

A Review of Causes and Effects of Dispute in the Construction Projects of Nepal

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Abstract

This study was conducted during the period from January to April 2018. 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 Nepal 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: Conflict; Disputes; Construction projects; Cost overrun; Time overrun

Introduction

Construction projects are important elements of any country's infrastructure and industrial growth. The construction industry makes its direct contributions to economic growth of the country. Nepalese Construction Industry contributed around 11% to the Gross Domestic Product (GDP) of the country and it uses around 35% of government budget [1]. The construction industry has great employment generation potential. It is estimated that this sector is creating employment opportunities to about one million people. About 60 percentages of the development budget is spent through the use of the contractors [2].

The construction industry is a huge organization, in which several construction participants with different background, different knowledge and different mentality work together. Their common motto is to make maximum profit. With these differences, the results in clashing of ideas, thoughts and perceptions in any decision makes conflicts in such situation become inescapable as well as inevitable. Since, it is always recommended that conflicts have to manage as soon as possible; if not so they rapidly turn into dispute. Disputes have the endemic features in the construction industry [3]. When such matters are not properly resolved, they may escalate and ultimately may require litigation proceedings, which can be extremely costly for the parties concerned [4].

Construction disputes often happen fairly; they have the reality of every construction project and they could happen at any point in time during the design or construction phase of the project [5]. Construction disputes vary in nature, size and complexity, but they all have a common thread; they are costly both in terms of time and money and are often accompanied with the destruction of individual and good working relationships.

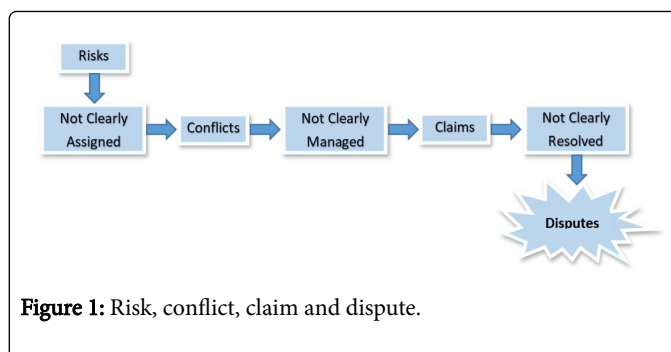
Disputes have to be resolved as soon as possible. If not so, they may get worsen that causes project delays, leads to claim for lawsuit. There are various factors like owner, consultant, third party etc. as they affect the effectiveness, productivity of work, and also interrupt with the perpetual completion of the project. Thus it is very essential to manage such factors for the smooth running or operation of a construction project without any occurrences of conflicts and disputes for better profit, and rate of return as well as on time completion of project.

In a perfect construction world, there would be no conflicts, but there is no perfect construction world [6], therefore, it is clear that conflicts in construction projects are inevitable, exactly like in any other form of human relationship, and disputes in the construction industry as an endemic problem [7]. Construction projects involve a variety of different participant groups including owners, designers, general contractors and subcontractors among others. Each of these groups has their individual objectives and concerns in terms of interest conflicts and disputes and the construction industry has gained a reputation for being contentious and litigious, in a manner that often damages the reputation of both parties. Inevitably, such disputes affect quality and punctuality of the construction project progress.

Disputes always affect the productivity and performance of a project. The history of construction points out that almost all projects face variation or poor performance with many projects failing to exceed to the expectation of the client thus, affecting time, cost and quality of the projects [8]. Direct costs associated with disputes range from 0.5 to 5% of the projects contract value. The indirect costs, on the other hand, resulting from lost productivity, stress, fatigue, loss of future work, the cost of strained business relationships among the various parties and tarnished reputation may cause even more damages to the parties involved [9]. Therefore, this current study will investigate the perception of professional on the causes and effects of disputes in construction projects of Nepal.

Common causes of construction dispute

There has been considerable research undertaken to determine the causes of disputes in the construction industry. A literature review has been conducted in order to overview the causes of construction disputes. Several researches from different countries have been analyzed and the result shows that the claim is the main cause of dispute in the construction industry. During the execution of a project, several issues arise that cannot be resolved among project participants [10]. Such issues typically involve contractor requesting for either time extension or reimbursement of an additional cost, or sometimes both. Such requests by the contractor are referred to as 'claim'. If the owner accedes to the claim of contractor and grants him extension of time or reimbursement of additional cost, or both, the issue is sorted out. However, if the owner does not agree to the claim put out by contractor and there are differences in the interpretations, the issue takes the form of dispute [6].



Based on Figure 1, it can clearly be seen that conflict and conflict management is an essential ingredient in construction management. Thus, in order to reduce the negative impact of claims and disputes on construction projects, there is a need to identify causes of disputes in construction projects of Nepal. The identified causes are evaluated and categorized under six major groups [10]. These major causes are summarized & grouped and a table is created which encapsulates all the common causes of disputes that may occur in the construction project of Nepal (Table 1).

Category of disputes	Causes of disputes
Employer Related Factors	Failure to Finance and payments of completed work
	Failure to respond on time
	Owner Interference
	Lowest Price mentality in engagement of contractor
	Slow decision making
	Unrealistic contract duration and requirements imposed
Contractor Related Factors	Inadequate investigation before bidding
	Site management
	Failure to plan & execute the changes of works
	Construction methods
	Mistakes during construction stage
	Inexperienced contractor
	Lack of understanding & agreement in contract document
	Financial Difficulties
	Exceptionally Low Bid
Consultant Related Factors	Poor Contract management & Supervision
	Preparation and approval of drawings
	Frequent Changes in orders & Designs
	Incompleteness of drawing and specification
	Variations due to design errors
	Waiting time for approval of tests and inspection

Material, Labor & Equipment Related Factors	Quality of material
	Price fluctuation of Construction Materials
	Government Regulations
	Shortage in material
	Shortage of Labor supply
	Labor productivity
	Equipment availability and failure
Contract & Contract Relationship Related Factors	Change orders
	Mistakes and discrepancies in contract document
	Inappropriate overall organizational structure linking to the project
	Lack of communication between the parties
External Factors	Inclement Weather condition
	Regulatory changes
	Unforeseen site condition
	Political Instability
	Force Majeure
	Price escalation

Table 1: Common causes of disputes by categories.

Common dispute causes globally

Several researchers have investigated the causes of disputes in the construction industry across the globe. From last seven years the Arcadis Contract Solutions team undertakes an in-depth annual review of projects globally and publishes the report focusing on five

key areas: the length of disputes, average value, common causes, most popular resolution methods and region specific nuances. The result of the study conducted in 2016 is summarized in the table below (Table 2).

Region	Average Dispute Values (US\$ Millions)						Average Length of Dispute (Months)					
	2011	2012	2013	2014	2015	2016	2011	2012	2013	2014	2015	2016
North America	10.5	9	34.3	29.6	25	21	14.4	11.9	13.7	16.2	13.5	15.6
Asia	53.1	39.7	41.9	85.6	67	84	12.4	14.3	14	12	19.5	14.6
Middle E.	112.5	65	40.9	76.7	82	56	9	14.6	13.9	15.1	15.2	13.7
UK	10.2	27	27.9	27	25	34	8.7	12.9	7.9	10	10.7	12
Europe	35.1	25	27.5	38.3	25	19	11.7	6	6.5	18	18.5	14.1
Global Average	44.2	33.1	34.5	51.4	44.8	42.8	11.2	11.9	11.2	14.2	15.4	14

Table 2: Global construction disputes report.

The overall results show that both the values of disputes and durations globally have slightly decreased. The decreased dispute value and dispute duration will have multiple effects for both parties and are likely to have a positive impact on the construction industry.

The report also shows that number one cause of construction dispute during 2016 was poor contract administration. The issue of the

employer/contractor/subcontractor failing to understand and/or comply with contractual obligations was also the most common cause. The social infrastructure/public sector saw the most disputes globally (Table 3).

2016 Rank	Dispute Range
1	Failure to properly administer the contract
2	Poorly drafted or incomplete and unsubstantiated claims
3	Employer/Contractor/Subcontractor failing to understand and/or comply with its contractual obligation
4	Errors and/or omissions in the contract document
5	Incomplete design information or employer requirements

Table 3: Causes of construction disputes.

According to their study, the most important activities in helping to avoid a dispute were:

- Proper contract administration.
- Accurate contract documents.
- Fair and appropriate risk and balances in contracts (Table 4).

2016 Rank	Most common methods of alternative dispute resolution	2015 Rank
1	Party to party negotiation	1
2	Arbitration	3
3	Mediation	2

Table 4: Most common methods of dispute resolution.

While comparing and reviewing the overall findings provided by Global Construction Disputes Report, it was noted the following insights into global disputes:

- The average value of disputes decreased slightly compared to previous years.
- They also have decreased in duration.
- The most common cause is still a failure to administer the contract.
- Party to party negotiation is still the most common form of resolving disputes.

Common dispute causes in Nepal

In case of Nepal, such type of exact data is not available or recorded. To find out main causes of disputes and their impacts, five construction projects in different sectors are studied. Their brief study is tabulated as below (Table 5).

Name of the Project	Causes of Disputes	Impacts of the Disputes
The Kulekhani Hydropower Project	Force Majeure (Earthquake 2015, Inclement Weather condition, unforeseen site condition, Political Instability). The project has been delayed due to the damage caused to the generator in the powerhouse. The contractor has not repaired the rotor in the generator due to which the work like installing the turbine, rotor, transformer, AVR and generator are on hold.	The construction work started in 2008 and it was planned to be completed by 2011. Due to various reasons creating the disputes the project is extended number of times. Now again the completion period had pushed back once again till the end of the current fiscal year. The initial estimated cost of the project was Rs 2.43 billion but its cost has ballooned to Rs 4.22 billion.
The Narayanghat-Muglin road widening project	The initial cost estimate was based on the assumption that only 2,000 cubic meters of soil and stones would have to be removed. But constant landslides at the construction site resulted in hundreds of thousands of cubic meters of extra soil having to be taken away. The road is being expanded to a double-lane road of Asian standard. Initially, it was agreed that only 9 meters of the road's but now 11-metre width would be black topped. Construction of a 4-km wall on a stretch of the highway also added to the cost. Other factors like Inclement Weather condition, unforeseen site condition, Madhes unrest and Indian blockade are also some causes of disputes.	It's expected to incur a cost overrun of Rs430 million due to extra expenses related to delays, removal of landslide debris and increased width of black topping. The project was slated to be completed in two years by mid-May 2017. After the forth deadline extension of mid-June 2018 also expired The main impact of the disputes leads to cost overrun and time overrun.

Road widening and upgrade of Pathalaiya-Birgunj	<p>Disputes over compensation, lack of construction materials, and mismanagement of electric poles.</p> <p>Landowners whose homes are within 50 meters of the road are demanding more compensation, although they had been provided with certain compensation from the postal road project earlier.</p>	<p>The project was to be completed in 2016. However, the company sought an extension of 120 days in 2016, second extension was by 84 days. Again the project was extended for two times for 182 days and 110 days. The project has already missed its fourth deadline.</p> <p>The project was to be completed in 2016. However, the company sought an extension of 120 days in 2016, second extension was by 84 days. Again the project was extended for two times for 182 days and 110 days. The project has already missed its fourth deadline.</p> <p>The project is extended extend the completion deadline, citing factors like the 2015 earthquakes, Indian blockade and lack of construction materials.</p>
Construction of Belahiya-Butwal six-lane road	<p>Delay in replacing electricity poles was affecting the project.</p> <p>Madhes unrest and Indian blockade is also one of the causes. The main cause is negligence of construction companies.</p>	<p>The project was to be completed in 2016. However, the company sought an extension of 120 days in 2016; second extension was by 84 days. Again the project was extended for two times for 182 days and 110 days. The project has already missed its fourth deadline.</p> <p>The project is extended extend the completion deadline, citing factors like the 2015 earthquakes, Indian blockade and lack of construction materials.</p>
Gautam Buddha International Airport Project	<p>Force Majeure like Earthquake 2015, Inclement Weather condition, Unforeseen site condition, Political Instability, Indian blockade and lack of construction materials are the causes of disputes in this project.</p> <p>The negligence of contracting company is also one of the main factors. The construction came to a halt for nearly six months due to differences between the Chinese contractor and its Nepali associate company.</p>	<p>The contractor must achieve six percent progress every month to meet the deadline but due to lack of skilled manpower the contractor progress is 0.5 percent per month due to which the project could not be completed within extended period.</p>

Table 5: Causes and impacts of disputes in construction project of Nepal.

The above study in five projects of Nepal shows that disputes in the construction project arises due to

- Negligence of contracting company.
- Differing site conditions.
- Political instability and strikes other than due to contractor's internal affairs.
- Change in the scope of work.
- Failure to properly administer the contract.

Contract document is also one of the sources of disputes in case of Nepal. Not properly prepared document contains many mistakes and many ambiguities. Mistakes may be easy to interpret. But ambiguities give more than one meaning - may be two, three or four. And therefore they are interpreted by each party of the contract as suitable, convenient and beneficial to them. Therefore, it is very important that contract document is examined by a professional construction manager or a contract engineer before it is taken for implementation.

The three most common methods of Alternative Dispute Resolution used throughout 2017 in Nepal were:

- Party to party negotiation.
- Adjudicator or a three-member dispute resolution committee.
- Arbitration.

Impacts of disputes in construction projects

Dispute in the project brings breakdown of relationships between project participants and results to project delays, claims and disputes which are the main shortcomings in completion of the project within objectives and goal. Construction dispute affects the interests of many

stakeholders in connection with big investments; they reduce profits and are therefore very expensive and unprofitable. The project is said to be success when it is completed to meet customer needs without any issues and problems in terms of time, quality and budget allocation. Successful closing is categorized as resolved at the stipulated time without any problems in the dispute [14,15].

Construction is a complex process involving of many activities, myriads of individual, different company or firms, different size, part of the country with different skills and capabilities and always subject to the changing environment. If dispute in the construction industry evolves, it becomes lengthy, complex and expensive to resolve. The consequences of the construction disputes will not benefit the stakeholders in the construction project. The impact of construction disputes may include additional expense in managerial and administration, possibility of litigation cases, loss of company reputation, loss of profitability and perhaps business viability, time delays and cost overruns, diminution of respect between parties-deterioration of relationship and breakdown in cooperation, higher tender prices, extended and /or more complex award process, rework and relocation costs for men, equipment and materials, loss of professional reputation [16].

Disputes resolution methods

The problems of construction disputes impacts on all stakeholders which may lead to an inequitable mode of project delivery such as reduce the margins, increased costs and even reduced the quality and/or level of service. Most disputes are of a minor nature and are settled quickly, fairly and amicably by the building team. From time to time, however, more serious issues come into dispute. When this

happens, the project manager should make every effort to reach a fair settlement by negotiation. If it fails, it becomes necessary to use one or more of the disputes resolution mechanisms available i.e. mediation, adjudication, arbitration and litigation [17].

According to the RICS (Royal Institution of Chartered Surveyors) guidance, there are only three distinct processes, and all techniques are subsequently based on these processes. They are negotiation, mediation or conciliation, and an adjudicative process [18]. These processes are also known as the three pillars of dispute resolution [19].

Dispute settlement in the court is time consuming, formal and costly. The dispute resolution procedures are normally mentioned in the conditions of contract of every construction projects of Nepal. A contract has an Alternate Dispute Resolution Mechanism (ADR). It is a Third Party intervention for resolving the dispute between two parties. ADR is the procedure for settling disputes without litigation, such as arbitration, mediation, or negotiation. ADR procedures are usually less costly and more expeditious. Similarly, the Public Procurement Act 2063 (PPA 2063) and Public Procurement Rules 2064 (PPR 2064) have provisions for dispute resolution. If the parties in dispute cannot resolve the dispute through mutual consensus (amicable settlement), then:

- For works of value up to NRs. 100 million, disputes can be settled by sole adjudicator.
- For works of value above NRs. 100 million, disputes shall be settled by a Dispute Resolution Board (DRB) consisting of three members.
- If the parties cannot settle dispute through adjudicator or DRB, then the dispute can be resolved through arbitration or litigation (court).

Adjudication: The adjudication is “a quick and relatively inexpensive way of resolving a dispute, whereby an impartial third party adjudicator decides the issues between the parties.” The following are the characteristics of adjudication.

- It is a mechanism of dispute resolution.
- An independent third party, called adjudicator, awards the decision.
- Quicker and inexpensive mechanism of dispute resolution, compared to arbitration and litigation, normally taking less than 30 days, and
- The Public Works Directive (PPD) and the Public Procurement Act 2063 have provisions for dispute resolution through adjudication.

Arbitration: The arbitration is “a formal mechanism of dispute resolution conducted outside a court.” The following are the advantages of arbitration over litigation.

- It is a private alternative to formal court procedure.
- The arbitrators are normally technical experts.
- Less time consuming.
- Less expensive.
- No public hearing, so low publicity (which is normally preferred by the parties).
- Less formal, hence more convenient to the parties of dispute.
- The PPA 2063 has recognized arbitration as a means of dispute resolution.

The Arbitration Act 2038 governs the arbitration process in Nepal. The Nepal Arbitration Council 1991 has been providing arbitration

services in Nepal. However, in Nepal, most of the disputes go to court, or settled out of court through mutual consent, even after arbitration, by ignoring the arbitrators’ decisions.

In case of Nepal a firm called Nepal Council of Arbitration “NEPCA” is established since 1991, to administer arbitration and other alternative methods of dispute resolution in an expeditious and less expensive manner by arranging co-operation from the concerned sector. NEPCA provides administrative services for arbitrating different kinds of dispute at reasonable fees. The council is not involved in deciding cases but supplies lists of individuals from which the parties mutually select impartial arbitrators. Arbitration is conducted by specific rules and procedures, and the awards by arbitrators are legally binding and enforceable. NEPCA provides arbitration facilities for settlement of all types of commercial and construction disputes between Nepalese parties or between Nepalese and foreign parties. Arbitration procedures of NEPCA are framed in accordance with international standards and it maintains a comprehensive list of panel of arbitrators. Experts in various fields and professions renowned for their knowledge, integrity and dispute resolution skills are listed on the council’s National Panel of Arbitrators for referrals to parties involved in disputes.

Results and Recommendations

The review in this paper covers meanings of conflict & dispute and its causes. The study has unearthed different causes of disputes in construction projects of Nepal. The effort has been made for finding the factors responsible for conflict and dispute and by proper management of these factors helps in minimizing their effect on industry. From the study, it is concluded, that the main factors for causes conflicts are priority of goal/objective, change of site condition, personality conflicts, manpower resources, peoples interruptions, input or instruction from leader, outside people interruptions, architect and engineers dissatisfies the work progress of the main contractor, communication barriers, lack of continuous improvement, cost estimates, opening for inspection, late delivery of materials by employer, communication breakdown and mistrusting each other.

The main effects of conflicts are disputes, arbitration, time overrun, quality of work, wasted resources, lack of new idea, idling of resources, decreased productivity, poor quality of work due to hurry, negative social impact, poor decision making, cost overrun, dissatisfaction and stress, increased costs and litigation. But limiting the effect, it brings many favorable changes like money saving, time saving, rapid growth, and so on. The events in which disputes arise, the importance of proper disputes recovery method and compliance with formal procedures cannot be over-stressed. If disputes proceedings become inevitable, it should be some comfort to know that proper alternative dispute resolution will be an asset rather than a liability.

Recommendations for the Employers/Clients

- While selecting the contractors, clients have to make sure that the contractors are not selected based only on the lowest bid. The selected contractor must have sufficient experience, technical capability, financial capability, and sufficient manpower to execute the project.
- Clients should not interfere frequently during the execution and keep making major changes to the requirements. This can cause excessive delays in the project.

- Clients should have the finances in time to pay the contractors after completion of a work. Therefore, clients should work closely with the financing bodies and institutions to release the payment on schedule.
- Clients must make quick decisions to solve any problem that arise during the execution.

Recommendations for the Consultants

- While drawing the contract between the client and contractor, the consultant must include items such as duration of contract, mechanism to solve disputes, mechanism to assess the causes of delay, if there are any and risk management plans.
- Consultants should prepare and approve drawings on time.
- Consultants should monitor the work closely by making inspections at appropriate times.
- Confirm all oral agreements/changes in writing and maintain daily records of the project.

Recommendations for the Contractors

- Contractors should not take up the job in which they do not have sufficient expertise.
- Contractors should have able site-managers for the smooth execution of work.
- Contractors must plan their work properly and provide the entire schedule to the clients.
- Contractors must make sure they have a sound financial backing and financial management system.

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