INVESTIGATE THE CRITICAL ATTRIBUTES AND PRACTICAL CONSTRAINTS AFFECTING THE EFFECTIVENESS OF ARBITRATION IN THE CONSTRUCTION INDUSTRY OF SRI LANKA

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Dissertation submitted in partial fulfilment of the requirements for the degree Master of Science in Construction Law and Dispute Resolution

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DECLARATION

I declare that this is my own work and this dissertation does not incorporate without acknowledgement any material previously submitted for a Masters or Degree in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

Further, I acknowledge the intellectual contribution of my research supervisor Mr. M.D.T.E Abeynayake for the successful completion of this research dissertation. I affirm that I will not make any publication from this research without the name of my research supervisor as contributing author unless otherwise I have obtained written consent from my supervisor.

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Dissertation Supervisor

M.D.T.E. Abeynayake

ABSTRACT

With the growing of the construction sector, construction disputes have been grown significantly. ADR methods including arbitration requires effective procedures of management in order to deliver fair awards to the clients. Still, few number of studies have been conducted on enhancing the effectiveness of arbitration, they had very little prioritisation on critical attributes and practical constraints. This research aims to enhance the effectiveness of arbitration method, which will ultimately help avoid disputes in the construction projects in Sri Lanka. The collected empirical data from expert interviews and two phase of questionnaire survey were analysed using content analysis and descriptive statistics respectively.

The research's findings indicated twenty-five (25) attributes connected to the Sri Lankan arbitration framework, with ten (10) of them being deemed the most critical. In the arbitration, "information confidentiality" is the most critical attribute. Furthermore, the analysis uncovered twenty-one (21) severe practical constraints relating to the Sri Lankan arbitration context, with ten (10) of them being identified as the most essential. In the context of Sri Lankan arbitration, the top most severe restraint is "time demanding." To enhance most critical attributes, 14 handlings strategies were identified. Among them, arbitrators must properly manage the arbitration process, arbitrators must gather sufficient information from the parties to deliver a successful hearing, conducting an awareness program is required to enhance the success of the arbitration and clearly identify their role and responsibilities of arbitrators can be considered as most significant strategies to deal with specific attributes also the professionals must avoid the practical constraints.

Keywords: Arbitration, Critical Attributes, Strategies, Practical Constraints

DEDICATION

I'd want to dedicate my work to my devoted parents, my wife and esteemed instructors, who have never wavered in their support, devotion, and encouragement.

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D Isuru Udana

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LIST OF ABBREVIATIONS

ADR - Alternative Dispute Resolution

RII – Relative Importance Index

DAB - Dispute Adjudication Board

RDA – Road Development Authority

SL – Sri Lankan

CPD - Continuing Professional Development

SPSS - Statistical Package for the Social Sciences

CHAPTER 01

1. INTRODUCTION

1.1 Background

The construction sector is the foundation of the socio-economic development of society (Ofori, 2012). Similarly, Asomanin and, Osei-Amponsah, (2007) point out that the construction industry plays a significant role in economic development and employment. Wimalasena and Gunatilake (2018) classifies the construction process into pre-construction, construction, and post-construction phases. Furthermore, Cheeks (2013) points out that disputes are unavoidable in every phase of the construction project.

Disputes and conflicts arise whenever interests are incompatible (Fenn et al., 1997). Similarly, Kavinda (2010) states that construction disputes arise whenever there is a contractual misrepresentation. Although Gobken (2006) points out that a dispute is difficult to be determined at the construction site. Arsecularathne (2011) defines that construction disputes disturb the continuity of the construction projects and the relationship between the parties to construction. Harmon (2003) has introduced the complexity and the extent of the work, numerous contracting parties, ill prepared and performed contract documents, insufficient planning, economic matters, and communication as important reasons for construction disputes. Even though resolving disputes is a complex task it is significant to resolve disputes hence they affect the progress of construction (Cheung et al., 2002).

As results of disputes, complicated litigation procedures could arise creating issues regarding cost, time, and the relationship of the parties to construction (Hoogenboom & Dale, 2005). Kavinda (2010) states that Alternative dispute resolution methods have become more favorable among parties to the contract. Similarly. Hibbered (2003) states that with the increasing dissatisfaction of litigation more parties to construction are turning to arbitration methods. Similarly, Dann (2009) points out that because of the complexity and increasing costs of litigation methods peruses

parties to turn on to more rapid and current dispute resolution methods. Therefore, the Alternative Dispute Resolution Methods have started to dominate the construction industry (Murdoch and Hughes 2008). De Zylva (2006) point out that Negotiation, mediation, adjudication, and arbitration as Alternative Dispute Resolution (ADR) methods.

Arbitration is often thought to be a more efficient process in ADR methods since it is faster, and offers more process and procedure flexibility (Gulghane & Khandve, 2015). The arbitrator is frequently chosen by the parties, and they have power over certain components of the arbitration process (Albright, 2012). Therefore, judges generally lack experience in the precise subject matter of the dispute, whereas arbitrators do (Pickavance, 2005). According to the American Arbitration Association (2004), Arbitration is a process where several external parties will give Choice of law of substances to the parties of the contract, and through contractual necessities, the parties may regulate the range of matters to be determined. Neale and Kleiner (2001) point out that Arbitration is a popular method of dispute resolution alternative for litigation for commercial disputes. Similarly, Harmon (2003) points out that the Arbitration clauses are incorporated into the contracts and widely used in the present. Sims (2003) explains that using the technical skills of the Arbitrator the disputes with technical nature can be easily resolved. In Sri Lankan context arbitration proceedings are conducted under AD-hoc proceedings where parties may decide on their proceedings to be adopted to be included in their arbitration proceedings. Therefore, this research mainly focusses on the Arbitration process due to its decision-making flexibility and efficiency as an ADR method (Hibberd, 2003).

1.2 Problem Statement

There are several kinds of research carried out regarding Alternative dispute resolutions in general (Kovach, 2004; Groton, 2005; Helbert, 2007). Also, several kinds of research on disputes (Ried and Ellis, 2007; Arsekulerathne, 2011). Similarly, some researchers have described dispute resolution methods more descriptively (Acharya, Lee, & Im. , 2006). However, there are only few numbers of researches have been carried out about the enhancement of the effectiveness of

Arbitration through providing strategies to improve critical attributes. Therefore, there is a research gap on critical attributes/factors and effective enhancement strategies for critical attributes concerning Arbitration methods in the construction industry of Sri Lanka.

Although there are several ADR methods such as Arbitration, Adjudication, Mediation and Negotiation used as an alternative to Litigation in Sri Lankan construction industry conveniently resolving disputes always have been challenging. Also implementing the most appropriate Alternative Dispute Resolution method to a certain scenario is required to overcome issues. According to Cheung and Suen (2009), all the Alternative dispute resolution methods do not apply to every dispute therefore evaluating the most appropriate method is vital. Evaluating the significant attributes of each of these Alternative dispute resolution methods is essential when implementing the most suitable method. Arbitration is one of the most common and effective ADR method in the current construction industry (Cheung S. , 1999). Therefore, Arbitration plays a significant role in the ADR procedure. Therefore, it is required to investigate the critical attributes/factors and practical constraints of Arbitration.

The absence of adequate researches on identifying the significant factors of Arbitration is a critical issue in the industry. Hence these two procedures are widely used in the dispute resolution arena and it is essential to get a clear idea regarding the critical attributes and practical constraints concerning Arbitration. Therefore, regarding all the above citations, it is apparent that it is required to research this area.

1.3 Aim

The aim of this research is to evaluate the critical attributes and practical constraints of Arbitration method in the construction industry of Sri Lanka to enhance the effectiveness of Arbitration

1.4 Objectives

The objectives of this research are to

1. Review the critical attributes, practical constraints and enhancement strategies of Arbitration method.
2. Investigate the significance of critical attributes and practical constraints of arbitration to the Sri Lankan construction industry.
3. Recommend strategies to enhance the effectiveness of Arbitration to the Sri Lankan construction industry.

1.5 Research Methodology

Literature review

A comprehensive literature survey was carried out by reading a range of journals, conferences papers, books, articles, thesis, and dissertations to research the significant factors concerning Arbitration methods in the construction industry in Sri Lanka. A literature review was implemented to collect findings for further analysis in other stages.

Research design

The mixed approach was adapted to this research since the mixed approach well resembles with the objectives of this research. A sample of construction experts were interviewed using semi-structured interviews followed by two questioner survey circulated among a sample of construction organizations.

Analysis

Thereafter data analysis was carried out utilizing the collected data via the expert interviews and two round questioner surveys. Then with the help of the outcome, the most significant attributes were evaluated of the Arbitration procedures.

1.6 Scope and Limitations

This research is limited to the Arbitration methods even though there are many other Alternative Dispute Resolution Methods in practice. Also, this research is limited to identifying the critical attributes and practical constraints concerning Arbitration aspects. Furthermore, this research is concentrated around the construction industry of Sri Lanka.

1.7 Chapter Breakdown

This dissertation consists of five chapters as given in the following Figure 1.1, as

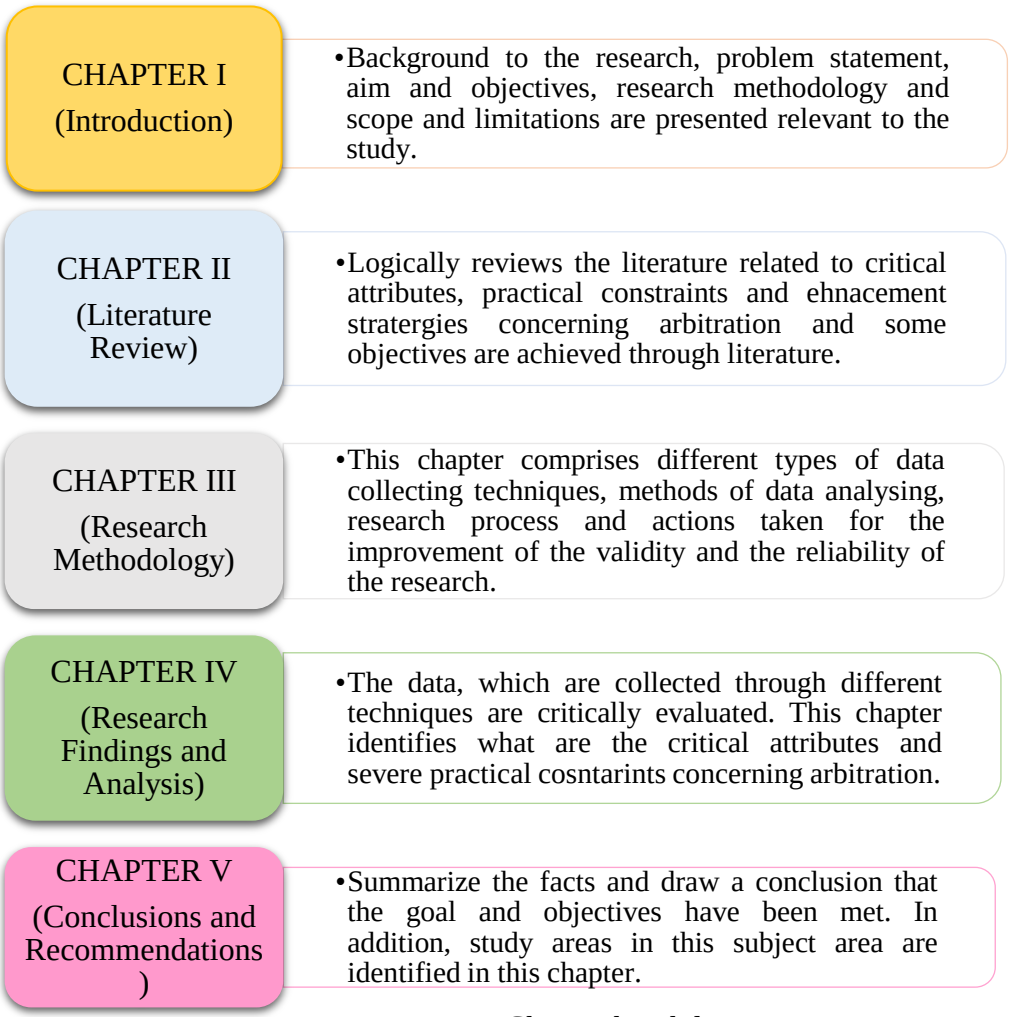


Figure 1.1: Chapter breakdown

mentioned below to carry out the research.

1.8 Chapter Summery

This chapter summarises by identifying the research problem and background to the research problem, strengthening with literature review. Also, it describes the scope and limitations of the research and highlights the contribution to the knowledge by doing this research. Further, the aim and objectives for the research have been emphasized with a research methodology in a concise manner where the original analysis takes place in the fourth chapter.

CHAPTER 02

2. LITERATURE REVIEW

2.1 Introduction

It has been discussed about the conflicts and disputes in the construction industry with their differences. The causations which affect the disputes also have been synthesized. Further, the alternative dispute resolution methods and litigation with their importance have been discussed literally and the critical attributes and practical constraints to the construction dispute resolution also identified. Finally, this chapter has discussed the applicability of arbitration in the Sri Lankan context and strategies to enhance its effectiveness.

2.2 Difference Between Disputes and Conflicts

Disputes and conflicts arise whenever interests are incompatible (Fenn, Lowe, & Speck, 1997; Brown & Marriot, 2018). Therefore, some authors exchange the two terms of disputes and conflicts. But others point out conceptual gaps between disputes and conflicts, even though they are obscured (Kumaraswamy, 1997). The conflict has been specified as 'serious disagreement and argument over something essential' (Douglas, 1999). Thus, there is a pandemic, conflict can be controlled by preventing that a conflict-related dispute is prevented. The dispute is related to distinct justifiable problems (Cheung, 1999; Kisi, Lee, Kayastha, & Kovel, 2020). Generally, the dispute resolution method lends itself to intervention from third parties. The effective management of conflicts and disputes would be further enhanced by the separation of different fields and, in particular, by the application of stricter structuring (Shamir, 2003).

Brown and Marriot (2018) described the dispute as a kind of conflict that manifests itself in separate, justifiable issues. It comprises conflict over problems that can be resolved by negotiation, mediation, or third-party adjudication. The dispute is an outcome of unsolved conflict which, in relation to conflict, is real and concrete. It has problems, expectations, and positions of relief (Costantino & Merchant, 1996). The

prevalence of conflicts and disputes varies from project to project (Cheung, 1999). Participants in the construction process, in particular the client, have a good knowledge of the reasons that cause conflict and, if they desire, they should take reasonable measures to prevent conflict (Fenn, Lowe, & Speck, 1997; Brown & Marriot, 2018). The legal and administrative mechanisms on which we have traditionally relied for dispute resolution appear to be adversarial and are structured to pick winners and losers, often ignoring the legitimate interests of either side (Kumaraswamy, 1997). However, if only one side "wins," the opposing party is likely to try to move the fight to another venue or gain revenge in an unforeseen scenario (Shamir, 2003).

2.3 Disputes in the Construction Industry

Construction, by definition, is a project with a set timeline for the start and completion of interrelated tasks (Jayalath, 2010). Further, the construction industry consists of a complex and competitive nature. As well as it includes a coordinated multi-party organization each having various opinions, capacities, and familiarity about the construction process to maximize its benefits (Cakmak & Cakmak, 2014). Due to the alterations in awareness between the contributors of the construction projects, conflicts can be foreseeable (Jayasena & Kavinda, 2012). According to the authors, due to improper management of those conflicts, they can be easily turned into disputes. Furthermore, complex construction can lead to complicated disputes (Harmon, 2003).

In the construction sector, disputes are widespread, and they are crucial to both the disputants and other stakeholders including developers, owners, non-owning occupiers, contractors, subcontractors, suppliers, and professional consultants (Brooker & Lavers, 1997; Collins, Dumas, & Moyer, 2018). One of the most typical reasons of dispute in the construction sector is contract issues. Moreover, design defects, adjustments, the size and severity of the job, nature of the site, insufficient preparation, faulty requirements, financial concerns, different site conditions, force majeure, and communication difficulties are all possible causes of disputes (Marzouk & Moamen, 2009). In addition, King (1998) mentions high interest rates, inflation,

frantic competition for fewer ventures, and speculative emotion as factors that could exacerbate disputes. Disputes disrupt the smooth execution of construction projects and can lead to the parties' business relationships breaking down (Haugen & Singh, 2015). Construction disputes have characteristics that set them apart from other forms of disagreements (Marzouk & Moamen, 2009). Disputes create additional costs to the construction industry. When conflicts occur, both calculable and incalculable costs are heavy (Mose & Kleiner, 1999). If conflicts are not resolved in a timely and productive manner, they can trigger project delays resulting in the contractor losing his expected benefit within the expected time frame (Cheung, Suen, & Lam, 2002). Construction professionals are confused in identifying the difference between a conflict and a dispute, and these concepts have been used mutually in the construction industry (Acharya, Lee, & Im, 2006). Therefore, it is better to identify conflicts and disputes separately before moving on to a resolution method.

2.4 Causes of Disputes

Studies have been conducted during the last decade to recognize the problems of the construction industry. The proliferation of construction disputes is one of the root causes of the collapse of the project. (Fenn, Lowe, & Speck, 1997; Kisi, Lee, Kayastha, & Kovel, 2020) also recently proposed that insufficient scientific evidence exists to support the explanations that have been developed. Number of the studies that has been conducted simply aims to discover a list of factors or causes that present some association with disputes. A number of factors have been found such as variation to scope, contract interpretation, EOT claims, site conditions, obtaining approvals, site access, quality of design. (D'Oliveyra & Arnold, 2007). Further, Kumaraswamy and Yogeswaran (1996) and Abeynayake (2014) have identified major causes of conflict in the construction industry as follows.

2.4.1 Variations to the Contracts

There are several corresponding reasons for variation; improvements in configuration to meet site requirements, the employer's ability to accommodate the more recent changes in scope during construction (Lu, Zhang, & Pan, 2015). The dispute can also arise where the contractor feels that the contract rates are too low and, therefore,

varying work should be assessed at new rates, which the engineer disagrees with (D'Oliveyra & Arnold, 2007).

2.4.2 Unclear or inadequate documentation

Inadequate employer briefing, lack of communication between various design teams at the pre-contract level, the wrong approach of the contract system, etc. are potential reasons for this (Jaffar, AbdulTharim, & Shuib, 2011). Consequently, conflicting material could be found in the drawings, the contract documents, and the provisions which contribute to the conflict (Lu, Zhang, & Pan, 2015).

2.4.3 Delays affected to Project Completion

Disputes arise as a result of delays in the finished design, drawings, variance orders, and instructions as requested by the contractor (Latham, 1994; Collins, Dumas, & Moyer, 2018). It also causes delays due to construction defects and unexpected and unexpected poor weather or physical environments (Ranjithkumar, 2005).

2.4.4 Inadequate site investigations

Due to the inability of the employer to grant possession or connect directly to the site at the time indicated or implied in the contract and the allocation of appropriate budget for the site investigation (Ranjithkumar, 2005). Accordingly, the original site conditions may vary from those specified in the contract document and, as a result of such disputes, the uncertainty to the contractor may increase concerning unforeseen ground conditions (Kumaraswamy, 2003)

2.5 Importance of Dispute Resolution in Construction Industry

Construction industry changes also shown the need for more effective conflict resolution processes in the construction sector (Cheung, Suen, & Lam, 2002). Currently, it is well identified within both national and international communities that timely and effective dispute settlement play a major role in maintaining open and competitive markets (Thomson, 2000). There are various types of dispute resolution methods are available. The determination of the most appropriate dispute resolution

method depends on the different reasons, such as the behaviour of all parties, the type of the dispute, the size of the dispute, etc (Chau, 2007). When a dispute occurs, the parties also waste a great deal of time and money trying to resolve the dispute. An unnecessarily lengthy and costly dispute resolution phase would damage existing business relationships, potential business opportunities and bring unnecessary costs to the conduct of business (Thomson, 2000). Therefore, the construction industry requires a quick and cost-effective means of resolving disputes (Weddikkara & Abeynayake, 2007). Before focusing on a single form of dispute resolution or multi-step processing, the parties should be well aware of the applicable dispute resolution processes (Brett, 2015). The aim of this is to find a cost-effective process that allows the parties to retain as much responsibility and ownership as necessary and to promote the maintenance of current and future contractual relationships (Shamir, 2003).

2.6 Litigation and Alternative Dispute Resolution Methods

The majority of construction disputes were resolved on the work site at an informal meeting between the Engineer and the Contractor based on a handshake in the early days of construction (Haugen & Singh, 2015). Then construction industry used the contract theory as an integral aspect of the legal process to resolve contractual disputes in the courtroom for more than two centuries (Brett, 2015). Further, the courtroom complexity and rapidly increasing court fees have opened up many other options for dispute resolution in recent decades, many of which are outside the courtroom (Elisabetta, 2013). Those dispute resolution methods except litigation are identified as Alternative Dispute Resolution (ADR) methods (McGregor, 2015). Both binding and non-Choice of law of substances from formal and informal procedures are gained through the ADR methods (García, 2017). ADR is a generic term that encompasses a number of procedures that are used as an alternative to traditional litigation, in which parties must prove their case in court in an exclusionary system of examination (Brooker, 2007). Due to the constraints of time and money, as well as the contentious nature of the problems at hand, disputants attempt to find alternate solutions (Joseph, Variathu, & Mohanty, 2013). Negotiation,

mediation, conciliation, mini-trial, adjudication, and arbitration are identified as the ADR methods (Kisi, Lee, Kayastha, & Kovel, 2020).

Litigation is a method of dispute resolution that takes place in the court and contains third parties who are professionally trained judges and lawyers (Asworth & Hogg, 2002). The decision of the litigation has a win-lose situation that rarely satisfies both parties (Funken, 2003). The advantage of litigation is that the court has the jurisdiction to obtain the "truth" from the parties, and the order or judgment is enforced with the help of other law enforcement agencies (Fisher, Ury, & Patton, 1991; Kisi, Lee, Kayastha, & Kovel, 2020). In the construction industry, litigation is an unusual way to resolve disputes because it negatively impacts long-term relationships with employers, architects, engineers, other contractors, and suppliers, all of whom have a significant impact on their future success (Harmon, 2009).

2.6.1 Negotiation

Negotiation cannot be viewed solely as a means of resolving disputes; in its broadest sense, it can be described as the mechanism by which people communicate in order to organize their business relations by reaching agreements and resolving conflicts (Pickavance, 2016). The purpose of these direct negotiations is to accurately and efficiently address any conflicts or disputes that arise (Jackson, 2000). Negotiation is frequently regarded as a low-cost, cooperative arrangement that is preferred over more hostile and costly processes (Zohar, 2015). Reduced costs, time saving, reduce conflicts, less interruption, better intelligence, maintaining partnerships, and less diversion of human resources are advantages of direct job-site negotiations (Pickavance, 2016). Negotiation is the most appropriate method for resolving disputes in the Sri Lankan construction industry, and it should be used first in all circumstances (Rothenberg, 1998; Collins, Dumas, & Moyer, 2018).

2.6.2 Mediation

Mediation is a confidential, flexible process in which a neutral third party actively assists parties in reaching a negotiated settlement to resolve a conflict or disagreement, with the parties having the final say on whether or not to settle and the

terms of the settlement, but the decision is not binding (Brooker, 2007). Mediation is a private process in which a neutral third party known as a mediator supports the parties in discussing and attempting to resolve their differences. (Thakur, 2018). Moreover, mediation is a kind of guided negotiation; the discrepancy between mediation and negotiation is that mediation requires the participation of a mediator (Funken, 2003). Mediators should have the ability to talk, listen, meet the other's needs, improve the relationship and ingrain a positive mind-set (Cheung & Yiu, 2007). Further, the authors stated that mediation is a confidential mechanism that allows business executives to reduce legal costs, take charge of decision making, escape the majority of emotional stress, maintain business relationships, and provide the quickest and most complete dispute resolution.

2.6.3 Conciliation

Conciliation is similar to mediation in that the conciliator may advise on the nature of the situation and is expected to propose a compromise if the parties cannot agree (Thakur, 2018). It started with all parties agreeing to a confidentiality agreement, which states that any evidence presented, positions adopted, admissions made, or recommendations and opinions expressed will not be discovered if litigation is needed, and that the parties will determine what they want to expose (Sourdin, 2014). The process of conciliation starts with the identification of the problems, accompanied by the exploration of the options for resolution, the conciliator's guidance on the probable outcome of the conflict in other contexts, and in view of this, the alternatives for resolution are evaluated, and eventually, preferably, a consensual agreement is made (Saeb, Mohamed, Mohd Danuri, & Zakaria, 2018).

2.6.4 Mini – trial method

The mini-trial is another method through which an impartial third party is involved in a dispute, also this practice actually allows the disputing parties to bring their claims to a board composed of themselves to be more accurate, it ensures that members of the employer's and contractor's organizations will perform anything equivalent to a trial in front of a jury of top management from those organizations (Murdoch &

Hughes, 2000). In government or corporate litigation, the mini-trial process is used to encourage decision-makers to settle legal disputes while protecting potential business or partnership interests (Brett, 2015).

2.6.5 Adjudication

Adjudication is a mechanism in which an impartial third party decides the solution that is binding on both disputants unless and until it is overturned in arbitration or litigation (Pickavance, 2016). Parties should intend to assign an adjudicator as a Dispute Adjudication Board (DAB) or sole adjudicator at the commencement of the contract (Murphy, 2001). Further, the author stated that until a final decision is made by agreement, arbitration, or litigation, the adjudicator's decision is binding, or the parties may accept the adjudicator's decision as final.

2.6.6 Arbitration

The application of a dispute to one or more neutral persons for a final and Choice of law of substance is known as arbitration (Beom, 2010). Moreover, the author stated that the parties will control the number of problems to be solved, the extent of compensation to be awarded, and several substantive laws of the procedure by contractual provisions. Attorneys who are qualified to be adversarial and to use any technique to prevail during the trials are often hired to represent the parties, and they put a secondary emphasis on preserving the relationship between the two parties (Chau, 2007). Arbitration, rather than being perceived as a better option to litigation, has been accused of being close to it in several ways (Brooker & Lavers, 1997; Brown & Marriot, 2018).

2.7 Importance of Arbitration Method

Arbitration is a process in which a third party, who is not affiliated with the parties but may be chosen by them, provides an award resolving the dispute, and also this award can be enforceable by courts (Beom, 2010). Using the judicial system to resolve conflicts has become an extremely expensive, time-consuming, and unsatisfying experience (Collins, Dumas, & Moyer, 2018). If the parties are unable to reach an agreement by negotiation or mediation, then parties can use arbitration as

a dispute resolution method (Houghton, Elkin, & Stevenson, 2013). The authors further stated that the arbitrators are generally selected by a structured procedure in which the disputing parties have some interest in who the third-party impartial will be. Parties will review the decision of the arbitration proceedings in view of their opinions of the facts and merits of the case to see whether the arbitrator's judgment and award are fair and justice (Collins, Dumas, & Moyer, 2018). Generally, arbitration can be interpreted as a method of dispute resolution in which the parties have limited influence over the results but complete control over the procedure, making expectations of procedural fairness especially important in the sense of arbitrator acceptability (Posthuma & Dworkin, 2000).

Arbitration provides for much quicker, more efficient, more flexible, lower cost, and less formal dispute resolution than is possible in state courts (Vinko & Daniela, 2014). Arbitration refers to concerns that have yet to be settled by the courts and provides a creative institution that addresses unique needs that are not adequately addressed by state courts (De Ly, Friedman, & Di Brozolo, 2012). Furthermore, arbitration helps the parties to settle their conflict by nominating trusted experts whose experience would assist in a reasonable and adequate resolution (Vinko & Daniela, 2014). Since the laws predict structuralize circumstances and react to real-life phenomena in a comparatively slow manner, institutional law is a relatively insufficient structure through which the parties would like to find a settlement of their conflict and develop further business relationships (Poudret, 1988; Acharya, Lee, & Im, 2006).

2.7.1 History of arbitration in Sri Lanka

Arbitration was introduced as a less formal dispute resolution mechanism British in 1866 by enforcing the Arbitration Ordinance No.15 of 1866. Abeynayake and Weddikkara (2012) In the 19th century, Arbitration was formally connected to the Sri Lankan legal system before the enactment of Act No. 11 of 1995 by two statuses as, the Arbitration Ordinance No. 15 of 1866, and the Civil Procedure Code of 1889. Further, Arbitration was classified into two groups under this status as voluntary and compulsory. Although the Arbitration ordinance used to deal with compulsory

arbitration is mentioned above (Abeynayake & Weddikkara, 2012). But civil Procedure Code is governed by both types of voluntary and compulsory arbitration.

2.8 Critical Attributes of Arbitration Method

As specified in the Section of Molecular Medicine (SMM, 2014), critical attributes are qualities linked with configuration items for which quality data is required to properly perform important processes. In this context, critical attributes are those implementation-level attributes of Arbitration process that could be utilised by an arbitrator to produce the equivalent of a key value update in resolution of disputes (Elisabetta, 2013). Several researchers focused on the critical attributes of construction dispute resolutions due to their positive influence on enhancing the performance of dispute resolution. Hence, it is important to explore the critical attributes of ADR methods. Cheung (1999) identified the twelve attributes of ADR methods as shown in Table 2.1.

Table 2.1: Major Areas to be consdered when find Critical attributes of the ADR methods

Attribute	Description
Bindingness	Bindingness of the decision (whether the parties are satisfied or not with the decision)
Economy	The cost involved
Confidentiality	Confidentiality of the purposes (not disclose any information to the public without the consent of other parties to the dispute)
Control	The parties' viability to manage the proceeding
Remedy	Obtaining creative remedies
Remedy	The width of the remedy
Enforceability	Enforceability of the decision (power to force the decision)
Fairness	Obtaining fairness
Flexibility	The flexibility of the proceeding (absence of strict rules and regulations or procedures)
Privacy	Privacy of the proceeding (Enclosing facts to the other party)
Speed	The duration of the proceeding
Relation	Preservation of relationships among parties

Adapted from: (Cheung, 1999)

Similarly, Cheng and Suen (2002) also identified the similar natured critical attributes of ADR methods identified by Cheung (1999). However, Cheng and Suen

(2002) categorized those identified critical attributes into main four categories as follows;

01. Nature - the range of issues, voluntary, control by parties, flexibility, formality, privacy, confidentiality
02. Neutral third party- neutrality, the power to compel consolidation, knowledge in construction
03. Settlement – consensus, fairness, creative agreement, the scope of the remedy
04. Benefits – speed to obtain, cost to obtain, liability for the opponent cost

As per the above literature review, arbitration is one of the most significant ADR methods used in the construction industry. Hence, the literature provides evidence that the critical attributes of ADR mostly comply with the critical attributes of arbitration. The following sections further illustrate the critical attributes of arbitration according to the found literature.

2.8.1 Confidentiality of the information

Brown and Marriot (1999) depicted that the parties to a dispute are not allowed to disclose any information or material regarding the dispute or decision to the public unless with the approval of the other parties to the dispute. Furthermore, that confidentiality almost exists among the parties to the dispute and the neutral third party. Any court proceedings are held in public. In case, public people can come along and watch, and that could publish in the press (Saqib, Farooqui, & Lodi, 2008). In addition, all papers which include the results are accessible to the public, including the press. However, the arbitration procedure strictly ensures the confidentiality of the information.

2.8.2 Degree of control by parties

According to Cheng and Suen (2002), parties to the dispute have control over the dispute resolution through strategies. In the arbitration, parties have the freedom to

choose the neutral third party and the way of proceeding on arbitration. This is called party autonomy (Kanagisvaram, 2011). All ADR methods have a degree of control by parties, however, litigation has different aspects (Kavinda, 2010). Furthermore, the parties to the dispute may choose the procedure by which the tribunal or sole arbitration will decide the dispute and also may determine the location, dates of the proceeding, seat of arbitration, and the language or languages of the proceedings. Section 6, 7, and 16 of *Arbitration Act No 11 of 1995* discussed the degree of control by parties.

2.8.3 Choice over the third party except disputants

The way of appointing a neutral third party is discussed in this section. According to the party autonomy, parties could be select a person whom parties can trust and work easier (Brown and Marriot, 1999). Hence, parties have the opportunity to select the third party who has the experience, knowledge, and professional expertise in the relevant field. According to the rules of international arbitration and *Arbitration Act No 11 of 1995* in Sri Lanka, if there is an arbitration tribunal (three members), arbitrators are appointed as follows.

- Each Party shall nominate one member for the approval of the other Party.
- The Parties shall consult both these members and shall agree upon the third member (Chairman)

2.8.4 Flexibility in the proceedings

Flexibility in the proceedings means there are not any strict rules and regulations to conduct the process. In most ADR methods, there are not any hard and fast rules to conduct the decision-making procedure. However, Arbitration is somewhat different with this aspect as per the available literature and practices. Due to the presence of *Arbitration Act No 11 of 1995* in Sri Lanka, arbitration has legal enforceability. That means the Sri Lankan arbitration is statutory. Hence, the flexibility in the proceeding in the arbitration is lesser compare to the other ADR methods (Isamil, Abdullah, Hassan, & Zin, 2010). However, flexibility is higher than litigation. Similar to other

ADR methods, the Arbitration award also depends upon the experience and ability of the third party.

2.8.5 Available remedies

Cheng and Suen (2002) interpreted the available remedies as the width of the remedy. Available remedies are depending on the procedure or method used. Similar to the other ADR methods, arbitration also has no specified or limited remedies. The outcome of the cases is reasonably varied with the facts on that matter. However, litigation has specified and limited remedies due to its adversarial nature (Steen, 1994).

2.8.6 Choice of law of substance

If the contract provides for a genuine Arbitration, the decision of the Arbiter (third party neutral who conducts the Arbitration) is final and enforceable against the parties. It is just like a court decree. Arbitration differs from other forms of ADR. In mediation, the mediator tries to persuade the parties to agree, the mediator cannot force a decision on the parties which they must abide by. The above literature evidence that the arbitration has a Choice of law of substance.

2.8.7 Enforceability of the decision

According to Cheng and Suen (2002), the enforceability of a decision means the ability of the parties to the arbitration agreement to force the decision. Unlike the other form of ADR methods, arbitration has the enforceability of the decision. According to the *Arbitration Act, No 11 of 1995* in Sri Lanka, a party to an arbitration agreement can take the steps to enforce the award in the High Court. According to the *Arbitration Act, No 11 of 1995,*

- It should do this within one year after the expiry of fourteen days from the receipt of the arbitration award Section 31 (1)).
- In addition to that, an arbitral award made in an arbitration held in Sri Lanka may be set aside by the High Court on an application made within sixty days of the receipt of the arbitration award (section 32 (1)).

However, there is no review of an arbitration award enforced by the arbitrators. There is only a possibility of having it set aside on very narrowly defined grounds as per Section 32 and section 34 in *Arbitration Act No 11 of 1995*.

2.8.8 Liability of opponent cost

In different ADR methods, there is an opportunity to bear the total cost of the proceedings by the defaulting party. That means the loose party in the dispute resolution, should pay for the opponents' legal costs and other incurred costs. According to Cheung and Suen (2001) in litigation and arbitration, the judge or the arbitrator could order the loose party to pay opponent costs.

2.8.9 Preservation of relationship

A good or better, friendly, honest relationship is built on trust, shared interests, and mutual respect, and it is also an important part of the running of a successful company (Cheung & Suen, 2002). Further, involvement in a conflict has a major impact on the relationship of the parties (Kavinda, 2010). As a result, in the event of a disagreement, it is preferable to seek litigation and arbitration in order to maintain a positive future relationship (Cheung & Suen, 2002). Cheng and Suen (2002) asserted that, since one party is considered the winner and the other is considered the loser at the conclusion of a trial, business relationships are often shattered. However, the authors have further highlighted ADR methods aim for a win-win situation in which the partnership can be maintained while the work is carried out smoothly. Kavinda (2010), has mentioned that professionals involved in the conflict settlement process have different cultures and ethics.

2.8.10 Overall duration/ Speed

Overall duration or speed indicates the rate of resolving the dispute or the amount of time taken for the dispute resolution (Groton, 1996). Further, the author has highlighted that in construction, time is one of the most important and strictly controlled elements. So that, parties have a strong desire for conflicts to be resolved quickly and without interfering with the construction process (Cheung & Suen,

2002). According to Kavinda (2010), there are three elements of achieving a rapid resolution as 1. Only process documents: save time by not requiring expert witnesses when they are not needed, 2. Time management; the process should be properly placed, and the parties should be fully informed on the details before dealing with the matter, 3. Early settlement; the dispute should be addressed as soon as possible before it becomes a full-blown problem. Although the industry prefers quick logical resolution methods, Cheng and Suen (2002) claim that estimating how long it will take to reach a resolution is difficult because it depends on a variety of factors such as complexity, quantum, and the number of disputants. It is measured in months and years in lawsuits and arbitration, but in other ADR methods it is measured in days (Sourdin, 2014). Furthermore, the author asserted that some methods, such as DAB, have a predetermined schedule and can be precise and fast.

2.8.11 Relative cost

The net cost of negotiating a settlement is referred to as cost or in other words the amount of direct, indirect, and hidden costs is identified as the costs in the construction dispute resolution (Cheung, 2011). Cost and time are usually closely connected, and quick resolution methods usually result in lower total costs (Cheung & Suen, 2002). Accordingly, the expense would be lower if the hearings were focused solely on records or on a limited form of hearing (Khatatbeh, 2020). While comparing arbitration is generally less costly than litigation (Kisi, Lee, Kayastha, & Kovel, 2020). Further authors have described that ADR procedures are less procedurally complicated, and the costs are much lower than arbitration or litigation.

2.8.12 Control by the third party to the process of Arbitration

The third-party neutral has varying powers or authority over the proceedings of various dispute resolution techniques)Yongkil Kim, 2011(. According to Cheung and Suen (2002), during ADR proceedings, the third-party neutral owes a duty of care to the parties and must play an impartial, facilitative function to help the parties to reach an agreement. Cheung (2011) has further elaborated that in mediation, the neutral has no decision-making authority, while in adjudication, arbitration, and

litigation, the resolution is decided by a third party. Hence, the level of the third party influenced over the operation of the resolution, format, and content is identified through this factor)Odermatt, 2018(.

2.8.13 Imbalance of Power of the Disputants

Hayati, Latief, and Santos (2019(have explained that construction is typically a business where one of the kind products are created to meet the needs of a customer. Apart from that, in construction, the employer is the party that pays the contractor for the job)Groton, 1996(. So that, according to Groton (1996), the employer is still in a position to influence any matter, decision, or procedure. Further, Yongkil Kim (2011(asserted that the parties in mediation have the power to reach an agreement with the help of a third party. However, the author has further elaborated that the powerful party, or the employer, has more clout and power in the settlement. Accordingly, when a third-party gains decision-making authority, the control of the employer is diminished)Cheung & Suen, 2002(. Therefore, this factor explains that is there a balance of power in the resolution process between the two sides or not)Yongkil Kim, 2011(.

2.8.14 Time requirement for parties

The amount of time it takes to submit, prepare applications, and respond to the proceedings varies by technique)Wildman & Stipanowich, 2013(. Further Wildman and Stipanowich (2013) highlighted that, mediation is conducted in co-cussing sessions that are arranged and addressed by the parties and the neutral and can be changed as required. However, the DAB has a submissions protocol in place, with a time limit for the whole process, including the decision of the panel of DAB)Yongkil Kim, 2011(. Even though arbitration is stringent but not as strict as prosecution, which gives the parties so much time between courts)Hayati, Latief, & Santos, 2019(. Further Hayati, Latief, and Santos (2019(asserted that this factor will assed is there a specific time limit for filing submissions, preparing submissions, and responding to the proceedings.

2.8.15 Consensus agreement

The third party must persuade the parties to admit their unwillingness to settle in the process)Khatatbeh, 2020(. According to Khatatbeh (2020(, in such circumstances, reaching a consensus is difficult. As a result, the process should be carried out by a third party acting as a facilitator in a non-adversarial manner in order to persuade the parties of the importance of reaching an agreement)Odermatt, 2018(. Since, a third party should ensure that the parties are aware of the interests of each other and that they can find common ground on which to begin negotiations toward a settlement)Cheung & Suen, 2002(. According to Cheung and Suen (2002), in non-adversarial ADR approaches, it is critical to persuade parties to participate voluntarily in litigation in order to reach a satisfactory settlement. Accordingly, this will further be elaborated on the ability to collaborate on a common basis.

2.8.16 Creative solution

The ability of the neutral third party to achieve the desired settlement by both disputing parties depends heavily on the talent, capacity, and creativity of the neutral third party)Demeyere, 2003.(Apart from that Odermatt (2018(has asserted that the third party in mediation does not have the authority to make a decision, but he can influence the parties to reach a more satisfactory conclusion. In addition, Odermatt (2018(has highlighted that a third party neutral could provide an innovative and appropriate judgment where strict rules do not control the decision of the adjudicator, but it should not impact but rather strengthen the relationship between the two parties. So that, there are clearly outlined remedies in litigation, and the judge should obey them)Cheung, 2011(. Therefore, Cheung (2011) described the creative solution as an assessment of measuring is the answer adequate for the requirements of the parties.

2.8.17 Fairness of Arbitrators

According to Cheung (2011), all parties would be treated fairly in the proceedings. Further, the author has asserted that both parties should be given an equal

opportunity to reveal relevant information. In adjudication, where the procedure is usually conducted in the form of a debate, the group with the best ability to present the facts may be given more chances)Hayati, Latief, & Santos, 2019(. As described by Demeyere (2003(, the impartial, on the other hand, has the responsibility of ensuring that the proceedings are fair. In arbitration, the arbitrator only evaluates the submission, so certain issues are unlikely to occur)Yongkil Kim, 2011(. However, in situations where organizations and individuals disagree, there is a perception that arbitrators are biased in favour of the interest of the organization in making decisions)Khatatbeh, 2020(. Hence, this factor describes the objectivity of the ability of both parties to reveal relevant information)Cheung & Suen, 2002(.

2.8.18 Knowledge in construction Industry

One of the key benefits and the possibilities of ADR over litigation is having a construction specialist as a third-party neutral interested in dispute resolution)Groton, 1996(. The adjudication process enables the parties to choose a panel of experts as neutrals at the outset of the negotiation and to choose the most appropriate one when a disagreement arises)Cheung, 2011(. As described by Kavinda (2010), in arbitration, you have the option of choosing an arbitrator with construction experience, but he must be a well-known arbitrator. Further, the author has highlighted that there is no opportunity for the construction experience in litigation. As a result, expert experts must be called upon to help the judge understand all of the legal terms and the procedures involved in the conflict)Groton, 1996(. Therefore, this explained that the construction experts are involved in the process)Cheung, 2011(.

2.8.19 Power to compel consolidation

During the settlement process, the parties to the conflict will rarely but consistently come together to make decisions but will later change their minds for selfish purposes)Khatatbeh, 2020(. In such situations, the third party should have the authority to compel the parties to stick to their previous decisions or to reconsider

and come up with a better alternative jointly)Demeyere, 2003(. According to Cheung (2011), if the parties do not consent to consolidate or voluntarily forbid it in arbitration, a slew of issues can arise later. Normally, arbitration has the ability to force consolidation in situations where mediation and adjudication are less efficient)Kavinda, 2010(. Furthermore, according to Cheung (2011), the courts have the authority to order restructuring in order to comply with the arbitration. Since the power to compel the consolidation describes that the amount of leverage available in the process forces the parties to reach an agreement)Cheung & Suen, 2002(.

2.8.20 Choice of language

In the opinion of Cheung and Suen (2002), when enclosing facts to the other party, language plays a vital role in Arbitration method. According to Kavinda (2010), types of mechanism have been created specifically to select a proper language, making it more flexible to communicate among the disputing parties. In mediation, the parties usually use specific language according to their preference to disclose the information, and their privacy is often shielded from each other)Khatatbeh, 2020(. Further Khatatbeh (2020) highlighted that the neutral must exercise caution when it comes to protecting the privacy of others. In adjudication and arbitration, only the disputing parties and the impartial share evidence, while in litigation, the proceedings are held in public)Cheung, 2011(.

Twenty-one qualities were found based on the literature findings and have been described in depth above. Based on the identified attributes, the following table has been prepared to summarise them based on the reference of the critical attributes.

Table 2.2 Critical Attributes in ADR method

No	Critical Attributes	Brown and Marriot (1994)	Saqib, Farooqui, & Lodi (2008)	Cheng and Suen (2002)	Kanagisvaram (2011)	Kavinda (2010)	(Isamil, Abdullah, Hassan, & Zin (2010)	Steen (1994)	Teo & Aibinu (2007)	Groton (1996)
1	Confidentiality of the information	x	x							
2	Degree of control by parties			x	x	x				
3	Choice over the third party except	x								

No	Critical Attributes	Brown and Marriot (1994)	Saqib, Farooqui, & Lodi (2008)	Cheng and Suen (2002)	Kanagisvaram (2011)	Kavinda (2010)	(Isamil, Abdullah, Hassan, & Zin (2010)	Steen (1994)	Teo & Aibinu (2007)	Groton (1996)
	disputants									
4	Flexibility in the proceedings						x			
5	Available remedies			x				x		
6	Choice of law of substance	x				x				
7	Enforceability of the decision			x						
8	Liability of opponent cost			x						
9	Preservation of relationship			x		x				
10	Overall duration/ Speed			x		x				x
11	Relative cost			x		x				
12	Control by the third party to the process of Arbitration			x						
13	Imbalance of Power of the Disputants									x
14	Time requirement for parties									
15	Consensus agreement									
16	Creative solution									
17	Fairness									
18	Knowledge in construction					x				x
19	Power to compel consolidation									
20	Choice of language					x				
21	Well drafted ADR Agreement					x				

No	Critical Attributes	Sourdin (2014)	Kisi, Lee, Kayastha, & Kovel (2020)	Khatatbeh (2020)	Odermatt (2018)	Yongkil Kim (2011)	Cheung (2011)	Latief, and Santos (2019)	Wildman & Stipanowich (2013)	Stipanowich (2013)
1	Confidentiality of the information									
2	Degree of control by parties									
3	Choice over the third party except disputants									
4	Flexibility in the proceedings									
5	Available remedies									
6	Choice of law of substance									
7	Cost of the third party									
8	Liability of opponent cost									
9	Preservation of relationship									
10	Overall duration/ Speed	x								
11	Relative cost		x							
12	Control by the third party to the process of Arbitration					x	x			
13	Power imbalance							x		

No	Critical Attributes	Sourdin (2014)	Kisi, Lee, Kayastha, & Kovel (2020)	Khatatbeh (2020)	Odermatt (2018)	Yongkil Kim (2011)	Cheung (2011)	Latief, and Santos (2019)	Wildman & Stipanowich (2013)	Stipanowich (2013)
14	Time requirement for parties								x	x
15	Consensus agreement			x	x					
16	Creative solution				x		x			
17	Fairness				x			x		
18	Knowledge in construction						x			
19	Power to compel consolidation			x			x			
20	Choice of language			x			x			
21	Well drafted ADR Agreement	x				x				

2.9 Practical Constraints of Arbitration Methods and Practice

Practical constants are factors such as ignorance that may limit a decision maker's capacity to implement an alternative (De Zylva, 2006). A moral judgement is made on the rightness or wrongness of the behaviour in question when making decisions (Gould, King, & Britton, 2010). This entails deciding on an alternative and putting it into action, as well as justifying why it was picked above other options (Saqib, Farooqui, & Lodi, 2008). Arbitration is a means of resolving disputes that are used as an alternative to the traditional judicial method (Gulghane & Khandve, 2015). According to the authors Gulghane and Khandve (2015), as a dispute resolution mechanism, arbitration makes a significant contribution to the construction industry worldwide. Because of, authors Mane and Pimplikar (2012) noted that the construction industry is one of the most complex and dynamic sectors in the world and that the construction sector, in conjunction with complex activities, tends to create a bundle of conflicts and disputes with the project team members. Therefore, it is required to most suitable and strong enough dispute resolving mechanism to the construction industry (Dholakia, 2011). As previously discussed, several benefits can be gain through this method of arbitration. Less paperwork and a faster hearing can be seen in the arbitration method (Gulghane & Khandve, 2015). Therefore, according to the authors Gulghane and Khandve (2015), the arbitration process is less costly and time-consuming compared to legislation. Furthermore, according to these authors Gulghane and Khandve (2015), arbitration is a flexible process. Because of this, arbitration allows parties to organize the procedure of arbitration, an

arrangement of hearing schedule, and deadlines to meet parties' goals and convenience (Gulghane & Khandve, 2015). In that sense, arbitration is a flexible mechanism that can be used to resolve construction disputes between parties (Gulghane & Khandve, 2015).

However, while taking advantage of this arbitration method, it also has to deal with a bundle of issues and many negative circumstances (Albright, 2012). Moreover, many researchers have identified different factors and different attributes that are critically affected by international arbitration (Arcekularatne, 2011; She, 2011). Consequently, many researchers have identified different types of problems when considering arbitration issues and negative circumstances (Alias, Zawawi, Yusof, Aris, & 2011). Low level of concentration to the technical issues, lack of knowledge and lack of awareness of methods by the professionals, inability to resolve multi-party conflicts and disputes, most of the time impossible to continue the relationship among the parties, and less satisfaction of the parties to the arbitration decision are some of the issues that identified by the different authors (Alias et al., 2011; Cheung, 1999). In addition to that, different arbitrators come to different resolutions, the award is very difficult to challenge, and limited jurisdictions are identified as the problems which are affected to the Sri Lankan arbitration procedure (Abeynayake & Dharmawardhana, 2015). According to the author Kanagisvaran (2011), it is difficult to arrange the hearing and find the Arbitrators on a full-time basis. Because of this, author Kanagisvaran (2011) further explained that this strategy mainly and directly affects the speed of the arbitration procedure. Accordingly, this difficulty should have to be eliminated to achieve a successful arbitration procedure (Kanagisvaran, 2011; Brown et al., 1996). Exorbitant cost is another issue related to the arbitration (Abeynayake & Wedikkara, 2012). Moreover, according to authors Abeynayake and Wedikkara (2012), to proceed with the arbitration, one has to provide a high emolument to the Arbitrators. Not only that but also, Arbitrators expect high facilities and several indirect advantages from the parties (Kanagisvaran, 2011). Therefore, this also affects the negative impact of the successful arbitration procedure (Abeynayake & Wedikkara, 2012).

According to the author Salomon and Villiers (2014), enforcement is a difficult legal procedure in this arbitration process. Moreover, according to the authors Salomon and Villiers (2014), there is no direct method for implementing an arbitral award. The authors further explained that the complicated legal procedure for enforcement is one of the major drawbacks (Salomon & Villiers, 2014). Furthermore, a little concern about the technicality of the dispute also can be considered as a problem of the arbitration process (Abeynayake & Wedikkara, 2012). When compared to pure legal matters, technical matters receive less attention, and a lack of technical people to serve as arbitrators is regarded as one of the most significant practical obstacles in arbitration (Abeynayake & Dharmawardhana, 2015). According to the authors Abeynayake and Dharmawardhana (2015), this also highly affects the success of the arbitration process. In addition to that, author Kanagisvaran (2011) cited that, rare and exceptional institutional arbitration arrangements also act as the negative circumstances. According to author Kanagisvaran's (2011) point of view, most of the time arbitration comportment in ad hoc method, and therefore, an arrangement of institutional arbitration can be seen rarely. Moreover, the relationship is one of the most important criteria for the success of the construction projects (Gulghane & Khandve, 2015). Therefore, the project team members should always try to maintain and protect this relationship among the parties, otherwise, the pre-determined success will not be achieved (Kanagisvaran, 2011). According to the author Abeynayake and Dharmawardhana (2015), this arbitration process often results in damage to the relationship between the project parties. Therefore, this also can be considered as the negative impact of the arbitration. Accordingly, different types of factors can be identified as the problems of the arbitration (She, 2011).

According to the above-mentioned criteria, in order to get successful results from the arbitration process, attention should be paid to minimizing or eliminating those negative interactions (Mane & Pimplikar, 2012; Ahmed & Luk, 2012). For that, many researchers tried to demonstrate the strategies for successful arbitration. Accordingly, the next section seeks to illustrate appropriate strategies to improve the success of the arbitration process.

2.10 Strategies to Enhance the Effectiveness of Arbitration

As previously discussed, there is a bundle of issues that negatively affect the success of the arbitration procedure. Therefore, to achieve the success of the arbitration process, there should have to propose suitable strategies to enhance the effectiveness of the arbitration (Kadir, Lee, Jaafar, Sapuan, & Ali, 2005). Author Ahmed and Luk (2012) proposed as arbitrators, building experts who are professionally trained should be included to resolve construction conflicts and disputes. Moreover, according to the author Madden (2001) to a large extent, the effectiveness of arbitration is determined by the competence of the arbitrator. Correspondingly, an arbitrator is eligible not by his expertise in a specific field, but by his willingness to assist the parties in settling (Gould, King, & Britton, 2010). Therefore, as a responding party, the arbitrators must properly manage the arbitration process and gather sufficient information from the parties to deliver a successful hearing (Madden, 2001). In order to Make a proper practical decision that ultimately leads to a solution, it must be analyzed and verified by knowledge (Chau, 2007). Finally, as professional and qualified Arbitrators, they should identify their role and responsibilities to the successful arbitration procedure (Gould et al., 2010).

As the next strategy, author Chau (2007), noted that there should be a clear procedure for speeding up the arbitration process. This is because if the dispute cannot be resolved within a limited time, it will directly affect the cash flow and the construction progress of the project (Chau, 2007). To remove this barrier, author Chau (2007), proposed that, Arbitrators should be appointed on a full-time basis to hold hearings regularly on a set schedule. Also, making it mandatory in a timely manner can stop giving parties too much time to submit documents and postpone proceedings (Gould et al., 2010; Mane & Pimplikar, 2012). In order to enhance the effectiveness of the arbitration, it should have to foster an arbitration culture and to step away from conventional court procedures, construction professionals' attitudes must shift and changed (Abeynayake, 2014). Consequently, conducting an awareness program is required to enhance the success of the arbitration (Chau, 2007). Author Chau (2007), further explained that when conducting the awareness program, it should have to be focused on the arbitration procedure and, for that can be used

teaching and Continuous Professional Development Seminars (CPD) regarding the arbitration. In addition to that, authors Brown, Cervenak, and Fairman (1996), stated that when choosing an arbitration or any other ADR method, a sustainable source of financial support must be found or created before proceeding with the process. Authors Brown, Cervenak, and Fairman (1996), further mentioned that, Conducting training and education programs can minimize the negative barriers that directly affect the arbitration process.

In order to enhance the effectiveness of the arbitration process, it should appoint the construction industry experts to the sole arbitration or arbitration tribunal (Abeynayake, 2014). Author Abeynayake (2014) further explained that a new rule should be introduced to prevent legal professional intervention in arbitration practice. Furthermore, a new mechanism for enhancing the effectiveness of arbitration can be provided by developing and publishing the arbitration system in both Tamil and Sinhala languages (Abeynayake & Dharmawardhana, 2015). Moreover, many parties today tend to go to court and are less likely to resort to arbitration or other ADR methods (Ahmed & Luk, 2012; Salomon & Villiers, 2014). Therefore, this is a critical barrier to the arbitration procedure, and the attitudes of construction professionals need to change to minimize this barrier (Albright, 2012). Author Albright (2012) further explained that changing the attitudes of construction professionals can encourage a culture of arbitration, thereby helping parties to hear the dispute successfully. In addition to these strategies, introduce a suitable and most appropriate method for reporting arbitration awards for future references, provide avenues to improve the attitudes of construction professionals in a positive way, usage of economic places for conducting arbitration proceedings to minimize the unnecessary cost are the some of the strategies that can be proposed to enhance the effectiveness of the arbitration process (Abeynayake & Dharmawardhana, 2015)

Following the above-mentioned strategies can lead to the success of the arbitration process (Gulghane & Khandve, 2015). Furthermore, these strategies help to reduce or minimize the issues and negative effects of arbitration (Albright, 2012; Ahmed & Luk, 2012). Therefore, the effectiveness of the arbitration can be enhanced by adopting these proposed strategies, and then, parties can get their satisfaction (Brown

et al., 1996; Alias et al., 2011). Consequently, team members can be achieved the desired success of the construction project also (Salomon & Villiers, 2014).

2.11 Applicability of Arbitration in Sri Lankan Construction Industry

The Arbitration Act of Sri Lanka was enforced in 1995 (Saram, 2020). It is a legal framework that provides the effective conduct of arbitration proceedings (Wimalachandra, 2007). Moreover, the author stated that the most comprehensive and methodical mechanism for the enforcement of arbitral awards thereby making arbitration a viable and expeditious alternative to litigation for the resolution of commercial disputes. This Act considers Arbitration in the construction sector regardless of the value of the contract or the disputed amount (Abeynayake, 2007). When the parties of the dispute have entered into the arbitration agreement, then it should be enforced Act as formal means of resolving disputes (Nihaaj, 2016). According to Nihaaj (2016), most of the construction disputes have been moved to arbitration after introducing the Arbitration Act No. 11 of 1995 in Sri Lanka. The dispute resolving mechanism of the construction industry is clearly stated in the Arbitration Act (Abeynayake & Weddikkara, 2012).

2.11.1 Arbitration procedure in Sri Lankan construction industry relating to the Arbitration Act No,11 of 1995

When considering the construction industry of the world, disputes can occur at any time due to any reason and it is most probably an inevitable thing (Nihaaj, 2016). However, according to the author, those disputes can be categorized most of the time according to their cause. Such as breach of the contract by any party in the project, variations orders, insufficient administration of responsibilities by the owner or the contractor, and drawing, plans that may contain errors and confusion. To resolve that kind of dispute arbitration is a better solution than the other dispute resolution methods. Because it denotes several advantages over the litigation procedure. Those advantages stated by Nihaaj (2016) are as follows; arbitration procedures' time consumption is lower than the litigation, arbitration procedures consume low cost than court litigation procedures, throughout the whole procedure autonomy of the party is well emphasized, and expert persons are involved to give an opinion as

arbitrators. Jayasena and Kavinda (2012) stated the main procedure of the arbitration relating to the Arbitration Act No,11 of 1995 in Sri Lanka as follows.

Arbitration agreement

According to the Arbitration Act, the agreement can be a single clause of the main contract, or a separate agreement and it shall be in written (Jayasena & Kavinda, 2012). Moreover, Kanag-Isvaran (2006) mentioned that before disputes arise most of the arbitration agreements are established according to the standard condition of contracts. According to Abeynayake and Weddikkara (2012), if any dispute arising out of the agreement, on the interpretation, rights, duties, obligation or liabilities of any party, operation, breach, termination, abandonment, foreclosure, or invalidity either party can refer to the Act for the final settlement. The applicable law for the agreement will be Sri Lankan Law (Abeynayake, 2007).

Constitution of the Arbitral Tribunal

Abeynayake (2014) reflected that the parties have an entitlement to decide the number of the arbitrator whether one or three according to their agreement and the standard condition of the contract. Then after parties nominate their arbitrators' additional arbitrators (chairman) shall be selected by the arbitrators appointed by the parties (Nihaaj, 2016). According to the author, if the parties do not select the arbitrators within the stipulated period, they shall be appointed by the high court complying with Arbitration Act.

The Hearing

Arbitrators should deal with the dispute and carry out the proceedings in an impartial way and practical and expeditious manner and the proceedings should be held in the English language (Kumara, 2012; Abeynayake, 2007). Furthermore, according to the Arbitration Act, all the parties should be given the equal opportunity to disclose the arguments of theirs by the arbitrational tribunal in an oral or written manner (Nihaaj, 2016). In addition to that, the author further stated that the oral hearing should be arranged by the tribunal to the parties before giving the award. During the hearing,

arbitrators should heed all the information carefully to come to the final decision (Kumara, 2012).

The Award

The final award of the dispute should be written and it consists of the summarization of the arbitration, the reason for the arbitration, and the decision (Jayasena & Kavinda, 2012). Finally, the award sends to each party with the signatures of the arbitrators (Nihaaj, 2016). According to Kumara (2012), this award is binding between both parties. Therefore, this award considers as the final judgment, and anyone could not question and appeal to the award (Nihaaj, 2016). If the parties are satisfied with the award at that time, they can accept the award and closed the matter (Kumara, 2012).

Enforcement of the Award

A party of the agreement can enforce the award in the High Court within one year after the expiry of fourteen days from the receipt of the award (Nihaaj, 2016). Further, this award can be set aside by the High Court within sixty days of the receipt of the award (Manuja, 2010).

2.12 Chapter Summary

The construction industry of the world has become more complex in the time to come. Therefore, to deal with the complexity, disputes should be considered as the inevitable thing in the construction industry. Hence, proper dispute resolution majorly affects the construction industry outcomes. The previous researches denoted the litigation is not a suitable method to resolve the disputes of the construction. Therefore, alternative dispute resolution methods become more favourable among the contract parties. Identification of critical attributes of construction dispute resolution is very important to select a suitable strategy for the successful settlement of the dispute eventually. As a result, most of the construction parties turning to arbitration methods to resolve their disputes. This research is focussing on the critical

factors concerning arbitration methods and recommendations to enhance the effectiveness of arbitration in the construction industry of Sri Lanka. This chapter was prepared to get a basic idea about the disputes and the conflicts, alternative dispute resolution methods, attributes, importance and the applicability of arbitration, and the enhancement of the arbitration effectiveness strategies.

CHAPTER 03

3. RESEARCH METHODOLOGY

3.1 Introduction

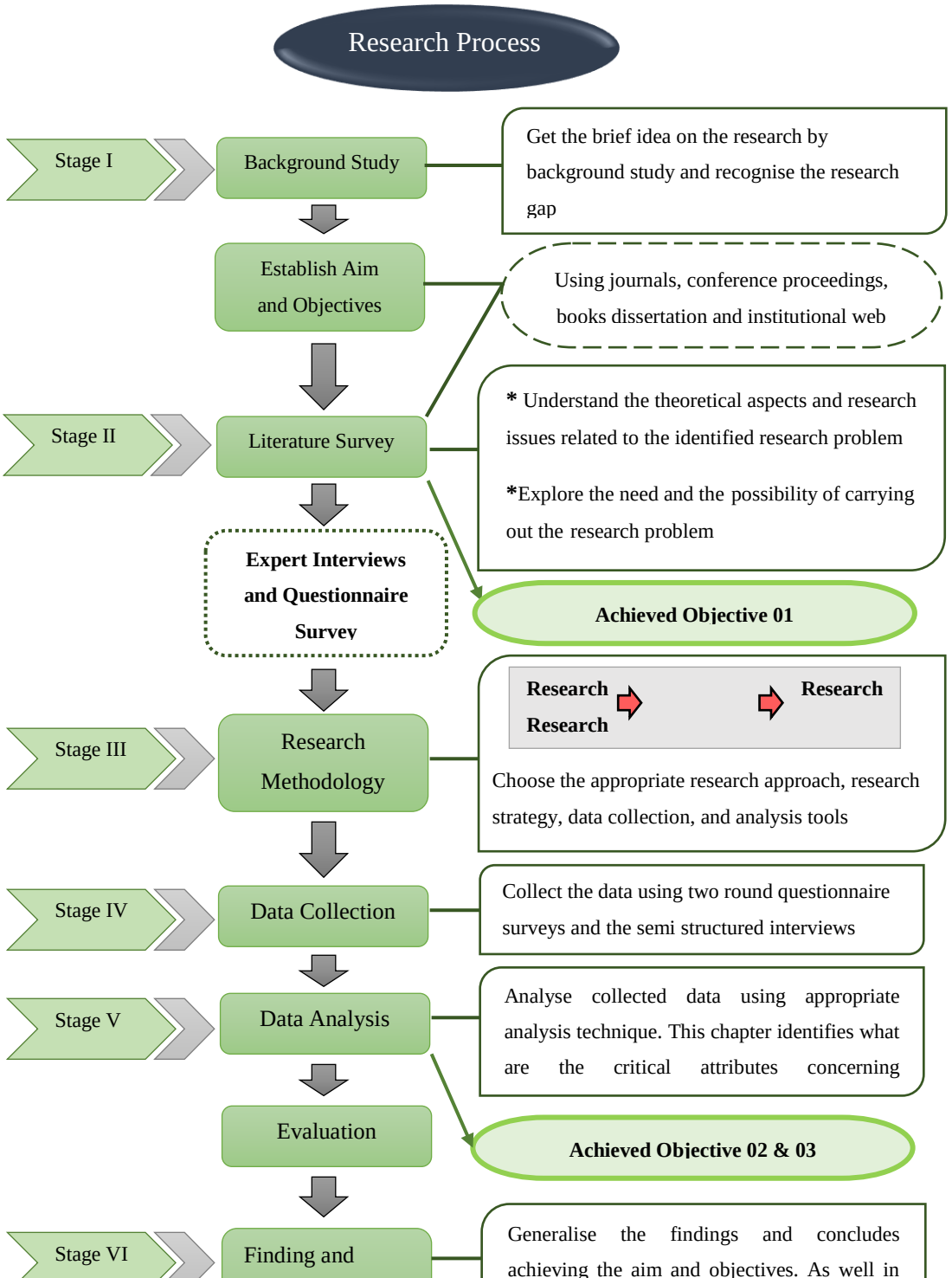
Naoum (2007) and Mertens (2005) have illustrated research as a procedure for collecting, analysing, and interpreting data. It transpires in providing solutions to particular questions and resolves a specific problem or research a theorem (Leedy & Ormrod, 2010). Research methodology is the procedure of, how research should be undertaken, which provides the overall guidance to answer the research problem (Collis & Hussey, 2003). This chapter initiates with the illustration of the research design, research approach, research process, and research techniques.

3.2 Research Process

The research process is a systematic way following the directives in force that the defining the objective of the research, the data management, and the communication of the result are taken place when established framework (Williams, 2017). Moreover, the author stated background study, literature review, data collecting, data analysing, conclusion, and validation of research findings have consisted in the research process. The first chapter of the research consisted of the background study, aim, objectives, and research problems. Literature findings consisted of the second chapter of the research. Systematically illustration of the research process is shown in Figure 3-1.

3.2.1 Background study and establish aim and objectives

The background study provides a brief idea about the research. The background study has identified Sri Lanka as an admirable and emerging region for dispute resolution and has conducted various research on disputed areas. However, study on critical factors concerning arbitration methods and make recommendations to enhance the effectiveness of arbitration in the construction industry is very essential to resolve the disputes. Hence, books, journal articles, conference proceedings, unpublished dissertations, and institutional websites were referred to implement the background study.



3.2.2 Literature survey

An extensive literature survey was conducted to gain a theoretical understanding of the identified research problem from the background study and to research the significant factors concerning Arbitration methods in the construction industry in Sri Lanka by reading a range of journals, conference papers, books, articles, thesis, and dissertations. Moreover, the literature survey explores the possibilities and necessity of the research. Therefore, the literature survey conducting is directed to achieve the primary objectives of the research.

3.3 Research Design/Methodology

Research design is fundamental of any research as the whole research ultimately flows under the design choice and it refers to the methods of collecting evidence and to the researcher's questions and theories (Vogt, Gardner, & Haeffele, 2012). This research design embodies background study, extensive literature synthesis, data collection and analysis, research findings validation.

3.4 Research Approach

According to Thurairajah, Haigh, and Amaratunga (2006), the process of organizing research actions and incorporating data collection in order to achieve the aim and objectives are known as the research approach. Quantitative, qualitative, and mixed approaches are generally adopted by the researchers as the main research approaches (Creswell, 2012).

A quantitative approach is defined as the process of finding data using collected records and the evidence (Naoum, 2007). Furthermore, Creswell (2012) mentioned

that the quantitative approach mainly focuses on statistical procedures. The quantitative research would be more appropriate for the research, which initiate the research question with ‘what’, ‘who’, ‘where’, ‘how much, ‘how many’(Smith, Thorpe, & Lowe, 2007). The qualitative research approach is most appropriate for cases evaluating social, attitudinal, and exploratory behaviours and beliefs (Naoum, 2007). Moreover, the qualitative approach is noteworthy in terms of considering a specific group of people, representing their opinions and aspects, and in-depth research on topics (Yin, 2011). Ritchie, Lewis, Nicholls, and Ormston (2014) expressed in their research that when the research question starts with ‘how’ and ‘why’, the qualitative approach is more suitable. The mixed approach is not a substitute for the qualitative or quantitative approaches, but a combination of both approaches, which avoids the negative points of the two approaches (Johnson & Onwuegbuzie, 2004).

This research intended to evaluate the critical attributes and practical constraints concerning Arbitration methods in the construction industry of Sri Lanka and make recommended strategies for enhancing the effectiveness of Arbitration. Since the research problem “How does the effectiveness and application of key attributes to arbitration in the Sri Lankan context?” was putting the research in an assessing opinion and behaviour perspective with the question begins with “how”, a qualitative approach was more relevant (Smith, Thorpe, & Lowe, 2007). Moreover, Kumar (2011) has described that a qualitative approach is suitable if the researcher investigates beliefs, values, perceptions, and meanings, in order to perceive the findings. This research intended to do a comparison based on the Arbitration, which required subjective and attitudinal information. Considering the aforementioned facts, the qualitative approach was more suitable with the intention of the research to study cultural values, beliefs, behaviours, and focusing on experiences of arbitration-effectiveness & applicability of critical attributes to Arbitration to the Sri Lankan Context.

Nevertheless, the subsequent objective of recommending strategies to enhance the effectiveness of Arbitration adopted a quantitative approach. According to Naoum (2007), the quantitative approach is based on collected records and evidence.

Therefore, this approach was used to grab details from the experts of the construction industry by semi-structured interviews to clarify the practicability of the recorded strategies through literature review and the qualitative research. Finally, it can be deduced that this research applied the mixed approach, with the intention of enhancing the quality of the analysis and findings while proceeding with this research.

3.5 Research Techniques

The data collection techniques are chosen based on the research approach (Creswell, 2003). Data collection techniques and data analysis techniques are the two primary forms of research techniques. The analysis methodology serves as a guide for choosing the most appropriate techniques for the research.

3.5.1 Data collection techniques

The nature of the research problem aids in the selection of the most effective data collection process. Interviews, questionnaire surveys, document surveys, direct and participant observations, and so on are all examples of data collection techniques. The data collection methods for this research were interviews and questionnaire surveys.

3.5.1.1 Semi-structured interviews

It is preferable to use semi-structured interviews if the sample population is limited. When gathering data without bias or inappropriate responses, semi-structured interviews are great and more versatile than structured interviews. Accordingly, semi-structured interviews were conducted to collect opinions about the effectiveness and applicability of critical attributes to arbitration to the Sri Lankan context. Then, expert interviews were conducted to validate the research findings that were gathered through using a questionnaire survey and semi-structured interviews. The interview guideline was developed using the theoretical results from the literature review as a guide to performing the interviews. Based on the research problem, the interview guideline was created to achieve the research objectives by completing one research objective at a time. When performing expert interviews, appropriate procedures were

used to prevent data loss and to ensure data accuracy. For the pilot survey and expert survey, six semi-structured interviews were conducted. A pilot survey was carried out to identify the effectiveness & applicability of critical attributes to arbitration to the Sri Lankan context. And the Expert survey was carried out to make recommended strategies to enhance the effectiveness of Arbitration.

- **Sampling**

Sampling will be used when choosing individuals in a population to enforce the practical data collection and research approach (Emerson, 2015). Furthermore, the author observed that the sample should be chosen carefully because the wrong samples might lead to the research going in the wrong direction. Random sampling (probability sampling) and non-random sampling (non-probability sampling) are the two main types of sampling methods (Bhardwaj, 2019). In this analysis, the non-random sampling approach was used to select individuals for data collection. Data was obtained from desirable industry experts based on their knowledge, experience, and the researcher's convenience. This indicates that not every population unit had the same ability to participate in the investigation (Alvi, 2016).

3.5.1.2 Two Phase of Questionnaire Surveys

The questionnaire is a set of questions, or a series of questions designed to provoke information from a person about a specific topic. The Questionnaire Survey Round I was conducted to determine the second objective of the research and round II determined the third object of the research. A questionnaire survey was carried out among the professionals involved in the construction industry in Sri Lanka. Closed-ended questions were generated based on the results of the literature review and semi-structured interviews.

3.5.2 Data analysis techniques

Data analysis is a technique for assessing the information collected during the data collection process. Data analysis was provided the exact effectiveness & applicability of critical attributes to arbitration to the Sri Lankan context and recommended strategies to enhance the effectiveness of arbitration. Tables, graphs, and charts were viewed as instruments for expressing the research's findings. Different data processing methods were used to analyse the data in different analysis approaches.

3.5.2.1 Qualitative Data Analysis

The data from semi-structured interviews were analysed using qualitative data processing. However, the commonly accepted approach for analysing qualitative data was used in the research. Content analysis is a data codification technique that can be used to achieve data presentation. More opinions were gathered for this research through semi-structured interviews. As a result, the qualitative data in this research was analysed using the content analysis process.

3.5.2.2 Quantitative Data Analysis

Quantitative techniques produce a large number or amount of data. As a result, the information should be explained, sorted, summarized, and analysed. Graphical strategies such as drawing charts, graphs, and measurements that have statistical functions such as median, standard deviations, mean, and mod can be used to achieve this. The dataset or quantitative statistics for the research were gathered through a questionnaire survey. As a result, the data collected from the questionnaire survey were analysed using the Statistical Package for Social Sciences Software (SPSS software). To analyse quantitative data in this research, the researchers used the Relative Important Index (RII) as a quantitative data analysis technique. The research's most critical attributes were defined as those with a score of more than 0.8.

$$\text{RII} = \frac{\sum W}{\text{AxN}} X 100\%$$

Where,

W: Constant expressing the weighting given to each response;

A: The highest weighting;

N: Total number in the responses

3.6 Chapter Summary

Overall, this chapter has discussed and justified the research methodology systematically by identifying the research design, research approach, research process, and research techniques. Moreover, the mixed approach has been used to conduct this research and the data collection has been done by conducting semi-structured interviews with the selected expertise and questionnaire survey among a large sample. Father, content analysis and the Relative Important Index were used as data analysis techniques and the results of the analysis have elaborated in the following chapters of the research.

CHAPTER 04

4. DATA ANALYSIS

4.1 Introduction

The research process and methodologies were addressed in the preceding chapter. This chapter delves into the analysis and outcomes of the expert interviews, as well as the two phases of the structured questionnaire was administered based on the methodology described above. The following summary of the results will concentrate on this because the research seeks to investigate the most substantial critical factors concerning arbitration methods and make recommendations to improve the effectiveness of arbitration in the Sri Lankan construction industry, as well as to determine their risk response measures and allocation. Finally, it produced a systematic critical element regarding arbitration processes and made suggestions to improve the efficacy of arbitration in Sri Lanka's construction business.

4.2 Expert Interviews

Six semi-structured interviews were conducted with construction industry specialists with more than ten years of experience utilizing the purposive sample approach. Participants were also questioned in accordance with the development principles. Finally, all of the data gathered from the semi-structured discussions is utilized to create a questionnaire method for data collecting and in-depth analysis.

4.2.1 Objectives of Expert Interviews

The primary goal of expert interviews was to identify crucial aspects relating to arbitration processes and give recommendations to improve the efficacy of arbitration in Sri Lanka's construction sector. Some gaps in the literature have been filled as a result of this expert review. Furthermore, the generic elements gained from the literature research are based on the general construction sector. As a result, the application of each of the aforementioned elements to the essential variables affecting arbitration techniques, as well as proposals to improve the efficacy of arbitration in the Sri Lankan construction sector, were validated by interviewing each interviewee. Furthermore, it is planned to check the dependability of the decided risk response techniques, define new risk response methods for the essential elements pertaining to arbitration procedures, and provide recommendations to improve the efficacy of arbitration in Sri Lanka's construction business.

4.2.2 Respondents of Expert Interviews

The expert interview included six construction industry professionals with more than ten years of work experience in important variables involving arbitration procedures and making recommendations to increase the efficacy of arbitration in the Sri Lankan construction sector.

Table 4.1: Interviewee List

Interviewee Code	Profession	Designation	Experience in Construction Industry	Experience in ADR
IA	consultant	Senior Legal Counsel	More than 10	Work as a Dispute resolver Participate in ADR method
IB	Contractor	Quantity Surveyor	5 - 10	Participate in ADR method
IC	consultant	Quantity Surveyor	More than 10	Work as a Dispute resolver Participate in ADR method
ID	consultant	Quantity Surveyor	5 - 10	Participate in ADR method
IE	Contractor	Quantity Surveyor	More than 10	Work as a Dispute resolver

				Participate in ADR method
IF	consultant	Senior Legal Counsel	More than 10	Work as a Dispute resolver Participate in ADR method

The interviews were chosen via purposeful sampling. As a result, the two key selection process were at least three years of expertise in projects and ten or more years of work experience in the building business. In addition, the chosen interviewees had prior job expertise in Sri Lanka's construction industry. The interviews lasted roughly 30 minutes. Respondents was asked to verify the elements and tactics found in the literature research and were given the opportunity to offer additional variables and tactics. Additionally, interviews were conducted both online and in person.

4.2.3 Examining the Results and Findings of Expert Interviews

Using the qualitative content analysis, generic variables discovered in the literature review were analysed based on expert judgments. Components with specific meanings have been combined and included to the survey round. Furthermore, elements related to construction projects were discovered and transmitted to the survey phase. Finally, the important findings of interviews conducted are summarized here.

4.2.4 Findings of Expert Interviews

First, in comparison to other construction works, essential aspects of to improve the efficacy of arbitration in the construction sector were discovered. Arbitration is used to recover land in order to meet various human demands in order to improve the efficacy of arbitration in the building sector. In comparison to civil engineering works, improving the efficacy of arbitration in the construction sector is difficult and necessitates knowledge in this area. In particular, there are a lot of preparatory aspects to consider when compared to other building projects. As a result, a greater number of risk variables might be discovered in order to improve the efficacy of arbitration in the construction business as contrasted to other engineering

construction. Moreover, in the next phase of data analysis, multiple risk response techniques were found in order to build survey round

4.2.5 critical attributes of Arbitration

Below list comprises of critical attributes of Arbitration as ADR methods. The respondents were asked to identify the suitability related to the Sri Lankan construction industry. Further, interviewees were asked to state any other critical attributes of Arbitration as ADR methods which are applicable to Sri Lankan construction industry

Table 4.2: critical attributes of Arbitration

Item No	Critical Attributes	Identified in Literature Review	Identified in Expert Interviews
1	Confidentiality of the information	x	
2	Degree of control by parties	x	
3	Choice over the third party except disputants	x	
4	Selection of Seat of Arbitration	x	
5	Available remedies	x	
6	Choice of law of substance	x	
7	Enforceability of the decision	x	
8	Liability of opponent cost	x	
9	Preservation of relationship	x	
10	Overall duration/ Speed	x	
11	Relative cost	x	
12	Control by the third party to the process of	x	

Item No	Critical Attributes	Identified in Literature Review	Identified in Expert Interviews
	Arbitration		
13	Imbalance of Power of the Disputants	x	
14	Time requirement for parties	x	
15	Consensus agreement	x	
16	Creative solution	x	
17	Fairness of Arbitrators	x	
18	Knowledge in construction industry	x	
19	Power to compel consolidation	x	
20	Choice of language	x	
21	Well drafted ADR Agreement	x	
22	Costs and Availability of the process		x
23	Time Management		x
24	Control of the Procedure		x
25	Neutrality of the Arbitrators		x

Following to the interview round, 6 number attributes were newly added according to the opinions of the industry experts.

4.2.5.1 Costs and Availability of the Process

ADR has a number of clear advantages for parties that prefer it versus litigation. To begin with, when compared to the evolution of costs from lower to higher appeal courts, the costs associated with ADR are much lower; nonetheless, arbitration has

recently been admonished for escalating costs comparable to litigation. Lowering expenses is unquestionably beneficial to all parties involved in a dispute, whether through faster procedures, consent, or control over manageable disclosures processes. This is especially beneficial when the participants have different levels of power. Employment disputes, project arbitration, intellectual property issues, and financial conflicts are just a few examples of where arbitration has increased in popularity in areas where it was previously regarded to be unsuitable or where an issue was deemed "in arbitrable. “As a preferred or optional supplementary technique of conflict resolution, ADR has 'infiltrated' new places. ADR may be beneficial in enhancing legal representation for all parties in conflict in this regard, because parties who are turned off by the cost of litigation can still raise their case through ADR.

4.2.5.2 Time Management

ADR should, on average, take less time than going to court. When the length of a judicial case would greatly delay a connected subject, the expeditiousness of ADR methods can be very advantageous. This is particularly true in arbitration, where the parties agree that Expedited Procedure will take precedence over any conflicting arbitration agreement provisions. Many arbitral rules impose deadlines, and arbitral tribunals are expected to keep track of them and avoid unnecessary delays. Despite the fact that arbitrators who unreasonably prolong an award now face penalties and substantial fines, long periods of time and delays in award issuance are still possible.

4.2.5.3 Control of the Procedure

In general, parties who use alternative dispute resolution (ADR) methods should be happier with the results than those who use the legal system. This could be because parties have more control over the outcome and have a direct voice in determining the terms of their settlement in ADR. While the existence of a conflict influences one's impression of success, international arbitration is the preferred form of dispute resolution. Relationships, as well as cultural sensitivities, must be maintained. ADR is less confrontational than traditional curial proceedings in general, and it can help

parties maintain and protect existing relationships throughout a dispute. This is extremely significant in this culture, although it is also significant in other cultures.

4.2.5.4 Principles of Natural Justice

When one party's understanding of the applicable laws and court processes may provide strategic benefits, or if there is a distrust of national legislations, ADR can offset or remove views of any 'home court advantage' that a side may have in judicial proceedings. It should be noted that during negotiations, the party in the best position may insist on having their country serve as the arbitration's seat, implying that domestic courts would be required for supervisory issues and remedy settlement.

4.2.6 Practical constraints of Arbitration

From the expert interview round, 17 practical constraints were identified and validated to the Sri Lankan context based on the literature findings. Furthermore, respondents were asked to propose new practical constraints that would be referred to Sri Lankan Arbitration. The responders to the expert interview round offered 6 new constraints based on the stated opinions, which are addressed below.

Table 4.3: Practical Constraints of Arbitration

Item No	Practical Constraints	Identified in Literature Review	Identified in Expert Interviews
1	Low level of concentration to the technical issues	x	
2	lack of knowledge and lack of awareness of methods by the professionals	x	
3	Inability to resolve multi-party conflicts and disputes	x	
4	Impossible to continue the relationship among the parties	x	
5	Less satisfaction of the parties to	x	

Item No	Practical Constraints	Identified in Literature Review	Identified in Expert Interviews
	the arbitration decision		
6	The award is difficult to challenge	x	
7	Difficult to arrange the hearing	x	
8	Difficult to arrange the hearing and find the Arbitrators on a full-time basis	x	
9	Time consuming	x	
10	Exorbitant cost	x	
11	Arbitrators expect high facilities and several indirect advantages from the parties	x	
12	Knowledge of Arbitrators	x	
13	Lack of concern about the technicality of the dispute	x	
14	Rare and exceptional institutional arbitration arrangements	x	
15	Damage to the relationship between the project parties	x	
16	Lack of arbitrators	x	
17	Place of arbitration	x	
18	Inequitable Negotiating Command		x
19	Lack of Legal Experts		x
20	Enforceability		x
21	Necessary Court Action		x

Numerous drawbacks are impeding the path to successful conflict settlement and frequently disturbing both sides' willingness to reconcile for a compromise choice. Some of the constraints are as follows:

4.2.6.1 Inequitable Negotiating Command

In such scenarios, one party can wield influence over the other. As a result, there is a significant disparity in power. For example, in employment and annulment issues, the courts are a better option for a weak party.

4.2.6.2 Lack of Legal Experts

When an argument contains complex legal matters, a mediation or arbitrator is unlikely to have the same legal fluency and knowledge as a judge. The disagreement can be one of several types, including viable disputes, social unrest, legal conflicts, and many more that require the services of specialized mediators. In the majority of situations, the mediator does not gain a judge's viewpoint.

4.2.6.3 Enforceability

In most cases, ADR is not legally binding, making any judgment difficult to implement. Legal arbitration includes some sort of plan of action for domestic appeals, which allows the evaluation as a compulsory and only problem to the Court's evaluation.

4.2.6.4 Necessary Court Action

When one party's understanding of the applicable laws and court processes provides strategic benefits, or if there is a distrust of national legislations, ADR can offset or remove views of any 'home court advantage' that a side may have in judicial proceedings. It should be noted that during negotiations, the best-positioned side may insist on having their country serve as the arbitration's seat, implying that domestic courts would be required for supervisory issues and remedy settlement.

4.2.7 Strategies to enhance the Effectiveness of Arbitration

Based on the findings, 10 enhancement strategies were identified and validated to the Sri Lankan context from the literature findings. Furthermore, respondents were asked to propose new enhancement strategies that would be referred to Sri Lankan Arbitration. The responders to the expert interview round offered four new strategies based on the stated opinions, which are addressed below.

Table 4.4: Strategies to enhance the Effectiveness of Arbitration

Item No	Strategies	Identified in Literature Review	Identified in Expert Interviews
1	Building experts who are professionally trained should be included to resolve construction conflicts and disputes as Arbitrators	x	
2	Arbitrators must properly manage the arbitration process	x	
3	Arbitrators must properly collect and review sufficient information from the parties to deliver a successful hearing	x	
4	Make a proper practical decision that ultimately leads to a solution	x	
5	Clearly identify their role and responsibilities of Arbitrators	x	
6	Arbitrators should be appointed on a full-time basis to hold hearings regularly on a set schedule	x	
7	Conducting an awareness programme is required to enhance the success of the arbitration	x	
8	Appointment the construction industry	x	

Item No	Strategies	Identified in Literature Review	Identified in Expert Interviews
	experts as arbitrators and members arbitral tribunal		
9	Introduce a suitable and most appropriate method for reporting arbitration awards for future references	x	
10	Applying universally accepted recognised procedures	x	
11	Improve the awareness of technical issues		x
12	Awareness of Arbitration method and procedure between the parties of the contract		x
13	Understand the commercial and contractual matters clearly		x
14	Request of legal professionals to participate as counsels for parties		x

Even if the contracts are based on regular forms, each agreement in the construction business has a degree of originality. In the industry, numerical constructions may be found, such as structural engineering steel, concrete technologies, soil techniques, engineering support with specific design and structures, and sewer systems, among others. These entail a wide range of task types that are run over lengthy periods of time, frequently resulting in contradictory concerns.

The parties wish to send their disagreements to a person with the abilities to comprehend the technicalities involved in the topic at hand, and who will use that expertise to tailor his judgment. Construction arbitration is a private process that compels litigants to enforce a settlement. It was originally thought to be part of a broader league of different conflict resolution techniques, such as conciliation, mediation, and expert judgment, as a substitute to the more expensive and frequently protracted arbitration proceeding.

The high expenses of litigation and the length of time it takes to settle conflicts are the primary reasons for using ADR procedures. As a result, the appropriate resolution technique should be chosen depending on criteria such as cost and time. It is ideal for the parties to use ADR methods to settle conflicts since the technique is low-cost and caters to the decrease of time consumption.

Arbitration is anticipated to be cheaper and faster as an ADR method, there are large expenses paid in the arbitration process and also in the Sri Lankan arbitration procedure practiced in the construction sector, due to the time invested and the participation of attorneys. As a result, respondents believed arbitration was unsuitable for a variety of reasons, and the arbitration method has since fallen into disfavour. Today, arbitration has its own limitations requires the integration of tiers in the arbitration process and occasionally at courts, as well as their legal expenses, time length, and so on. These are the only disadvantages that can be identified not just in the Sri Lankan context, but also in international arbitration, where the expenses are extremely expensive, and as a result, parties are hesitant to embrace the arbitration system.

The possibility of producing construction conflicts is significant owing to scientific or technological issues that develop as a result of the unique character of the building sector. As a result, the inclusion of knowledge is advantageous in a conflict settlement process. In current practice, attorneys are chosen as arbitrators, leaving a gap in their ability to deal with intricacies in the subject matter. In addition, appointing a mediator makes no difference but follows along the same lines.

Arbitration appears to be acknowledged and useful in the construction business due to the binding legal character of the ruling. Furthermore, the non-binding nature of mediation appears to be one of the most improper characteristics when contrasted to the arbitrator's binding on the party’s decision. Mediation would be more popular if it were made a legal requirement.

In ADR methods, rather than in litigation, the oppose parties would have greater influence over the structure and content of the procedures. The arbitrator and the procedural procedures enunciated by the Arbitration Act in Sri Lanka provide the

parties with no actual option in the process. Litigation isn't any longer productive since it is left in the hands of attorneys, and instead, disputants turn to arbitration as an alternate way of resolution. However, in the current environment, the system of arbitration operates along some principles of litigation since the majority of arbitrators are selected from among former Supreme Court justices. While the situation with arbitration already has grown comparable to that of court procedure, worldwide practice demonstrates arbitration as a respected process that is fully apart from court proceedings.

Litigation has grown inefficient as a result of lawyer manipulation. Disputed parties are unconcerned about proceeding with litigation, but instead seek remedy in arbitration since the technique of arbitration is considerably more convenient for meeting their goals. However, because the majority of arbitrators are former Supreme Court judges, present arbitration practice has grown more comparable to that of court process, leading to incompetence and a lack of awareness and comprehension. However, there is no such engagement of attorneys in mediation since there is no method defined by law in arbitration, and the majority of mediators active in construction moderation activities are construction industry specialists.

4.3 Questionnaire Round I

Questionnaire round I was subjected to rank the critical attributes and practical constrains of arbitration. Number of attributes and constraints were identified through the literature review. In addition to that, semi structured interview series discovered the attributes and constraints which had not been identified in literature survey and added as new factors to the analysis. The analysis was carried out based on all collected attributes and constraints, and the most critical attributes were forwarded to the questionnaire round II in order to reach the ultimate goal.

4.3.1 Objectives of Questionnaire Round I

The main objective of questionnaire round was to rank the critical attributes and constraints in order to identified most critical attributes and most significant constraints to Sri Lankan context. In addition to that, to achieve ultimate objective of

the research, the top most critical attributes were brought forwarded to the questionnaire round II.

4.3.2 Respondents of Questionnaire Round I

The questionnaires were distributed among the 52 respondents and collected 31 responses from the experts in the construction sector including the ADR experience. The response rate is around 50%, and the following are the specifics of the experts.

Table 4.5: List of respondents

Designations	Experience in Construction Industry	Number of Respondents	Experience in ADR	
			Participated in ADR method	Work as a Dispute Resolver
Engineers	1-5 Years	11	11	-
	5-10 Years	4	1	3
	10 years above	4	-	4
Quantity Surveyors	1-5 Years	8	8	-
	5-10 Years	1	1	-
	10 years above	3	-	3
Total		**31**	**21**	**10**

4.3.3 Examining the Results of Questionnaire Round I

Purposive sampling was used in the process of selecting respondents. In addition to that, the respondents were given instructions to rank each attribute and the constraints on a scale of 1 to 5. The RII analysis technique was used to examine the overall results.

4.3.4 Findings of Questionnaire Round I

The questionnaire round I is subjected to identify most critical attributes in Arbitration and the most significant constraints in ADR practise. Questionnaire analysis is based on Relative Important Index (RII) as a quantitative data analysis technique.

4.3.5 Most Critical Attributes in ADR practises in Sri Lanka

During the literature review, twenty-one new attributes were discovered, and four new traits were added following the semi structured interviews. In total, twenty-five attributes were applied to Round I of the questionnaire and were ranked as the most important attributes to the Sri Lankan context. The SPSS software was used to conduct the analysis, and the results can be summarised as follows.

Table 4.6: Most critical attributes

No	Attributes	RII Score	Rank
1	**Confidentiality of the information**	**1.00**	**1**
2	**Selection of seat (Place) of arbitration**	**1.00**	**2**
3	**Enforceability of the decision**	**0.93**	**3**
4	**Overall duration/ Speed**	**0.87**	**4**
5	**Time requirement for parties**	**0.87**	**5**
6	**Knowledge in construction Industry**	**0.87**	**6**
7	**Principles of Natural Justice**	**0.87**	**7**
8	**Well draft ADR Clause/Agreement in the contract**	**0.87**	**8**
9	**Choice of language**	**0.87**	**9**
10	**Choice of law of substance**	**0.87**	**10**
11	Choice over the third party except disputants	0.79	11
12	Available remedies	0.79	12
13	Cost and Availability	0.78	13
14	Consensus agreement	0.76	15
15	Creative solution	0.75	16
16	Fairness of Arbitrators	0.75	17
17	Power to compel consolidation	0.75	18
18	Time Management	0.74	19
19	Control of the Procedure	0.74	20
20	Liability of opponent cost	0.73	22
21	Relative cost	0.73	23
22	Control by the third party to the process of Arbitration	0.73	24
23	Imbalance of Power of the Disputants	0.73	25
24	Degree of control by parties	0.67	27
25	Preservation of relationship	0.67	29

According to the above Table 4.6, ten attributes have been highlighted as the most important attributes of Arbitration practice in the Sri Lankan setting. Based on past research, more than 0.8 cut-off level was chosen for this research, with qualities exceeding 0.8 being deemed the most critical. The most significant element, according to the poll results, is information secrecy, which is a key feature of arbitration processes.

All discussions, as well as the contents of papers supplied but not used as evidence and information provided throughout the Arbitration process, are kept private and confidential. Confidentiality can lead to more meaningful participation and positive outcomes. Confidentiality allows the parties to have an open and honest dialogue about the issues at hand, which may help to resolve or limit the issues.

The second most critical factor is selection of seat of arbitration. The legal location where the arbitration takes place is known as the seat of arbitration. Parties pick the arbitration legislation that will apply and which national courts will have supervisory authority over the arbitration by deciding where the arbitration will take place. The choice of arbitration seat is very crucial, as it has a significant impact on the entire arbitration procedure.

In arbitration, overall duration and speed are also important considerations. When the arbitration procedure takes a long time, it is inconvenient for both parties in terms of time and money. As a result, the duration period should be brief to save time while maintaining the quality of arbitration practices. In that situation, there are a variety of precautions that can be taken to shorten the duration. However, the quality of the process and decisions should not be harmed or changed as a result of the arbitration process's duration management.

Another key issue that should be prioritised in arbitration practises is the amount of time required of the parties. During this time, the parties have the opportunity to collect the required materials to resolve the dispute. As a result, it plays an important function because it is during this time that all necessary documents, information, and supplies are papered. As a result, the parties' final judgments are entirely dependent on this time frame, as they must gather more particular and essential information for the relevant situations. Further, The arbitration practices were primarily applied to construction disputes in this research. As a result, knowledge of construction is one of the most important attributes that must be considered one of the primary needs for resolving construction disputes. Experts of the arbitration practises should have the vast area of knowledge in building industry in order to resolve the conflicts. As a

result, it has been ranked as the sixth most important attribute in the arbitration process.

Natural Justice is one of the critical attributes in arbitration process. Every issue that could have a bearing on the resolution of a dispute has the right to be appropriately heard by both parties. All parties must be treated properly by the arbitrator, who must provide them an equal opportunity to present and respond to their reasons. The arbitrator should not reach a decision based on information that has not been submitted to him or that has not been challenged in front of him. However, an arbitrator's ruling that violates the notion of natural justice may be challenged in court and set aside under section 34 of The Arbitration and Conciliation Act, 1996. When a party challenges an arbitral judgment on the basis of a breach of natural justice, the party must demonstrate which rule of natural justice was broken, how it was broken, and how the violation of natural justice was related to the verdict.

According to the findings of the investigation, a well-organized arbitration draft has become one of the most important features in modern arbitration. Because they are confident in the success of their enterprise and the bona fides of the parties, experts may not correctly analyse what would happen if one party broke the agreement or a disagreement arose while negotiating an arbitration agreement. Distributor agreements, employment agreements, vendor or manufacturer contracts, intellectual property licenses, and research and development collaborations can all benefit from a well-drafted dispute resolution clause. Furthermore, arbitration rules can aid in the quick, cost-effective, and equitable resolution of future disputes. However, many agreements rely on generic cut-and-paste ADR provisions without thinking. Taking this shortcut early on could be costly later if a dispute arises, costing money and time in procedural manoeuvring for an appropriate forum even before the merits of a commercial issue are determined.

Due to the international nature of arbitration, parties, arbitrators, and other participants in the processes are typically of different countries and speak different languages. As a result, the language in which the procedures will be conducted becomes extremely important and crucial for the arbitration's primary goal: the

peaceful resolution of conflicts. Nonetheless, procedural language is sometimes seen as a side issue, to the point that parties may choose one without giving it any thought, or even relinquish their right to do so in the arbitration agreement. Instead, the arbitration agreement's choice of (correct) procedural wording can have a considerable impact on the proceedings' efficiency.

The ninth attribute, the law of substance, is regarded as one of the most important in the arbitration process. The contract may expressly pick a different substantive law than the choice of jurisdiction. Choice of law clauses are more important than an afterthought, proforma use, or cut-and-paste since the subject matter of commercial contracts frequently expands beyond domestic intrastate operations and into interstate and international trade and commerce. The controlling law, forum, practice and procedural rules, operation of Alternative Dispute Resolution (ADR) clauses, and, most crucially, enforcement is all influenced by the law chosen.

4.3.6 Most Severe practical Constraints in ADR methods in Sri Lanka

During the literature review, seventeen contains were discovered, and four new constraints were added following the semi structured interviews. In total, twenty-one elements were applied to Round I of the questionnaire and were ranked as the most severe contains to the Sri Lankan context. The SPSS software was used to conduct the analysis, and the results can be summarised as follows.

Table 4.7: Most severe practical constraints

No	Practical Constraints	RII Score	Rank
1	**Time consuming**	**0.93**	**1**
2	**Knowledge of the arbitrators**	**0.93**	**2**
3	**Lack of concern about the technicality of the dispute**	**0.87**	**3**
4	**Difficult to arrange the hearing and find the Arbitrators on a full-time basis**	**0.87**	**4**
5	**Exorbitant cost**	**0.87**	**5**
6	**Place of arbitration**	**0.87**	**6**
7	**Lack of Legal Experts**	**0.87**	**7**
8	**lack of knowledge and lack of awareness of methods by the professionals**	**0.87**	**8**
9	**The award is difficult to challenge**	**0.87**	**9**
10	**Lack of arbitrators**	**0.87**	**10**
11	Rare and exceptional institutional arbitration arrangements	0.73	11

No	Practical Constraints	RII Score	Rank
12	Low level of concentration to the technical issues	0.73	12
13	Impossible to continue the relationship among the parties	0.67	13
14	Less satisfaction of the parties to the arbitration decision	0.67	14
15	Difficult to arrange the hearing	0.67	15
16	Damage to the relationship between the project parties	0.67	16
17	Inability to resolve multi-party conflicts and disputes	0.60	17
18	Enforceability	0.60	18
19	Necessary Court Action	0.60	19
20	Arbitrators expect high facilities and several indirect advantages from the parties	0.53	20
21	Inequitable Negotiating Command	0.53	21

Ten practical constraints were highlighted as the most severe obstacles in arbitration practices based on the survey's findings. According to the survey results, the most significant obstacle in the arbitration process in Sri Lanka is time. Due to the complexity of the nature of the dispute and the need for both parties to be heard fairly, Arbitration processes drag on a long time. As a result, as part of the data analysis, it has become the research's top constraint.

Knowledge of the Arbitrators is another important constraint. One of the most significant benefits of arbitration is that the parties have the option of selecting their own judge or allowing a professional organization to do so. As a result, the parties are not obligated to accept the judge who happens to be in Court on that particular day, who may have little or no knowledge in a potentially difficult subject area. When the parties choose a certain person, there is a level of trust on both sides in that person's choice. Therefore, the arbiter should be high skilled and knowledgeable in arbitration field as the whole decision of the process depends on the knowledge of the Arbitrator.

Another important obstacle is giving little concern on the technicality of dispute. This is one of the problem in Arbitration process which is frequently occurred in the cases during the COVID 19 situation. Due to the legal provisions and enforcements by the government, there were numbers of technical issues had been risen in the

construction of project for the period of 2020 and 2021. In this case, the projects started before the period of above, were severely affected to the time claims and number of disputes which were brought to Arbitration were increased. However, the decisions are based on the conditions of the contact. Hence, the technical difficulties of the disputes were considered less. Due to this, in most cases parties were unhappy with the decision given by the Arbiters. Therefore, it can be considered as a sever constraint in the Arbitration process.

The parties do not participate in the arbitration procedure full-time. Both parties are professional workers in the construction industry. As a result, allocating a long amount of time for the arbitration procedure on a full-time basis has a significant impact on the professional job outcomes. Therefore, the arbitration procedure does not take place on a full-time basis. The process has dragged on for a long time in this case, and it has definitely impacted the expense and time of the parties and specialists participating in the process.

There are arbitrators who have earned a reputation for being fair and reasonable in all aspects of their work, including their costs. Unfortunately, there is a significant number of arbitrators who are not. Any policy decision must take into account both groups. Furthermore, in high-value cases, arbitrators have the right to seek significant fees, especially when the cases are intricate and considerably bigger sums are being paid to lawyers contesting the cases. That isn't the issue. The issue is the way fees are fixed/set, as well as the power imbalance that underpins this process. In Sri Lanka, the great bulk of arbitration is ad hoc. The arbitrator(s) determine their fees in ad hoc arbitration. The vast majority of the time, parties are unaware of these fees until the arbitrator enters upon reference. For fear of antagonizing the person who will ultimately rule their case on the merits, the parties rarely have a genuine voice in determining the arbitrator's fees once the arbitrator is appointed. As a result, it is common for the arbitrator's price suggestion to be accepted without question by the parties. Unfortunately, numerous arbitrators have taken advantage of this power imbalance to charge parties exorbitant fees. Arbitration practitioners all around the country can provide you with several examples of each arbitrator charging several

crores for a single arbitration. Therefore, exorbitant costs are the one of the obstacles which keeps away good arbitration practises in Sri Lankan context.

It's one thing to agree to arbitrate, and quite another to figure out how the arbitration will be conducted (Place). The rules governing how an Arbitration should be conducted might come from three different places. Therefore, the selection of place of arbitration is a difficult task that the both parties needed to agreed and accepted. However, the process of selection can be done in different ways in the Sri Lankan context. The parties can include precise provisions in the agreement itself on the identity of the Arbiter, the timetable, the venue, the arbiter's powers and duties, costs, and so on due to clogs up the contract, this is a rare occurrence. In addition to that, there are dozens of sets of Arbitration Rules for various types of arbitrations which determines the place of arbitration in a procedural way. The associations who wrote the rules are sometimes in charge of enforcing them and providing a structure within which the Arbitration will take place, at a cost, of course. Alternatively, the contract might relate to the norms of a body, with the parties agreeing on specific arrangements once the conflict develops. Using the best features of multiple sets of rules, the parties can create a set of rules (which can then be integrated into the contract). Finally, different rules can be applied in different contracts depending on the circumstances, such as the ICC (International Chamber of Commerce) Rules in international contracts and the Institute for the Development of Commercial Law and Practice Rules in domestic contracts. Therefore, due to this complexity of selection of places, it has become of the sever constraint in Sri Lankan arbitration.

Many individuals believe that, with a little common sense, arbitration law is simple to learn and apply. This would be ideal, but it isn't the case. It combines toughness and adaptability. That is a significant benefit of arbitration. Strength is important because it leads to enforceable choices that are backed up by the state's coercive powers. Flexible because it allows contestants to select their own judges based on the nature of the disagreement and procedures that, in theory, should also be tailored to the nature of the dispute and the business setting in which it happens. Therefore, lack of the legal expertise and lack of knowledge by professionals is critical constraints which lead arbitration process to a negative impact.

However, the final award of the arbitration is legally enforced and cannot be altered. Hence, the parties may have faced the issues due to the unfair decisions and they have no ability to change it within the arbitration process. Therefore, this constraint has a severe impact on the arbitration process which is needed to give attention. Finally, the number of professional arbitrators in Sri Lanka is extremely limited. The arbiters make the majority of the decisions and rely on their arbitration knowledge. As a result, high-skilled professionals are constantly in demand, even if low-skilled professionals face some competition in the industry. As a result, the majority of cases necessitate high-level arbitration knowledge. This has become one of the mainstays in the Sri Lankan arbitration procedure due to a shortage of highly competent individuals.

4.4 Questionnaire Round II

Questionnaire round II was carried out to identify the enhancement strategies to the selected critical attributes from the questionnaire I. In addition to that, number of enhancement strategies were identified through the literature review and number of new strategies were discovered through the semi structured interviews.

4.4.1 Objectives of Questionnaire Round I

Questionnaire round I was subjected to rank the critical attributes and practical constraints of arbitration process in ADR practises to Sri Lankan context. However, based on the results ten number attributes were selected as the most critical attributes. In addition to that, questionnaire round I is carried out to allocate enhancement strategies to improve the effectiveness of this attributes in order to achieve the ultimate goal of this research. As it mentioned above, all the enhancement strategies were identified through the literature review and the semi structured interviews. Therefore, in questionnaire round II, respondents were asked to input five enhancement strategies to each attribute and analysis were carried out based on the survey results.

4.4.2 Respondents of Questionnaire Round II

The questionnaires were distributed among the 52 respondents and collected 28 responses from the experts in the construction sector including the ADR experience. The response rate is around 50%, and the following are the specifics of the experts.

Table 4.8: Respondents of Questionnaire Round II

Designations	Experience in Construction Industry	Number of Respondents	Experience in ADR	
			Participated in ADR method	Work as a Dispute Resolver
Engineers	1-5 Years	10	10	-
	5-10 Years	3	1	2
	10 years above	4	-	4
Quantity Surveyors	1-5 Years	8	8	-
	5-10 Years	-	-	-
	10 years above	3	-	3
Total		**28**	**21**	**10**

4.4.3 Examining the Results of Questionnaire Round II

Purposive sampling was used in the process of selecting respondents. In addition to that, the respondents were given instructions to allocate 5 number enhancement strategies to each critical attribute.

4.4.4 Findings of Questionnaire Round II

Ten number strategies were identified through the literature review and four new factors were discovered from the expert interviews. Altogether, eighteen number strategies were considered out to the questionnaire round II and the respondents were instructed to include five strategies from the list to the most critical attributes in arbitration practises in Sri Lankan context. Finally, the strategies were ranked using SPSS software and RII value of the strategies were calculated. based on the previous studies, 0.8 considered as the cut-off mark and selected the strategies above 0.8 for this research. The selected strategies are as follows,

Table 4.9: Strategies for enhancement with codes

No	**Strategies**	**Strategy Code**

1	Building experts who are professionally trained should be included to resolve construction conflicts and disputes as Arbitrators	ST01
2	Arbitrators must properly manage the arbitration process	ST02
3	Arbitrators must properly collect and review sufficient information from the parties to deliver a successful hearing	ST03
4	Make a proper practical decision that ultimately leads to a solution	ST04
5	Clearly identify their role and responsibilities of Arbitrators	ST05
6	Arbitrators should be appointed on a full-time basis to hold hearings regularly on a set schedule	ST06
7	Conducting an awareness program is required to enhance the success of the arbitration	ST07
8	Appoint the construction industry experts to the sole arbitration or arbitration tribunal	ST08
9	Introduce a suitable and most appropriate method for reporting arbitration award for future references	ST09
10	Applying universally accepted recognized procedures	ST10
11	Improve the awareness of technical issues	ST11
12	Awareness of Arbitration method and procedure between the parties of the contract	
13	Understand the commercial and contractual matters clearly	ST12
14	Most of the arbitrator's influence and request to have lawyers as councils discourage the other professionals to involve with counseling	ST13

Based on the above strategies, respondents were asked to allocate five strategies to all the selected critical attributes. Among those allocated strategies, RII values more than 0.8 were selected as the most suitable enhancement strategies for each attribute. The survey analysis results can be elaborated as follows.

Table 4.10: Allocation of Enhancement strategies to Critical attributes

No	Critical Attribute	Rank	Enhancement Strategy Code	Enhancement Strategy	RII Value
1	Confidentiality of the information	1	ST05	Clearly identify their role and responsibilities of Arbitrators	0.98
			ST12	Awareness of Arbitration method and procedure between the parties of the contract	0.87
			ST07	Conducting an awareness program is required to enhance the success of the arbitration	0.83
2	Selection of seat (Place) of arbitration	2	ST02	Arbitrators must properly manage the arbitration process	0.97
			ST12	Awareness of Arbitration method and procedure between the parties of the contract	0.85

No	Critical Attribute	Rank	Enhancement Strategy Code	Enhancement Strategy	RII Value
3	Enforceability of the decision	3	ST03	Arbitrators must properly collect and review sufficient information from the parties to deliver a successful hearing	0.91
			ST10	Applying universally accepted recognised procedures	0.87
			ST13	Understand the commercial and contractual matters clearly	0.85
4	Overall duration/ Speed	4	ST02	Arbitrators must properly manage the arbitration process	0.95
			ST9	Introduce a suitable and most appropriate method for reporting arbitration award for future references	0.85
			ST06	Arbitrators should be appointed on a full-time basis to hold hearings regularly on a set schedule	0.81
5	Time requirement for parties	5	ST02	Arbitrators must properly manage the arbitration process	0.97
			ST12	Awareness of Arbitration method and procedure between the parties of the contract	0.86
6	Knowledge in construction Industry	6	ST08	Appoint the construction industry experts to the sole arbitration or arbitration tribunal	0.96
			ST13	Understand the commercial and contractual matters clearly	0.87
			ST12	Improve the awareness of technical issues	0.81
7	Natural Justice	7	ST03	Arbitrators must properly collect and review sufficient information from the parties to deliver a successful hearing	0.91
			ST04	Make a proper practical decision that ultimately leads to a solution	0.87
			ST12	Awareness of Arbitration method and procedure between the parties of the contract	0.87
8	Well draft ADR Clause/Agreement in the contract	8	ST07	Conducting an awareness program is required to enhance the success of the arbitration	0.94

No	Critical Attribute	Rank	Enhancement Strategy Code	Enhancement Strategy	RII Value
			ST02	Arbitrators must properly manage the arbitration process	0.86
			ST01	Building experts who are professionally trained should be included to resolve construction conflicts and disputes as Arbitrators	0.85
9	Choice of language	9	ST10	Applying universally accepted recognised procedures	0.84
			ST07	Conducting an awareness program is required to enhance the success of the arbitration	0.82
10	Choice of law of substance	10	ST10	Applying universally accepted recognised procedures	0.97
			ST02	Arbitrators must properly manage the arbitration process	0.87
			ST07	Conducting an awareness program is required to enhance the success of the arbitration	0.86

Based on the findings, confidentiality of the information can be enhanced by Clearly identify their role and responsibilities of Arbitrators. Arbitrators are the key person of the process. Therefore, their roles and responsibilities have a direct impact on the confidentiality of the information. In addition to that, Awareness of Arbitration method and procedure between the parties of the contract and conducting an awareness program is required to enhance the success of the arbitration.

In addition to that, selection of seat of arbitration is another critical process that can be enhanced by proper management of arbitration process by arbitrators. As it mentioned above the key person of the process are Arbitrators and they have sole responsibility to manage it properly in order to select a venue for the process. Further, introduce a suitable and most appropriate method for reporting arbitration award for future references and improving the Awareness of Arbitration method and procedure between the parties of the contract enhance the key attribute; the selection of seat of arbitration. Furthermore, Enforceability of the decision can be improved by

the responsibilities of Arbitrators to gather sufficient information from the parties to deliver a successful hearing. Successful hearing defines, the consideration of the all-relevant factors from the both parties in order to get a better decision. However, Applying universally accepted recognised procedures and understanding the commercial and contractual matters clearly have direct impact on the enhancement of the enforceability of the decision in arbitration process in Sri Lanka.

Overall duration/ Speed is a frequent critical factor in construction related activities. The arbitration process is subjected to this critical attribute and it has a considerable impact on the cost and time of the parties who are involved. Mainly, it can be enhanced by the proper management of the arbitration process by the arbitrators. Similarly, introduce a suitable and most appropriate method for reporting arbitration award for future references plays a vital role in this attribute as the number of previous cases will ease the process and decisions in the construction disputes. Furthermore, while it may be impossible to have both parties involved in a full-time arbitration process, Arbitrators may be recruited on a full-time basis to hold hearings on a regular basis during working hours and on a fixed timetable.

Time requirement for parties is another significant attribute which also can be enhanced by proper management of arbitration process by arbitrators. Awareness of Arbitration method and procedure between the parties of the contract will ensure the time required for the parties as well. It can be used to enhance the attribute in Sri Lankan context.

Another vital quality is construction knowledge. Arbitrators are well-versed in the law. Despite the fact that they are less knowledgeable about construction and technical elements. As a result, one of the critical features that can be increased by assigning construction industry professionals to the solitary arbitration or arbitration panel is construction knowledge. Furthermore, a strong understanding of business and contractual matters will always aid in improving technical thinking. In order to deal with construction conflicts, arbitrators should also strengthen their technical knowledge. Furthermore, Natural Justice is a crucial component that can be improved by acquiring enough information from the parties in order to conduct a

successful hearing. Arbitrators are in charge of gathering information, and they may be able to ensure natural justice. Furthermore, in natural justice, inadequate decisions always resulted in bad consequences. As a result, make a decision that leads to a solution that improves the above-mentioned features in the construction industry. Furthermore, contract parties' awareness ensures natural fairness in the arbitration procedure.

Well draft ADR Clause/Agreement in the contract plays significant role in Sri Lankan arbitration context. In can be improved by conducting an awareness program is required to enhance the success of the arbitration. Furthermore, proper management in arbitration process will ensure Well draft ADR Clause/Agreement in the contract. In addition to that, building experts who are professionally trained should be included to resolve construction conflicts and disputes to enhance the Well draft ADR Clause/Agreement in the contract as Arbitrators.

Another challenge that arbitrators confront in the ADR procedure is language selection. However, as the acceptable terminology is utilized to progress the arbitration process, adopting generally acknowledged legal processes would always help to reduce this difficulty. Similarly, in the arbitration procedure, the authorities have sole authority to change the legal forms and circumstances. As a result, appointing authority can be used as an augmentation strategy in the ADR method to address concerns with language choice. Furthermore, in order to improve the success of the arbitration, an awareness program is essential. This will also help to improve the above attribute in the Sri Lankan setting. Following globally recognised right methods can help you choose a law of substance. Because the arbitration terms are governed by a universally acknowledged document. As a result, selecting a substantive law is subject to following proper procedure that is widely accepted. Furthermore, it is the topmost responsibility of arbitrators to correctly manage the arbitration process, and an awareness program is essential to improve the arbitration's success.

4.5 Discussion

When comparing practical constraints and research handling strategies, some strategies are significantly influenced by the most severe practical constraints in the research. According to the results of the questionnaire II analysis, a number of handling techniques were identified as handling strategies that are affected by the most significant practical constraints with a high frequency. As a result of these described handling procedures, the arbitration process can be improved by having proper management in the most severe practical constraints in the research. The following strategies are the strategies that are heavily influenced by the most severe practical restrictions, and they were used in a variety of key attributes.

Table 4.11: Strategies which are highly affected by most severe practical constraints

Code	Enhancement Strategies
ST02	Arbitrators must properly manage the arbitration process
ST03	Arbitrators must gather sufficient information from the parties to deliver a successful hearing
ST07	Conducting an awareness program is required to enhance the success of the arbitration
ST11	Introduce a suitable and most appropriate method for reporting arbitration award for future references
ST12	Awareness of Arbitration method and procedure between the parties of the contract
ST13	Appointing authorities
ST14	Applying universally accepted recognised procedures
ST17	Understand the commercial and contractual matters clearly

Furthermore, a number of strategies have been identified as being less affected by the most severe practical constraints. These strategies can be applied to the critical attributes of the research without first addressing the research's most serious practical constraints. The following strategies were recognised as unique strategies to improve the effectiveness of qualities in the research that are not substantially impacted by practical constraints.

Table 4.12: Strategies which are negligibly affected by most severe practical constraints

Code	Enhancement Strategies
ST01	Building experts who are professionally trained should be included to resolve construction conflicts and disputes
ST04	Make a proper practical decision that ultimately leads to a solution
ST05	Clearly identify their role and responsibilities of Arbitrators
ST06	Arbitrators should be appointed on a full-time basis to hold hearings regularly on a set schedule

Code	Enhancement Strategies
ST09	Appoint the construction industry experts to the sole arbitration or arbitration tribunal
ST16	Improve the awareness of technical issues

4.6 Summary

Semi structured interviews, questionnaire round I, and questionnaire round II were used to conduct the overall analysis. The main objective of the semi structured interviews was to check the applicability of the attributes, constraints and the enhancement strategies to the Sri Lankan context and identify the new factors for each section of the research. Following the interviews, a questionnaire round I was conducted to discover the research's most significant features as well as the research's most severe constraints. Finally, the research's ultimate goal was realized by allocating enhancement solutions to each critical attribute found in the questionnaire survey round I during the questionnaire round II.

CHAPTER 05

5. CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The essential concept of modern arbitration was introduced with the application of English Law to the settlements of dispute. Arbitration plays a vital role in construction disputes resolution and it has become one of the most successive ADR methods in current construction practises. However, Due to a lack of enhancement measures to improve the process' effectiveness, existing arbitration practice is fraught with issues. A number of practical constraints have influenced the flexibility and smoothness of the arbitration process, and the effectiveness of the arbitration process has become one of the key threats in the Sri Lankan construction industry as a result of these difficulties. Therefore, it is necessary to improve the effectiveness of the arbitration process in Sri Lanka, and one of the most important approaches to do so is to study critical attributes and reduce practical constraints through enhancement strategies. As a result, this research primarily focused on the enhancement of critical

attributes and investigate the severe constraints of the arbitration process and provide suitable strategies to enhance the effectiveness of the process.

5.2 Conclusion

This research took a thorough approach to elaborate one of the ADR methods, using a literature review as the foundation to identify trouble spots in the process of resolving conflicts in the construction sector. Negotiation, adjudication, and arbitration are the most suitable ADR methods in the construction sector. However, the focus of this research was on arbitration, with discussions focusing on three primary areas: critically investigating appropriate arbitration procedures for the Sri Lankan construction industry, as well as further recommendations to improve the effectiveness of those arbitration methods. It also examined the construction industry's disagreements and disputes, as well as its differences. The causations that influence the conflicts have also been synthesized. Furthermore, the necessity of alternative dispute resolution methods and litigation has been examined in detail, as well as the important aspects of construction dispute settlement. Finally, this research looked at the application of arbitration in the Sri Lankan setting as well as strategies for improving its effectiveness.

5.3 Objective 1: Identify the critical attributes, practical constraints and enhancement strategies of Arbitration method.

The objective 1 was partially achieved through the literature review. Mainly, the literature review discovered twenty-one critical attributes; confidentiality of the information, degree of control by parties, Choice over the third party except disputants, flexibility in the proceedings, available remedies, Choice of law of substance, enforceability of the decision, degree of formality, cost of the third party, liability of opponent cost, preservation of relationship, overall duration/ speed, relative cost, willingness to resolve, Control by the third party to the process of Arbitration, power imbalance, Time requirement for parties, consensus agreement, creative solution, fairness, knowledge in construction, power to compel consolidation, Choice of language, range of issues and well drafted DR Agreement. In addition to that, after the semi structured interviews, four factors were added;

Costs and Availability of the process, time management, control of the Procedure and neutrality of the Arbitrators All together 25 factors were carried out to the questionnaire round I in order to find out the most significant attributes of the research.

Moreover, the literature review discovered seventeen practical constraints such as low level of concentration to the technical issues, lack of knowledge and lack of awareness of methods by the professionals, inability to resolve multi-party conflicts and disputes, impossible to continue the relationship among the parties, less satisfaction of the parties to the arbitration decision, the award is very difficult to challenge, limited jurisdictions, difficult to arrange the hearing , difficult to arrange the hearing and find the arbitrators on a full-time basis, time consuming, exorbitant cost, arbitrators expect high facilities and several indirect advantages from the parties, little concern about the technicality of the dispute, rare and exceptional institutional arbitration arrangements, damage to the relationship between the project parties, lack of arbitrators and place of arbitration. In addition to that, after the semi structured interviews, four factors were added; Inequitable Negotiating Command, lack of legal experts, enforceability and necessary court action, all together 21 factors were forwarded to the questionnaire round I to find out the most severe practical constraints.

5.4 Objective 2: Explore significance and applicability of critical attributes and practical constraints of arbitration method in the Sri Lankan Context.

Based on the RII value computed from the SPSS program, 10 critical attributes were identified as the most critical in the Sri Lankan context based on the findings of questionnaire round I. The most critical attributes are confidentiality of the information, selection of seat of arbitration, enforceability of the decision, overall duration/ speed, Time requirement for parties, knowledge in construction, natural justice, well draft ADR Clause/Agreement in the contract, choice of language and choice of law of substance.

In addition to that, based on the RII value computed from the SPSS program, 10 practical constraints were identified as the most severe constraints to the Sri Lankan

context which are, time consuming, knowledge of the arbitrators, little concern about the technicality of the dispute, difficult to arrange the hearing and find the arbitrators on a full-time basis, exorbitant cost, place of arbitration, lack of legal experts, lack of knowledge and lack of awareness of methods by the professionals, the award is very difficult to challenge, lack of arbitrators.

5.5 Objective 3: Make recommendations and strategies to enhance the effectiveness of Arbitration method.

Based on the results of questionnaire round I, ten most critical attributes were subjected to include enhancement strategies which were identified form the literature review and the semi structured interviews. Among the handing strategies, the strategies such as arbitrators must properly manage the arbitration process, arbitrators must gather sufficient information from the parties to deliver a successful hearing, conducting an awareness program is required to enhance the success of the arbitration, introduce a suitable and most appropriate method for reporting arbitration award for future references, Awareness of Arbitration method and procedure between the parties of the contract, appointing authorities, Applying universally accepted recognised procedures and understand the commercial and contractual matters clearly can be considered as the common handling strategies while the strategies such as building experts who are professionally trained should be included to resolve construction conflicts and disputes, Make a proper practical decision that ultimately leads to a solution, clearly identify their role and responsibilities of arbitrators, Arbitrators should be appointed on a full-time basis to hold hearings regularly on a set schedule, appoint the construction industry experts to the sole arbitration or arbitration tribunal and improve the awareness of technical issues were considered as the unique strategies of the research.

5.6 Recommendations

Arbitrators are typically hired on a part-time basis in most common construction practises. As a result of this problem, the majority of arbitration proceedings take a long time and incur additional expenditures for both parties involved. Therefore, Arbitrators should be appointed on a full-time basis to hold hearings regularly on a

set schedule. In case, it will reduce the excessive time consumptions and also the results of the hearing can be delivered within a shorter period of time.

Furthermore, understanding of the arbitration procedure is an important component to consider during the arbitration process. Both parties must be fully informed about dispute resolution and arbitration methods prior to the first hearing of the arbitration. If a party lacks awareness, it is one of the greatest obstacles to receiving a fair decision from the arbitration. Therefore, Awareness between parties shall be increased and it can be done by awareness programmes and Continuous Professional Development sessions

Further, it is foremost duty of Arbitrators to gather all relevant and sufficient information from the parties to deliver a successful hearing. If the party delay to give the information, proper notices shall be given for keep the mutual understanding between arbitrator and the relevant party.

In addition to that, both legal and technical considerations play an important role in the arbitration process. As a result, it is critical to improve arbitrators' technical knowledge, which is one of the research's top recommendations. However, the above issue can be overcome by appointing the construction industry experts with high technical knowledge to the sole arbitration or arbitration tribunal. The majority of Arbitrators are legal specialists. However, they aren't as knowledgeable on construction. As a result, their decisions are entirely based on legal considerations rather than practical construction concerns. It would be a disadvantage at times since the practical aspects of the situation may be varied from the legal aspects. As a result, the construction expert as an arbitrator can fill this void and improve the arbitration method's effectiveness.

5.7 Areas for Further Research

Some more research areas can be highlighted as a guide for researchers in this field in order to improve the effectiveness of the arbitration procedure in Sri Lanka.

- Strategies to raise the awareness of arbitration process in the Construction Sector Sri Lanka

- Development of a Framework for handle the Risks in Sri Lankan Arbitration Process
- Analyse the Significance of ADR methods in Government Funded Projects in Sri Lanka

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APPENDICES I – INTERVIEW GUIDELINE

Mr. Isuru Udana

Department of Building Economics,

University of Moratuwa.

Date.

Dear Sir/Madam,

To Conduct an Interview for Dissertation

I am a Quantity Surveying postgraduate of Department of Building Economics, University of Moratuwa. I'm currently conducting research on the topic of "*A research on critical factors concerning to arbitration methods and make recommendations to enhance the effectiveness of arbitration in the construction industry of sri Lanka"* with the aim of evaluating the critical attributes concerning Arbitration methods in the construction industry of Sri Lanka & make recommended strategies for enhancing the effectiveness of Arbitration.

This research is conducted under the supervision of Mr. M.D.T.E Abeynayake, Senior Lecturer, Department of Building Economics, University of Moratuwa. In order to gather data on above mentioned topic, I wish to conduct an interview with you and other experts who are currently involving in and had experiences in construction industry. Therefore, I kindly request your assistance by allowing me to conduct interviews on above mentioned topic. I would like to interview you for approximately 30 – 45 minutes. The medium of collecting data will be note taking and tape recording (with the permission of the interviewee) to ensure the accuracy and reliability of the collected data. I assure that the information collected will be purely used for the research purpose, and the confidentiality of the details will be strictly maintained.

Thanking you in advance your kind collaboration.

Date of the Interview: …….

SECTION A: *General information about the respondent*

(Please cross (X) in relevant box)

Name (Optional)						
Organization(Optional)						
Type of organization	Contractor		Client		Consultant	
Profession	Engineer		Architect		Quantity Surveyor	
Designation						
Years of experience in construction industry	Less than 5		5 - 10		More than 10	
Experience in ADR	Work as a Dispute resolver		Participate in ADR method		No experience	

SECTION B: *This section is designed to identify the critical attributes of Arbitration as ADR methods*

- Below list comprises of critical attributes of Arbitration as ADR methods. Please identify their suitability related to the Sri Lankan construction industry.
- Further state any other critical attributes of Arbitration as ADR methods which are applicable to Sri Lankan construction industry.

Item No	Critical Attributes	Applicability (Yes / No)	Remarks
1	Confidentiality of the information		
2	Degree of control by parties		
3	Choice over the third party except disputants		
4	Flexibility in the proceedings		
5	Available remedies		
6	Choice of law of substance		
7	Enforceability of the decision		
8	Liability of opponent cost		
9	Preservation of relationship		
10	Overall duration/ Speed		
11	Relative cost		
12	Control by the third party to the process of Arbitration		
13	Imbalance of Power of the Disputants		
14	Time requirement for parties		
15	Consensus agreement		
16	Creative solution		
17	Fairness		
18	Knowledge in construction		
19	Power to compel consolidation		
20	Choice of language		
21	Well drafted ADR Agreement		
22	Confidentiality of the information		
23	Degree of control by parties		
24	Choice over the third party except disputants		

SECTION C: *This section is designed to identify the practical constraints of Arbitration as ADR methods*

- Below list comprises of practical constraints of Arbitration as ADR methods. Please identify their suitability related to the Sri Lankan construction industry.
- Further state any other practical constraints of Arbitration as ADR methods which are applicable to Sri Lankan construction industry.

Item No	**Practical Constraints**	**Applicability (Yes / No)**	**Remarks**
1	Low level of concentration to the technical issues		
2	lack of knowledge and lack of awareness of methods by the professionals		
3	Inability to resolve multi-party conflicts and disputes		
4	Impossible to continue the relationship among the parties		
5	Less satisfaction of the parties to the arbitration decision		
6	The award is difficult to challenge		
7	Difficult to arrange the hearing		
8	Difficult to arrange the hearing and find the Arbitrators on a full-time basis		
9	Time consuming		
10	Exorbitant cost		

11	Arbitrators expect high facilities and several indirect advantages from the parties		
12	Knowledge of Arbitrators		
13	Lack of concern about the technicality of the dispute		
14	Rare and exceptional institutional arbitration arrangements		
15	Damage to the relationship between the project parties		
16	Lack of arbitrators		

SECTION D: *This section is designed to identify the strategies to enhance the Effectiveness of Arbitration as ADR methods*

- Below list comprises of strategies to enhance the effectiveness of Arbitration as ADR methods.

  Please identify their suitability related to the Sri Lankan construction industry.
- Further state any other strategies to enhance the effectiveness of Arbitration as ADR methods which are applicable to Sri Lankan construction industry.

Item No	**Strategies**	**Applicability (Yes / No)**	**Remarks**
1	Building experts who are professionally trained should be included to resolve		

	construction conflicts and disputes		
2	Arbitrators must properly manage the arbitration process		
3	Arbitrators must gather sufficient information from the parties to deliver a successful hearing		
4	Make a proper practical decision that ultimately leads to a solution		
5	Clearly identify their role and responsibilities of Arbitrators		
6	Arbitrators should be appointed on a full-time basis to hold hearings regularly on a set schedule		
7	Conducting an awareness program is required to enhance the success of the arbitration		
8	Conducting training and education programs		
9	Appoint the construction industry experts to the sole arbitration or arbitration tribunal		
10	Publishing the arbitration system in both Tamil and Sinhala languages		
11	Introduce a suitable and most appropriate method for reporting arbitration award for future references		

-Thank you for your kind cooperation-

APPENDICES II – QUESTIONNAIRE ROUND I

SECTION A

Name (Optional)						
Organization(Optional)						
Type of organization	Contractor		Client		Consultant	
Profession	Engineer		Architect		Quantity Surveyor	
Designation						
Years of experience in construction industry	Less than 5		5 - 10		More than 10	
Experience in ADR	Work as a Dispute resolver		Participate in ADR method		No experience	

SECTION B: Rank the **significance of** the **critical attributes** of Arbitration as ADR methods

Use the suitable ranking according to the scale provided below

1 – Very Low Significance

2 – Significance

3 – Medium Significance

4 – High Significance

5 – Very High Significance

Item No	Critical Attributes	Ranking					Your Answer (1-5)
1	Confidentiality of the information	①	②	③	④	⑤	
2	Degree of control by parties	①	②	③	④	⑤	
3	Choice over the third party except disputants	①	②	③	④	⑤	
4	Selection of Seat of Arbitration	①	②	③	④	⑤	
5	Available remedies	①	②	③	④	⑤	
6	Choice of law of substance	①	②	③	④	⑤	
7	Enforceability of the decision	①	②	③	④	⑤	
8	Liability of opponent cost	①	②	③	④	⑤	
9	Preservation of relationship	①	②	③	④	⑤	
10	Overall duration/ Speed	①	②	③	④	⑤	
11	Relative cost	①	②	③	④	⑤	
12	Control by the third party to the process of Arbitration	①	②	③	④	⑤	
13	Imbalance of Power of the Disputants	①	②	③	④	⑤	
14	Time requirement for parties	①	②	③	④	⑤	
15	Consensus agreement	①	②	③	④	⑤	
16	Creative solution	①	②	③	④	⑤	
17	Fairness of Arbitrators	①	②	③	④	⑤	
18	Knowledge in construction industry	①	②	③	④	⑤	
19	Power to compel consolidation	①	②	③	④	⑤	
20	Choice of language	①	②	③	④	⑤	

Item No	Critical Attributes	Ranking					Your Answer (1-5)
21	Well drafted ADR Agreement	①	②	③	④	⑤	
22	Costs and Availability of the process	①	②	③	④	⑤	
23	Time Management	①	②	③	④	⑤	
24	Control of the Procedure	①	②	③	④	⑤	
25	Neutrality of the Arbitrators	①	②	③	④	⑤	

SECTION C: Rank the **significance of** the **practical constraints** of Arbitration as ADR methods

1 – Very Low Significance

2 – Significance

3 – Medium Significance

4 – High Significance

5 – Very High Significance

Item No	Practical Constraints	Ranking					Your Answer (1-5)
1	Low level of concentration to the technical issues	①	②	③	④	⑤	
2	lack of knowledge and lack of awareness of methods by the professionals	①	②	③	④	⑤	
3	Inability to resolve multi-party conflicts and disputes	①	②	③	④	⑤	
4	Impossible to continue the relationship among the parties	①	②	③	④	⑤	
5	Less satisfaction of the parties to the arbitration decision	①	②	③	④	⑤	
6	The award is difficult to challenge	①	②	③	④	⑤	
7	Difficult to arrange the hearing	①	②	③	④	⑤	
8	Difficult to arrange the hearing and find the Arbitrators on a full-time basis	①	②	③	④	⑤	

Item No	Practical Constraints	Ranking					Your Answer (1-
9	Time consuming	①	②	③	④	⑤	
10	Exorbitant cost	①	②	③	④	⑤	
11	Arbitrators expect high facilities and several indirect advantages from the parties	①	②	③	④	⑤	
12	Knowledge of Arbitrators	①	②	③	④	⑤	
13	Lack of concern about the technicality of the dispute	①	②	③	④	⑤	
14	Rare and exceptional institutional arbitration arrangements	①	②	③	④	⑤	
15	Damage to the relationship between the project parties	①	②	③	④	⑤	
16	Lack of arbitrators	①	②	③	④	⑤	
17	Place of arbitration	①	②	③	④	⑤	
18	Inequitable Negotiating Command	①	②	③	④	⑤	
20	Lack of Legal Experts	①	②	③	④	⑤	
21	Enforceability	①	②	③	④	⑤	

-Thank you for your kind cooperation-

APPENDICES III – QUESTIONNAIRE ROUND II

SECTION A

Name (Optional)						
Organization(Optional)						
Type of organization	Contractor		Client		Consultant	
Profession	Engineer		Architect		Quantity Surveyor	
Designation						
Years of experience in construction industry	Less than 5		5 - 10		More than 10	
Experience in ADR	Work as a Dispute resolver		Participate in ADR method		No experience	

SECTION B: Select the appropriate enhancement strategy for the below most critical attributes in Arbitration practices

Use the suitable ranking according to the scale provided below

1 – Very Low Impact

2 – Significance Impact

3 – Medium Impact

4 – High Impact

5 – Very High Impact

No	Most Critical Attributes	Most suitable enhancement strategies				
		1	2	3	4	5
1	**Confidentiality of the information**					
2	**Selection of seat of arbitration**					
3	**Enforceability of the decision**					
4	**Overall duration/ Speed**					
5	**Time requirement for parties**					
6	**Knowledge in construction**					
7	**Natural Justice**					
8	**Well draft ADR Clause/Agreement in the contract**					
9	**Choice of language**					
10	**Choice of law of substance**					

Fill above table using below Enhancement strategies

No	Strategies	Strategy Code
1	Building experts who are professionally trained should be included to resolve construction conflicts and disputes	ST01
2	Arbitrators must properly manage the arbitration process	ST02
3	Arbitrators must gather sufficient information from the parties to deliver a successful hearing	ST03
4	Make a proper practical decision that ultimately leads to a solution	ST04
5	Clearly identify their role and responsibilities of Arbitrators	ST05
6	Arbitrators should be appointed on a full-time basis to hold hearings regularly on a set schedule	ST06
7	Conducting an awareness program is required to enhance the success of the arbitration	ST07
8	Conducting training and education programs	ST08

No	Strategies	Strategy Code
9	Appoint the construction industry experts to the sole arbitration or arbitration tribunal	ST09
10	Publishing the arbitration system in both Tamil and Sinhala languages	ST10
11	Introduce a suitable and most appropriate method for reporting arbitration award for future references	ST11
12	Awareness of Arbitration method and procedure between the parties of the contract	ST12
13	Appointing authorities	ST13
14	Applying universally accepted recognised procedures	ST14
15	Retired judges and retired lawyers comes to the arbitration and do the arbitration as court procedures	ST15
16	Improve the awareness of technical issues	ST16
17	Understand the commercial and contractual matters clearly	ST17
18	Most of the arbitrator's influence and request to have lawyers as councils discourage the other professionals to involve with counselling	ST18