

# MOST APPROPRIATE DISPUTE RESOLUTION STRATEGY FOR SRI LANKAN CONSTRUCTION INDUSTRY

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## ABSTRACT

*With the surge of increasingly complex and fast-track construction projects, disputes are inevitable. Skills in dispute resolution should be part of the tool kit of any practitioner in a managerial position. However, the last decade evidenced the incorporation of increasingly complex dispute-resolution clauses in construction contracts, typically involving several alternative dispute resolution (ADR) techniques and arbitration arranged in sequential tiers. While the industry followed the standard guidelines, it was not clear what exactly the industry expect from the resolution process. In this study, a hierarchical model is developed to organise attributes of ADR processes. This hierarchical presentation fits with the use of analytical hierarchy process methodology by a group of experts to prioritise ADR process attributes. Frequently the question is how to select the most appropriate resolution method that can fit well with the disputing parties' needs. Hence, dispute resolution strategy selection model is developed in this research based on the above AHP results. The Model is considered beneficial to the industry, as it provides construction professionals with a systematic and objective approach in the selection of ADR methods for Sri Lankan construction project disputes.*

**Keywords:** Dispute Resolution, ADR Method Selection, Construction, Sri Lanka.

## 1. INTRODUCTION

Alternative Dispute Resolution (ADR) is a voluntary approach that parties to a contract can agree upon for resolution of dispute outside the courts. The adoption of ADR methods has shown lack of rationality in the Sri Lankan construction industry. This paper presents findings of a rational approach to selection of ADR method.

## 2. BACKGROUND

Construction is a complex process that requires the coordinated effort of a temporarily assembled multiple-party organisation of many discrete groups, each having different goals and needs, and each expecting to maximise its own benefit (Walker, 1996). Because of difference in perception and frequent conflicting goals among partners to a project, conflicts in the construction project environment are inevitable. However, conflicts can quickly turn into disputes if not properly managed. Dispute is often regarded as a form of conflict that is made public and requires resolution (Brown and Marriott, 1999).

Disputes can arise due to several reasons including design errors, changes, multiple prime contracting parties, complexity and magnitude of the work, different site conditions, inadequate planning, defective specifications, financial issues and communication problems. Complicated litigation or arbitration could arise because of all the above factors affect the cost, communication and relationship of the parties. The progress and duration of construction projects are affected by such disputes and they may cause owners to lose their investment revenue because of the associated delays. They may have negative impacts on contractors since project delays are associated with increased materials and labours costs. Finally, both parties are affected by the time and monetary cost of dispute resolution itself. Construction disputes are

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characterised by features that differentiate them from other types of disputes (Marzouk and Moamen, 2009).

It is a known fact that the client and the contractor have to face significant difficulties in resolving disputes in construction industry (Murtoaro and Kujala, 2007). Therefore they always have to use different type of dispute resolution methods in practice. Though they use alternative dispute resolution methods such as Negotiation; Mediation; Adjudication; Arbitration; Litigation etc., it is complicated to make a decision on selecting a most appropriate dispute resolution method for a given context of a dispute. However, lack of experiences in these methods has hindered the acceptance of potential users. Hence, the industry's approach in the selection of dispute resolution method has been heavily criticised, where too much reliance is placed on intuitive judgments rather than on rational approach (Chan *et al.*, 2006).

In the current practice of the Sri Lankan construction industry, the choice of the ADR method to a great extent is involuntary; that is, the contracting parties adopt the ADR method stipulated on the standard form of contract. This is likely to increase the technical suitability because the ADR clauses are scrutinised against the other clauses within the standard form.

In addition to the technical suitability, the appropriateness is also affected by the contextual factors like culture and attitudes of the parties. As any other society, the Sri Lankan society is thought to have its own value system. A rational approach to identify the most suitable dispute resolving method according to Sri Lankan environment of construction is therefore a necessity. At the same time, management of construction disputes in an effective way requires mapping the dispute with the most appropriate dispute resolution method. Due to above reason, this research proposes a systemic, logically consistent and theoretically acceptable approach to identify the most appropriate dispute resolution strategy suit to Sri Lankan construction industry.

### **3. RESEARCH METHODOLOGY**

The knowledge gathered through the literature survey was further strengthened from a round of pilot interviews among experienced construction professionals. A list of factors that can affect the selection of ADR method was developed through this process. The pilot interviews also had a secondary objective of identifying the experts who could be prospective participants/respondents for the study.

The intention of the study was to generalise the conclusions and develop a model that has an industry wide usage. The study was conducted within a positive philosophical stance, and a quantitative approach was preferred. However, a direct quantitative method was not possible due the nature of the subject of interest. A search for alternative options revealed that the Analytical Hierarchical Process (AHP) developed by Saaty (2008) would be the most suitable research method. AHP is a research method which has its own tool for data collection and analysis. The method was preferred primarily due to the nature of prospective participants/respondents of the research that they were experienced professional who could critically compare attributes for decision, and the attributes themselves fit into a two-tier hierarchical structure. The AHP tool allows a respondent to compare only two factors at a time, which is a strong feature that helps rational decision making.

Thirty experience professionals took part in the research study. They were a mixed of professional representing both clients and contractors and had active involvement of dispute resolution processes. The data analysis technique was that of AHP using a spreadsheet application. Graphical techniques were used to explore and describe the AHP output. Finally, the utility values attributes which had been found by Cheung and Suen (2002) were mathematically compared with the priority of attributes in Sri Lankan context in order to identify suitable ADR method.

### **4. IDENTIFICATION OF ADR PROCESS ATTRIBUTES**

Dispute resolution has attracted the interest of many researchers and practitioners. Among the noteworthy, Goldberg *et al.* (1992) completed a comprehensive list of attributes of dispute resolution, including voluntariness, involvement of a third party, and degree of formality, nature of the proceeding, outcome,

and privacy. York (1996) concerns more with the practical issues and identified time, cost, preservation of relationships, binding decision, degree of control by parties, flexibility in procedure, and confidentiality. Moreover, David (1988) focused on social and human issues such as impartiality, consensus, and continuing business relationships. Cheung and Suen (2002) had reviewed most of relevant literature, including the above in developing a list of 16 utility factors of dispute resolution. These were used as the basis of development of a list of attributes. Through the consultation of experts the following list of attributes were identified.

1. Voluntariness
2. Neutrality
3. Fairness
4. Knowledge in Construction
5. Creative Agreement
6. Enforceability
7. Scope of Remedy to satisfy interest
8. Speed
9. Consolidation
10. Cost
11. Range of Issues
12. Preservation of Relationship
13. Flexibility in issues, strategy and agreement
14. Binding decisions and enforcement
15. Degree of control by parties
16. Formality
17. Consensus Agreement
18. Privacy
19. Relative cost
20. Confidentiality

In identification of the above list, priority was a concise and comparable list. These attributes were then grouped and arranged in a two-tier hierarchy as Main Attributes and Sub Attributes and taken to expert response using the AHP tool.

## **5. GLOBAL PRIORITIES FOR SUB ATTRIBUTES**

Based on the ranking by experts, the Local Priority Weightings (LPW) for each and every Sub Attributes was calculated using AHP tool. The Global Priority Weighting (GPW) or the overall importance for each Sub Attributes was then calculated by multiplying its LPW by its Main Attribute's Priority Weighting. These are tabulated in Table 1.

AHP approach mainly focuses on prioritising attributes quantitatively from the priority weightings arrived thorough simple pair wise comparisons. All calculated Consistency Ratios (CR) were less than 0.1 as can be expected from judgements of experts. This was a signal of accuracy in judgement.

The most useful finding of the study is the quantitative weight for priority of each attribute. The GPW for each sub attributes as graphically illustrated in Figure 1 in the descending order of priority.

The “Degree of Control by the Parties” hit the top of the priority list showing that parties consider that they need to have a control over the process. In the second position is “Voluntariness” and “Confidentiality” was at third position. These attributes are in fact the key difference of ADR from litigation. Thus, ADR as a concept has been developed rationally. The top ten attributes (i.e. down to “privacy of the proceedings”) covers 80% of total weightings. From the bottom of them, “privacy of the proceedings” was a common feature for ADR, “range of issues” was a subjective feature of the context, and “neutrality” was also a common feature for all ADR methods considered. Thus, only the balance seven attributes were taken to the next step, in order to find suitable ADR method for Sri Lankan construction industry. The selection is however bounded rational, based on quantitative significance and knowledge of the researchers. One may select more number of attributes, but unlikely to find different conclusions because of low weighting and low utility variation in those attributes.

Table 1: Global Priority Weightings

Priority Rank	Main Attributes		Sub Attributes		
	Attribute name	Priority	Sub-Attribute name	Local Priority	Global Priority
1	Non-Litigious Nature	0.549	1. Degree of control by the parties	0.251	0.138
			2. Voluntariness	0.245	0.135
			3. Confidentiality of the process	0.147	0.081
			4. Flexibility	0.136	0.075
			5. Range of issues	0.098	0.054
			6. Privacy of the proceeding	0.088	0.049
			7. Formality	0.034	0.019
Non-Litigious Nature					0.549
2	Time and Cost Benefit	0.204	1. Speed to obtain	0.344	0.070
			2. Relative cost	0.312	0.064
			3. Preservation of business relationship	0.280	0.057
			4. Liability for opponent’s cost	0.065	0.013
Time and Cost Benefit					0.204
3	High Quality Settlement	0.129	1. Bindingness of the decision	0.273	0.035
			2. Fairness	0.218	0.028
			3. Consensus agreement	0.214	0.028
			4. Enforceability of the decision	0.145	0.019
			5. Creative Solution	0.086	0.011
			6. Scope of remedy to satisfy interest	0.064	0.008
High Quality Settlement					0.129
4	Neutral Third Party	0.117	1. Neutrality	0.487	0.057
			2. Knowledge in construction	0.318	0.037
			3. Consolidation	0.196	0.023
Neutral Third Party					0.117

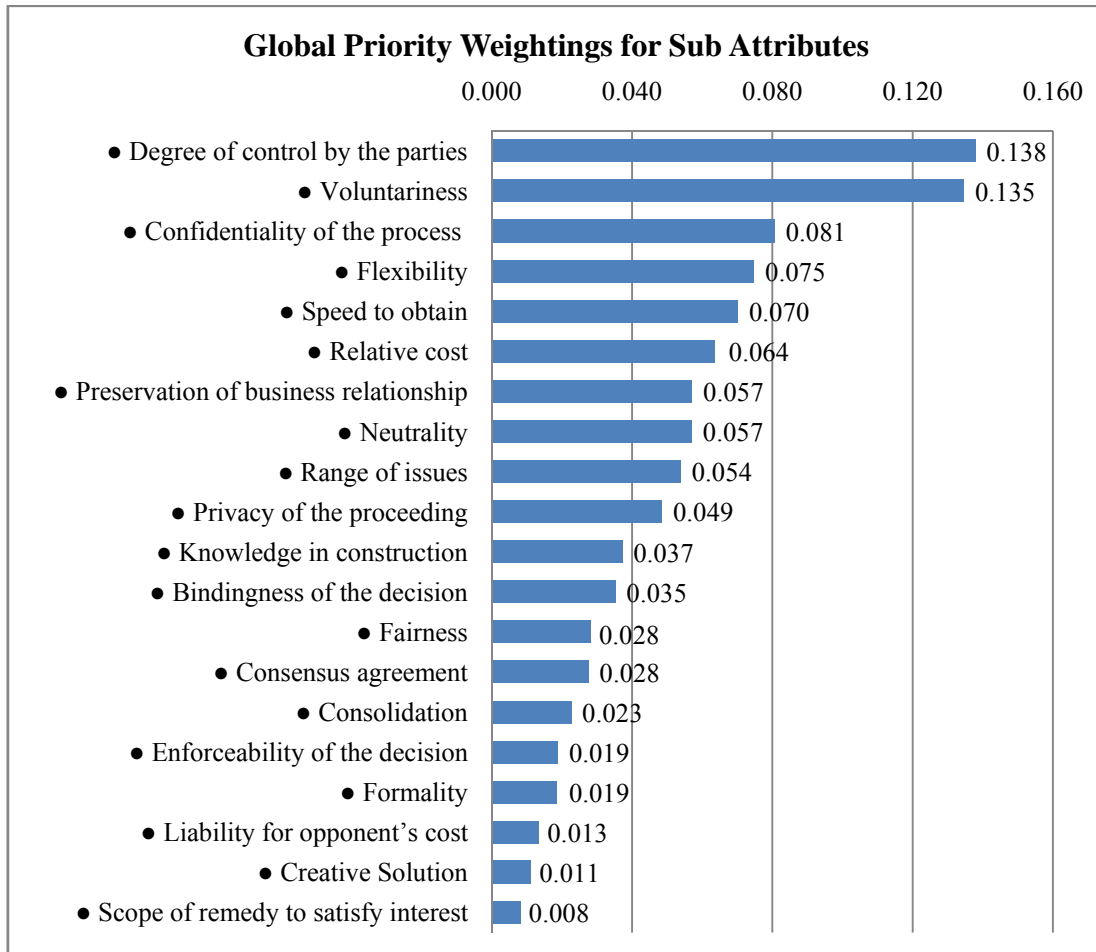


Figure 1: Global Priority Weightings for Sub Attributes

## 6. DEVELOPING A DISPUTE RESOLUTION STRATEGY SELECTION MODEL

The ADR selection model was developed by combining the findings of AHP and utility values which had been found by Cheung and Suen (2002). They had calculated the utility values as a percentage of overall average utility, thus having a centre value of 100. For this reason, simple multiplication of priority value became appropriate. However, for clarity, the priority values of the seven factors were transformed so that their total becomes one so that the expected Utility Score (US) becomes 100. The calculated Utility Scores are shown in Table 2.

From the Utility Scores it could be observed that the order of rational preference of ADR for a generic Sri Lankan context is in the order:

1. Negotiation (US = 94)
2. Mediation (US = 88)
3. Adjudication (US = 72), and
4. Arbitration (US = 53)

A wider gap is observed between the utility scores of adjudication and arbitration. Litigation also was scored for the utility for the same priorities and found to have a very low score of 26. These findings together with the GPW of attributes are used in drawing conclusions.

Table 2: Developed Model for Dispute Resolution Strategy Selection

Selection Factors	Global Priority Weight	Negotiation		Mediation		Adjudication		Arbitration		Litigation	
		U.F.	U.S.	U.F.	U.S.	U.F.	U.S.	U.F.	U.S.	U.F.	U.S.
Degree of control by the parties	0.223	105.00	23.39	91.50	20.38	51.50	11.47	51.50	11.47	29.20	6.50
Voluntariness	0.217	83.40	18.14	82.00	17.83	76.00	16.53	62.00	13.48	45.00	9.79
Confidentiality of the process	0.130	88.50	11.53	85.40	11.13	76.20	9.93	94.60	12.33	22.30	2.91
Flexibility	0.121	107.00	12.93	94.60	11.43	87.70	10.60	51.50	6.22	15.40	1.86
Speed to obtain	0.113	96.20	10.91	87.70	9.95	80.80	9.17	26.20	2.97	16.20	1.84
Relative cost	0.103	89.20	9.18	87.70	9.03	80.00	8.23	28.50	2.93	16.90	1.74
Preservation of business relationship	0.092	90.80	8.38	88.50	8.17	70.80	6.53	34.60	3.19	13.80	1.27
<b>Total Score</b>	<b>1.000</b>	<b>94.46</b>		<b>87.91</b>		<b>72.46</b>		<b>52.60</b>		<b>25.91</b>	
<b>Order of Preference</b>		<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>	

## 7. CONCLUSIONS AND RECOMMENDATIONS

The research aimed to develop a model for rational selection of suitable Alternative Dispute Resolution (ADR) method. This became necessary and useful because the current practice of choice in the country was mostly by intuition or personal judgment, or merely by following what is given in standard forms adopted.

At the initial stage of the study, through a review of literature, 20 attributes of ADR were identified. Then they were got prioritised quantitatively by the judgments of 20 experts, professionals with an experience in ADR, by using the Analytical Hierarchy Process (AHP). Consistency ratios calculated showed high level of consistency throughout, which was not doubtful when the type of participants are considered.

Twenty number of attributes identified were studied in a two tier hierarchical model, with “Non Litigious Nature”, “Neutral Third Party”, “High Quality Settlement” and “Benefits” as top level (main) attributes, and 20 sub-attributes under them.

The Global Priority Weightings (GPWs) of 20 sub-attributes showed that “Degree of Control by the Parties”, “Voluntariness”, “Confidentiality of the Process”, “Flexibility”, “Speed to Obtain”, “Relative Cost”, and “Preservation of Business of Business Relationship” as top seven attributes. Therefore it can be stated that the construction industry of Sri Lanka gives a high priority on “Degree of Control by the Parties”. In fact all the top seven attributes are exclusively from the tier one attributes “Non-Litigious Nature” and “Benefit”, highlighting that these are the critical attributes for the industry. This also highlights the dislike for litigation in the industry.

The most suitable strategy for ADR in Sri Lankan construction industry was identified by using a model that combines the AHP output with the attribute utilities found by Cheung and Suen (2002). The calculated Utility Score shown in Figure 2 below gives a clear idea of level of utility each ADR method can deliver, and how they are comparable to litigation.

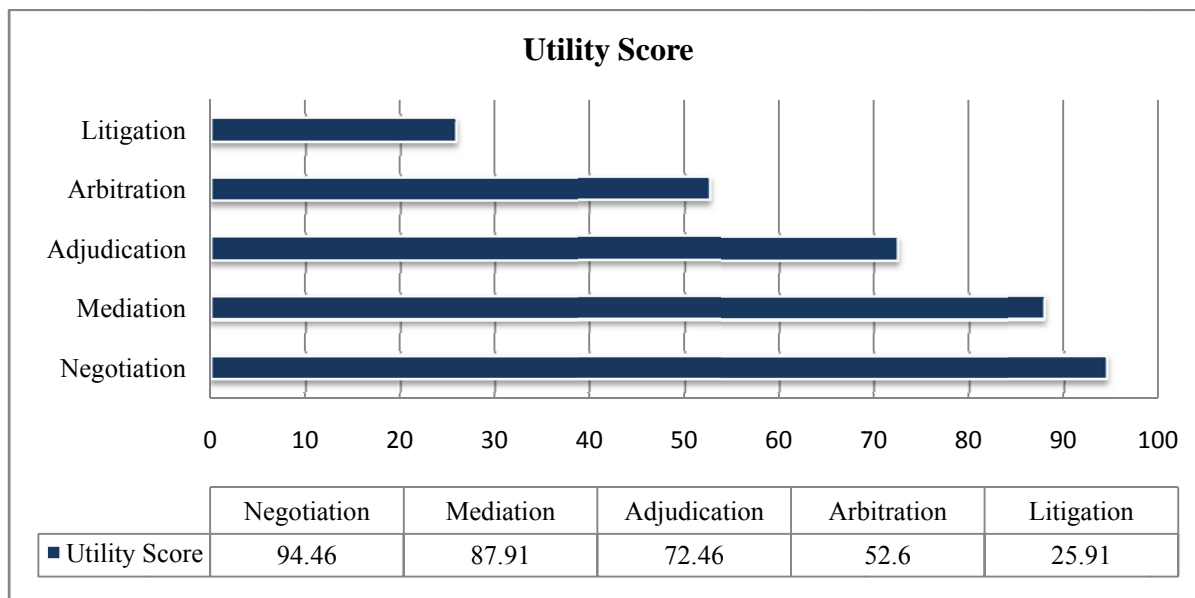


Figure 2: Utility Score of Dispute Resolution Methods

The recommended method is the one with the highest utility. Thus “Negotiation” is the preferred choice for the industry, and the others will be in the preference list in descending utility score order. It should be noted that this exercise was done with the industry expert from their judgement on the generic industry context. Thus this knowledge is ideally useful only for general contexts such as development of standard forms (conditions) of contracts. However, ADR is a choice for the parties in a dispute or who anticipate to resolve disputes, if arise, using ADR. In such a context, it is not necessary follow the generic conclusions. Instead, they can utilise the model developed herein to identify their own priorities and to find best ADR strategies accordingly. For example, in the generic model, “binding decision” and “enforceability of the decision” had a low priority score, if parties consider those to be high priority, a method like Arbitration would get highest utility score.

The Utility Score model is not a decision making model, but a decision support model. Parties should not totally rely on the final output. Instead, they should look at intermediate outputs, viz. Global Priority Weightings (GPW), Consistency Ratios (CR) and the final output - Utility Scores (US), in making an informed decision. CR must be first improved if found poor (i.e. higher than 10%). Attributes for the Utility Score model should be selected based on the GPWs. Necessary attribute utilities can be found from the works of Cheung and Suen (2002). However, it can be recommended to find the attribute utilities using AHP method as a further study. AHP is likely to yield more reliable results due to its unique scale and calculation method.

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