

# Arbitration: A Case Study in the Construction Industry

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**Abstract** - Arbitration is the process where the settlement of dispute occurs between two parties, one party is government body (Client) and another is private party (Contractor, supplier, service provider) and third person is arbitrator or arbitral tribunal. Arbitral award is final and binding upon the parties. If they are not agreeing regarding award then parties can claim under Section 35 Chapter VIII of Arbitration Act, 1996. Arbitration is a legal process where proper arbitral proceedings carried out. Construction dispute can arise from many factors: inadequate planning, changes in commodity prices, unexpected conditions at the work site, differing interpretation of contract language, and lack of communications among the parties in the project, these can affect the project and can ultimately lead to litigation. The main objective of this paper was to work on arbitration process and the consequences faced by the parties like the client, contractor and arbitrator. In this paper, interviews of various experienced clients and contractors were conducted based on which the questionnaire was designed. Along with that, the data of 10 railway projects of Panvel division were also gathered. The reliability of the questionnaire was checked by Cronbach's alpha test which showed good consistency. Further, comparisons between ten railway projects which are gone through arbitration process were done.

**Keywords** — Arbitration, Arbitral Tribunal, Dispute, Arbitration Act 1996, Cronbach's alpha test

## I. INTRODUCTION

A dispute is a disagreement between two parties. Dispute Resolution is the process where dispute settles between two parties. Types of Dispute Resolution are Mediation, Arbitration, and Litigation. Mediation is the process where there is the third party which acts as a mediator for resolving the dispute. Arbitration is the process, a neutral third-party act as a judge for resolution of the dispute. Litigation is the process of taking legal action.

Arbitration is simply defined as a private court. The Indian law of arbitration is contained in the Arbitration and Conciliation Act, 1996. The Act is based on the 1985 UNCITRAL (United Nations Commission on International Trade Law) Model Law on International Commercial Arbitration and

the UNCITRAL Arbitration Rules 1976. There comes the significance of Arbitration, Mediation, Conciliation and such alternate disputes resolution mechanisms. As per the Arbitration and Conciliation Act, 1996, an arbitration agreement is an agreement by the parties to submit to arbitration all or certain disputes which have arisen or which may arise between them in respect of a legal relationship, whether contractual or not. An arbitration agreement may be in the form of an arbitration clause in a contract or it may be a separate agreement. Further, an arbitration agreement shall be in writing. If either of the disputing parties approaches a court for adjudication of the dispute, in spite of the presence of an arbitration agreement, then the court has the power to refer the parties to arbitration. The parties to an arbitration proceeding are entitled to approach the jurisdictional court for urgent and interim measures of protection. The parties are free to decide the number of arbitrators; however the same shall not be an even number. The arbitrator may be a person of any nationality. If there is any justifiable doubt about the independence or impartiality of an arbitrator, then, he shall not become an arbitrator.

H.M. Al-Humaidi examines the concept of arbitration as alternative dispute resolution methods and its application in the Kuwaiti construction industry. He focuses on Kuwaiti arbitration law, the current rules under this law and recommends a real arbitration system for the state of Kuwait. It also concludes that the parties should avoid the disputes or minimize the disruptive impact of disputes by concentrating on the development working relationships [1]. Kathleen (2004) introduced several techniques to cut the time and cost during the arbitration process. It concludes that the arbitration should be a fair process when both sides believe that they fully put forth their cases. Arbitration will be when cost-effectiveness and fairness work in consort takes place [2]. Jun Iwamatsu (2008) describes Japan's construction market regarding the construction disputes and designates the unique characteristics of the implementation of construction work in Japan [3]. Patricia D. G. (2011) inspects the changing trends in construction and the mechanisms of dispute resolution in construction disputes using relevant statistical data. Worked on statistical data of

Japan regarding the dispute resolution in construction point of view and which is less as compared to others [4]. W. Laurence suggests that how an engineer attorney influences the cost and time efficient results in the arbitration. It was not a theory based but gives practical guidance because it was based on the experience of writers, who are engineers and who have been in the arbitration field, both domestically and internationally for over 30 years. The researcher recommends that the arbitration process is the better choice for dispute resolution [5]. Adebayo Oladapo (2009) highlighted the state of dispute management in the Nigerian Construction Industry in which questioner survey of industry participants provided the data. The data analyzed by using percentage score and severity index method with the Statistical Package of Social Science (SPSS) and showed that dispute often occurs mainly due to client’s payment delay and contractual claims [6]. Violete Kensulie et al. (2010) used SWARA methods for practical implementation of specialized decision support and alternative dispute resolution in a virtual environment.

It considers major principles of application of the attribute system to solve tasks [7]. As arbitration is increasing in the global market, many of the studies are done on disputes, claims, documentation and so on. In these studies, the various techniques used to find out the disputed matter in construction like statistics, theoretical research in arbitration, to find out the impact on the dispute, questionnaires’ survey and many more techniques have done by the researcher.

## II. DATA COLLECTION

The qualitative data collected from interviews to create the questionnaire and make the statistical analysis. For this reason, an interview from various firms was taken during the data collection, as this type of interviews allows the investigator to gather qualitative data based on the certain group of questions. The data was gathered from various reputed and experienced contractors and the client who are involved in the arbitration process. It also has information of total 10 projects from Panvel railway division which includes project data and arbitration data. It consists of name of the project, the total cost of the project as per tender and the real cost of the project means as per contractor. It includes the contractors claim for the project and the awarded claim i.e. how much amount has been given to the contractor.

## III. METHODOLOGY

This study was conducted to identify factors which affect the project due to arbitration. The data mentioned above was collected and analyzed to access the suitability and prepared the questionnaire in relations with the client, contractor, and

arbitrator. The study was carried out in the following manner as shown in Fig. 1.

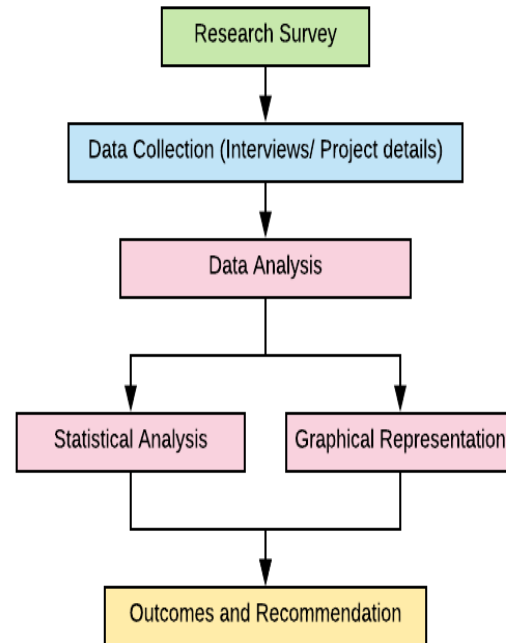


Fig. 1 Overview of the research

In this, questionnaire deals about whether it requires speedy result or the arbitration process are necessary to resolve the dispute, from which side the project work delay and who is responsible.

The questionnaire survey was constructed on the basis of Likert scale. A Likert scale is a psychometric scale often accepted in research done using questionnaires. This gives respondent an opportunity to show the level of importance of various factors on the basis of their past experiences in scale range between 1 to 5 as shown in Fig. 2.

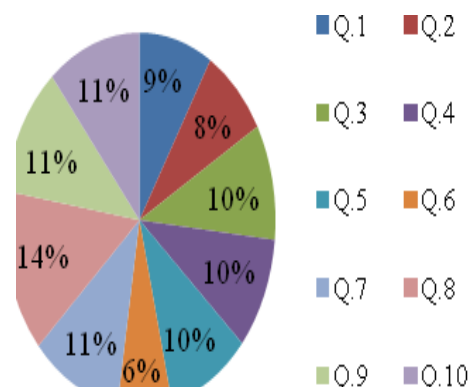


Fig. 2 Likert scale analysis

Further, Cronbach’s alpha reliability test was conducted based on the survey data for internal consistency. Cronbach’s alpha reliability coefficient normally ranges between 0 and 1. However, the closer Cronbach’s alpha coefficient is to 1.0 the the mean of the inter-item correlations. After statically analysis, the project data of 10 railway project about arbitration were analysed.

**IV. RESULTS AND DISCUSSION**

In this study, Cronbach’s Alpha Test was employed to check internal consistency of the questionnaire. The Cronbach’s coefficient alpha was related to the arbitration process involved construction projects. Reliability test for overall feedbacks received was 0.849 which shows good reliability in internal consistency.

In this study, Wilcoxon signed-rank test is a non-parametric statistical hypothesis test used to compare two related samples or repeated measurements on a single sample to assess whether their populations mean ranks differ. Table 1 specifies the rank of feedbacks given by the client and contractors.

**Table 1 Rank of feedbacks**

Questionnaire	Rank 1 (Contractor)	Rank 2 (Client)
Is arbitration process is only necessary to resolve the dispute in construction industry?	46	7
For dispute matter, both parties are responsible according to you	39	41
Is arbitration provides speedy results	45	71
Employer role in dispute settlement	46	41
Contractors/client claims are acceptable or not	71	40
From the client side decision are made within time	9	7
Will you accept the arbitral award declared by arbitrator or you will challenge in the court.	46	71
How you expect your work from client/ contractors	88	74
According to you negotiation is the better way to resolve the dispute.	76	41
Contractor should complete their work on time to reduce the dispute matter	74	41

greater the internal consistency of the items in the scale [8]. Based upon the following equation (1),

$$Reliability = \frac{k \times Mean(r_{ij})}{1 + Mean(r_{ij}) \times (k-1)} \quad (1)$$

Where, k is the number of items considered and r is

T-test is statistical hypothesis test used to analyze one or two sample means. Depending on the t-test we can compare a sample mean to a hypothesized value, the means of two independent samples, or the difference between paired samples. The level of significance is considered  $\alpha = 0.05$  for calculations. Table 2 gives the t-test results for feedbacks.

**Table 2 T-test on feedbacks**

Particulars	Client	Contractor
Mean	3.057	2.63
Variance	0.477	0.296
Observations	10	10
Hypothesized Mean Difference	0	0
Df (degree of freedom)	17	17
t Stat	1.542	1.542
P(T<=t) one-tail	0.070	0.070
t Critical one-tail	1.74	1.74
P(T<=t) two-tail	0.141	0.141
t Critical two-tail	2.109	2.109

In statistics, the t-statistic is the ratio of the departure of the estimated value of factors from its hypothesized value to its standard error. It is used in estimating the mean from a sampling distribution of sample means if the standard deviation is unknown. With the help of t-test, the data is analyzed and the values are obtained where degree of freedom is 17 for both groups. The t stat is 1.54. The P-value is greater than  $\alpha$ , then the null hypothesis is not rejected.

The project data and arbitration data was collected and from this data graphical representation shown. The comparison between the awarded claims and contractors claim of railway projects are shown in Fig. 3. From the Fig. 3, it was observed the contractors claim were more as compared to the awarded claims. By going through arbitration also, contractor is in loss.

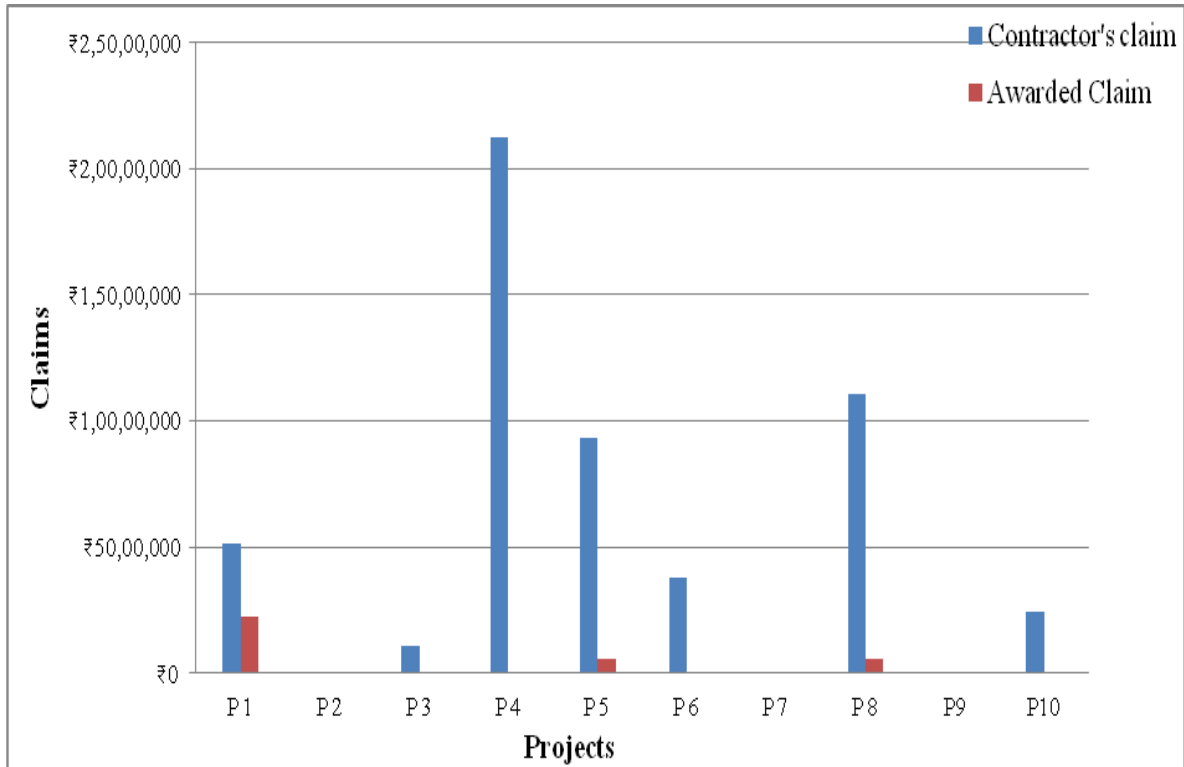


Fig. 3 Comparison between contractors claim and awarded claim

The relation between the project amount and arbitration amount in which comparison is shown between costs of project as per tender, final cost of project, contractors claim and awarded claim.

From Fig. 4, it was observed that the awarded claim was very less and in many of the project it was almost nil.

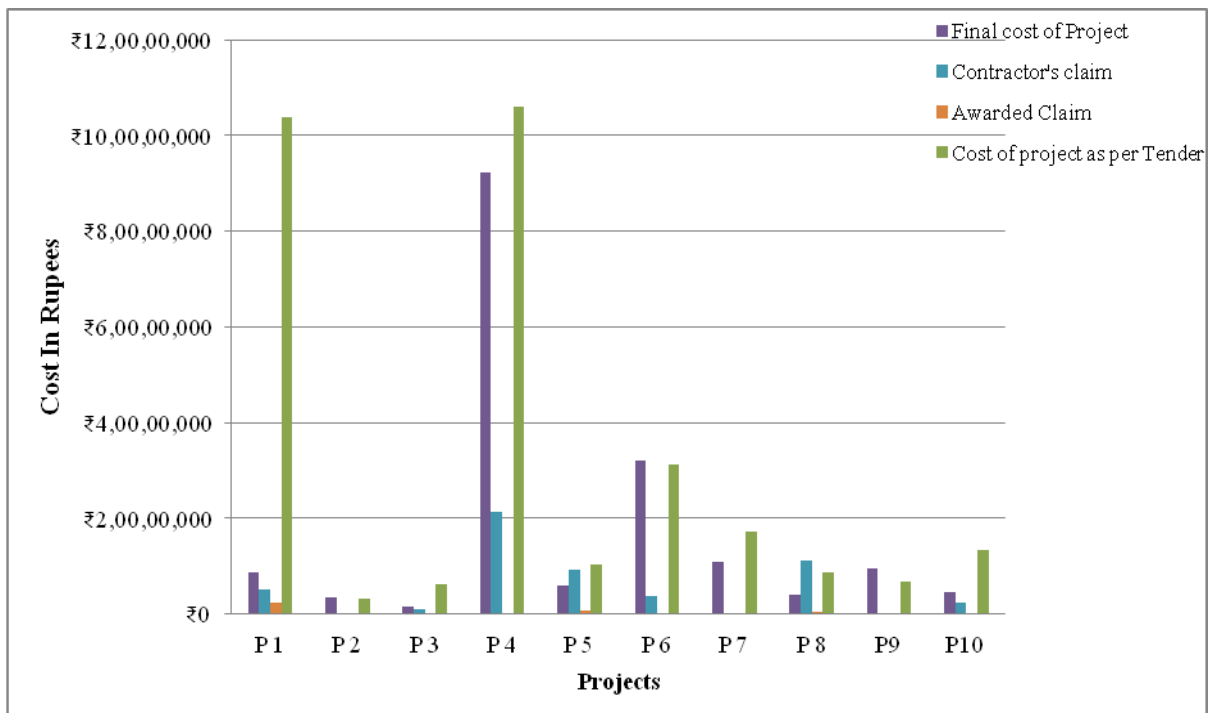


Fig. 4 comparison between overall project cost with contractors claim

of project after arbitration process was more as compared to

In Fig. 5, comparison between the actual duration of project, total duration of arbitration and duration of project as per tender are shown. Duration

actual duration of project and duration of project as per tender. It was observed that the arbitration process requires more duration which leads to delay in completion of the project.

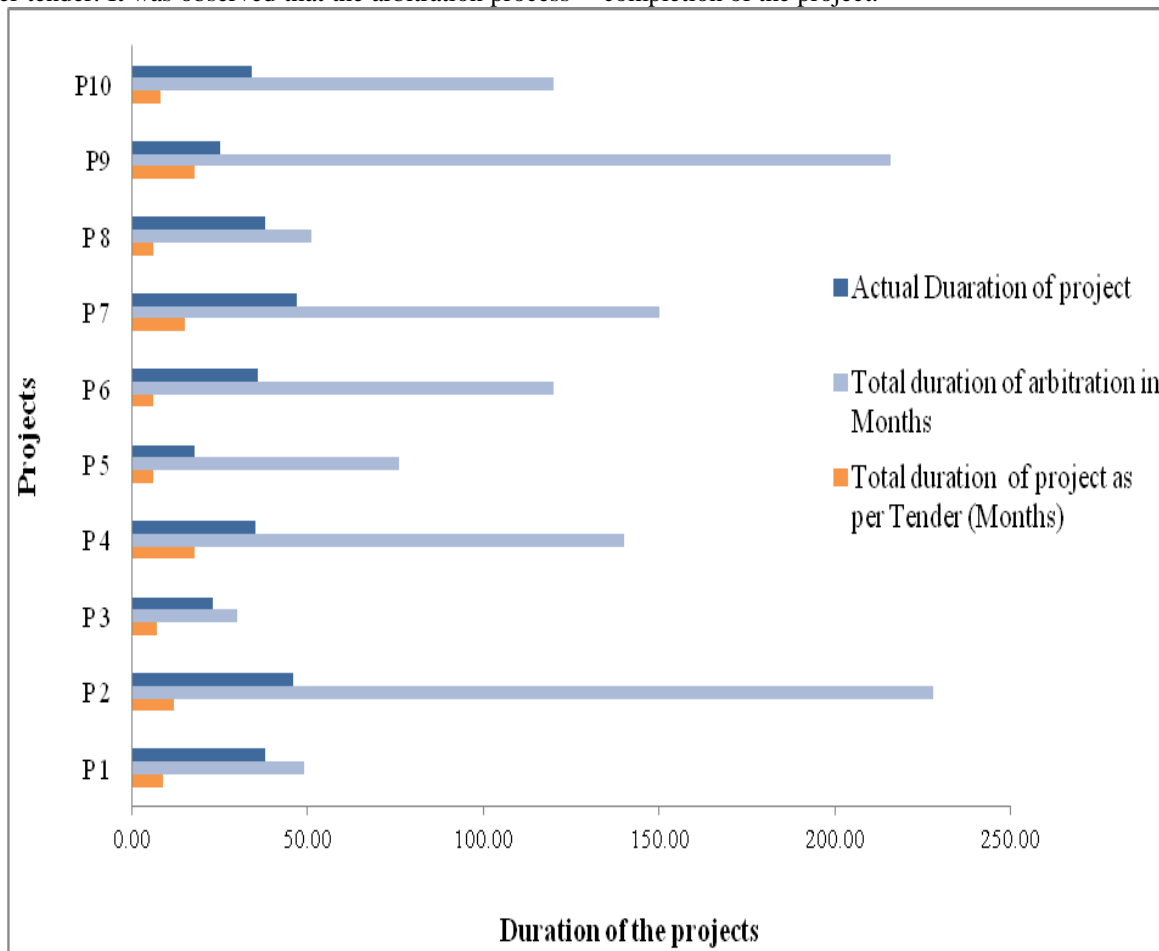


Fig. 5 Comparison between total duration, actual duration and duration after arbitration process

## V. CONCLUSIONS

In arbitration, construction disputes are resolved by the Dispute Review Board (DRB) or many of the techniques used to analyse the construction dispute. As dispute arises because of many factors like miscommunication among the parties, related to the material cost and so on. Arbitration is based on the party of self-direction, self-reliance, self-sufficiency. Every arbitration agreement presupposes a certain delineation of arbitrary tasks. Every arbitration dispute is a derogation of corresponding judicial competences and has to be interpreted strictly. Tribunals carefully watch the boundaries of their competence, since such a transgression may lead to the annulment of the arbitral award, or to difficulties in the process of its recognition and enforcement. In this study, Cronbach Alpha test used to check the reliability or internal consistency of questionnaire. The reliability was acceptable for the questioner. From the railway project arbitration data, we can evidently see that the duration required for arbitration process was more which ultimately leads to delay of the project.

To overcome the issue Amendment Act 2015 was introduced to cut the duration.

## VI. RECOMMENDATION

As the client has the responsibility, to get their work done by Contractor side by co-operating with them. And same as the Contractor also follow the work instruction with the support of the government body so that there will be fewer arbitration cases or through negotiation, the conflict can be resolved. The arbitration duration requires very long duration as compared to the duration of the project, this duration

should be minimized. In Arbitration and Conciliation Act 1996 (Amendment) 2015 one year duration has been allotted, and for the fast track six months were given. But the problem arises is that sometimes client, as well as a contractor, could not attend the meetings due to their personal issues and by this way duration increases. The contractor faces the hindrances before the tender is allotted to any contractor from the client side for that purposes it is important to review the work. The main issue faced by the Contractor is land

acquisition, delays in drawings and decision making from the Client point of view. The common issue of the contractor is the progress of work is very slow

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