes of the conflicts due to multiple meaning of specifications.

![Graph showing ranking of indirect causes of conflicts due to multiple meaning of specifications](image)

Fig.13 Ranking of the Indirect Causes of Conflicts due to Multiple Meaning of Specifications

**Fig.13** shows that “Complicated Project” and “Inexperience Specification Writer” is ranked as first and second indirect cause of the conflicts due to multiple meaning of specifications with an average mean value of 2.77 and 2.55 respectively. Whereas, the “Vested Interest” and “Negligence” are ranked as third and fourth indirect cause of the conflict due to multiple meaning of specifications.

xi. **Ranking of Indirect Causes of Conflicts due to Cultural Differences**

Conflict due to cultural differences is an important area of conflict occurrence. This group cause serious conflict. Fig.14 shows the average mean value and rank of the indirect causes of the conflicts due to cultural differences.

![Graph showing ranking of indirect causes of conflicts due to cultural differences](image)

**Fig.14** shows that “Professional Culture Problems”, “Working norms problems” and “Adversarial Industry Culture” are ranked as first, second and third indirect cause of the conflicts due to cultural differences with an average mean value of 2.89, 2.77 and 2.41 respectively. Whereas, the “Language Problem” is ranked as fourth indirect cause of the conflict due to cultural differences.

VI. **Conclusions**

It has been observed that success of a construction project depends upon a number of variables. One of them is the way how construction team facing conflicts in the project. Conflicts and disputes in the construction affect the performance of all the stakeholders e.g. Sponsor, Owner, Consultants, Design team, Contractors, sub-contractors, Material or equipment supplier and labor force etc. The main objective of the research was to identify direct and indirect causes of the conflicts in the construction projects in the construction industry of Pakistan.

The result of the study indicates that “Delay in payment; Contractual claims (on extension of time and financial claims); Public interruption; Poor communication; Differing site conditions” are the five most areas of conflicts which greatly influence the performance of project in construction sector of Pakistan. However “Excessive contract variations; Errors in project documents; Design Errors; Difference in evaluations; Multiple meaning of specifications and Cultural differences” are the low ranked areas of conflicts which can cause conflict and dispute resulting in effects on stakeholders performance and project.

The research identifies that Lack of funds, Poor financial projections on the client side, excessive claims made by the contractor, lack of site knowledge, investigation of the site conditions, Unclear risk allocation, Lack of money, time, and experts in site investigation, change of scope of work as a result of changes in requirement ordered by the client, Incompetent personnel in preparation of contract documents, Dubious claim by contractors, Complicated project and Professional cultural problems are the indirect causes of conflict in the construction industry of Pakistan.

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