



DISPUTES IN CONSTRUCTION AND THEIR SETTLEMENT

N.B.Bhole¹, Dr. A.K.Gupta², Prof. D.B.Desai³

¹PG Schlor, Dr.J.J.Magdum College Of Engineering,Jaysingpur

²Dr. D.Y.Patil College of Engineering, Kasba Bawda.

³Associate Professor, Dr.J.J.Magdum College Of Engineering,Jaysingpur

Abstract

The number and complexity of contract disputes have increased dramatically in recent years. At the same time, the delays and costs associated with litigation have become more significant. This section provides an overview of dispute resolution methods commonly used. The increasing trend to alternative methods of resolving disputes suggests a considerable dissatisfaction with the traditional litigation process, at least in certain types of construction cases. Alternative dispute resolution mechanisms in the construction industry have wide application and disputing parties' reasons for adopting ADR are many and varied. However, the main reasons are that the costs of litigation are prohibitive and that it takes a long time to settle disputes or come to a ruling hence the parties in dispute and their advisers are now considering alternative methods to resolve disputes. The alternative methods are a realistic alternative to litigation and are cheaper and quicker methods of dispute resolution which do not so easily lead to a breakdown in the working relationships between the parties. Where a decision is given then such a decision may have binding effect or may simply be a recommendation that the parties can accept or ignore.

This work emphasizes problems of dispute in Jalswarajya Projects i.e. Water Supply Scheme for Villages. The delays affect all factors including time coat and efficiency of project. The dispute involves disturbance in the economy as well as schedule of project because as the time increases the cost of construction also increases. This shows us that the cost of project is directly proportional to the time of project. The

requirement of contractor involvement during the design process can improve constructability and reduce the probability of design changes. The evolution of dispute resolution processes has led to the development of a range of alternative dispute resolution opportunities. Considering other methods of the dispute resolution ADR is effective as it directly relates the three main component of problem the creator the sufferer and the ultimate affecter of dispute.

1. Introduction

Construction contracts provide rise to disputes of unusual difficulty and complexity even by evaluation with other types of litigation. The performance of many construction contracts run over much longer periods than most other forms of commercial contract, with potential scope for disagreement and financial disagreement arising constantly during the construction period, and with large sums of money and cash flow pressures concerned on both sides. There is plenty chances of disputes or difference of opinion from the very inception of entering into the contract and commencing the work because consistently both the parties have to meet with reciprocal obligations on either side one after the other and a single case of default is satisfactory to upset the balancing pendulum and the whole development, programming enhances targeted schedule of completion of work. The employer wants to reduce the expenses in order to keep up the economic viability of the project within its restrictions, tries to bring down the expenses whereas the contractors universally called 'builders'. who invests large amounts by way of establishment cost in the form of machinery, materials, tools and plants as also onsite and offsite staff and at

times own testing laboratories and research wings, planning and drawing wings, when confronted with unexpected situations where variations from the scope of the contract or undue delays by the owner which were not within the consideration of the parties at the tendering stage, unless remedied immediately, would upset the planning and programming and financial viability, enter into prolonged correspondence leading to dissimilarity of opinion and disputes which ensue in settlement.

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. Research into determining the causes of disputes has reached saturation point; consistently the same variables are identified and continue to manifest in projects. Because most of the studies undertaken have been based upon questionnaires or derived from case law, the factors identified lack contextual meaning. For example, poor communication has been identified as a cause of disputes. Simply improving communication practices by improving information flow with technology or using Computer-Aided-Design will not reduce per se the incidence of disputes in construction. Fundamentally, work processes, policies, and procedures as well behaviours need to change in concert if disputes are to be reduced in construction.

2. Dispute in Jalswarjya Projects & their Settlement

There are many factors affecting disputes rather generating disputes. The main factors are owner related, contractor related, design related, contract related, human behavior related, project related & external factors. The major problem noted was regarding human behavior, project related & contractor related in highest percentage of the other problems. Lack of communication was seen to the major problem agreed by 71% of the respond & secondly was quality of work which was 70% in agreement of the respondents. The least contractual problems were seen as only 30% of respondents agreed on contractual problems as the contractual points are cleared in the tender document. In owner related problems mainly factors affecting are payment delay 61% & secondly unrealistic expectations 57% there are the factors totally depending on the behavior & decision making of owner. In contractor related problems mainly factors affecting are quality of work 70% as quality totally depend on financial problem of owner & funding commission. The contractor secondly suffers due to financial failure 66% tendering 63% & delay in progress of work 60%. In design related problems the quality design is the main factor affecting 68% & other all factors are minor. Secondly the change in design is also a main & important part related to the delay in progress of work. In contractual related problems the main cause is ambiguities 60% in contractual document & all legal factors binding contractor. The risk allocation is also important as it is agreed by 54% of respondents & it has its own importance relating to the quality of work. Human behavior related is the main source of problem in delay & extension of work. The smooth working is totally dependent on human behavior as its main factors are lack of communication 71% lack of team spirit 69% & adversarial or controversial culture 46%. For project related problem only two main factors are site condition 71% & unforeseen changes 60%. These factors are mainly affecting the contractor's decision in completion of work. External factors are least affecting the projects progress as they consist of fragmental structure & legal economic factors.

Table No 1 Cause of Disputes

| Category of Disputes | | Causes of Disputes | Total | Average |
|------------------------|---|--|-------|---------|
| Owner related | 1 | variations initiated by the owner | 38 | 2.53 |
| | 2 | change of scope | 49 | 3.27 |
| | 3 | late giving of possession | 51 | 3.40 |
| | 4 | Acceleration | 54 | 3.60 |
| | 5 | unrealistic expectations | 57 | 3.80 |
| | 6 | payment delays | 61 | 4.07 |
| Contractor related | 1 | delays in work progress | 60 | 4.00 |
| | 2 | time extensions | 53 | 3.53 |
| | 3 | financial failure of the contractor | 66 | 4.40 |
| | 4 | technical inadequacy of the contractor | 59 | 3.93 |
| | 5 | tendering | 63 | 4.20 |
| | 6 | quality of works | 70 | 4.67 |
| Design related | 1 | design errors | 74 | 4.93 |
| | 2 | inadequate / incomplete specifications | 61 | 4.07 |
| | 3 | quality of design | 68 | 4.53 |
| | 4 | availability of information | 57 | 3.80 |
| Contract related | 1 | ambiguities in contract documents | 60 | 4.00 |
| | 2 | different interpretations of the contract provisions | 46 | 3.07 |
| | 3 | risk allocation | 54 | 3.60 |
| | 4 | other contractual problems | 30 | 2.00 |
| Human behavior related | 1 | adversarial / controversial culture | 46 | 3.07 |
| | 2 | lack of communication | 71 | 4.73 |
| | 3 | lack of team spirit | 69 | 4.60 |
| Project related | 1 | site conditions | 71 | 4.73 |
| | 2 | unforeseen changes | 60 | 4.00 |
| External factors | 1 | weather | 58 | 3.87 |
| | 2 | legal and economic factors | 57 | 3.80 |
| | 3 | fragmented structure of the sector | 40 | 2.67 |

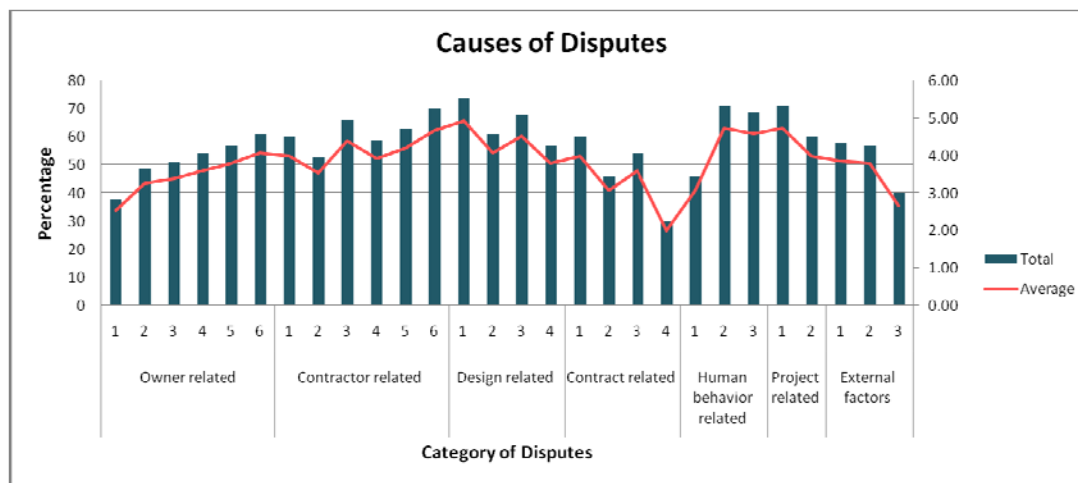


Figure No 1 Causes of Disputes in Percentage

2.1. Responses of contractors for the types of disputes in construction industry

We have to study various responses of contractors for the type of disputes arrives in following four projects. We have considered

five types of sources of disputes of various projects and 15 contractors give their responses.

2.1.1 Karandwadi

There are less problems in Karandwadi to other sites of Shigaon, Bagni & Koregaon. The respondent agrees on the financial problem 75%, contractual problem 68%, defective work 64% & other 59 to 50 %. This was mainly due to the political influence & conflict & also due to the political influence, conflict between labour & contractors.

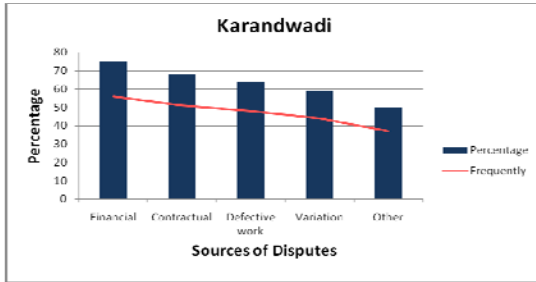


Figure No 2 Sources of Disputes at Karandwadi Project

2.1.2 Shigaon

There was more problem in Shigaon to other sites of Karandwadi, Bagni & Koregaon. The respondent agrees on the financial problem 91%, contractual problem 82%, defective work 74% & other 68 to 60 %. This was mainly due to the political influence & conflict due to the political influence & conflict due to contractual.

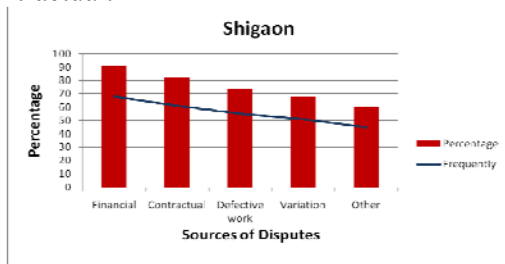


Figure No 3 Sources of Disputes at Shigaon Project

2.1.3 Bagni

There was more problem in Bagni and Shigaon to other sites of Karandwadi and Koregaon. The respondent agrees on the financial problem 86%, contractual problem 78%, defective work 70% & other 64 to 63 %. This was mainly due to the contractual influence & conflict due to the political influence & conflict due to contractual.

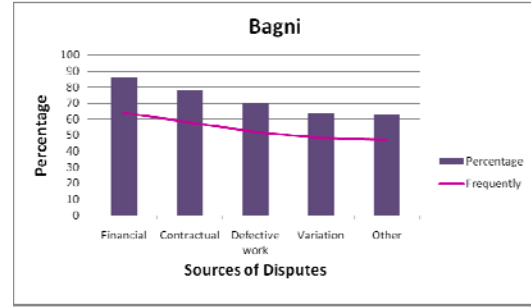


Figure No 4 Sources of Disputes at Bagni Project

2.1.4 Koregaon

There was less problem in Koregaon to other sites of Shigaon, Bagni &. The respondent agrees on the financial problem 83%, contractual problem 75%, defective work 67% & other 62 to 60 %. This was mainly due to the political influence & conflict due to the political influence & conflict between labour & contractors.

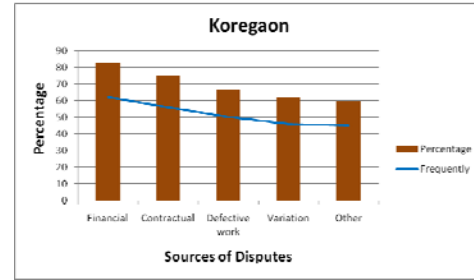


Figure No 5 Sources of Disputes at Koregaon Project

2.2. Time taken to solve dispute

2.2.1 Karandwadi

The time taken to solve the dispute with court process is compared with the arbitration. It was seen that arbitration solves 68% of total dispute while courts solve only 39% of total dispute in a year. It was noted that disputes to be solve after or more than 2 years covers 70% for court proceeding and only 34% for arbitration.

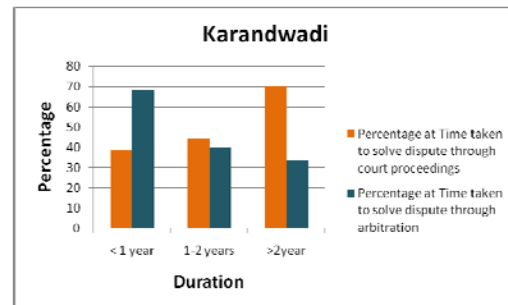


Figure No 6 Time Taken To Solve Dispute through Court Proceedings & Arbitration at Karandwadi

2.2.2 Shigaon

The time taken to solve the dispute with court process is compared with the arbitration. It was seen that arbitration solves 83% of total dispute while courts solve only 55% of total dispute in a year. It was noted that disputes to be solve after or more than 2 years covers 86% for court proceeding and only 50% for arbitration.

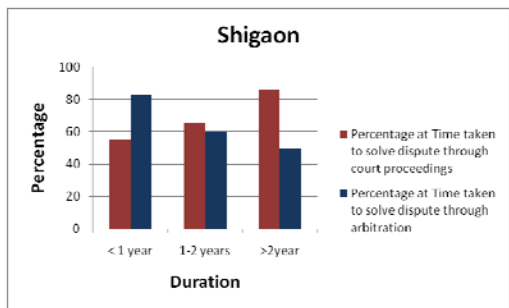


Figure No 7 Time Taken To Solve Dispute through Court Proceedings & Arbitration at Shigaon

2.2.3 Bagni

The time taken to solve the dispute with court process is compared with the arbitration. It was seen that arbitration solves 80% of total dispute while courts solve only 50% of total dispute in a year. It was noted that disputes to be solve after or more than 2 years covers 80% for court proceeding and only 43% for arbitration.

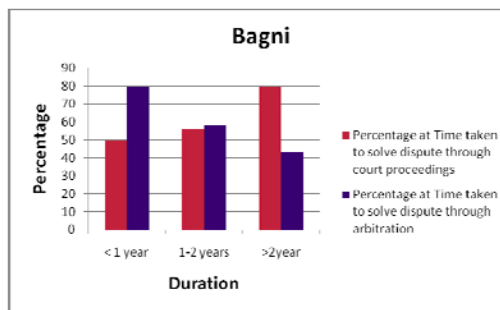


Figure No 8 Time Taken To Solve Dispute through Court Proceedings & Arbitration at Bagni

2.2.4 Koregaon

The time taken to solve the dispute with court process is compared with the arbitration. It was seen that arbitration solves 75% of total dispute while courts solve only 46% of total dispute in a year. It was noted that disputes to be solve after or more than 2 years covers 75% for court proceeding and only 38% for arbitration.

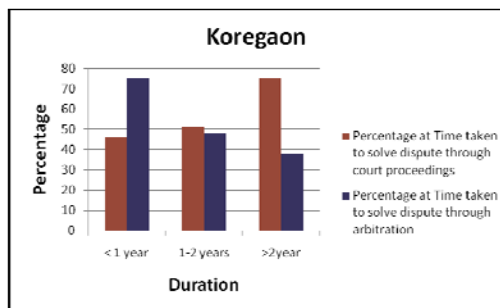


Figure No 9 Time Taken To Solve Dispute through Court Proceedings & Arbitration at Koregaon

Table No 2 Information Related To Project

| Cases | The Disputants | Population | The Project And Its Cost | Funding Pattern Of The Scheme | Charges For Estimation And Supervision | Estimated Time For Project Completion |
|-------|---------------------------------------|------------|---|---|---|---------------------------------------|
| | Karandwadi, Tal- Walwa, Dist- Sangli. | 4785 | Jalswarajya Project with amount of Rs.90,00,000/- | 90%- Government funds and 10%- contributed by villegers | cost of estimation was carried out to be 2% and for supervision it was taken as 5% total estimation | 2.0 years |
| | Shigaon, Tal- Walwa, Dist- Sangli | 5000 | Jalswarajya Project with amount of | 90% Government funds and | cost of estimation was carried out to be | 2.0 years |

| | | | | | | |
|--|------------------------------------|------|---|--|---|-----------|
| | | | Rs.1, 20, 00,000/- | 10%contributed by villegers | 2% and for supervision it was taken as 5% total estimation | |
| | Bagni, Tal- Walwa, Dist- Sangli | 5000 | Jalswarajya Project with amount of Rs.1, 32, 00,000/- | 90% Governmet funds and 10% contributed by villegers | cost of estimation was carried out to be 2% and for supervision it was taken as 5% total estimation | 1.8 Years |
| | Koregaon, Tal- Walwa, Dist- Sangli | 3500 | Jalswarajya Project with amount of Rs.87, 00,000/- | 90% Governmet funds and 10% contributed by villegers | cost of estimation was carried out to be 2% and for supervision it was taken as 5% total estimation | 2.0 years |

Table No 3 Information Related To Project for Reason of the Dispute

| C a s e | The Disputants | Reason Of The Dispute | Date Of Start For The Project | Date At Which The Project Was Completed | Delay Time Due To Dispute | Duration Of Dispute Versus Duration Of The Project |
|----------------|---------------------------------------|--|--------------------------------------|--|----------------------------------|---|
| 1 | Karandwadi, Tal- Walwa, Dist- Sangli. | Due to the disputes among the political parties in the village | May-06 | Oct-10 | 384 days | more than 2 times the duration of the project |
| 2 | Shigaon, Tal- Walwa, Dist- Sangli | Due to the disputes among the contractor and supervisor for work quality and schedule and more interference of local bodies in the village | Feb-06 | Jun-12 | 695 days | more than 6 times the duration of the project |
| 3 | Bagni, Tal- Walwa, Dist- Sangli | Due to the disputes among groups of people for the work and benefits seeking from ongoing work. | Jun-08 | Nov-11 | 515 days | 4 times the duration of the project |
| 4 | Koregaon, Tal- Walwa, Dist- Sangli | due to change in the Grampanchayat body the project gets delayed | Sep-08 | Oct-12 | 496 days | Almost 2.5 times the duration of the project |

Table No 4 Extra Cost required due to Dispute

| Case | The Project And Its Cost | Reason Of The Dispute | Date Of Start For The Dispute | Date At Which The Dispute Got Its Final Award | Total Time Taken To Complete After Solving Dispute | Cost Of The Dispute |
|------|---|--|-------------------------------|---|--|---------------------|
| 1 | Jalswarajya Project with amount of Rs.90,00,000/- | Due to the disputes among the political parties in the village | Feb-10 | Oct-10 | 90 days | 1,11,490 |
| 2 | Jalswarajya Project with amount of Rs.1,20,00,000/- | Due to the disputes among the contractor and supervisor for work quality and schedule and more interference of local bodies in the village | Jun-11 | Jun-12 | 245 days | 32,21,919 |
| 3 | Jalswarajya Project with amount of Rs.1,32,00,000/- | Due to the disputes among groups of people for the work and benefits seeking from ongoing work. | Dec-08 | Nov-11 | 195 days | 41,48,266 |
| 4 | Jalswarajya Project with amount of Rs.87,00,000/- | due to change in the Grampanchayat body the project gets delayed | Mar-10 | Oct-12 | 160 days | 14,12,480 |

3. Conclusion

The study until now was performed on predicting the system Problems which leads to dispute and parties involved in the dispute used to manage the construction work on site. Many researchers derived different methods to resolve the dispute and increase the effectiveness of work on site and ultimately deal with the cost effective project. The conclusion of dispute is delaying in work which influences the cost of project this leads to inflation in estimates cost of project. Many methods are mentioned to solve the dispute but in India rules and laws are prepared for the same purpose. This leads to find the appropriate method to be followed by the parties to solve dispute.

The study until now was performed on predicting the system Problems which leads to dispute and parties involved in the dispute used to manage the construction work on site. Many researchers derived different methods to resolve the dispute and increase the effectiveness of

work on site and ultimately deal with the cost effective project. The conclusion of dispute is delaying in work which influences the cost of project this leads to inflation in estimates cost of project. Many methods are mentioned to solve the dispute but in India rules and laws are prepared for the same purpose. This leads to find the appropriate method to be followed by the parties to solve dispute.

- Past studies states that Disputes between the parties to construction projects are of great concern to the industry. An effective claim management process is essential to ensure that any contractual claims arising are dealt with in a way that is fair to each involved party. Better training in the area of contract management to the professionals can be said to be of a great help for better understanding of the contract.
- The dispute involves disturbance in the economy as well as schedule of project because as the time increases the cost of

construction also increases. This shows us that the cost of project is directly proportional to the time of project.

- The requirement of contractor involvement during the design process can improve constructability and reduce the probability of design changes. The evolution of dispute resolution processes has led to the development of a range of alternative dispute resolution opportunities.
- Considering other methods of the dispute resolution arbitration is effective as it directly relates the three main component of problem the creator the sufferer and the ultimate affecter of dispute
- ARBITRATION is to a certain extent about 65%, effectively used in contracts in the construction industry. It is the most frequently used method in resolving disputes in the construction industry.
- The majority of construction participants has a moderate knowledge of arbitration methods and experiences the methods as not being flexible and somewhat too complex. Specifically reduces time by 66.67% reduction in time to solve the issue.
- Apart from the mediation, adjudication and arbitration, other forms of arbitration are also used in the construction industry, such as the negotiation, med-arbitrator, and reconciliation for about 47.65%. The majority of respondents would prefer the inclusion of the adjudication as the priority in resolving dispute before arbitration.

4. Future Scope

- To improve the arbitration Method compiling it with the Provisions in the law for dispute Resolution
- Exact effect of the time of delay on project cost and dispute resolution time.

5. References

1. A. A. Elziny, M. A. Mohamadien, H. M. Ibrahim, M. K. Abdel Fattah, "Application of Modern Methodologies to Settle Disputes in Construction Projects", IPASJ International Journal of Management (IIJM), Vol.-2, Pp. No. 1-15, 2014.
2. C. Bvumbwe, D.W. Thwala, "An Exploratory Study of Dispute Resolution Methods in the South African Construction

- Industry", IPEDR, Vol.-21, Pp. No.-32-36, 2011.
3. Chaitanya Khekale, Nityanand Futane, "Management of Claims and Disputes in Construction Industry", International Journal of Science and Research (IJSR), Vol.-4, Pp. No. 848-856, 2013.
4. Dr. Jur.Tunay Köksal, "The Settlement Mechanisms of Disputes between the Parties According to Fidinc Conditions of Contract for Construction", Centre for Promoting Ideas, USA, Vol.-1, Pp. No. 194-202, 2005.
5. Edwin H.W. Chan and Henry C.H. Suen, "Dispute Resolution Management For International Construction Projects In China", Management Decision, Vol. 43ss, Pp. No. 589-602, 2005.
6. Ikechukwu Ikea Chinyere, "Procedures and Arrangement for Dispute Resolution Management in International Construction Development Projects", Interdisciplinary Journal of Research in Business, Vol.-1, Pp. No. 61-71, 2011.
7. K.C. Iyer, N.B. Chaphalkar, G.A. Joshi, "Understanding time delay disputes in construction contracts", International Journal of Project Management, Vol.-26, Pp. No. 174-184, 2008
8. K.W. Chau, "Insight into resolving construction disputes by mediation/adjudication in Hong Kong", Journal of Professional Issues in Engineering Education and Practice, Vol.-133, Pp. No.-143-147, 2007.
9. Mr. Rajiv Mohite, Dr. A. C. Attar, Mr. D. S. Patil, "Cost Benefit Analysis Of Adopting Solar Energy Pumps For Jalswarajya Schemes In Sangli District: A Case Study", International Journal of Scientific & Engineering Research, Vol.-4, Pp. No. 1588-1591, 2013.
10. Omkar Ashok Pawar, Rahul S.Patil, "Conflicts & Disputes in Construction Projects", International Journal of Innovations in Engineering and Technology (IJIET), Vol.-3, Pp. No. 48-53, 2014.
11. Sigitas Mitkus, Tomas Mitkus, "Causes Of Conflicts In A Construction Industry: A Communicational Approach", Elsevier Ltd., Vol.-110, Pp. No. 777-786, 2014.