



Assessment of Construction Dispute Resolution in Ethiopian Somali Regional State Road Projects: A Case Study on Road Projects in the Region

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Abstract: The construction industry has been a paradoxical leader in both dispute occurrences and dispute resolution systems for many years. This study assessed the construction dispute resolution mechanism in Ethiopian Somali Region Road Construction Industry. It has identified the causes that lead to construction dispute in the road sector; determined the most frequent causes of the dispute; and analyzed its current dispute resolution mechanisms. Results show to have five major categories of disputes which are design-related, contractor-related, owner related, contract-related, and external factors ranked from first to fifth, respectively. The Dispute Resolution Mechanisms currently used in the road construction industry of the Ethiopian Somali region are an Amicable Settlement (Negotiation), DRE, Arbitration (Litigation), and “others” not disclosed by respondents. ADR is to a certain extent, effectively used in contracts in the construction industry. Negotiation is initially most frequently used in resolving disputes in road construction projects in Somali Region. However, parties cannot resolve the issue through Negotiation thereby resorted to Arbitration (Litigation). Arbitration is the final stage of dispute management in the road construction sector and arbitration proceedings resemble to regular court litigation. Various but specific recommendations were forwarded to major construction stakeholders to minimize or avoid disputes. Such as disputes can be reduced by checking that the contract documents are in place. Avoid making general statements, and instead set out a complete list of specifications, drawings, questions and answers, and others that apply to the project.

Keywords: Alternative Dispute Resolution, Arbitration, Causes of Disputes, Dispute Resolution Mechanisms, Mediation, Road Construction, Somali Regional State

1. Introduction

The construction industry is a complex due to many parties participate at different level to meet the goal of the project. In this complex environment, participants from various professions, each has its own goals and each expects to make the most of its own benefits. While this may or may not be an enviable position, the industry has managed to develop and adopt many unique ways to address the potential risks of disputes. Disputes are one of the main factors which prevent the successful completion of the construction project. Thus, it is important to be aware of the causes of disputes in order to

complete the construction project in the desired time, budget and quality [5].

The construction industry has been a paradoxical leader in both dispute occurrences and dispute resolution systems for many years [1, 5]. While this may or may not be an enviable position, the industry has managed to develop and adopt many unique ways to address the potential risks of disputes [2, 3, 8, 9]. Additionally, many of these concepts and systems, including partnering, realistic risk allocation, dispute review boards, and stepped negotiations, have been successfully applied in other industries [11]. However, the justification for implementing these procedures has been based primarily upon

contractual requirements, governmental regulation, court order, limited previous experience, or basic reactionary instinct and not on measured cost savings. Despite being an industry keenly focused on quantitative results, parties involved in the purchase or construction of capital projects frequently fail to analyze the actual dispute resolution system & costs associated with dispute occurrences [3]. While, many industry publications and experts have deplored the trend towards increased litigation in the industry.

As in any other construction works, road construction contracts are liable to various kinds of disputes. The disputes may be between the client and the contractor, the main contractor and sub-contractor over payment, performance of the contract, delay and disruption of works, design changes, price escalation, quality of works etc. Most disputes are resolved by negotiation between the contracting parties without the involvement of third party. The consulting architect and engineer resolve most disputes that might arise during the progress of the work on site. Some cases, however, may require the constitution of dispute review expert or board. Still, some cases could be referred to an independent adjudicator to seek workable solutions and disputing parties may willfully accept and enforce the decision of the adjudicator. After exhausting the foregoing dispute resolution mechanisms, it may be unavoidable to take the matter to arbitration, often for final and binding award that is enforceable by state courts like any court judgment.

The first section of this paper introduces the proposed framework for the current dispute resolution mechanisms in Ethiopia. The system, based upon concepts developed within the field of construction dispute resolution system, focuses on Causes of dispute identification, and dispute handling (dispute control) system. Existing research and literature will form the basis for both the cause of dispute identification and the dispute handling (control) system components. Particular attention is given to frequent causes of disputes/claims and the typical progression of dispute resolution procedures. Recommendations are given to practitioners who are responsible for managing the capital facility process at several levels, including procurement, project management, legal/contractual, and others. As the findings of this research point to the fact that resolving disputes once they occur is only half the solution, it is hoped that providing quantitative results on successful means of others. As the findings of this research point to the fact that resolving disputes once they occur is only half the solution, it is hoped that providing quantitative results on successful means of dispute prevention and minimization of causes of dispute may be one method to increase the adoption of preventative and alternative dispute resolution procedures in the future.

The construction industry has been a paradoxical leader in both dispute occurrences and dispute resolution systems for many years [3, 4, 7]. While this may or may not be an enviable position, the industry has managed to develop and adopt many unique ways to address the potential risks of disputes [2, 4, 5, 8].

As the most common and typical project types, construction projects have several characteristics such as specific objects,

time limit, financial constraints and economic requirements, special organizational and legal conditions, complexity and systematic characteristics. For that each investment project itself is a complex system [11] in such case disputes are inevitable.

Additionally, many of these concepts and systems, including partnering, realistic risk allocation, dispute review boards, and stepped negotiations, have been successfully applied in other industries [8, 9]. However, the justification for implementing these procedures has been based primarily upon contractual requirements, governmental regulation, court order, limited previous experience, or basic reactionary instinct and not on measured cost savings. Despite being an industry keenly focused on quantitative results, parties involved in the purchase or construction of capital projects frequently fail to analyze the actual dispute resolution system & costs associated with dispute occurrences [10, 11]. While, many industry publications and experts have deplored the trend towards increased litigation in the industry [10 - 12].

In the context of our country, Ethiopia, dispute is unavoidable as it was stated by different authors [1, 3]. As in any part of the world project, there are also construction disputes in Somali Region State Road Projects. The disputes may be between the client and the contractor, the main contractor and sub-contractor for cases on over payment, performance of the contract, delay and disruption of works, design changes, price escalation, quality of works, etc. Moreover, some road projects in Somali region under disputes were not resolved or it may be resolved but through judgmental resolution method like Litigation which was the most serious and adversarial method of dispute resolution. Alternative Dispute Resolution mechanisms which help to save time and money for the parties in dispute and which maintains the relationship between the parties were not fully, developed, and utilized.

Other worlds suffered for litigation created alternatives like DB in FIDIC, MDB-FIDIC and ERA following the world has created alternative real time Dispute Resolution Mechanisms as alternative to minimize litigation through the condition of the contract of ERA Manual 2002 NCT, Section 12. But regions like Somali regional road projects are suffering from litigation. As has been identified projects in Somali region failed under design related problems due to inaccessibility of remote areas, either professionalism or has been identified from the most frequent causes of disputes in Somali region. However, this will not let none of the parties to fail under unresolved claim or dispute, the dispute resolution mechanism, applicable and practiced mostly in the region is litigation apart from negotiation, and as has been seen (in some cases and survey conducted). In some cases, contractors had known their rights to arbitrate and inviting clients to arbitrate like in case No. 3. However, this Litigation is compared to other alternative dispute resolution mechanisms [1] so the researcher has surveyed the interest of the parties for the other dispute resolution mechanisms like DRE to be practiced in the future and all parties showed their agreement and the researcher has shown one good case as example of

DRE conducted by ERA and Hunahuda in Somali region. The forwarded recommendation, applicability and suitability of DRE was bestly recommended by [3].

The objectives of this research work were to answer the following question: What are the causes that lead to construction dispute?, What are the most dominant causes of dispute in the road construction industry? And what are the current dispute resolution mechanisms in the road construction industry in the Ethiopian Somali region's road construction industry?

2. Methodology

The general methodology of this study relies largely on the survey questionnaire responses which were collected from the client, contractors and consultants involving in Ethiopian Somali road construction projects. Questionnaire prepared for the survey was formulated by screening and comprehending the relevant literatures in the area of Construction Claims and Disputes. In order to aid the gathering of data through primary source it was vital that a thorough literature review was initially conducted to identify the various causes of disputes in the construction industry from an international perspective. Prior relevant research and books form the major part of secondary data sources. The study involves descriptive analysis.

Multiple methods such as questionnaire, in depth interviews, case document review, and literature review were the techniques and methods used in collecting and analyzing data on the causes of disputes and the current dispute resolution mechanisms. Closed-ended and open-ended questionnaires as well as interviews were conducted among employers, contractors and consultants and their representatives. The questionnaires were completed by 65 construction participants. Relative Importance Index was used

to rank the most frequent causes of the dispute.

This study has identified the causes that lead the parties of road construction projects to disputes. Questionnaires were distributed to identify the causes of disputes. Dispute Resolution Mechanisms were assessed both through case studies and literature review. The current dispute resolution mechanisms were conducted through perceptions of clients, consultants, and contractors. The participants were requested to allocate marks from 1 to 5 (a 5-point scale). Interviews were also conducted to gather more information about the scope of the study. These different methods of data collection have been used in order that the data or information obtained from one can be supplemented by others whereby the collected data will give multiple evidences. The researcher conducted interviews for selected group representatives in addition to the questionnaire. For this research sample has been more often non-random, purposeful and small in number. Thus, the choice of interviewees in this study was selected through nonprobability sampling designs by means of purposive or judgmental sampling.

The responses from the 65 questionnaires were subjected to statistical analysis for analysis. The contribution of each of the cause's dispute and mechanisms of disputes examined and the ranking of the attributes in terms of their criticality as perceived by the respondents was done by use of the Relative Importance Index (RII) which was computed using the following equation.

$$RII = \frac{\sum W}{A * N} = (0 \leq RII \leq 1) \quad (1)$$

Where: W – is the weight given to each factor by the respondents and ranges from 1 to 5, (where “1” is “strongly disagree” and “5” is “strongly agree”);

A – is the highest weight (i.e. 5 in this case) and; N – is the total number of respondents.

3. Result and Analysis

Table 1. Response Rate for the Structured Questionnaire.

Group	Distributed	Returned	Returned %	Valid	Valid response (%)
Contractors	24	23	95.83	22	91.66
Consultants	25	24	96.00	22	88.00
Clients	24	21	87.50	21	87.50
Total	73	68	93.11	65	89.05

Although owners and contractors may have a different awareness on construction project management, they have a common interest in creating an environment leading to successful projects in which performance quality, completion time and final costs are within prescribed limits and tolerances [1]. So, it is interesting to note the comprehensive experience of clients, consultants and contractors who gave responses during this research.

3.1. Causes of Dispute in Ethiopian Somali Region Road Construction

The questionnaire for this study dealt with the quantification of each of the causes of dispute in terms of

frequency of occurrence and severity. The following major categories along with the number of sub-causes for each type of dispute are as follows: 1. Design related (with 4 sub-causes); 2. Contractor-related (with 6 sub-causes); 3. Owner-related (with 5 sub-causes); 4. Contract-related (4 sub-causes); and 5. External factors (with 4 sub-causes). Sub-causes were shown in the succeeding tables.

According to a study conducted by [4] on “An analysis of causes of disputes in the construction industry using an analytical network process” the first ranked factor that cause dispute was owner-related factors. However, causes of disputes in the Road construction of Somali Region as checked for the agreement or disagreement among the three

parties (the client, contractors and consultants) in ranking main causes of disputes, the representatives of the parties, like Somali Roads Authority Highway Manager says “we have problems related to design that mostly cause dispute during construction.” The Somali Road Construction Road Enterprise General Manager also says “the most common problems encountered by us was dispute related to interpretation of design and specification errors.”

The Somali Water Works Design and Supervision Enterprise’s representative says “Problems due to Design related are mostly common and since the sites are remote some have with security problem and inaccessibility of the site; some designs are made at the office using software’s as a preliminary design and tried to solve claims before escalating to disputes.” This shows that respondents agreed for Design-Related Problems as the main causes of dispute in Somali Region Road Projects. The output of Design-related Problem resulted to dispute and Litigation was the Resolution Mechanism used.

Table 2. Major Categories of Dispute.

Causes of dispute	Relative importance Index (RII)	Rank
Design-related factors	0.35	1
Contractor-related factors	0.28	2
Client/owner-related factors	0.27	3
Contract-related factors	0.10	4
External factors	0.04	5

3.1.1. Design Related Causes

Design related factors were ranked as the first by the respondents. The sub categories of the causes of dispute in road construction industry of the study area were also ranked accordingly based on the response from the respondents.

1. Design error
2. Inadequate / incomplete specifications
3. Quality of design
4. Unavailability of information about the project area

Table 3. Design related Sub causes.

Design related Sub causes	Relative importance Index (RII)	Rank
Design errors	0.35	1
Inadequate / incomplete specifications	0.30	2
Quality of design	0.27	3
Availability of information	0.27	3

As it was summarized from the above Table design error was the top ranked causes of dispute. Errors in design can lead to delays and additional costs that become the subject of disputes. Often no planning or sequencing is given to the release of design information, which then impacts on construction. Equally, the design team sometimes abrogate their responsibilities for the design, leaving the contractor to be drawn into solving any design deficiencies by carrying out that part of the work itself to try to avoid delays, and, in doing so, innocently assuming the risk for any subsequent design failures.

3.1.2. Contractor-Related Causes

Contractor related factors that cause dispute in road construction industry of the study area were ranked accordingly by the respondents as shown in Table 4.

Under the categories of contractor related disputes, delay in work progress was ranked top. Disputes frequently arise in respect of delays and who should bear the responsibility for them. Most construction contracts make provision for extending the time for completion. The sole reason for this is that the owner can keep alive any rights to delay damages recoverable from the contractor. On international construction projects the question of any rights the contractor might have to extend the time for completion was a matter often addressed towards the end of the contract, when an overrun looked likely. From the owner’s point of view, this made the examination of the true causes of delay problematical and inevitably led to disputes between the contractor and the owner as to the contractor’s proper entitlement.

Table 4. Contractor -related sub causes.

Contractor related sub causes	Relative importance Index (RII)	Rank
Delays in work progress	0.25	1
Time extensions	0.25	2
Financial failure of the contractor	0.25	3
Tendering	0.24	4
Technical inadequacy of the contractor	0.24	5
Quality of works	0.24	6

Under the FIDIC contracts the contractor is now required to give prompt notice of any circumstances that may cause a delay. If the contractor fails to do so, then any rights to extend the time for completion will be lost, both under the contract and at law. This may seem a harsh measure, but a better view is that this approach brings claims to the surface at a very early stage and gives the recipient an opportunity to examine the cause and effect of any delay properly as and when it arises, so that the owner has some say in what can be done to overcome the delay.

3.1.3. Owner-Related Causes

The personality of the Engineer or the Employer’s Representative and their approach to the proper and fair administration of the contract on behalf of the Employer is crucial to avoiding disputes, yet a substantial proportion of disputes have been driven by the Engineer or the Employer’s Representative exercising an uneven hand in deciding differences in favor of the Employer. According to the response from the respondents the top ranked factors that cause the dispute under this category is shown in Table 5.

In domestic and international contracts, the Engineer traditionally had an independent and impartial role. This independence or impartiality was often not properly exercised, and in some cases there was clear evidence of bias by the Engineer towards the Employer. This practice was not limited to third world countries but also existed in developed countries. Under the FIDIC contracts the Engineer no longer has an impartial role but expressly acts for the Employer. This

does not prevent the Engineer from taking a professional view on the merits of any difference that may be at issue, but in the event of a dispute the mechanism to resolve such matters quickly by independent means has been achieved by the introduction of a dispute adjudication board.

Table 5. Owner-related sub causes.

Owner-related sub causes	Relative importance Index (RII)	Rank
Payment delay	0.23	1
Late giving of possession	0.21	2
Variations initiated by owner	0.21	2
Unrealistic expectations	0.21	2
Change of scope		2

3.1.4. Contract-Related Causes

The written (or unwritten) contract is what guides the parties' expectations as to payment and performance. The contract must clearly identify the rights and obligations of each player in the process, from developer, to designer, to contractor, to subcontractor and supplier. More problems occur because an incomplete, vague or ambiguous "Scope of Work" in the agreement. A well-written contract that properly analyzes and allocates the risk on the project will often save heartache at the time of completion. According to the response from the respondents the top ranked sub-causes arising from contract-related resulting to disputes is shown in Table 6.

Table 6. Contract- related sub-causes.

Contract related sub causes	(RII)	Rank
Risk allocation	0.20	1
Different interpretations of the contract provisions	0.20	1
Ambiguities in contract documents	0.20	1
Other contractual problems	0.20	1

As it was summarized on the above figure Risk allocation was the top ranked cause of dispute. Risks associated with the experience and capacity of the Contractors, low balling, risk allocations, adversarial relations, locations, quality failures, negative cash flows and accidents under Tender, Contract and Construction related risk type (wubshet, 2008).

3.1.5. External Factors

External factors were the least ranked factor that cause dispute in road construction industry of the study area. Under external factor category, the following sub-factors were ranked by the respondents as shown in Table 7.

Table 7. External factors that cause disputes.

External factors sub-causes	RII	Rank
Weather	0.14	1
Legal and economic factors	0.12	2
Security	0.12	2
Fragmented structure of the sector	0.12	2

From the above figure, the top ranked causes of dispute was the weather condition. Anyone who works in the construction

industry is sure to know that working in severe weather can be dangerous. High winds and rains are one of the worst culprits and can constitute such a risk that work is often stopped temporarily which can lead to delays and extra expenses for the project as a whole. The workforce will usually have nothing to do during this temporary pause and very often construction machinery and equipment that has been hired at great expense will sit idle until the weather clears and work can return to normal.

The owner of the project will naturally want the building work to be finished as quickly and as cost effectively as possible. Delays due to bad weather can be particularly frustrating as there is absolutely nothing that can be done to avoid these delays, they are just one of the problems that affect the construction process. Delays due to reasons other than weather can often be addressed a supply chain delay can often be solved with a few phone calls. Delays due to staff sickness can be avoided by hiring temporary workers to cover the absence. If there are several delays on a project, it's likely to come in late and over budget which means that the owner may not realize the expected return on investment.

3.2. Current Dispute Resolution Mechanisms in the Road Construction Industry in Ethiopian Somali Regional State

One of the goals of any construction industry is to avoid claim and or dispute. But since construction project is complex (various stakeholders) dispute is an inevitable. Accordingly the Ethiopian Roads Authority replaces clause 67 for preventive type ADR, the involvement of Dispute Review Expert (DRE).

Resolving disputes out of the conventional court system is quite common in commercial contracts and more so in the construction contracts. The special expertise and technicalities involved in the sector and the exigency of time for the performance of such contracts often necessitate that alternative dispute resolution methods and arbitration to be in place to resolve such disputes. Though road construction contracts entered between the ERA and foreign or local contractors are public works, often financed mainly out of state coffer and that are classified as administrative contracts, disputes arising from such contracts can be submitted to arbitration and other amicable dispute resolution mechanisms.

According to the interviewee from client's representative, "dispute prevention was the goal of our road construction industry that is why we assign an expert at the commencement of the project. If a dispute arises between client and contractor, the hired DRE will give the recommendation." While another interviewee from contractor's representative suggest that "for any dispute, ADR like negotiation is the best option since adversarial method of dispute resolution is too costly for both parties."

The previous studies conducted by [1] and [3] on Effectiveness of Dispute Review Expert in practice in Ethiopian Federal Road Projects and Alternative Dispute Resolution Method in Ethiopian Construction Industry, respectively, suggests that DRE was the effective method of

dispute preventive and resolution method for construction industry of developing countries like Ethiopia. For the question did you practice negotiation, conciliation, arbitral submission etc. as Ethiopian civil code, procedure code, when dispute occurs.

Table 8. Settlement of disputes from civil code and their RII as per Somali Region Road Projects.

Dispute Resolution Mechanisms	RII	Rank
Compromise (Negotiation)	0.54	01
conciliation	0.01	03
Arbitral Submission	0.01	02
Litigation	0.44	03

The table above shows the most common dispute resolution mechanism practiced was compromise or negotiation, beyond that the next most settlement of dispute was Litigation the other conciliation and Arbitral Submission were not practiced more.

Table 9. Most practiced Condition of Contract in Somali Road Projects.

Condition of Contract?	Client		Consultant		Contractor	
	Frequency	%	Frequency	%	Frequency	%
ERA	22	100	22	100	21	100
PPA	0	0	0	0	0	0
Total	22	100	21	100	22	100

4. Case Study

In this study to explore the causes of dispute and resolution mechanism in study area, case study were also used in addition to interview and questioner. According, the case of three completed projects were assessed.

Table 10. Case study No. 1 and its resolution mechanism.

Case No	Cause of dispute for this case	Actual claim	Claimant	Initial Mechanism Used	Final Mechanism (resorted to)	Status of the project
1	Design- related (Design error)	Extension of time and money claim	Contractor	Negotiation	Litigation	Terminated

The table above shows that the cause of dispute was design error. The Resolution mechanism initially employed was Negotiation. But Negotiation did not work, hence resorted to Litigation. The contractor claimed for extension of time and money claim but parties did not agree to the conditions. The case was terminated without completing the project. The contractor claim for extension of time and money claim are nil. Claims are not settled but still pending. The case was terminated without completing the project.

Table 11. Shows that the cause of dispute was Change in Legislation (under the category of external factor). Here, the client was ERA compared to all other cases which is Somali Road Authority. This case was initially underwent Negotiation, however it was finally referred to Dispute Review Expert. The cause of dispute in this case was due to

3.3. Most fit Mechanism of Dispute Resolution and Method of Minimization of Disputes in Ethiopian Somali Reginal State

For the question “Which type of dispute resolution mechanism fits for the road construction industry of Somali”, almost all respondents agreed that they wish to use ADR like negotiation before DRE, arbitration, or litigation is applied to avoid time and involvement of third party.

What is the consequence of Litigation? The summery from the respondents was, waste of time and hostility, a cost that is sacrificed for resolution of unnecessary and time wasting litigation. And this was witnessed through Case 1.

From the results gathered through Questionnaire, out of 65 respondents shown in Table 9. 22 from Clients, 22 from Contractors and 21 from Consultants all answered that the practiced Conditions of Contract used in Somali road construction projects was the ERA General Conditions of Contract. PPA was one of the Conditions of Contract provided by the government but not practiced in Somali Road projects.

change in legislation. The Contractor here avers that he paid Surtax on all goods imported for the project. And the issues are- “Is the Contractor entitled to reimbursement by the Employer of Surtax Costs paid by the Contractor on goods imported before the enactment of Surtax on 11 April 2007? And is the Contractor entitled to reimbursement by the Employer for any increased Foreign Exchange Costs incurred due to change in legislation?” It is common ground that after the contract base date, Government Regulation No. 133/2007 introduced a Surtax of 10% on all goods imported into Ethiopia, effective 11 April 2007, and that the Contractor is entitled to reimbursement of the resulting additional cost he has properly incurred on goods imported for the sole purpose of the project works.

Table 11. Case study No. 2 and its resolution mechanism.

Case No	Cause of dispute for this case	Actual claim	Claimant	Initial Mechanism Used	Final Mechanism (resorted to)	Status of the project
2	External Factor (Change in legislation)	Money claim (Additional Cost)	Contractor	Negotiation	DRE	Completed

Table 12. Shows that the cause of dispute was design error as in case No. 3. The Resolution mechanism initially employed was Negotiation. But Negotiation did not work, hence resorted to Arbitration (Litigation). Contractor's one

claim is for extension of time but nil. This claim is still pending. For the contractor's money claim for his impounded equipment & machinery. This another claim is still unresolved. Contractor was refused any and all payments.

Table 12. Case study No. 3 and its resolution mechanism.

Case No	Cause of dispute for this case	Actual claim	Claimant	Initial Mechanism Used	Final Mechanism (resorted to)	Status of the project
3	Design- related (Design error)	Extension of time and money claim	Contractor	Negotiation	Arbitration (Litigation)	Suspended for about seven years

5. Conclusion

This research has three primary objectives, which were achieved through the data collected using Survey, Case study and Document Review techniques. The first objective was to determine the causes that lead to construction dispute; second, to identify the most frequent causes of dispute; and third, to assess the current dispute resolution mechanisms in Ethiopian Somali region's road construction industry.

Results show to have five major categories of disputes which are design-related, contractor-related, owner related, contract-related, and external factors ranked from first to fifth, respectively. Under each of the major categories, sub-causes of disputes were identified and ranked according to its relative importance. Overall, there were twenty three (23) factors found under all these major categories. The top three causes of dispute were design errors, inadequate/incomplete specification, and quality of design (all are under design-related disputes), respectively; while one of the least's factors is fragmented structure of the sector

Based on the results obtained from this research, the following conclusions of the research were drawn according to the response of the respondents.

Results from respondents' responses through the questionnaire show that the most commonly used dispute resolution mechanism was Negotiation; while from the analysis of case studies, Arbitration ranked the first. The differing result shows different levels of understanding and lack of knowledge of the parties as to the nature of claim and the actual status of disputed cases. That's where the claim could not be resolved through Negotiation considering the nature of claim, it has to resort to Arbitration (Litigation) which is the final stage of dispute management in the road construction sector. Also, lack of ability of the parties to negotiate will result to adversarial resolution mechanism. The majority of construction participants has a moderate knowledge of ADR methods and experiences the methods as not being flexible and somewhat too complex.

Through data analysis, it was generated that waste of time

and hostility is a cost to be sacrificed for resolution of unnecessary and time wasting litigation as the consequence of unresolved dispute. For the question "Which type of dispute resolution mechanism fits for the road construction industry", almost all respondents reported that they wish to use ADR, like negotiation before arbitration (litigation) to avoid time and the involvement of third parties.

In the case studies, it was determined that had the parties use ADR as the resolution method, projects should not have been terminated, suspended nor delayed. Projects in Road Construction Industry of Ethiopian Somali Region suffered from a lack of legitimate ADR application. The litigation option does not show itself compatible option for dispute resolution as assessed. Further, Somali regional state was not following the actual DRE System as formal method used by ERA yet the ERA's Standard Specification treats the settlement of disputes mainly for road construction projects.

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