

**SUITABILITY OF AD-HOC AND INSTITUTIONAL
ARBITRATION FOR RESOLVING DISPUTES IN SRI
LANKAN CONSTRUCTION INDUSTRY**

Sanjeevani Sakunthala Edirisinghe

(189536T)

Master of Science in Construction Law and Dispute Resolution

Department of Building Economics

University of Moratuwa

Sri Lanka

July 2022

**SUITABILITY OF AD-HOC AND INSTITUTIONAL
ARBITRATION FOR RESOLVING DISPUTES IN SRI
LANKAN CONSTRUCTION INDUSTRY**

Sanjeevani Sakunthala Edirisinghe

(189536T)

Dissertation Submitted in Partial Fulfilment of the Requirements for the Postgraduate
Degree of Master of Science in Construction Law and Dispute Resolution

Department of Building Economics

University of Moratuwa

Sri Lanka

July 2022

DECLARATION

Declaration and the Statement of the Supervisor

“I declare that this is my own work and this dissertation does not incorporate, without acknowledgement, any material previously submitted for a degree or diploma 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. I retain the right to use this content in whole or part in future works (such as articles or books).

Further, I acknowledge the intellectual contribution of my research supervisor Prof. (Mrs.) Y. G. Sandanayake 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 research supervisor”.

Signature:

Date:

[S. S. Edirisinghe]

The above candidate has carried out research for the Masters Dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

Signature of the supervisor:

Date:

[Prof. (Mrs.) Y. G. Sandanayake]

Suitability of Ad-Hoc and Institutional Arbitration for Resolving Disputes in Sri Lankan Construction Industry

Construction industry being vulnerable for disputes due to its comprehensive and complex nature, the resolution of disputes become a prominent factor. Disputes have the potential to arise in any stage of a construction project. Thus, a significant need for Alternative Dispute Resolution (ADR) methods has arisen where arbitration plays a vital role. There are two basic forms of arbitration namely ad-hoc and institutional, where both forms have advantages as well as shortcomings when practicing them. Even though there are many researches available regarding ad-hoc and institutional arbitration pertaining to global context, less evidences can be found for researches on the suitability of ad-hoc and institutional arbitration for the Sri Lankan construction industry. Therefore, this study aims to investigate the suitability of ad-hoc and institutional arbitration to resolve disputes in Sri Lankan construction industry.

The different types of arbitration, their significance in construction industry, and current practice, applicability and appropriateness of ad-hoc and institutional arbitration have been reviewed through literature survey. Subsequently, qualitative research approach was followed to achieve the aim of this research. Semi-structured interviews were conducted with 10 arbitrators practicing in Sri Lankan construction industry. The collected data were analysed using code-based content analysis with the aid of NVivo 11 software.

Further to the findings, institutional arbitration contains strengths like pre-tested rules and firm procedures with adequate administrative support as well as weaknesses like higher administrative fees. Ad-hoc arbitration comprising with party autonomy and flexible procedures as strengths and controlling time of the proceedings as the major weakness. Based on strengths and weaknesses of both forms, most international and upper-level local contractors are likely to go for institutional arbitration due to its reliable rules and procedures. Finally, strategies were proposed to enhance the effectiveness of ad-hoc and institutional arbitration for the progression of Sri Lankan construction industry. Since ad-hoc arbitration does not contain procedural rules and time limit to conduct arbitration, it has been suggested to amend the Arbitration Act by including a provision for procedural rules and specific time duration to provide the arbitral award. In terms of institutional arbitration, capacity development programs for arbitrators have been suggested as a strategy focusing to their development towards institutional arbitration. It can be concluded that among the two arbitration methods, institutional arbitration is the most suitable method under the prevailing legal system in Sri Lanka, where ad-hoc arbitration is the most feasible method to resolve disputes in Sri Lankan construction industry. Construction industry practitioners can use the findings of this study to effectively solve disputes in Sri Lankan construction industry.

Keywords: *Ad-hoc Arbitration, Alternative Dispute Resolution, Arbitration, Construction Industry, Disputes, Institutional Arbitration.*

DEDICATION

To my beloved late father

who always believed in me

&

My dearest mother, brothers and husband

for their endless love and support...

ACKNOWLEDGEMENT

This research is a result of commitment and encouragement of many people who have supported me in several ways. I would like to express my gratefulness to all of them for their valuable ideas, encouragement and commitment for successfully complete this research.

First and foremost, I would like to convey my heartfelt gratitude to my research supervisor Prof. (Mrs.) Y. G. Sandanayake for her immense guidance, encouragement and assistance given to me throughout the entire period of time.

My special gratitude goes to all the construction industry professionals who provided me an enormous support to complete the data collection process more than I was expected. Further, I must pay my gratitude to entire academic and non-academic staff of the Department of Building Economics, University of Moratuwa for their huge support during the research.

Finally, I would like to grant my heartiest gratitude to my beloved family for giving me their genuine helping hand and continuously motivating me to complete the work successfully.

TABLE OF CONTENTS

DECLARATION	i
ABSTRACT	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	ix
LIST OF TABLES	xi
ABBREVIATIONS	xii
CHAPTER 1: INTRODUCTION	1
1.1. Background	1
1.2. Problem Statement	3
1.3. Aim and Objectives.....	4
1.4. Research Methodology	5
1.5. Scope and Limitation	5
1.6. Research Chapter Breakdown.....	5
1.7. Chapter Summary	6
CHAPTER 2: LITERATURE REVIEW	7
2.1. Introduction.....	7
2.2. Nature of the Construction Industry.....	8
2.3. Disputes in the Construction Industry.....	8
2.4. Alternative Dispute Resolution (ADR) Methods.....	11
2.4.1. Types of ADR methods used in construction industry	12
2.4.2. Importance of ADR methods to construction industry	17
2.5. An Overview of Arbitration and its Significance to Construction Industry ...	18

2.6. Forms of Arbitration	22
2.6.1. Institutional arbitration.....	22
2.6.2. Ad-hoc arbitration	23
2.7. Advantages and Disadvantages of Institutional and Ad-hoc Arbitrations.....	24
2.7.1. Advantages of institutional arbitration.....	24
2.7.2. Disadvantages of institutional arbitration	26
2.7.3. Advantages of ad-hoc arbitration.....	26
2.7.4. Disadvantages of ad-hoc arbitration	27
2.8. Institutional and Ad-hoc Arbitration: International Conventions and Case Laws	30
2.9. Application of Institutional and Ad-hoc Arbitration for Resolving Disputes in Construction Industry.....	31
2.10. Suitability of Institutional and Ad-hoc Arbitration to Sri Lankan Construction Industry.....	32
2.11. Chapter Summary	34
CHAPTER 3: RESEARCH METHODOLOGY	35
3.1. Introduction.....	35
3.2. Research Design.....	35
3.3. Research Approaches.....	35
3.3.1. Quantitative approach	36
3.3.2. Qualitative approach	36
3.3.3. Mixed method approach.....	36
3.3.4. Justification for the selected approach.....	37
3.4. Research Process.....	37
3.4.1. Initial study	38
3.4.2. Literature survey	39

3.4.3. Data collection	39
3.4.4. Expert sample selection	40
3.4.5. Data analysis	41
3.4.5. Validation.....	41
3.5. Chapter Summary	41
CHAPTER 4: RESEARCH FINDINGS AND DISCUSSION.....	42
4.1 Introduction.....	42
4.2 Semi-structured Interviews with Experts.....	42
4.3 Research Findings	44
4.3.1 Arbitration in Sri Lanka	44
4.3.2 Current Practice of Ad-hoc and Institutional Arbitration in Sri Lankan Construction Industry.....	48
4.3.3 Applicability and Appropriateness of Ad-hoc Arbitration for Sri Lankan Construction Industry.....	53
4.3.4 Applicability and Appropriateness of Institutional Arbitration for Sri Lankan Construction Industry.....	61
4.3.6 Strategies to Enhance the Effectiveness of Ad-hoc and Institutional Arbitration in Sri Lankan Construction Industry	70
4.4 Discussion	72
4.5 Validation of Findings	73
4.6 Chapter Summary	77
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS.....	78
5.1 Introduction.....	78
5.2 Overview of Research and Conclusions	78
5.3 Recommendations for Construction Industry	81
5.4 Recommendations for Government	81

5.5 Recommendations for Academic Researchers.....	82
REFERENCES.....	83
ANNEXURE A: INTERVIEW GUIDELINE.....	103

LIST OF FIGURES

Figure 1.1: Proposed chapter breakdown of the research	6
Figure 2.1: Conflicts, claims and disputes in construction industry	9
Figure 2.2: Stair step model for dispute resolution process in the construction industry	13
Figure 2.3: Procedural options in ADR	14
Figure 3.1: Research process	38
Figure 4.1: Summary of analysis	44
Figure 4.2: Significance of arbitration compared to other ADR methods	45
Figure 4.3: Awareness of arbitration in Sri Lankan construction industry	46
Figure 4.4: State of demand for arbitration in construction industry of Sri Lanka...	47
Figure 4.5: Benefits of practicing arbitration in Sri Lankan construction industry ..	49
Figure 4.6: Barriers for practicing arbitration in Sri Lankan construction industry .	50
Figure 4.7: Respondents' experience in ad-hoc and institutional arbitration	51
Figure 4.8: Level of current practice of ad-hoc arbitration in Sri Lankan construction industry	52
Figure 4.9: Level of practicing of institutional arbitration in Sri Lankan construction industry	52
Figure 4.10: Reasons to practice ad-hoc arbitration for resolving disputes.....	53
Figure 4.11: Skills and knowledge of Sri Lankan arbitrators to use ad-hoc arbitration	55
Figure 4.12: Advantages of using ad-hoc arbitration in Sri Lankan construction industry	56
Figure 4.13: Disadvantages of using ad-hoc arbitration in Sri Lankan construction industry	57
Figure 4.14: Challenges faced by arbitrators when practicing ad-hoc arbitration....	59
Figure 4.15: Strategies to overcome the challenges when practicing ad-hoc arbitration	60
Figure 4.16: Reasons to use institutional arbitration to resolve disputes.....	61

Figure 4.17: Skills and knowledge of Sri Lankan arbitrators to use institutional arbitration	62
Figure 4.18: Advantages of using institutional arbitration in Sri Lankan construction industry	63
Figure 4.19: Disadvantages of using institutional arbitration in Sri Lankan construction industry	64
Figure 4.20: Challenges faced by arbitrators when practicing institutional arbitration	66
Figure 4.21: Strategies to overcome the challenges when practicing institutional arbitration	67
Figure 4.22: Strategies to enhance the effectiveness of ad-hoc and institutional arbitration in Sri Lankan construction industry	71
Figure 4.23: Summary of research findings.....	75

LIST OF TABLES

Table 2.1: Types of ADR methods	15
Table 2.2: The advantages and disadvantages of institutional and ad-hoc arbitration	29
Table 4.1: Summary of respondents.....	43
Table 4.2: Comparison of ad-hoc and institutional arbitration in Sri Lankan construction industry	68
Table 4.3: Details of experts for validation.....	74

ABBREVIATIONS

ADB	- Asian Development Bank
ADR	- Alternative Dispute Resolution
CIDA	- Construction Industry Development Authority
CPD	- Continuing Professional Development
DAB	- Dispute Adjudication Board
DRB	- Dispute Review Board
EOT	- Extension of Time
ICC	- International Chamber of Commerce
ICCSL	- International Chamber of Commerce Sri Lanka
ICLP	- Institute for the development of Commercial Law and Practice
JICA	- Japan International Cooperation Agency
MENA	- Middle East and North Africa
SLNAC	- Sri Lanka National Arbitration Centre
UNCITRAL	- United Nations Commission on International Trade Law
VoIP	- Voice over Internet Protocol

CHAPTER 1: INTRODUCTION

1.1. Background

Construction industry plays a significant role among other key economic sectors despite the development status of any country (Olanrewaju & Abdul-Aziz, 2014). According to Jones, Comfort and Hillier (2006), building construction, infrastructure construction and specialty trades are the main subsections in construction industry. Similar to other countries, Sri Lankan construction industry has comprehensive and complex nature of activities (Abeynayake & Weddikkara, 2012). Majority of shares in Sri Lankan construction industry belong to building construction sector, which has developed considerably in recent past (Halwatura & Jayatunga, 2013).

Disputes can be commonly seen at any point throughout the construction (Abeynayake & Weddikkara, 2012). Therefore, almost all the construction projects can subject to disputes all the way through entire project duration, which result in increasing labour and material costs (Nihaaj, 2016). Cheung and Suen (2002) stated that construction disputes are not predictable as there are variety of parties involved due to complexity of the projects.

Since, disputes have become a widespread problem in the construction industry, it tends to go for Alternative Dispute Resolution (ADR) methods in last few decades due to several shortcomings of litigation (Teo & Aibinu, 2007). However, most of the employers are likely to go for litigations as they do not need to accept risks associated with other dispute resolution methods (Amoatey, Ameyaw, Adaku & Famiyeh, 2015). According to Cheung and Suen (2002), parties to the dispute will unconditionally loss their autonomy to a third party by choosing litigation. Therefore, Silver and Furlong (as cited in Abeynayake & Weddikkara, 2012) stated that ADR is the best method rather than going for litigation to maintain mutual respect and fair atmosphere to all parties. In this context, negotiation, mediation, neutral evaluation, arbitration and collaborative law are considered as best mechanisms for resolving disputes outside the court (Cheung & Suen, 2002).

Arbitration is one of major types of ADR, which permits to be resolved a disagreement between two separate parties without going for litigation (Wallgren-Lindholm, 2016). Sri Lanka has a strong history of alternate dispute resolution in last two thousand five hundred years (Amarasinghe, 2007) and also the country has a contemporary, comprehensive and progressive legal system to support international and domestic arbitrations (Marsoof, 2010). De Zylva (2006) specified that the Arbitration Act No. 11 of 1995 is currently governing arbitration process in Sri Lanka and the underlying law is UNCITRAL model law.

Schroeter (2017) also identified Arbitration as a widespread and frequently used dispute resolution mechanism alternative over litigation for many construction disputes. Therefore, in most of the public and private standard contracts, arbitration clause is specifically included (Harmon, 2003). Further to Schroeter (2017), there are two basic forms of arbitration, namely, ad-hoc and institutional.

Institutional arbitration can be recognised as one which is administered by an expertise predetermined arbitral institution based on its own set of rules of arbitration (Schroeter, 2017). Ad-hoc arbitration can be simply defined as opposite to institutional arbitration (Akkas, 2019). Accordingly, ad-hoc arbitration is not administered by any institution and parties should arrange their selection of arbitrators at their own discretion for a designation of rules, procedures and administration (Wallgren-Lindholm, 2016).

When parties have their intention for arbitration, they must take a decision whether their arbitration to be directed by a selected arbitral institution or whether it is to be ad-hoc (Tao & Wunschheim, 2007). Therefore, institutional or ad-hoc arbitration is basically decided with the view of the parties depend on their specific requirements (Bockstiegel, 2012).

When considered globally, Chinese legal system clearly advice to choose institutional arbitration over ad-hoc arbitration since they usually do not enforce and recognise ad-hoc arbitral awards except for some exceptional cases (Yilmaz, 2017). Contrary to China, the Iranian law recognises ad-hoc arbitration over institutional arbitration as a traditional practice (Shokrani, 2018). However, according to Shah and Gandhi (2011),

there is no objection in the law for institutional arbitration even though it recognises ad-hoc arbitration in Iran. Moreover, in MENA region, ad-hoc arbitration has established as the legally secure choice over institutional arbitration (Al Tamimi, 2017). According to Chen (2012), ad-hoc and institutional arbitration are equally enforceable in countries like Hong Kong and Singapore as both are established under doctrine of party autonomy.

Both institutional and ad-hoc arbitration have their respective strengths as well as weaknesses (Blanke, 2008; Shokrani, 2018). Institutional arbitration comprises with strengths like pre-tested and pre-determined procedure, proper administrative assistance and adequate physical facilities (Gupta & Mittal, 2010). Most importantly, it provides expedite procedure engaged with more effective rules (Blackaby, Partasides, Redfern & Hunter, 2009). However, higher administrative fees, bureaucracy and unrealistic time frame are major weaknesses of institutional arbitration (Hartnett & Schafler, 2017).

Unlike in institutional, ad-hoc arbitration is less expensive and comprising with more flexible procedures (Wallgren-Lindholm, 2016). Besides, Aliaj (2016) identified, maximum party autonomy and absence of sovereignty issues as key strengths of ad-hoc arbitration. However, parties require strong corporation between themselves in order to prevent delays in the proceedings which is considered as major weaknesses in ad-hoc arbitration (Shokrani, 2018).

It can be identified that, ad-hoc arbitration is appropriate when parties need to be the deciders of the arbitration whereas institutional arbitration is appropriate when parties need a proper supervision (Rajoo, 2010). Hence, the author further stated that, it is difficult to suggest which is superior since it depends on the needs of the parties.

1.2. Problem Statement

The above review highlights that, disputes can be arisen at any stage of construction process and ADR methods have become the best way to resolve them. Arbitration has established as a leading ADR method, which is a legal method for dispute resolution outside the courts (Gupta & Mittal, 2011). Since, construction is one of the leading

sectors in Sri Lankan economy, an investigation on effectiveness of arbitration attached to construction is much important.

Ad-hoc and institutional arbitration can be identified as the two basic forms of arbitration, where the parties to the contract can jointly decide which one to be processed (Schroeter, 2017). However, choice of the form of arbitration can be rely upon the facts and circumstances of the disputes where the entitlement for selection is completely with the parties (Rajoo, 2010).

Many researchers including Blanke (2008) have found that both ad-hoc and institutional arbitration have shortcomings in the practices. Therefore, it is necessary to review and increase the effectiveness of arbitration periodically (Amarasooriya & Abeynayake, 2011).

Even though there are many researches available regarding ad-hoc and institutional arbitration in global context, there are less evidences in researches on the suitability of ad-hoc and institutional arbitration for the Sri Lankan construction industry. Therefore, there is a necessity to investigate the suitability of both ad-hoc and institutional arbitration for the Sri Lankan construction industry.

1.3. Aim and Objectives

The aim of this research is to investigate the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry.

The following objectives lead the way to achieve the aim.

1. Review the different types of arbitration and their significance in construction industry
2. Situational analysis on the current practice of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry
3. Evaluate the applicability and appropriateness of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry
4. Propose strategies to enhance the effectiveness of ad-hoc and institutional arbitration to the Sri Lankan construction industry

1.4. Research Methodology

A comprehensive literature survey was conducted through books, journals, conference articles, reports and official websites to identify the different types of arbitration and their significance in construction industry.

Subsequently an empirical investigation based on a qualitative research approach was carried out to achieve the aim. A comprehensive interview guideline was developed and executed to identify the current practice of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry. The interviews were further extended with 10 experts who have a wide knowledge on arbitration related to construction industry to evaluate the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry.

Finally, the collected data was analysed using code-based content analysis and strategies was proposed to enhance the effectiveness of ad-hoc and institutional arbitration to the Sri Lankan construction industry.

1.5. Scope and Limitation

The scope of the study was limited to ad-hoc and institutional arbitration for resolving disputes and data collection was limited to construction projects within Western Province of Sri Lanka.

1.6. Research Chapter Breakdown

Figure 1.1 shows the chapter breakdown of this research. It elaborates the structure of the dissertation, which further clarifies the contribution of each chapter for achieving the above stated objectives.

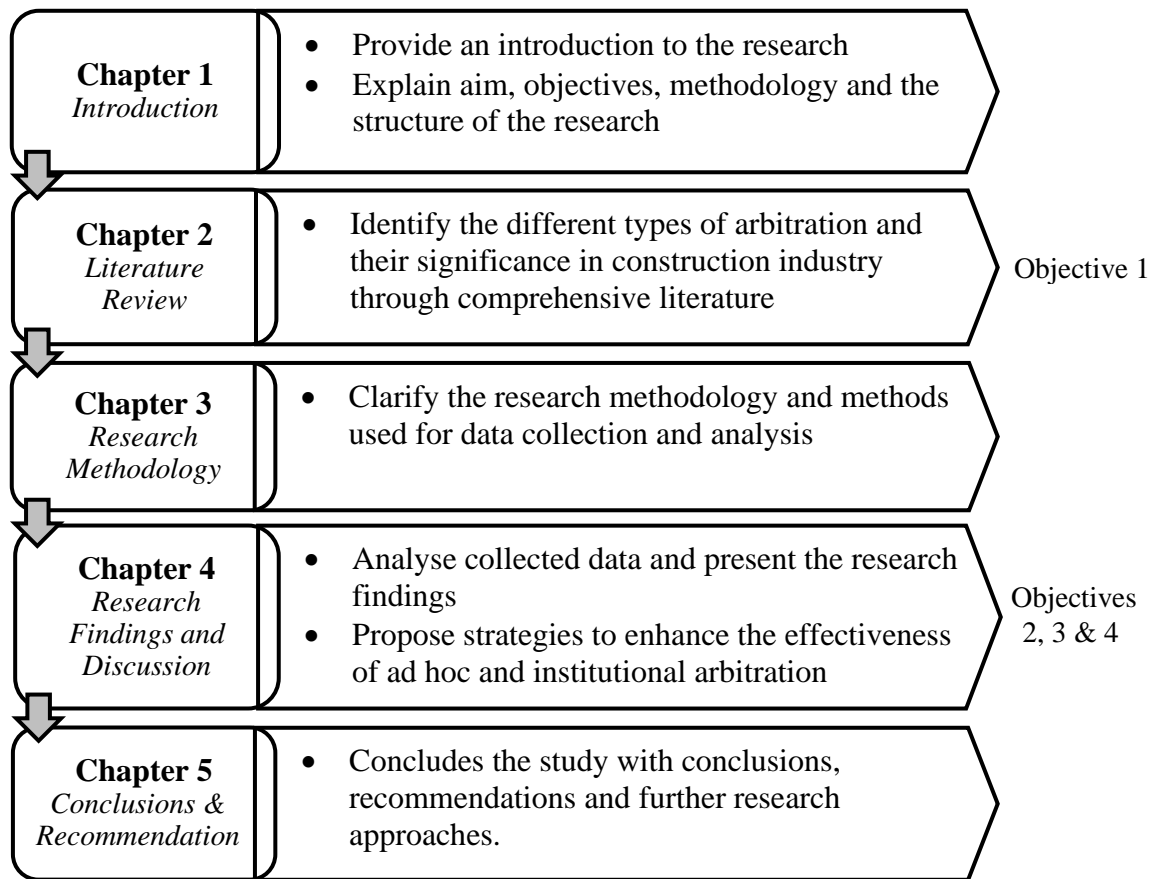


Figure 1.1: Proposed chapter breakdown of the research

1.7. Chapter Summary

This chapter provides an introduction to the research on suitability of ad-hoc and institutional arbitration for resolving disputes in construction projects in Sri Lanka. Accordingly, background to the research topic, problem statement, aim and objectives of the research were identified in this chapter. Moreover, research methodology was established for achieving aim and objectives of this research. Finally, scope and limitations together with chapter breakdown of the research were presented in this chapter.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

Construction industry can be defined as the major and most challenging industry in the world (Attar, Gupta & Desai, 2012). Thus, disputes can be identified as a common feature in the construction industry (Ashworth & Hogg, 2002). Construction industry has become vulnerable for disputes due to involvement of different parties, complicated nature, culture, applicable laws and different languages (Tanielian, 2013). Therefore, construction industry has been considerably focused for dispute resolution methods in past recent years (Ilter & Attila, 2008). Accordingly, Brooker and Lever (2010) identified that it is preferable to going for Alternative Dispute Resolution (ADR) methods to resolve disputes due to its time and cost efficiency when compared with the litigation. Thus, most of the disputes in modern world have a tendency to resolved by referring to arbitration, which is one of the ADR methods due to advantages like low cost and confidentiality (Nevisandeh, 2016). According Aliaj (2016), arbitration can be identified in two major forms namely, ad-hoc and institutional.

As a key part of the research, this chapter reflects the literature highlighting valuable findings of many researchers attached to arbitration in both global and Sri Lankan construction industry. Thus, it is mainly focus on the suitability of ad-hoc and institutional arbitration for dispute resolution in construction industry.

Initially, this chapter focus on the literature regarding construction industry and disputes. Secondly, the chapter provides a brief introduction on the alternative dispute resolution (ADR) methods and its importance to the construction industry. Afterwards, it discusses about the arbitration and its significance to the construction industry, while emphasising the key forms of arbitration, i.e., ad-hoc and institutional and their respective pros and cons. Moreover, the focus moves towards the practice of ad-hoc and institutional arbitration for resolving disputes in construction industry and eventually, it attempts to find the opinions of researchers regarding the suitability of institutional and ad-hoc arbitration to construction industry.

2.2. Nature of the Construction Industry

Construction industry plays a significant role to achieve national economic development goals by providing infrastructure, shelter and employment, where the industry is generally considered as a driver towards economic growth particularly in underdeveloped countries (Anaman & Osei-Amponsah, 2007). Further, Wibowo (2009) confirmed that construction industry put multiplier effects on the other economic sectors by significantly interacting with them through its backward and forward linkages. Therefore, various studies have found that construction sub sectors and national economy can have bi-directional correlation between them (F. Ozkan, Ozkan & Gunduz, 2012).

According to Halwatura and Jayatunga (2013), Sri Lankan construction industry has enormously developed during the recent past and holding significant position in the national economy. Further to the National Accounts of Sri Lanka, construction activities has been contributed to the industrial sector with 7.5% of highest rate which has been developed by 4% during the year 2019 compared to year 2018 (Department of Census and Statistics, 2019). However, there is a downturn in construction industry during year 2020 due to contraction in industrial activities in Sri Lanka (CBSL, 2021). Regardless of the challenges faced by Sri Lankan construction industry, it has the potential to continue to boom with the aid of various commercial and residential projects (Karunaratna, 2018).

Generally, construction industry consisting with multi-party organisations, which are temporarily assembled, while having various needs and aims, resulting in a very complex nature (Walker, 2007). Due to this complexity, there is a high possibility to generate disputes among parties with considerable cost and time consequences (Flyvbjerg, 2013).

2.3. Disputes in the Construction Industry

Conflicts always lead any construction project towards problematic situations result in project delays, cost overruns, low productivity or damage to business relationships (Jaffar, Tharim & Shuib, 2011). Conflict becomes a dispute in case of failure to resolve

it by the contracting party (Chong & Zin, 2012). Therefore, disputes are kind of most negative aspects attached to construction industry (Treacy, Spillane & Tansey, 2016). Generally, disputes engaged with human factors and contractual difficulties, where resolving them could be time consuming and expensive (Yan, 2011). Therefore, the author further stated that it is very important to analyse the causes, characteristics and sources of construction disputes.

Disputes can be classified, interpreted and defined from various perspectives with regard to different stakeholders (Gupta & Mittal, 2010). According to Brown and Marriott (1999), dispute can be simply defined as a form of conflict, which emerge searching for a solution. However, construction disputes may categorise by features that differentiate from other disputes, which are arising in different commercial backgrounds (Marzouk & Moamen, 2009). According to Abeynayake and Wedikkara (2012), conflicts, claims and disputes in the construction industry can be illustrated as follows;

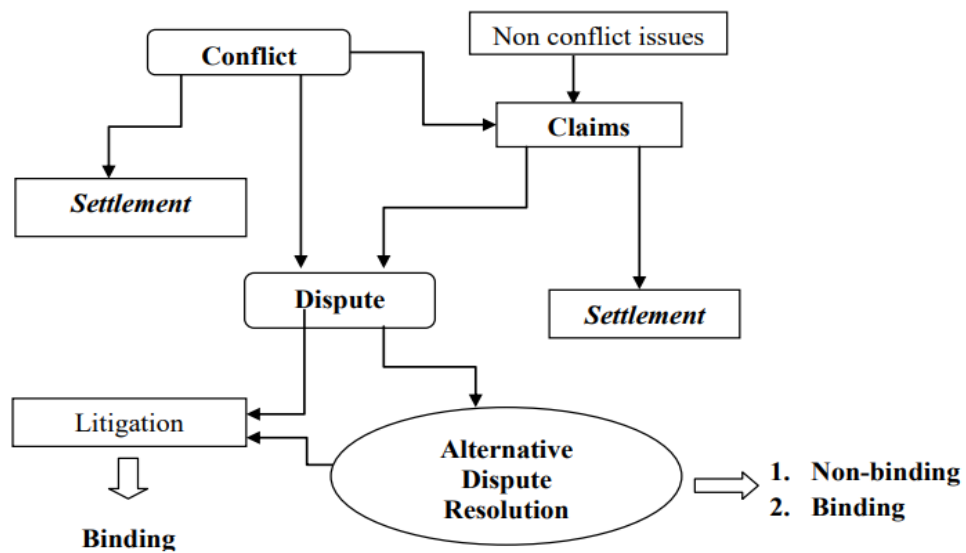


Figure 2.1: Conflicts, claims and disputes in construction industry

Source: (Abeynayake & Wedikkara, 2012)

With regard to any dispute appearing in a construction project, professionals who are engaged with the construction industry will be blamed, since it is not possible to resolve disputes within a shortest period of time (Ranasinghe, 2011). However, Allen (2011) found that disputes in Asia could prevail through 11.4 months averagely.

Further, Cheung and Suen (2002) identified that delaying the project, cost overruns and bad impact on mutual relationship are the major harmful consequences of unsettled disputes.

Construction industry as a highly competitive industry with multi-party involvement, there may be several reasons behind disputes such as, lack of coordination, magnitude and complexity of the works, inadequate planning, low quality contract documents, disagreement on site issues and financial problems (Yousefi, Hipel & Hegazy, 2010). Thus, there are various sources of disputes in the construction industry, which are mostly related to contractual matters including time extension, variations, unrealistic expectations of client, quality of specifications, payments, availability of information and administration (Cheung & Suen, 2002). Further, Harmon (2003) stated that complex construction is the major cause for many complex disputes, which are mainly arising from the magnitude and difficulty of the work, improper contract documents, multi-party involvement, financial issues, inadequate planning and communication problems.

According to Abeynayake and Wedikkara (2012), many professionals have identified the following major causes for disputes in the Sri Lankan construction industry:

- Delays as a result of deficient designs
- Delays in completion of final designs, instructions and variation orders compatible with the required timeframe by the contractor
- Varied site conditions, unforeseeable adverse weather and physical conditions which lead the project delay
- Insufficient finance
- Delay in post contract instructions
- Late site possession given by the Employer
- Price fluctuations
- Contractor's inability to meet required performance and standards
- Delay damages

The nature of construction disputes may become complex, if not managed properly, which have a potential to reduce productivity (Okuntade, 2014). Hence, if disputes in the construction industry could not properly managed, there may be consequences like cost overruns, project delays, damage to team spirit and business relationships as well (Cheung & Suen, 2002). Further to the authors, dispute resolution in the construction industry is much difficult since, limited availability of resources and complexity of disputes. Therefore, many studies have been conducted regarding dispute resolution methods since resolving construction disputes is a significant and essential part of the construction administration (Doug, 2006). Thus, resolution of disputes through alternative dispute resolution is much beneficial, which usually controls negative impacts to the construction projects in terms of technical and financial aspects (Seifert, 2005).

2.4. Alternative Dispute Resolution (ADR) Methods

Alternative Dispute Resolution (ADR) methods have obtained an enormous popularity among contracting parties for the purpose of managing disputes (Lee, Yiu & Cheung, 2016). Since there could be a huge amount of time and cost involved with the litigation, other dispute resolution methods have emerged as ADR methods (Harmon, 2003). ADR methods are basically considered as more effective than adversarial processes for resolve grievances (Riley, Prenzler & McKillop, 2018). Further, Blake, Browne and Sime (2014) defined that alternative dispute resolution is a set of intentional or discretionary procedures of dispute resolution methods, which is confidentially carry out with the intention of settling disputes. Accordingly, ADR methods provide privacy, flexibility, binding or nonbinding decision, intervention of a neutral third party, less formality and consensus (Cheung & Suen, 2002). Further to the authors, even though litigation, mediation, arbitration and negotiation are practicing as dispute resolution methods, which one is most suitable for each dispute is always questionable.

For Sri Lanka, ADR is not a novel concept, since disputes have settled as a way of mediation by referring to “Gam Sabawa”, which is a kind of village forum in the ancient Sri Lanka (Wimalachandra, 2007). Nonetheless, amicable settlements through informal discussions may not be practicable, where complexity of the dispute become

much higher, which result in parties to select any other appropriate dispute resolution mechanism (Gunasena, 2010). Further to Abeynayake and Weddikkara (2014), applying ADR methods, construction disputes can resolve within least time duration without badly affecting to the relationship between parties. However, currently in Sri Lankan construction industry, parties used to implement ADR methods as it is stipulated in their respective contracts despite of their voluntariness (Jayasena & Kavinda, 2012).

In spite of above, when disputes involve legal issues, litigation may be the most preferable methods to resolve those issues (Gebken & Gibson, 2006). Additionally, the authors further stated that dispute resolution procedure should be designed for the purpose of reduce both cost of disputes and risk of claims. Yet, litigation cannot always satisfy every need of the parties (Rendell, 2000). Therefore, since, time and cost are beneficial factors in ADR approach, it has become common when resolving construction disputes (Chan, 2014).

2.4.1. Types of ADR methods used in construction industry

Dispute resolution methods can be divided into “traditional methods” and “alternative methods”, where both negotiation and litigation considered as traditional/conventional dispute resolution methods, while mediation and arbitration considered as ADR methods (Chinyere, 2011). Apart from that, Kersuliene, Zavadskas and Turskis (2010) classified ADR methods as negotiation, mediation, conciliation and arbitration. Moreover, Tolson (2017) mentioned that negotiation, mediation, adjudication, dispute review boards (DRBs) and arbitration can be considered as ADR methods. Similarly, ADR methods commonly include negotiation, mediation, dispute review board (DRB) and arbitration (Peña-Mora, Sosa & McCone, 2003).

Furthermore, Goodman (as cited in Carneiro, Novais, Andrade, Zeleznikow & Neves, 2010) stated that, negotiation, mediation and arbitration can be considered as major ADR methods. Similarly, Gad, Kalidindi and Shane (2011) identified negotiation, mediation, conciliation, adjudication, Dispute Adjudication Board (DAB) and arbitration as major ADR methods. Further to Wang (2000), disputants can resolve

their disputes using three major ADR methods known as negotiation, mediation and arbitration. Therefore, in global practice, negotiation, mediation, conciliation and arbitration can be recognised as major ADR methods (Keršulienė, Zavadskas & Turskis, 2010).

All non-litigation methods, which could be binding or non-binding, can consider as ADR methods (Harmon, 2003). Accordingly, Cheung (1999) mentioned that in the construction industry, conciliation, mediation, executive tribunal, dispute review advisors, dispute review board and mini-trials are considered as non-binding dispute resolution methods while adjudication, expert determination, arbitration and litigation are considered as binding methods. Besides, the author developed a stair step model for alternative dispute resolution process in the construction industry as shown in Figure 2.2.

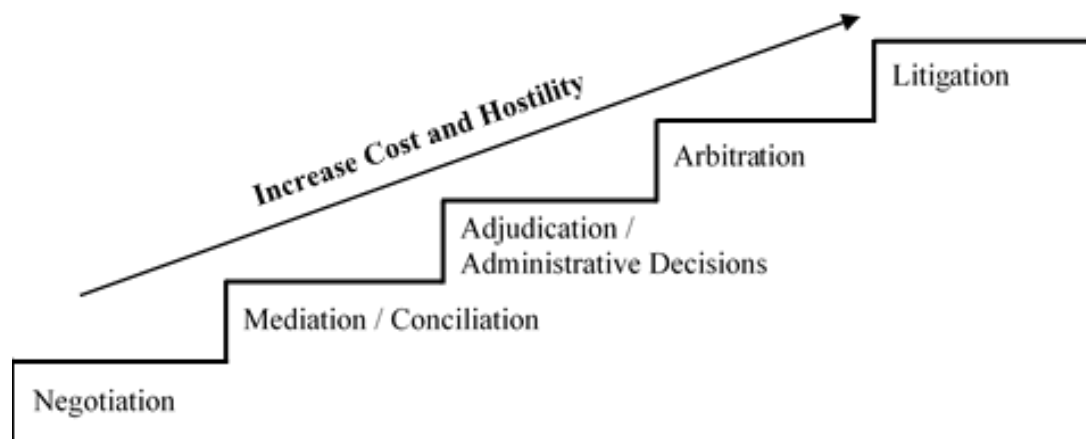


Figure 2.2: Stair step model for dispute resolution process in the construction industry

Source: Cheung (1999)

According to Figure 2.2, Cheung (1999) identified that ADR methods are implementing as a manner of an escalator, where hostility and cost incurred by different forms of ADR methods are escalating. The author further stated that, these are the key methods commonly used in construction industry where hierarchy continues from simplest stage to the advanced stage with changing cost and hostility.

Furthermore, Moore (2014) identified some procedural options available for ADR as shown in Figure 2.3.

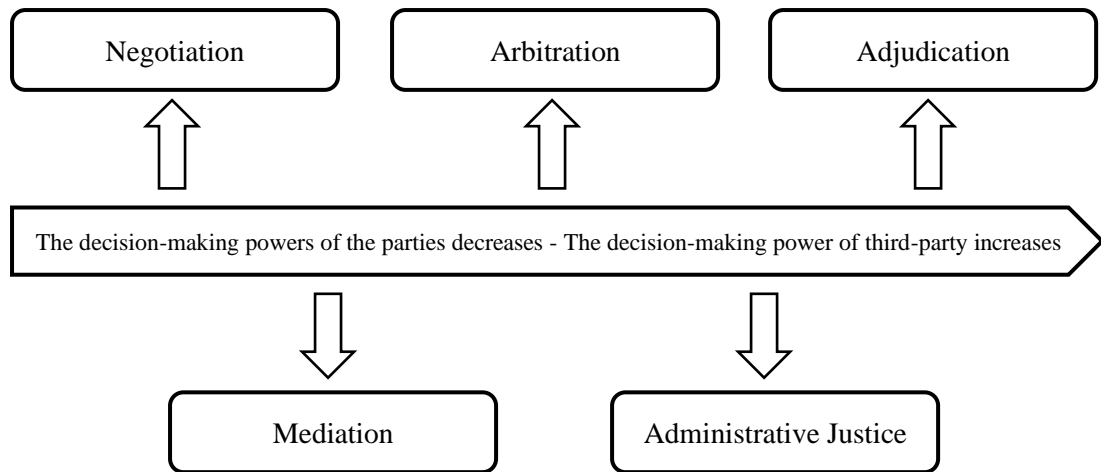


Figure 2. 3: Procedural options in ADR

Source: Moore (2014)

According to the author, left side of the figure shows negotiation and mediation, which are informal, but resolve disputes encouraging collaboration and new positive relationships between parties to the dispute. The author further stated that middle and right side of the above figure shows more formal ADR options, which are adversarial in nature.

There are number of ADR methods currently practicing in Sri Lankan construction industry which are holding greater demand (Illankoon, Tam, Le & Ranadewa, 2019). Negotiation, mediation, adjudication and arbitration as major ADR methods in Sri Lankan construction industry have obtained various positive impacts so far (Nihaaj, 2016; Illankoon, et al., 2019). Accordingly, Gunasena (2010) mentioned that in Sri Lanka, negotiation, mediation, adjudication and arbitration can be recognised as major ADR methods used in the construction industry during recent years.

Therefore, it has been identified that, alternative dispute resolution methods have established in the construction industry while holding a great significance (Yousefi, Hipel & Hegazy, 2010).

Table 2.1 summarises different types of ADR methods identified by different authors.

Table 2.1: Types of ADR methods

ADR Method	References									
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Negotiation	X	X	X	X	X	X	X	X	X	X
Mediation	X	X	X	X	X	X	X	X	X	X
Conciliation	X			X				X		X
Dispute Review Board (DRB)/Dispute Adjudication Board (DAB)		X	X	X				X		
Adjudication		X		X	X	X		X		
Arbitration	X	X	X	X	X	X	X	X	X	X
References: [1] Kersulienė, Zavadskas and Turskis (2010); [2] Tolson (2017); [3] Peña-Mora, Sosa and McCone (2003); [4] Cheung (1999); [5] Nihaaj (2016); [6] Gunasena (2010); [7] Carneiro, et. al., (2010); [8] Gad, Kalidindi and Shane (2011); [9] Wang (2000); [10] Keršulienė, Zavadskas and Turskis, (2010)										

According to the table, negotiation, mediation and arbitration are the most commonly recognised ADR methods by past researchers. Consequently, Moeves and Moeves (2004) explain that major ADR methods like negotiation, mediation and arbitration have replaced litigation due to their less combative, less costly and more efficient nature.

- **Negotiation**

In basic means, negotiation is a communication process, which allow people to resolve conflicts (Wiggins & Lowry 2005). Parties attempt to talk with each other to resolve their disputes through negotiation (Wang, 2000). The author further stated that this is the most expedite and simplest way to resolve disputes as parties are well aware about each other's strengths and weaknesses more than a third party. Moreover, Yousefi, Hipel and Hegazy (2010) confirmed that, in terms of cost, time, relationship and confidentiality, negotiation is the most efficient method of dispute resolution.

- **Mediation**

In mediation, a third party called mediator assist parties to resolve their disputes through a negotiated settlement while providing various settlement options (Kelleher & Walters 2009; Yates & Smith 2007). Mediator is an unbiased and neutral third party

who is assist parties without providing a formal decision (Menkel-Meadow, 2015). Specially, mediation process is designed to protect confidentiality and relationship between disputant parties (Yiu & Lai, 2009).

- **Conciliation**

Conciliation involves a conciliator who provides recommendations for the disputants to settle where disputants have the discretion to accept or reject (Yates & Smith 2007). Moreover, Preez (2014) stated that conciliator usually attempt to build up compromising and positive relationship between the parties, which can be considered as psychological element of mediation procedure.

- **Dispute Review/Adjudication Board**

Dispute Review Board (DRB) and Dispute Adjudication Board (DAB) are commonly used in the construction industry under dispute avoidance procedure, which allows the parties to resolve their dispute at site level (Abeynayake & Weddikara, 2013). Dispute boards comprises with a panel of members who are experts usually work with site team from the commencement of the project while familiarising with site progress and construction contract (Sweet & Schneier 2013; Seifert, 2005). Importantly, the disputant parties are under an obligation to bind with DAB's decision although DRBs provide recommendations where parties allow to accept or reject (Gerber, 2013).

- **Adjudication**

Adjudication is a process where neutral third party called adjudicator involved to provide a decision for contractual disputes within previously agreed time limit (Gad, Kalidindi & Shane, 2011). The authors further stated that the decision of the adjudicator can become binding if it is clearly mentioned in the contract between parties. Therefore, adjudication is most suitable for resolution of disputes where time is of the essence (Sweet & Schneier, 2013).

- **Arbitration**

Arbitration can identify as a semi-judicial process, which is more formal where an independent and qualified third-party act as the Arbitrator (Wang, 2000). Through pre-agreement between the parties, arbitration can recognise as an alternative to litigation (Kelleher & Walters 2009). Furthermore, Sweet and Schneier (2013) stated that arbitral awards are globally enforceable under New York Convention.

In modern construction industry, parties frequently tend to do commercially based settlements through ADR methods as those are effective mainly in terms of time and cost (Elziny, Mohamadien, Ibrahim & Fattah, 2016).

2.4.2. Importance of ADR methods to construction industry

Alternative dispute resolution methods prevail prominent in construction industry when managing disputes (Kirimi & Wanjohi, 2019). Thus, ADR methods are being highly used in large construction projects for the purpose of handling disputes in cost saving and more effective ways since most of the construction projects drive through tight budgets (Song, Peña-Mora, Menassa & Arboleda, 2012). Accordingly, ADR methods have obtained a huge reputation for resolving construction disputes in Sri Lanka (Wong, 2011).

Among various other aspects, dispute resolution methods deviate based on the enforceability of decision, time consumption to resolve the dispute and cost of the process (Yates & Smith 2007). Since, litigation is costly and time consuming and is generally not effective in resolving construction disputes, almost all the construction contracts are comprising with some specific provisions for ADR to avoid going into court proceedings (Kovach, 2004). While agreeing to this, Skene and Shaban (2002) mentioned that resolving disputes in the construction through litigation is usually expensive and lengthy. Anyhow, there are some instances where ADR methods have become limited use in the construction industry due to lack of knowledge in carrying out negotiation, mediation, conciliation and arbitration, which ultimately result in higher use of litigation (Kirimi & Wanjohi, 2019). On the other hand, the construction industry tends to resolve their disputes through ADR methods with the dissatisfaction

of litigation caused by lengthy process, high cost, non-confidentiality and relationship breakups (Danuri, Ishan, Mustaffa & Jaafar, 2012). However, De Zylva (2006) mentioned that many construction disputes can be primarily and amicably resolved through negotiation with the involvement of industry professionals on the work sites.

The use of ADR to resolve construction disputes has potential impact to increase the business relationship among parties in Sri Lanka (Amaradiwakara, 2017). Accordingly, Gunasena (2010) found that cost minimisation and safeguarding business relationships have enormously influenced by the use of ADR methods to resolve construction disputes in Sri Lanka. Therefore, disputes emerge in Sri Lankan construction projects have always tend to resolve them through ADR methods (Abeynayake, 2017). However, among all these ADR methods, arbitration plays key role in mitigating oppositional attitude between parties by ensuring the impartiality in resolving construction disputes (Overcash, 2015).

2.5. An Overview of Arbitration and its Significance to Construction Industry

Arbitration can consider as a leading and commonly accepted method of ADR among different types of alternative dispute resolution like negotiation, mediation and conciliation (Gupta & Mittal, 2010). Shah and Gandhi (2011, p232) defined arbitration as “a reference of a dispute or difference between not less than two parties for determination after hearing both sides in a judicial manner by a person or persons other than a court of competent jurisdiction”.

In history, arbitration did not purely consider as a decisional tool, but it was a significant part of the process of negotiation (Overcash, 2015). Further to the author, arbitration labelled as a purely decisional tool with the rise of law, which allowed the enforceability of arbitral award. De Zylva (2006) emphasised that arbitration can be recognised as a form of alternative dispute resolution method as per the legal point of view whereby a decision taken by parties to the dispute to resolve it through a neutral third party. Therefore, arbitration has established as the most preferable method for dispute resolution after negotiation due to its binding nature followed by the legal support (Cheung & Suen, 2002).

Arbitration has been practicing in many countries as an efficient method for resolving disputes (Coutts & Dann, 2009). In MENA region, arbitration recognises as a significant ADR method, which has been practicing very steadily over years (Al Tamimi, 2017). In Hong Kong, arbitration has been well developed as a dispute resolution method (Chen, 2012). The author further stated that arbitration has become more popular in Asia with the recognition of enforceability of arbitral award globally.

Moving forward, primary objective of the arbitration is to deliver unbiased dispute resolution, which is not resulting cost or time wastages, while facilitating the parties to agree upon the procedure of dispute resolution (Aliaj, 2016). Therefore, arbitration can be recognised as a private method of adjudication, which allows a control over the procedures of the dispute resolution and party autonomy (Lawyer, 2017).

Generally, arbitration clause is included in contracts to identify the parties' intention to arbitration (Gupta & Mittal, 2010). According to Drahozal and Naimark (2005), arbitration clause is included to 90% of international contracts. Since arbitration clause also can consider as a sort of contract, which is formed based on an agreement between both parties, arbitration contract may refer either to arbitration clause or to arbitration contract (Katouzian, 2004). According to Nevisandeh (2016), arbitration agreement can identify as a contract based on some people's intention to refer possible or actual dispute to investigation apart from going for judicial proceedings. Thus, once the dispute occurred, if the parties entering into an independent agreement with the involvement of an arbitrator, this agreement will be identified as arbitration contract (Karimi & Parto, 2012). Thus, arbitrators give their final and binding decision for a particular dispute based on the arbitration agreement between the parties (Hughes, Champion & Murdoch, 2015).

In Sri Lanka, the Arbitration Act of Sri Lanka No. 11 of 1995 provides the way of resolving disputes arising in all the industries (Abeynayake & Wedikkara, 2012). Further to the authors, Sri Lanka was the foremost country in South Asia, which has enacted an arbitration law in accordance with the Arbitration Act No.11 of 1995. Moving forward, they identified that arbitration is the only ADR method, which is legally enforceable and inspired by the Arbitration Act No 11 of 1995. Accordingly,

Kanag-Isvaran (2011) identified some basic characteristics of Arbitration Act No. 11 of 1995 in Sri Lanka as follows:

- Court intervention is limited
- Higher degree of party autonomy
- Cannot appeal by exclusion agreement
- Final and binding decision
- Recognition together with enforcement

Internationally, arbitration awards are enforceable under the New York Convention (Sweet & Schneier, 2013). Accordingly, there are two significant reasons why parties stimulate to go for arbitration; the impartiality and the possibility of the arbitral award enforceable under the New York Convention (Merrills, 2017). Thus, arbitration makes attractive in global disputes, since the arbitral award is final and binding, which is pertaining an enforceability through the courts attached to any jurisdiction (LayngRoss, 2009). In other words, the parties shall be complied by the arbitrator's ultimate decision, which is final and legally binding (Marques, 2018). As said by Tanielian (2013), absence of the ability to appeal is one major weakness of arbitration, but such inaccurate decisions can be mitigated with the selection of experienced panel of arbitrators. Besides, Gupta and Mittal (2010) argued that arbitration is benefited over litigation due to its impartiality and mutuality. Therefore, people tend to use arbitration in terms of resolving commercial disputes as it provides many significant advantages (Hlaing, 2011).

Depending on the nature of the construction project, there has been a tendency towards searching for a best suit alternative method for dispute resolution (Jones, 2006). Since, construction disputes are unpredictable, dispute resolution clause in the contract has become extremely critical (Gad & Shane, 2012). Therefore, selection of dispute resolution method and formation of dispute resolution clause in the contract should be done carefully to control various risks attached to the construction project (Gad, Kalidindi, Shane & Strong, 2011).

According to El-Adaway, Ezeldin and Yates (2009), arbitration is one of the common ADR methods of resolving construction disputes. Hence, the arbitration prevailing as a significant part of the construction dispute resolution since, construction industry frequently needs a decision maker with well industry related technical and legal knowledge (Yates & Smith 2007). Therefore, it is interesting to practice arbitration as an ADR method in the energetic and multi-cultural industry like construction (Allen, 2011).

Generally, parties may select arbitration apart from referring their disputes to litigation which is an automatic right for dispute resolution (Alpkokina & Capar, 2019). However, there is another argument that litigation can damage the mutual relationship between parties while weakening the financial status of the weaker party due to delay in the process of resolving construction disputes (Danuri et al., 2012). Therefore, the authors further stated that provisions for arbitration have included in almost all the construction contracts, which mandate the parties to refer their disputes to arbitration prior to litigation. Alemayehu (2014) identified some advantages of arbitration over litigation commonly attributable to the construction industry as follows:

- Freedom in selecting panel of arbitrators
- Arbitrator's expertise in technical background
- Flexible procedure which can be easily adapted to the nature of the dispute
- Less expensive than litigation
- Less time consuming relative to the court
- Finality of the arbitral award
- Privacy
- Not required a legal representative

Accordingly, parties entitle to choose arbitration as their ADR method by carefully considering the facts and circumstances of the dispute (Aliaj, 2016). Since, construction disputes engaged with more technical aspects than many other commercial disputes, arbitration would be the most efficient way to resolve construction disputes, which is one of the flexible and legally enforceable ADR methods (Nihaaj, 2016). Further, Abeynayake and Weddikkara (2013) stated that

construction industry professionals have generally preferred arbitration over litigation to resolve disputes between the Employer and the Contractor, since majority of them are consisting with the technical aspects. However, there can be identified many forms of arbitration practicing in the world (Hlaing, 2011).

2.6. Forms of Arbitration

In terms of both theory and practice, mainly, there are two forms of arbitration namely, ad-hoc arbitration and institutional arbitration (Aksen, 1991). Moreover, Lew, Mistelis, S. M. Kröll and Kröll (2003) also mentioned that basic forms of arbitration can be categorised as ad-hoc and institutional. While agreeing to above, Shah and Gandhi (2011) stated that underlying to the governing law and terms of the agreement, dispute resolution can be referred to either ad-hoc or institutional arbitration. Therefore, it can be clearly mentioned in the arbitration clause whether to refer respective disputes to an institutional network or not attached to such institution, which is called as ad-hoc arbitration (Golsong, 1984). However, in spite of conducting arbitration under ad-hoc or institutional basis, parties should always ensure that arbitration process is neutral from the beginning to the end (Bok, 2011).

2.6.1. Institutional arbitration

Institutional arbitration can be recognised as where the parties decided to refer their disputes to an arbitration center, which consisting with pre-determined procedural rules and provide administrative service to settle the dispute (Arkin, 1987). Thus, institutional arbitration process within a specialist arbitral institutions, which followed by its arbitral rules and code of procedures with administrative assistance (Hlaing, 2011; Nigel, Constantine, Alan & Martin, 2015; Shokrani, 2018).

Once the parties agree to delegate their respective disputes to an arbitral institution, while agreeing with their rules and procedures to make a binding decision, the arbitration becomes an institutional (Schroeter, 2017). Accordingly, Shah and Gandhi (2011) defined that the institutional arbitration is a legal process, which proceed under the administration of a arbitral organisation based on their fixed fee schedule and set of rules, while keeping uniformity, neutrality and efficiency. Further to the authors, it

is important to describe the designation of the arbitral institution in the particular arbitration clause of the contract, which provides clear intention for institutional arbitration.

With the increased use of institutional arbitration globally, more than fifty countries have implemented the UNCITRAL Model Law for resolving disputes (Schu'tze, 2012). Accordingly, there are several qualified organisations in worldwide those who have their capabilities to provide administrative service based on proceedings and arbitral rules (Abraham, 2008). Abeynayake and Wedikkara (2012) identified that there are two key arbitral institutions located in Sri Lanka namely; the Sri Lanka National Arbitration Centre (Sri Lanka Centre) and the Institute for the Development of Commercial Law and Practice Arbitration Centre (ICLP Centre). Further, Marsoof (2010) confirmed that the Arbitration Centre established by the Development of Commercial Law and Practice (ICLP) in 1996 is also carrying out institutional arbitration in Sri Lanka.

2.6.2. Ad-hoc arbitration

Basically, arbitration will be considered as ad-hoc, if it is not administered by an arbitral institution since the arbitration agreement not direct the parties for institutional arbitration (Nigel et al., 2015; Rajoo, 2010). Further, Aliaj (2016) confirmed that, parties may refer their disputes to the ad-hoc arbitration at their own discretion and based on a mutual agreement of not to refer those disputes to an arbitral institution. Accordingly, parties tend to choose ad-hoc arbitration, where they were unable to reach an agreement on an arbitral institution (Hlaing, 2011). Thus, in ad-hoc arbitration, parties allow to arrange the designation of rules, arbitrators, administrative assistance and applicable law (Shah & Gandhi, 2011; Shokrani, 2018). In ad-hoc arbitration, parties may select pre-established rules published by institutions but, will not obtain administrative services from them, which ultimately provide more flexible and less expensive process (Chen, 2012). Therefore, independent process with flexibility, party selected arbitral tribunal and absence of reviewing the award by an institution can be recognised as key features of ad-hoc arbitration (Aliaj, 2016).

Ad-hoc arbitration can be successfully carried out if there is a proper legal system attached to the place of arbitration and if there is a good cooperation between parties from start to the final stage of the proceedings (Gupta & Mittal, 2010). Generally, majority of the ad-hoc arbitrations are following the UNCITRAL Arbitration Rules (Hlaing, 2011). Moreover, Shokrani (2018) emphasised that parties may decide the applicable laws for arbitration attached to their agreement, but in case of absence of such pre-agreed law, the law pertaining to the local arbitration shall apply. However, parties who are willing to go for ad-hoc arbitration can choose an institution as an appointing authority to adapt their rules with the exception of their administration or they can directly adopt the UNCITRAL ad-hoc rules for resolving international and domestic disputes (Hartnett & Schafler, 2017). In Sri Lanka, the National Council of International Chamber of Commerce (ICC), which is located in Colombo and started in 1985, vastly provide ad-hoc basis arbitral proceedings (Marsoof, 2010). However, while holding different characteristics, both forms of arbitration have their respective advantages and disadvantages (Hartnett & Schafler, 2017).

2.7. Advantages and Disadvantages of Institutional and Ad-hoc Arbitrations

Since, parties have a right to choose the form of arbitration, there is a necessity to evaluate and consider the different key features of these major two forms of arbitration as both forms carry their own pros and cons (Aliaj, 2016). Hence, there are numerous advantages and disadvantages in both ad-hoc and institutional arbitration (Shokrani, 2018). Blanke (2008) also recognised that institutional arbitration as well as ad-hoc arbitration consisting with their respective merits and demerits. Nevertheless, the author further stated that there may be some major advantages of institutional arbitration over ad-hoc arbitration in practice.

2.7.1. Advantages of institutional arbitration

Institutional arbitration allows parties to execute their arbitration with pre-tested and pre-determined processes with proven set of rules, where the cost and the procedure are managed by the institution (Green & Savage, 2013). Therefore, Weigand (as cited in Alemayehu, 2014) stated that arbitration can be effectively carried out due to the

existence of set of pre-determined rules and procedures even if one party is hesitant to move forward with the process, which is a key advantage of institutional arbitration.

Institutional arbitration can be preferred over ad-hoc arbitration for some reasons such as, decision taken based on applicable procedure, use practically proven rules and because those rules are more effective as they do not base on every mixed idea of parties (Blackaby, et al., 2009). Further to them, expedition, impartiality and fairness are major factors to choose institutional arbitration over ad-hoc arbitration. According to Aliaj (2016), and Lew, et al. (2003), advantages of institutional arbitration can be listed as follows:

- Reputation
- Proper administrative assistance
- Availability of pre-determined rules and procedures, thus, time effective
- Choice of qualified arbitrators
- Well established plan with a proven record
- Assistance to encourage the other parties to enter into arbitration

Out of all these advantages, the major advantage of institutional arbitration is that it offers a set of tested and proven procedural framework for parties to conduct their arbitration (Blanke, 2008). Accordingly, Gupta and Mittal (2010) confirmed that institutional arbitration offers well established procedural rules with good administrative assistance and sufficient physical facilities to get a valid arbitral award. Consequently, Redfern and Hunter (2004) mentioned that there are well proficient administrative staff available in most of the arbitral institutions and the award of the arbitral tribunal will be reviewed by the institution prior to sending it to the parties, which is a significant advantage of institutional arbitration.

Apart from all these advantages, institutional arbitration contains some disadvantages too (Shokrani, 2018) and those are discussed below.

2.7.2. Disadvantages of institutional arbitration

There are some disadvantages in institutional arbitration such as, higher administrative fees, bureaucracy within the arbitral institution that may cause for delays, and sometimes parties' responses may require within unrealistic time bounds (Wallgren-Lindholm, 2016). Accordingly, Rajoo (2010) confirms that institutional arbitration consisting with some disadvantages like administration fees, unnecessary red tape and sovereignty issues. Furthermore, Hartnett and Schafler (2017) and Aliaj (2016) identified followings as some key disadvantages of selecting institutional arbitration:

- Bureaucracy of the institution result in unnecessary cost and delays,
- Higher expenses for administrative services and facilities,
- Unrealistic time bounds allowed for disputants to respond.

Generally, parties required to pay a fixed fee in advance for arbitral proceedings for the institution, where the arbitral tribunal is extensive, which is a prime drawback of institutional arbitration (Alemayehu, 2014). According to Blanke (2008), by selecting institutional arbitration, parties bound to pay expenses for the services of the institution in addition to the cost for their legal guidance. In spite of that, the arbitral process followed by the institution can get delay due to its bureaucratic steps (Redfern & Hunter, 2004). Further, Berger (2018) stated that autonomy of the institution may become a threat to the party autonomy in institutional arbitration, which can result in unnecessary conflicts between parties. Additionally, Hlaing (2011) mentioned that majority of arbitral institutions practice only one set of rules for all the disputes. Consequently, the author further stated that in this manner, parties have numerous reasons to choose ad-hoc arbitration over institutional arbitration.

2.7.3. Advantages of ad-hoc arbitration

When ad-hoc arbitration is properly structured, it will not be expensive as institutional arbitration, and therefore, it will be more appropriate for smaller claims (Hartnett & Schafler, 2017). Parties may select ad-hoc arbitration to resolve their disputes arguing that they can save both time and cost or there will be biasness towards opposite party, if they go for institutional arbitration (Gupta & Mittal, 2010). Thus, in ad-hoc

arbitration, the parties who involved in the arbitration will only should pay fees for representatives, arbitrators or lawyers, which is why the costs for the proceedings are comparatively less expensive rather than going for an arbitral institution (Arkin, 1987). If properly structured, ad-hoc arbitration should be less expensive than institutional arbitration and it is suitable for all types of claims disregard the complexity of the claim (Rajoo, 2010). Thus, in ad-hoc arbitration, the arbitral proceedings can be established flexibly based on desires of the parties and facts of the disputes, which is a major advantage (Redfern & Hunter, 2004).

Many parties prefer to proceed with the ad-hoc arbitration due to its nature of autonomy and maximum freedom (Shokrani, 2018). According to Aliaj (2016), followings can be identified as major advantages of ad-hoc arbitration:

- Flexibility, which allow parties to decide the arbitral procedure,
- No sovereignty issues, which is a major issue in institutional arbitration,
- Cheaper than institutional arbitration, and
- Parties can directly negotiate fees with the selected arbitrators.

Ad-hoc arbitration proceedings are more flexible, faster and cheaper than institutional proceedings and this has become a popular choice as the absence of administrative fees (Wallgren-Lindholm, 2016). Further to the author, letting parties to decide the arbitral procedure and flexibility can be considered as primary advantages of ad-hoc arbitration. Even though, avoiding the involvement of an arbitral institution makes ad-hoc arbitration more flexible, that unlimited flexibility should be controlled by the parties by mitigating issues attached to procedural efficiency, which could become a disadvantage of ad-hoc arbitration (Blanke, 2008).

2.7.4. Disadvantages of ad-hoc arbitration

The ad-hoc approach, however, has a major disadvantage, which is its effectiveness and the efficiency may depend on the willingness or the interest of the parties to settle on procedures for a particular case (Aliaj, 2016; Rajoo, 2010). According to Redfern and Hunter (2004), the prime drawback of ad-hoc arbitration is that the effectiveness of arbitration can depend on the corporation between the parties and appropriate legal

system attached to the place of arbitration, which may lead delay in arbitral proceedings. Thus, in order to succeed the ad-hoc arbitration, sufficient cooperation between parties is an essential requirement (Shokrani, 2018). However, the inability of one or both parties to cooperate fully may result in time consuming for problem solving or ultimately it will end up as a court case (Wallgren-Lindholm, 2016). Thus, the author further stated that this will obviously require the parties to make greater effort, cooperation and proficiency to regulate the arbitration rules. In spite of that, parties may bound to go for litigation for the purpose of taking the arbitration forward while expected cost advantage attached ad-hoc arbitration can be reduced by the higher expenses of court proceedings (Aliaj, 2016).

There are some instances where in ad-hoc arbitration, parties misunderstand the arbitration agreement, which may lead unnecessary disputes between them (Shokrani, 2018). However, Aksen (1991) found that this problem can be solved by including well-prepared comprehensive set of rules in to the arbitration agreement. However, if the involving parties have not agreed on arbitration conditions before a single dispute arises, it is unlikely that the parties will cooperate fully when a dispute has arisen (Blanke, 2008). Thus, ad-hoc arbitration can be heavily vulnerable to challenges regarding procedural aspects (Green & Savage, 2013).

Therefore, the advantages and disadvantages of ad-hoc and institutional arbitration are summarised in Table 2.2.

Table 2.2: The advantages and disadvantages of institutional and ad-hoc arbitration

	Institutional Arbitration	Ad-hoc Arbitration
Advantages	<ul style="list-style-type: none"> • Pre-tested and pre-determined procedure [1, 2, 6, 7] • More effective rules [3] • Expedition of the process [3] • Impartiality [3] • Good reputation [4, 5] • Proper administrative assistance [4, 5, 7, 8] • Choice of qualified arbitrators [4, 5] • Assistance to encourage other parties to enter into arbitration [4, 5] • Adequate physical facilities [7] 	<ul style="list-style-type: none"> • Less expensive [9, 11, 14] • Less time consuming [7, 9] • Arbitral proceedings are flexible [8, 9] • Autonomy and maximum freedom [13] • Parties allowed to decide arbitral proceedings [4] • No sovereignty issues [4] • Parties can directly negotiate fees with the selected arbitrators [4]
Disadvantages	<ul style="list-style-type: none"> • Higher administrative fees [9, 10, 11] • Bureaucracy within the institution [9, 10, 11] • Unrealistic time bounds [4, 11] • Majority of arbitral institutions practice only one set of rules for all the disputes [12] 	<ul style="list-style-type: none"> • Require more corporation between parties [4, 8, 10, 13] • Delay in the proceedings if parties not cooperated [9, 13] • Vulnerable to challenges regarding procedural aspects [1]
<p>References: [1] Green and Savage (2013); [2] Alemayehu (2014); [3] Blackaby, Partasides, Redfern and Hunter (2009); [4] Aliaj (2016); [5] Lew, Mistelis, S. M. Kröll and Kröll (2003); [6] Blanke (2008); [7] Gupta and Mittal (2010); [8] Redfern and Hunter (2004); [9] Wallgren-Lindholm, (2016); [10] Rajoo (2010); [11] Hartnett and Schafler (2017); [12] Hlaing (2011); [13] Shokrani (2018); [14] Arkin (1987)</p>		

2.8. Institutional and Ad-hoc Arbitration: International Conventions and Case Laws

The recognition and enforcement of international arbitration is always linked with international conventions and treaties on arbitration together with judicial background of particular countries regarding the enforcement (Hober & Kryvoi, 2016).

Presently, majority of international arbitration agreements are formed as applicable to United Nations Convention on recognition and Enforcement of Foreign Arbitral Awards called New York Convention (Graffi, 2013). The prime purpose of New York Convention is to allow parties to acquire enforcement of arbitral awards made outside the country (Harris, 2007). Therefore, The New York Convention of 1958 is allowed parties to enforce an arbitral award easily in another contracting country unlike a judgement acquired through litigation (Garth, 2015).

Furthermore, United Nations Commission on International Trade Law (UNCITRAL) enacted a model law called UNCITRAL Model Law focussing to international commercial arbitration in 1985 which provide a harmonised law format on arbitration synchronising New York Convention of 1958 and national arbitration laws to get the recognition and enforcement on foreign arbitral awards (Al Hyari & Al Ani, 2021). According to Srinivasan (2013), there are UNCITRAL Arbitration Rules which were specifically designed for ad-hoc arbitration to provide a set of standalone rules for arbitration which is not require institutional support. However, if parties do not act cooperatively, ad-hoc arbitration has a great potential to be prolonged unless supported by the UNCITRAL Rules (Blanke, 2008).

Other than New York Convention, there are some conventions like The Amman Arab Convention on Commercial Arbitration (1987) which has been adopted in Middle East region for the enforcement of arbitral awards within the region (Gemmell, 2006). According to Abeynayake and Weddikkara (2013), when construction contracts are supported by Amman Convention, there is a requirement to proceed all the arbitral proceedings in Arabic language. However, the prime purpose of Amman Convention is to develop an integrated Arab system for commercial arbitration (Jalili, 1990).

When focus to the Sri Lankan context, Arbitration act of 11 of 1995 is based on the UNCITRAL Model Law on international commercial arbitration and thereafter inspired by the Swedish Arbitration Act (Wijeratne, 2011).

Apart from conventions, there are some leading cases in Sri Lanka which have become part of the law of arbitration as judicial precedent (Abeynayake & Weddikkara, 2013). The authors further stated that, case of *Southern Group Civil Construction (Private) Limited vs. Ocean Lanka (Private) Limited* deliberated grounds to set aside the arbitral award and also the specific time limit to challenge the award given by the arbitrator. Further to *State Timber Corporation vs. Moiz Goh (Private) Limited* case, courts does not own a jurisdiction to take part in an arbitration proceeding. Moreover, Nihaaj (2016) mentioned that, the requirement of certified copies to prove the existence and validity of arbitration agreement for its enforceability is clearly discussed in court case *Kristley (Private) Limited vs. The State Timber Corporation*. Moreover, *Oberoi Hotels (Private) Limited. vs. Asian Hotels Corporation Limited* case discussed the excess of jurisdiction by the arbitral tribunal (Marsoof, 2010). These leading cases prevailing as decisions of superior courts of Sri Lanka as a part of law relating to arbitration in Sri Lanka.

2.9. Application of Institutional and Ad-hoc Arbitration for Resolving Disputes in Construction Industry

Construction industry professionals usually tend to search for most effective and efficient dispute resolution methods (Gregory & Berg, 2013). Thus, arbitration is the major binding ADR method commonly implemented in the construction industry (Abeynayake & Weddikkara, 2013). The efficiency and effectiveness of arbitration is heavily depending upon the application and implementation of principles of institutional and ad-hoc arbitration (Shah & Gandhi, 2011). Further to the authors, there have been number of arbitral institutions formed for resolving domestic and international commercial disputes due to the increased implementation of arbitration in the world. Hence, arbitration turned out to be more institutionalised and due to that it has become a need to consider the law applicable to relevant policy changes (Nguyo, 2014).

Ad-hoc arbitration is the mostly used form of arbitration in Sri Lankan construction industry for most of the domestic construction contracts (Abeynayake & Weddikkara, 2013). Accordingly, Nihaaj (2016) stated that majority of the dispute resolution through arbitration is processed as per ad-hoc manner and it is rare to be found the institutional arbitration in resolving construction disputes, which is one of the key constrains in Sri Lankan construction industry. Moreover, Arbitration Act No. 11 of 1995 and institutions like International Chamber of Commerce Sri Lanka (ICCSL), Institute for Development of Commercial Law and Practice (ICLP) and Sri Lanka National Arbitration Centre (SLNAC) provide guidance for execution of arbitration in Sri Lanka (Abeynayake & Weddikkara, 2013).

Despite of being ad-hoc or institutional, arbitration prevail as a dispute resolution method preferred by most of the professionals regardless the shortcomings and loopholes in the system (Govindarajan, 2020). However, based on the efficiency of the ad-hoc or institutional arbitration, parties can choose either one, which is more suitable for their dispute resolution (Akkas, 2019).

2.10. Suitability of Institutional and Ad-hoc Arbitration to Sri Lankan Construction Industry

The particular situations of the parties to the contract and the nature and condition of the dispute will eventually determine whether to go for institutional or ad-hoc arbitration (Wallgren-Lindholm, 2016). Accordingly, in practical scenario, the choice of the form of arbitration depends upon the parties, nature of the dispute and the contractual circumstances (Green & Savage, 2013). Further to Böckstiegel (2013), parties use the advantage of party autonomy by cooperatively deciding, which one to be selected between the ad-hoc and institutional arbitration. Therefore, it is a common feature in the arbitration that parties often jointly choose the form of arbitration with their own perceptions (Carbonneau, 2014).

Even though it is said that ad-hoc arbitration is less expensive than institutional arbitration, in reality, it may happen vice versa since, the parties may lack the required knowledge to make necessary arrangement to process the arbitration, lack of teamwork

between the parties and some complex cases require additional administrative assistance, which could result in extra expenses (Aliaj, 2016). Further to the author, ad-hoc arbitration can be recognised as cost effective where there is good corporation between parties, understandability of arbitration procedure by the parties and selection of qualified arbitrators to conduct the arbitration. However, it is recommended to choose institutional arbitration to resolve disputes attached to international contracts regardless it's time consuming, rigid and expensive nature, since many researchers believe that specialised staff in the institutions can afford better service than national courts attached to ad-hoc arbitration (Chen, 2012). By analysing advantages and disadvantages of both ad-hoc and institutional arbitration, it can be clearly recognised that despite the support obtained from the UNCITRAL rules, the key advantages of ad-hoc arbitration are totally depend on the corporation between the parties and it may result in delays in the proceedings, if the parties act uncooperatively (Blanke, 2008).

Many countries put no objections to use both forms of arbitrations and not recognised any difference between validity of the arbitral awards given in institutional arbitration and ad-hoc arbitration (Chen, 2012). Accordingly, when compare the ad-hoc and institutional arbitration, it is never mentioned any difference regarding enforceability of the arbitral award (Blackaby, et al., 2009). Nevertheless, it is not often investigated the exact demarcations of these two forms of arbitration (Schroeter, 2017) and it is hard to determine, which is superior than the other (Akkas, 2019; Aliaj, 2016).

Many researchers around the world have investigated regarding the ad-hoc and institutional arbitration in different perspectives. Further, some of them have focused on the applicability of these two forms of arbitrations to the construction industry in their countries. However, there are a lack of literature available on the suitability of institutional and ad-hoc arbitration to Sri Lankan construction industry. This research therefore aimed to investigate the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry.

2.11. Chapter Summary

Literature review has developed to identify different forms of arbitration and their significance to Sri Lankan construction industry. Further, this comprehensive review focused on disputes associated with the construction industry and available types of ADR methods, while highlighting arbitration as the foremost mechanism amongst them. Moreover, this chapter investigated the global practices of ad-hoc and institutional arbitration for resolving disputes in global construction industry and suitability of institutional and ad-hoc arbitration to construction industry.

Construction disputes have become common with complexity of the industry while generating a serious need to searching for a better dispute resolution mechanism to resolve them. Key ADR methods like negotiation, mediation, conciliation, dispute boards, adjudication and arbitration are implementing in the construction industry worldwide. Consequently, arbitration has gained more popularity in construction industry among other above ADR methods providing numerous advantages. Accordingly, ad-hoc and institutional arbitration methods prevail as the key forms of arbitration that consisting with different features, merits and demerits allowing parties to decide, which one to be processed. In this manner, efficiency of arbitration gets major impact from the choice of executing institutional and ad-hoc arbitration.

Many researchers have found that, due to the availability of various pros and cons attached with both ad-hoc and institutional arbitration, it is hard to determine which one is the best form of arbitration applicable to construction industry. Hence, this study aimed to investigate the suitability of ad-hoc and institutional arbitration for dispute resolution in Sri Lankan construction industry.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Introduction

Research cannot be considered as a process of just collecting information and it is far beyond, which result in getting answers for unanswered questions or generating something that does not exist at present (Goddard & Melville, 2004). Therefore, research can be simply defined as a systematic investigation of data attached to a specific problem (Sivasubramaniyan, 2012). Accordingly, research methodology can be identified as a sort of science, which explains how to execute research and it is a systematic way of resolving a particular problem (Rajasekar, Philominathan & Chinnathambi, 2006).

This research is focused to investigate the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry. This chapter provides a systematic technique used to accomplish final outcome of the research, while getting answers to the research problem and to achieve its aim and objectives. The chapter further focuses on research design, approach and process used in the data collection and analysis.

3.2. Research Design

Research design is a plan or a structure to collect information for the purpose of getting an answer to the research problem (Bhattacharjee, 2012). Accordingly, Kothari (2004) identified that research design comprises with the methods of data collection and analysis, while achieving the objectives of the research. In this research, the research design includes, comprehensive literature survey, semi-structured interviews with expertise, data analysis and validation of research findings, respectively.

3.3. Research Approaches

The research approach allows to arrange research activities and manage data collection for the purpose of achieving the research aim successfully (Thurairajah, Haigh & Amaratunga, 2007). As stated by Conrad and Serlin (2011), research approaches can

be divided into major three categories as quantitative, qualitative and mixed approach. However, nature of the research problem is highly influential for the selection of research approach (Noor, 2008). Below sections explain these three approaches and justify the choice for this research.

3.3.1. Quantitative approach

Quantitative research approach generates results by quantifying data from a selected sample of population (Headlem & Macdonald, 2010). Therefore, it allows to identify data in the numeric form (Punch, 2004). Further to Creswell (2003), major activities engaged with quantitative research approach are collecting data for quantification of attitudes and analysing the data through a statistical technique. Moreover, quantitative approach improves the objectivity, good at prediction and simplifies the findings (Conrad & Serlin, 2011). However, this approach has weakness as well including failure to find out in-depth explanation and meanings even though they are reliable, valid and significant (Amaratunga, Baldry, Sarshar & Newton, 2002).

3.3.2. Qualitative approach

Qualitative research approach generally used to develop and interpret new concepts and theories, whereas it primarily put attention to data, which cannot identify in a numeric form (Hancock, Windridge & Ockleford, 2009). Moreover, this approach offers high degree of autonomy for the selection of topics, obtain opinions and perspectives from particular set of people and allows to cover huge scope of topics, which are remaining as major advantages (Yin, 2011). Accordingly, Mauch and Park (2003) stated that qualitative approach is the most suitable method to assess cases with behaviours and opinions. However, still there are few constraints to use this approach in practice such as details of classification record, complexity of analysis, volume of data and flexibility of analysis (Denzin & Lincoln, 2017).

3.3.3. Mixed method approach

Since both quantitative and qualitative research approaches hold their own strengths and weaknesses, there is a suggestion from the research community that, mixed

approach would overcome many constraints in research analysis process (Amaratunga, et al., 2002). Therefore, mixing requirements from quantitative and qualitative approaches may guide the research towards a mixed approach (Creswell, 2003; Nau, 1995). Most importantly, mixed method will enable the researcher to capture complexity of data (Sandelowski, 2001). Although mixed approach provided enormous benefits, there can be difficulties arisen when researcher tries to combine quantitative and qualitative approaches together (Tashakkori & Creswell, 2007).

3.3.4. Justification for the selected approach

Since the research problem is to investigate the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry, in depth opinions were required from the respondents. Besides, there were few researches done in ad-hoc and institutional arbitration related to Sri Lankan construction industry. Therefore, considering aforementioned strengths and weaknesses of both quantitative and qualitative approaches, it is decided to conduct the research under qualitative approach based on its advantages over quantitative approach to achieve the aim of this research.

3.4. Research Process

The initial stage of executing research is creating the research process (Polonsky & Waller, 2011). As stated by Kothari (2004), the research process can be identified as a bunch of activities or actions, which arrange in sequence for an effective conduct of research. The research process of this study is demonstrated in Figure 3.1.

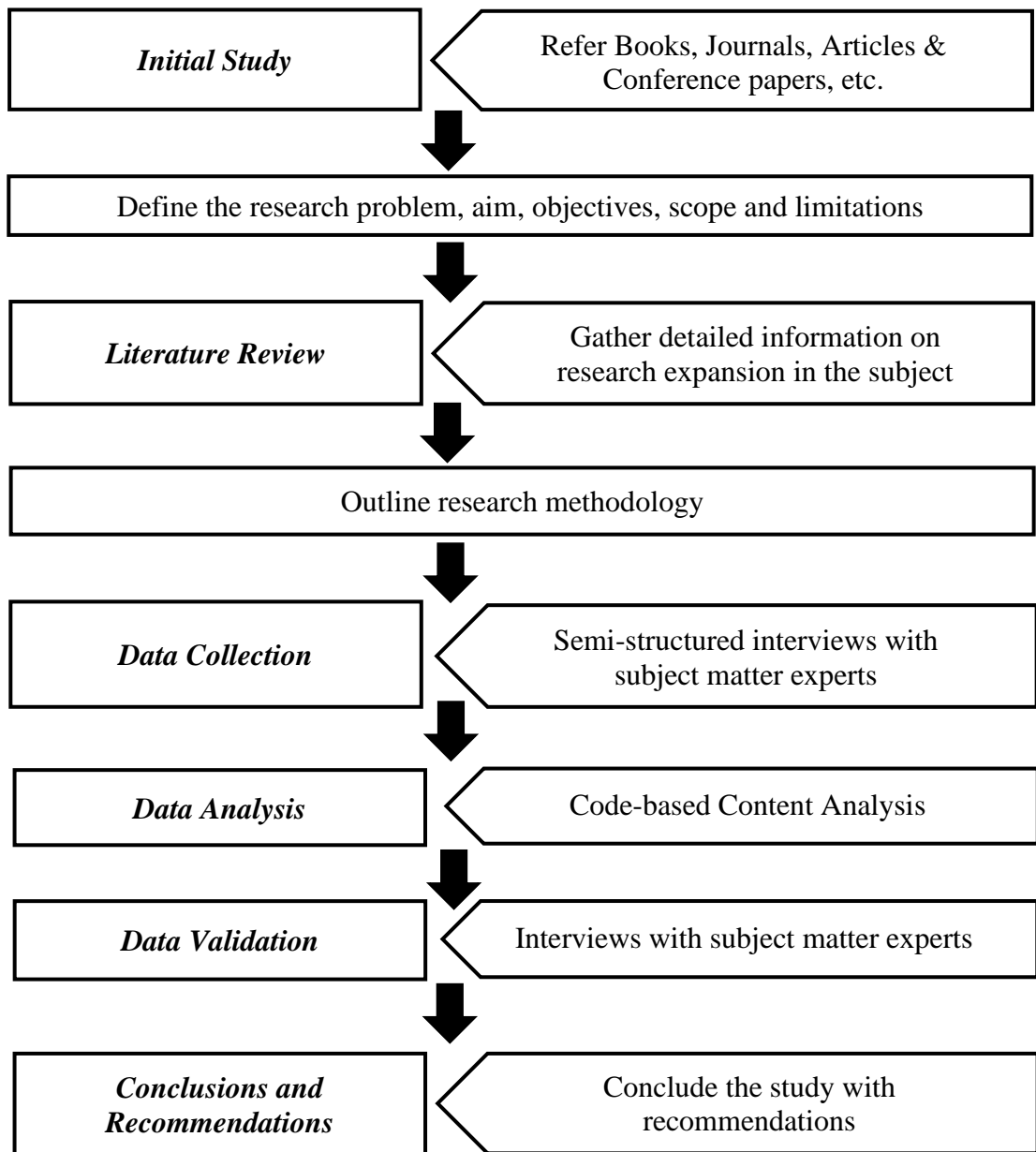


Figure 3.1: Research process

3.4.1. Initial study

The primary need to carry out an initial study is to establish research problem, aim, objectives, scope and limitations. This research study was initiated by referring books, journals, articles, conference proceedings and research papers for the purpose of identifying the research gap. Accordingly, it is found that there is a lack of research on the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri

Lankan construction industry. Subsequently, the aim was established to investigate the suitability of ad-hoc and institutional arbitration for dispute resolution in Sri Lankan construction industry.

3.4.2. Literature survey

A methodological path for the research can be determined through literature, which allows for further study (Bluhm, Harman, Lee & Mitchell, 2010). In this study, literature with prevailing statistics were analysed with the aid of journals, books, research papers, reports and conference proceedings.

The main purpose of the literature survey is to acquire in-depth knowledge regarding different types of arbitration and their significance in construction industry. Moreover, it moved towards the global practices, applicability and appropriateness of ad-hoc and institutional arbitration in order to propose strategies to enhance their effectiveness.

3.4.3. Data collection

The research problem, which was discovered through literature survey was answered through data collection. Within this process, information related to the selected population to be gathered such as human opinions and characteristics (Lee & Kramer, 2002). However, when choosing the most suitable data collection method, it should be specifically considered the reliability, validity, quantity and appropriateness of data (Polonskey & Waller, 2011). Accordingly, variety of data collection methods can be found as schedule survey, observation method, interview method, questionnaire survey to name a few (Kothari, 2004).

In questionnaire survey method, well-formed questionnaires are sent to respective parties who are within the selected population. Although questionnaire surveys allow to get data from a widespread sample, there are some drawbacks like ambiguity in answers, low responses, poor understandability of the questions (Kothari, 2004). Besides, data can be obtained through well personalised manner by using interview method than questionnaire survey (Bhattacharjee, 2012). The author further stated that during the interview, the interviewer can get personal observations and allow to record

each particular comment. Additionally, causal concepts and requirements in qualitative approach can be identified through in-depth interviews (Sivasubramaniyan, 2012). Consequently, there are three basic types of interviews namely, structured, semi structured and unstructured interviews (Headlem & Macdonald, 2010). Semi-structured interviews were selected as a data collection method for this study.

A semi-interview guideline was prepared and executed with the help of findings from the literature. Refer Annexure A for the semi-structured interview guideline. Initial part of the interview guideline was prepared to capture the basic information of each respondent. Part 1 of the interview guideline focused on idea of the respondents regarding the arbitration as a whole. Part 2 comprised with questions related to current practice of ad-hoc and institutional arbitration in Sri Lankan construction industry. Subsequently, Parts 3 and 4 focused to identify the applicability and appropriateness of ad-hoc and institutional arbitration to Sri Lankan construction industry, respectively. As the final part of the interview guideline (Part 5), ad-hoc and institutional arbitration were compared against different factors.

Accordingly, 10 experts in construction arbitration were interviewed to identify the current practice of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry. All these experts are involved in arbitration in their professions having extensive experience over years. As a limitation due to COVID-19 pandemic, all the respondents were interviewed using VoIP (Voice over Internet Protocol) technology such as Zoom. Furthermore, the interviews were extended with aforementioned experts in construction arbitration for the purpose of evaluating the suitability of ad-hoc and institutional arbitration in Sri Lankan construction industry and to finding strategies to enhance the effectiveness of ad-hoc and institutional arbitration.

3.4.4. Expert sample selection

The target population of the research was Arbitrators and Lawyers who are involved in arbitration related to construction industry of Sri Lanka. The population was limited and the sampling technique had to be decided accordingly. Therefore, sample was

selected through snowball sampling method, which is a non-probability sampling technique. In snowball sampling, interviewees may be asked to nominate some other professionals to be interviewed.

3.4.5. Data analysis

Data analysis is the major successive research technique after data collection (Schutt, 2012). However, data analysis is the most challenging process throughout the research process (Ritchie, Lewis, Nicholls & Ormston, 2014).

Among all the other qualitative data analysis techniques, content analysis holds a key position (Hsieh & Shannon, 2005). Further, Duke and Mallette (2011) states that content analysis can be effectively use to analyse books, interviews, speeches and conversations to name a few. Accordingly, this can be called as a way of analysing visual, verbal or written information (Elo & Kyanga, 2008). The content analysis can be carried out through NVivo software once the data was gathered from qualitative questions (Golafshani, 2003). Therefore, in this research study, semi-structured interview findings were analysed with the aid of NVivo 11 software.

3.4.5. Validation

The validity of the research outcome is verified through data validation. Therefore, validation is much important for the quality of final research outcome. Accordingly, the research findings were shown to three experts in the area of construction arbitration. They finally validated the ultimate outcome of this research. The final outcome of this research was reshaped in accordance with the validation considering its benefit to the Sri Lankan construction industry.

3.5. Chapter Summary

This chapter consisting with the methodology of this research to achieve its aim and objectives. Accordingly, qualitative research approach is identified as the most appropriate way to collect data for this research and semi-structured interviews were figured out as the suitable data collection technique. Further, content analysis was identified as the data analysis method in this research.

CHAPTER 4: RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter comprising with analysis of the collected data and validation of research findings. Accordingly, objectives stipulated in Chapter 1 is consequentially achieved and presented in this chapter. A comprehensive literature survey was carried out in Chapter 2 in the initial stage of this study to achieve the first objective and to get an approach to the second, third and fourth objectives. Subsequently, semi-structured interviews with experts were conducted to substantiate the findings of literature survey. Further, the findings from the semi-structured interviews were analysed and presented in a descriptive manner to investigate the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry.

4.2 Semi-structured Interviews with Experts

Semi-structured interviews with experts were carried out to investigate the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry. The main target of the data collection was to identify the current practice of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry and identify the applicability and appropriateness of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry.

Interview guideline was prepared and developed based on the major areas of this research and the findings of the comprehensive literature survey. The expertise professionals related to arbitration were interviewed using a semi-structured interview guideline. This guideline was contained open ended questions under five main sections, which could gather more comprehensive information from respondents based on objectives of the research.

Ten semi-structured interviews were conducted for the study. Respondents were selected based on their professional experience and academic knowledge on Arbitration in construction. Accordingly, interviews were conducted with CIDA registered arbitrators who have more than five years of experience and one respondent

with academic qualification on undergraduate and postgraduate degrees related to law and construction dispute resolution. Table 4.1 presents the information about respondents with their experience.

Table 4.1: Summary of respondents

Respondent	Designation	Experience in arbitration
R1	Director/ Arbitrator/ Adjudicator	Currently practicing as an arbitrator with more than 10 years of experience
R2	Contract Specialist/ Arbitrator/ Adjudicator	Represented construction party by giving evidences for arbitration for 6 years and currently working as an arbitration panel member
R3	Contract Management Specialist / Arbitrator/ Mediator	Nearly 7 years as an arbitrator and mediator
R4	Attorney-at-Law & Notary Public	Practicing as an attorney-at-law and involved with arbitration
R5	Quantity Surveyor/ Managing Director/ Arbitrator/ Mediator	Experienced in arbitration and mostly practicing as a mediator
R6	Consultant Structural Engineer/ Arbitrator/ Adjudicator	More than 5 years as an arbitrator
R7	Deputy Head of Legal/ Arbitrator	Involved in commercial arbitration around 5 years
R8	Head of Contracts and Commercial/ Arbitrator	Nearly 10 years of experience as an adjudicator and arbitrator
R9	Construction Manager/ Arbitrator	Nearly 6 years of experience as a registered arbitrator and before that, have involved for arbitration representing disputant parties by giving evidences
R10	Senior Consultant Engineer/ Arbitrator	Experienced in several arbitrations in last 5 years

All the respondents have experience related to arbitration in construction industry. Experts were primarily focused on applicability and appropriateness of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry.

4.3 Research Findings

A comprehensive literature survey was carried out on Arbitration and its global practices; aiming to investigate the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry. Consequently, the data collection was carried out through interviews using a semi-structured questionnaire developed with the basis of literature findings and research objectives. Findings of the interviews were analysed using NVivo 11 software using nodes with respect to interview guideline. The summary of the analysis reflects in Figure 4.1. Nodes were prepared based on the research objectives which eventually achieve the aim of the study.

Nodes		
Name	Sources	References
Suitability of Ad-hoc and Institutional arbitration for resolving disputes in Sri Lank	10	434
Arbitration in Sri Lanka and its significance	10	30
Usage of Ad-hoc and Institutional Arbitration in Sri Lankan Construction Indus	10	80
Applicability & Appropriateness of Ad-hoc Arbitration for Sri Lankan Construc	10	109
Applicability & Appropriateness of Institutional Arbitration for Sri Lankan Cons	10	106
Strategies to enhance the effectiveness of arbitration in Sri Lankan constructio	10	20

Figure 4.1: Summary of analysis

According to Figure 4.1, first column shows the name of the node and second column shows the number of sources which is number of interviews carried out to do the analysis and third column shows how many references have obtained through different sources.

4.3.1 Arbitration in Sri Lanka

First part of the interview guideline was prepared to identify general information on Arbitration related to Sri Lankan context. All the respondents commonly stated that, arbitration is a dispute resolution method alternative to litigation. For an example, respondent R1 defined, *“Arbitration is a private dispute resolution method, which is faster and easier than litigation. Judges to arbitration are selected by the parties from the industrial specialists who have expertise and knowledge on industrial and legal aspects”*. Further to R5, *“Arbitration provides an arbitral outcome, which is final and*

binding more or less similar to court. But arbitration includes technical aspects than litigation. Only arbitrable disputes can refer to arbitration". Subsequently, respondents were asked to provide their opinions regarding significance of arbitration compared to other ADR methods in Sri Lankan construction industry under next question of the interview guideline.

4.3.1.1. Significance of arbitration compared to other ADR methods in Sri Lankan construction industry

Providing their opinions and understanding regarding the significance of arbitration compared to other ADR methods in Sri Lankan construction industry, different respondents identified the significance in different perspectives, which are summarised in Figure 4.2.

Nodes			
Name	Sources	References	
Significance of arbitration compared to other ADR methods	10	10	
As arbitration is connected to an Act	3	3	
As arbitration is mandatory by the Contract	2	2	
As arbitration is successful in construction industry	2	2	
As arbitration is a detailed process	3	3	

Figure 4.2: Significance of arbitration compared to other ADR methods

Among ten respondents, eight respondents were agreed that Arbitration plays significant role in Sri Lankan construction industry when compared with other ADR methods. Nevertheless, two respondents were not agreed with the above. According to the opinions of R1, R5 and R10, arbitration plays a significant role compared to other ADR method, since it is connected to an Act. Further to R1, *"parties can have a full analysis and expert witnesses on the dispute resolution through arbitration than resolving dispute though adjudication"*. Moreover, R5 stated that, *"arbitration is significant in terms of finality and binding only and significance in terms of resolution is not much acceptable because arbitrators try to give their decisions based on experience rather stick to the Arbitration Act"*. Further R2 explained that, arbitration plays a significant role since parties used to refer their disputes for arbitration, if they

did not satisfy with the decision of adjudication, which is a mandatory clause in most of the construction contracts. However, according to R4 and R6, arbitration was very effective ADR method before 2005 and later there were lot of loopholes have been identified.

4.3.1.2. Awareness of arbitration in Sri Lankan construction industry

Question three of Part 1 was specifically developed to identify the awareness of arbitration among industry professionals in Sri Lankan construction industry. According to the experts' opinions, current awareness of arbitration in the field is not satisfactory. Figure 4.3 shows the current state of awareness of arbitration in Sri Lankan construction industry according to the responses.

Nodes			
Name	Sources	References	
<input checked="" type="radio"/> Awareness of arbitration in Sri Lanka construction industry	10	10	
<input type="radio"/> Enough	3	3	
<input type="radio"/> Not enough	7	7	

Figure 4.3: Awareness of arbitration in Sri Lankan construction industry

Out of ten respondents, seven respondents were agreed that, the awareness of arbitration among construction industry professionals in Sri Lanka is not in a satisfactory level. Accordingly, R2 stated that, the awareness pertaining to arbitration is better than earlier but still not enough to compete internationally. While agreeing with R2, R5 mentioned that, the awareness related to arbitration is not enough compared with other countries due to attitude issues of the Sri Lankan citizens. Furthermore, R6 came up with a different finding which is awareness regarding arbitration is satisfactory among international and upper grade local contractors but not having enough awareness with lower grade local contractors. Similarly, R4, R7 and R9 as well stated that, the awareness related to arbitration is not enough in Sri Lankan construction industry.

However, R1, R3 and R10 was not agreed with the above as construction industry professionals in Sri Lanka have enough awareness not only about arbitration but also about adjudication stating that there are enough awareness programs conducting by different institutes including CIDA, ICLP and University of Moratuwa, which are providing enough knowledge.

4.3.1.3 Current state of demand for arbitration in Sri Lankan construction industry

Moving to next question of the section, respondents were asked to provide their opinions regarding state of demand for arbitration currently in construction industry of Sri Lanka. Responses were summarised as indicated in below Figure 4.4.

Nodes			
Name	Sources	References	
Current state of demand for arbitration compared to other ADR methods	10	10	
Less demand from lower grade contractors	2	2	
Higher demand from international and upper grade contractors	2	2	
Both arbitration and adjudication are equally practicing	6	6	

Figure 4.4: State of demand for arbitration in construction industry of Sri Lanka

As stated by six respondents, both arbitration and adjudication are practicing equally in Sri Lankan construction industry. Accordingly, R2 explained, “*at the moment, adjudication is compulsory. Anyway, if parties not satisfied with the decision of adjudicator, arbitration comes in to the use*”. Furthermore, R3 and R10 mentioned that, highest demand for arbitration is coming from international contractors and upper-level local contractors. However, R4 and R5 mentioned that, there is less demand for arbitration in construction industry specially from lower graded contractors. Further to R5, very few people are doing arbitration where majority are Colombo centric.

4.3.2 Current Practice of Ad-hoc and Institutional Arbitration in Sri Lankan Construction Industry

Investigation of the current practice of ad hoc and institutional arbitration in Sri Lankan construction industry was focused by the second section of the interview guideline. This section was prepared mainly based on the second objective.

As initial part of this section, respondents were asked to briefly explain their experience in arbitration. Accordingly, all the respondents have experience in doing arbitration related to construction industry in Sri Lanka. Thus, R1 is currently practicing as an arbitrator with more than ten years of experience. R2 briefly explained his journey to become an arbitrator as *“I started with representing construction party by giving evidences for arbitration and advising attorneys represented by the parties. Then I started working as an arbitration panel member. Currently, I’m working as an arbitrator involving to construction arbitration too”*. According to R5, he has less experience in arbitration and mostly practicing as a Mediator. Furthermore, R6 mentioned that, he has been involved with arbitrations mainly on issues relating to prolongation claims associated with EOT and challenges to the Engineer’s determination on quantification of extra contractual work associated with lump-sum contracts. In this manner, all the respondents have their experience in arbitration in different capacities in construction industry.

4.3.2.1 Benefits of practicing arbitration in construction industry compared to other ADR methods

As per the literature finding, arbitration give rise to number of benefits within the construction industry. Through interviews with industry experts, it was able to verify benefits, which were identified in literature survey and to identify some other benefits of practicing arbitration in Sri Lankan construction industry. Figure 4.5 shows the coding structure of benefits of practicing arbitration, which were identified by respondents.

Nodes		
Name	Sources	References
Benefits of practicing arbitration in construction industry	10	10
Detailed analysis on the case	6	6
Provide sufficient time to hear the case	3	3
Can get quick solutions	1	1
Decision involves more technical basis	2	2
Settlements are reached halfway through cordial discussions	1	1

Figure 4.5: Benefits of practicing arbitration in Sri Lankan construction industry

Most of the respondents were stated that, arbitration provides number of benefits mainly against litigation and similarly there are benefits against other ADR methods too. Consequently, all the ten respondents have specified benefits of arbitration pertaining to construction industry against other ADR methods.

Among all the benefits identified by the respondents, 6 respondents including R1, R2, R3, R8, R9 and R10 have come up with a major benefit which is arbitration provides detailed analysis on the case unlike in adjudication. Further to R2 and R5, arbitration does not have a fixed date to provide the arbitral award. It allows parties to present comprehensive evidences with multiple submissions as per respondents R1 and R9. However, R4 mentioned that, parties can get a quick decision in most of the cases. Moreover, R6 and R8 raised a significant benefit of arbitration which is arbitration provide a decision involving more technical basis than adjudication. Moving forward, they explained that, decisions made by adjudicators are based on ill-founded facts/law, which are being somewhat corrected in Arbitration. Further to R7, in some particular cases, settlements are reached half way through cordial discussions in arbitration, which is a different benefit identified by the respondent.

Despite of all these benefits, some barriers also could be identified in implementing arbitration in Sri Lankan construction industry. The barriers are discussed below.

4.3.2.2 Barriers for practicing arbitration in Sri Lankan construction industry

According to the interviews, Figure 4.6 presents the barriers identified through respondents' opinions.

Nodes		
Name	Sources	References
Barriers of practicing arbitration in Sri Lankan construction industry	10	10
High cost	3	3
Reluctant of the parties to honour the final decision	4	4
Less awareness among professional	3	3
Inadequate capacity of Arbitrators	1	1
Retired judges and lawyers act as Arbitrators	1	1
No predefined time frame to provide the award	4	4
Statutory barriers	2	2

Figure 4.6: Barriers for practicing arbitration in Sri Lankan construction industry

According to all the respondents, there are some barriers also exist in spite of the benefits identified above. As a foremost barrier in arbitration, R3, R7 and R8 specified that, arbitration involved with high cost compared with other ADR methods like Adjudication, Mediation and Negotiation. Therefore, cost for arbitration is not affordable for some contractors. Moreover, R4, R5, R6 and R8 stated that, Arbitration Act does not provide a specific time limit to issue the arbitral award, which could ultimately lead to drag the process unnecessarily result in delays. Apart from that, there are some instances where parties tend to dishonour the arbitral award with unfair manner as stated by R4 and R8. While agreeing with that, R1 stated, *“when I give my decision as an arbitrator, there are reluctant in the parties to honour that. However, the party who got the favourable decision through arbitration can go for high court requesting to get a decree from the court against the other party to implement the arbitral award”*. In addition to that, less awareness among professionals and inadequate capacities of the arbitrators can be identified as some other key barriers in arbitration. Accordingly, R2 stated; *“since parties not well aware about the arbitration in Sri Lanka, the whole process is depending on the chosen type of arbitrators. Therefore, there are some instances where arbitrators also not knowledge enough to carry out the arbitration properly which will become a huge problem to continue with arbitration”*. Moreover, R5 specified that, there are some statutory barriers also exist in construction industry related to arbitration like construction specified clauses not included to the Arbitration Act.

4.3.2.3 Ad-hoc and Institutional arbitration

Moving forward, Part 2 of the interview guideline, questioned respondents regarding their experience in ad-hoc and institutional arbitration separately. All the respondents have experience in either ad-hoc arbitration, institutional arbitration or both. Below Figure 4.7 demonstrates the responses.

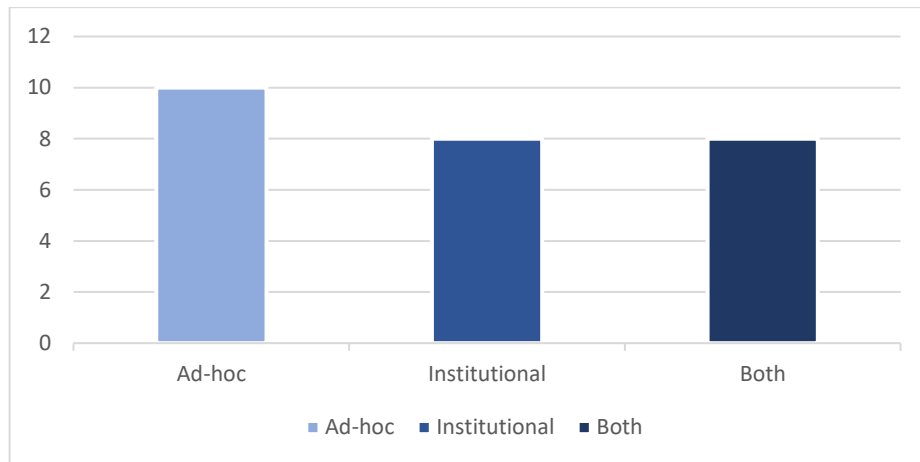


Figure 4.7: Respondents' experience in ad-hoc and institutional arbitration

Out of ten respondents, all of them have experience related to ad-hoc arbitration. However, only eight respondents have experience related to institutional arbitration. Thus, eight respondents have both ad-hoc and institutional arbitration experience.

Moreover, respondents were checked whether they have found any other form of arbitrations during their working experience other than ad-hoc or institutional but no one have come across any other forms of arbitration.

4.3.2.4 Level of practicing of ad-hoc and institutional arbitration

The last part of this section focused on current level of practicing arbitration in Sri Lankan construction industry. In this part, experts explained their experience regarding current practice of ad-hoc and institutional arbitration separately. Figure 4.8 reflects the responses received for current level of practice of ad-hoc arbitration in Sri Lankan construction industry.

Nodes		
Name	Sources	References
Current level of practicing ad-hoc arbitration in Sri Lankan construction in	10	10
Highly practicing	8	8
Moderately practicing	2	2

Figure 4.8: Level of current practice of ad-hoc arbitration in Sri Lankan construction industry

As stated by eight respondents, ad-hoc arbitration is highly practicing in Sri Lankan construction industry when compared with institutional arbitration. Accordingly, R2 mentioned, “*ad-hoc arbitration is very popular in Sri Lanka as it is compulsory as the third step*”. Furthermore, R8 stated, “*ad-hoc arbitration is very popular among most lower grade contractors in Sri Lanka*”. However, as mentioned by R3 and R6, ad-hoc arbitration is moderately practicing in construction industry of Sri Lanka.

Further, Figure 4.9 reflects the responses received for current level of practicing institutional arbitration in Sri Lankan construction industry.

Nodes		
Name	Sources	References
Current level of practicing institutional arbitration in Sri Lankan constructi	10	10
Moderately practicing	6	6
Less than moderately practicing	4	4

Figure 4.9: Level of practicing of institutional arbitration in Sri Lankan construction industry

According to six respondents, institutional arbitration is moderately practicing in Sri Lankan construction industry when compared with ad-hoc arbitration. As stated by R3, institutional arbitration is moderately practicing in Sri Lanka, where most of the upper grade contractors go for ad-hoc arbitration. Further to R4, “*institutional arbitration is mostly used by international contractors*”. Nevertheless, four respondents including R1, R2, R7 and R9 mentioned that, institutional arbitration practice is less than ad-hoc arbitration in Sri Lankan construction industry.

4.3.3 Applicability and Appropriateness of Ad-hoc Arbitration for Sri Lankan Construction Industry

The third and fourth sections of the interview guideline were developed to identify the applicability and appropriateness of ad-hoc and institutional arbitration for the Sri Lankan construction industry respectively, which was established to achieve the third objective of the research. Therefore, all the respondents were asked to provide their opinions regarding the appropriateness and applicability of ad-hoc arbitration in third section of the interview guideline.

First part of this section was focused to identify the reasons why parties tend to select ad-hoc arbitration over institutional arbitration. Accordingly, all the respondents were stated various reasons, which are summarised in Figure 4.10.

Name	Sources	Reference
Reasons to use ad-hoc arbitration method for resolving disputes	10	10
Cost effectiveness for simple cases	4	4
Time effectiveness for simple cases	2	2
Flexible procedures	2	2
Convenience of selecting arbitrators	1	1
Less awareness on institutional arbitration	2	2
Issues of selecting Institutions	1	1

Figure 4.10: Reasons to practice ad-hoc arbitration for resolving disputes

Comparing ad-hoc and institutional arbitrations, four respondents were specified cost effectiveness as a key reason for selecting ad-hoc arbitration over institutional arbitration. In view of that, R5 stated; *“due to cost, most parties do not want to retain arbitrators for a long period of time or to refer their disputes to an institution, which eventually result in high cost”*. However, R2 stated, *“as no obligation for time frame stipulated in ad-hoc arbitration, the case can be dragged unnecessarily which ultimately result in high cost. Therefore, cost effectiveness in ad-hoc arbitration only applicable for simple cases which have less potential to be dragged over the time”*. Moreover, R5 and R6 stated that, ad-hoc arbitration can be selected over institutional

arbitration due to its time effectiveness specially for simple cases. Further to them, cases with less complex nature can be easily resolved through ad-hoc arbitration rather referring to institutional arbitration, which always engaged with fix procedures that may sometimes not required to follow for simple cases. Apart from that, ad-hoc arbitration can be preferred to resolve construction disputes because it is comprising with flexible procedures which can be agreed at the beginning of the arbitration based on discretion of the parties as stated by respondents R7 and R9. Further to R4, parties given authority to select the most suitable arbitrator to resolve their dispute, which is one of the major reasons why parties tend to select ad-hoc arbitration. However, R1, R7 and R9 stated that, there is lack of awareness regarding institutional arbitration in Sri Lankan construction industry and in some particular cases, parties face difficulties in selecting a proper institution to handle their dispute, which is usually end up with selecting ad-hoc arbitration.

Moving forward, the respondents were asked to provide their opinions regarding applicability and appropriateness of ad-hoc arbitration to Sri Lankan construction industry based on their experience. As per the opinion of six responses, ad-hoc arbitration is not suitable for Sri Lankan construction industry as there are some loopholes like possibility to drag the process. Explaining this R2 stated that, a country like Sri Lanka requires firm rules and procedures to keep parties stick to the process which is cannot identified through ad-hoc arbitration. Further to R5, ad-hoc arbitration is not suitable for Sri Lankan construction industry due to the absence of authenticity, dependability and reliance. However, four respondents mentioned that, ad-hoc arbitration is suitable considering some benefits.

Further, experts were questioned whether there are any specific kind of disputes which can be refer to ad-hoc arbitration. All the respondents were mentioned that any kind of disputes can be resolved using ad-hoc arbitration unless the Contract specified otherwise. However, R3 and R4 mentioned that, it is preferable to refer disputes with less complex nature to ad-hoc arbitration for easy resolution and for less time consumption.

The next question of the interview guideline was focused to check the level of skills and knowledge of arbitrators practicing in Sri Lanka to proceed with ad-hoc arbitration, which is shown in Figure 4.11.

Nodes			
Name	Sources	Reference	
Skills and knowledge of Sri Lankan arbitrators to proceed with ad-hoc arbitr	9	9	
+ Enough	3	3	
+ Not Enough	6	6	

Figure 4.11: Skills and knowledge of Sri Lankan arbitrators to use ad-hoc arbitration

Nine respondents were provided their answer for this question, but, R6 was refused to give his answer stating that he is not eligible to comment on someone else’s skills and knowledge. According to the obtained responses, six respondents were stated that, skills and knowledge of arbitrators practicing in Sri Lanka are not enough. Providing reasons for the above, R1 stated that, only few of them have adequate knowledge and experience but most of them does not have. Five respondents were stated that most of the arbitrators are qualified but not practically capable to carry out ad-hoc arbitration. Accordingly, R2 and R8 stated that, *“sometimes problems occur, when retired judges practicing as arbitrators, due to their lack of technical knowledge”*. While agreeing with that, R4 mentioned *“when retired judges practicing as arbitrators, they only apply law related knowledge, but industrial professionals as arbitrators apply technical knowledge with legal background, which is more successful in arbitration”*.

In spite of that, R3, R7 and R10 stated that, arbitrators practicing in Sri Lankan construction industry have enough skills and knowledge but only to perform within domestic arbitration. Hence, their knowledge needs to be improved.

4.3.3.1 Advantages of using ad-hoc arbitration method in Sri Lankan construction industry

Through this question under Part 3 of the interview guideline, all the respondents were asked to bring forth the advantages of using ad-hoc arbitration over institutional

arbitration and Figure 4.12 summarises the advantages, which have been identified by the respondents.

Nodes		
Name	Sources	Reference
Advantages of using ad-hoc arbitration method in Sri Lankan construction	10	10
Flexible time frame	4	4
Parties allowed to decide procedures	5	5
Cost Effectiveness for simple cases	3	3
Selection of arbitrators on parties' discretion	1	1
Less bureaucracy	2	2

Figure 4.12: Advantages of using ad-hoc arbitration in Sri Lankan construction industry

When compare ad-hoc arbitration with institutional arbitration, three respondents including R2, R4 and R9 were mentioned that, properly structured ad-hoc arbitration is cost effective than institutional arbitration specially for simple cases. Because, cases with complex nature can spend more time to reach the solution which may incur more cost through ad-hoc arbitration even more than institutional arbitration. Further four respondents including R1, R4, R5 and R7 stated that, ad-hoc arbitration provide flexible time frame, which can be decided as per discretion of the parties. Therefore, ad-hoc arbitration allows adequate opportunity for parties to present themselves regarding the dispute with flexible time frame. However, flexible time frame is not always a good characteristic in ad-hoc arbitration as parties tend to use that unnecessarily by dragging the process. Apart from that, parties have the opportunity to agree on arbitral procedures and select their panel of arbitrators based on their requirements, which is one of the foremost advantages in ad-hoc arbitration as per R4, R6, R7 and R9. Moreover, R6 and R8 brought up a significant advantage of ad-hoc arbitration, which is it provides less bureaucracy in proceedings which usually cannot be obtained through institutional arbitration.

4.3.3.2 Disadvantages of using ad-hoc arbitration method in Sri Lankan construction industry

Figure 4.13 presents the coding structure of different views of experts on disadvantages of using ad-hoc arbitration method in Sri Lankan construction industry.

Nodes			
Name	Sources	References	
Disadvantages of using ad-hoc arbitration method in Sri Lankan constructi	10	10	
Possibility to drag the process	5	5	
No pre-defined procedure	2	2	
Less supervision	4	4	
Issues in appointing arbitrators	2	2	

Figure 4.13: Disadvantages of using ad-hoc arbitration in Sri Lankan construction industry

According to R5, R6, R8 and R9, ad-hoc arbitration does not provide proper supervision during the process, which is a major disadvantage. Most importantly, five respondents were mentioned that time duration to reach the settlement can be bigger than institutional for most of the case in ad-hoc arbitration as no specific time limit has stipulated. Accordingly, R4 stated that if the dispute is more complex, the process can be dragged unavoidably. Therefore, more corporation between parties is required in ad-hoc arbitration. Further to R3 and R8, issues can be arisen regarding appointment of arbitrators by the parties. Explaining this further, R3 stated that, *“may be things can get complicated if one party failed to appoint an arbitrator. In such case, the parties may get a court order to appoint one. Thus, process can get delay. To avoid this, more corporation between parties is required”*. In ad-hoc arbitration, pre-established procedures cannot be found and parties required to make the procedure based on their own requirements. In line with this, R2 mentioned, *“ad-hoc arbitration, does not have proper and well-defined procedure. Since, parties not well aware of the process, arbitrators decide the procedure, which will ultimately depend upon the capabilities of arbitrators”*. However, R2 further stated that, arbitrators usually use civil procedural code in Sri Lanka as a backing for procedures to be followed.

4.3.3.3 Facilitation from legal system of Sri Lanka for ad-hoc arbitration

As next question of the interview guideline, experts were asked to give their opinions whether prevailing legal system of Sri Lanka adequately facilitate for the ad-hoc arbitration. Out of ten respondents, eight respondents were stated that, assistance from prevailing legal system of Sri Lanka is adequate but there are minor adjustments to be made. Accordingly, R1 mentioned; *“there are certain adjustments to be made such as in case where high court judge gives a wrong decision, there is no room for challenge it in supreme court. There is a provision that you can go for supreme court only after you get the award. It is a waste of time. It is better to go for supreme court before that, when you get the high court decision without waiting for ending the entire process”*. In addition to that, R3 stated another few areas to be amended in prevailing legal provisions pertaining to arbitration *“Arbitration Act is not comprising with a time limit to give the arbitral award. Therefore, arbitration process is dragging number of years. So, better to include a provision for maximum duration for arbitration. Moreover, once parties not able to resolve the dispute through adjudication, there is no specific time to go for Arbitration. This can be misused by the Contractors since Employers are changing time to time. Thus, after number of years, other party can go for arbitration. Therefore, better to provide maximum duration to go for arbitration after adjudication”*.

Subsequently, experts were requested to provide their thoughts regarding the currently functioning arbitral institutions, whether they provide proper assistance for ad-hoc arbitration in Sri Lanka. Accordingly, six respondents were specified that, institutions not involve with ad-hoc arbitration and they are silent regarding ad-hoc arbitration. However, four respondents were mentioned that, institutions provide assistance for ad-hoc arbitration only in terms of venue for hearing. In line with that, R1 mentioned, currently functioning institutions like ICLP provide hearing room for ad-hoc arbitration, but nothing else.

4.3.3.4 Challenges faced by arbitrators when practicing ad-hoc arbitration in Sri Lankan construction industry

Respondents' perceptions on the challenges faced by arbitrators in using ad-hoc arbitration method in Sri Lankan construction industry, which is part of the third objective of the study were analysed using NVivo 11 software. Challenges identified by all the respondents were analysed as shown in Figure 4.14.

Name	Sources	Reference
Challenges faced by arbitrators in using ad-hoc arbitration method in Sri L	10	10
Controlling time of the proceedings	7	7
Court intervene	1	1
Insufficient facilities	1	1
Inadequate procedural rules	2	2
Midway party differences	1	1
Disagreements regarding procedures	1	1

Figure 4.14: Challenges faced by arbitrators when practicing ad-hoc arbitration

All the respondents were answered to this question and most frequently mentioned challenge by the respondents was “controlling time of the proceeding”. In view of that, R1 mentioned “*some parties try to delay the process telling number of reasons and sometimes arbitrators say they cannot come to the hearing due to several reasons. So, the process will be dragged unnecessarily*”. Further to R3, court intervene for some particular cases can cause to extend the duration of arbitration, which is another challenge faced by arbitrators. In addition to that, R6 and R8 mentioned that, inadequate procedural rules can become a challenge for arbitrators when involve with ad-hoc arbitration. Further to R6, midway party differences can be identified as a challenge faced by arbitration when dealing with ad-hoc arbitration. Apart from above, R4 and R3 stated insufficient facilities and disagreements regarding procedures can be happened as challenges for arbitrators since ad-hoc arbitration does not equip with pre tested rules and procedures unlike in institutional arbitration.

4.3.3.5 Strategies to overcome the challenges when practicing ad-hoc arbitration in Sri Lankan construction industry

Moving to the next question of the interview guideline, experts were asked to provide strategies to overcome the challenges identified in above when using ad-hoc arbitration in Sri Lankan construction industry. Responses received were summarised as shown in Figure 4.15.

Nodes			
Name	Sources	References	
Strategies to overcome the above identified challenges in using ad-hoc ar	10	10	
Commitment of the parties to stick to the procedure	2	2	
Specify time for arbitration under Arbitration Act	3	3	
Getting more industry professionals to arbitration	1	1	
Sufficient procedural rules in Arbitration Act	2	2	

Figure 4.15: Strategies to overcome the challenges when practicing ad-hoc arbitration

According to most of the respondents, issues regarding procedures and rules were identified as a major challenge in practicing ad-hoc arbitration. The fundamental strategy suggested by respondents was to provide full commitment of the parties and arbitrators in to the process without dragging it unnecessarily. Moreover, R4 and R6 proposed that, Arbitration Act should be amended with sufficient procedural rules to follow by the parties involve with ad-hoc arbitration. This may help to keep parties strict to the procedures stipulated by the Act due to its legitimate nature which can even reduce the court intervention for ad-hoc arbitration. Further, R2 mentioned that *“more and more industry professionals should enter in to the arbitration as only paper qualifications of arbitrators are not enough as their practical experience in construction industry matters the most”*. Moreover, in order to control the dragging of the arbitral proceedings, fix time limit can be introduced to the Arbitration Act as an amendment according to R3, R7 and R10.

4.3.4 Applicability and Appropriateness of Institutional Arbitration for Sri Lankan Construction Industry

Similar to the above, this section was specifically focused to identify the applicability and appropriateness of institutional arbitration for Sri Lankan construction industry which was developed to achieve the third objective of the research. Therefore, all the respondents were asked to provide their opinions regarding the applicability and appropriateness of institutional arbitration in fourth section of the interview guideline.

First part of this section was focused to identify reasons why disputant parties select institutional arbitration without going for ad-hoc arbitration. Accordingly, Figure 4.16 summarises various reasons raised by all the respondents.

Nodes			
Name	Sources	References	
Reasons to use institutional arbitration method to resolve disputes	10	10	
As a requirement of the Contract	3	3	
As requested by funding agents	2	2	
Due to proper procedures and administration	4	4	
Due to good facilities	2	2	
When parties in a disagreements for selecting arbitrators	1	1	

Figure 4.16: Reasons to use institutional arbitration to resolve disputes

Institutional arbitration comprising with well-defined procedures which is not available with ad-hoc arbitration. Most of the industry professionals identify this as a major reason for selecting institution arbitration according to majority of the respondents. Moreover, R1 mentioned that, because it is stated in the Contract, parties bound to go for institutional arbitration. Besides, when international contractors are involved and when funding agents like JICA, ADB, World Bank involved, they require to go for institutional arbitration with international institution like ICC. Five respondents have identified these two as key reasons to choose institution arbitration. However, there are some instances where parties face disagreements in selecting arbitral panel. Accordingly, R5 stated “*may be parties not in a position to reach to an*

agreement between themselves for the nomination of arbitrators. In such cases, institutions have more recognition to do the work for them”.

Moving forward, the respondents were asked to provide their opinions regarding applicability and appropriateness of institutional arbitration to Sri Lankan construction industry based on their experience. As per the opinion of six respondents, institutional arbitration is suitable for Sri Lankan construction industry due to its key benefits. However, according to four respondents, institutional arbitration is not much suitable for Sri Lankan construction industry. According to R1, R7 and R10, this is because, Sri Lankan contractors do not have enough knowledge and resources to deal with institutional arbitration. Besides R2 mentioned, *“at the moment, institutional arbitration is not practicable in Sri Lanka. But if properly implemented, the entire process will be controlled better than ad-hoc”.*

Further, experts were questioned whether there are any specific kind of disputes, which can be referred to institutional arbitration. All the respondents were mentioned that any kind of disputes can be resolved using institutional arbitration unless the Contract specified otherwise. However, R4 and R5 mentioned that, there is no such classification, but most complex disputes refer to institutional arbitration where multiple or foreign parties involved to the Contract.

The next question of the interview guideline was to check the level of skills and knowledge of arbitrators practicing in Sri Lanka to proceed with institutional arbitration and the responses are summarised in Figure 4.17.

Nodes			
Name	Sources	Reference	
Skills and knowledge of Sri Lankan arbitrators to proceed with institutional	9	9	
Enough	2	2	
Not enough	8	8	

Figure 4.17: Skills and knowledge of Sri Lankan arbitrators to use institutional arbitration

Responses received only from nine respondents to this question. Eight respondents were stated that, skills and knowledge of arbitrators practicing in Sri Lanka are not

enough to carry out institutional arbitration. Providing reasons for the above, R5 stated that, most of the arbitrators are not matured enough to proceed with institutional arbitration and do not have broad theoretical knowledge on dispute resolution in terms of institutional arbitration. Further to R7, it is very difficult to find both industrial expertise and legally knowledgeable arbitrators in Sri Lanka to successfully carry out institutional arbitration. Moreover, R3 and R9 mentioned that, knowledge of Sri Lankan arbitrators is only enough to proceed with domestic arbitration but not sufficient for international arbitration.

4.3.4.1 Advantages of using institutional arbitration method in Sri Lankan construction industry

All the respondents were asked to bring forth advantages of using institutional arbitration over ad-hoc arbitration under this question of the interview guideline. Figure 4.18 shows the advantages identified by the respondents;

Nodes		
Name	Sources	Reference
Advantages of using institutional arbitration in Sri Lankan construction indu	10	10
Pre tested rules and firm procedures	7	7
Predefined time frame	2	2
Proper supervision and administration	5	5
Responsibility by the Institution	2	2
Arbitrators not act beyond limits	1	1

Figure 4.18: Advantages of using institutional arbitration in Sri Lankan construction industry

Most frequently mentioned advantage of institutional arbitration was it comprises with proven set of pre-tested rules and firm procedures. Seven respondents namely; R1, R2, R3, R4, R7, R8 and R10 mentioned that, rules and procedures stipulated by the institutions are very easy for managing the whole process. Moreover, five respondents brought up proper supervision and administration as a key advantage in institutional arbitration. Accordingly, R5 stated that, as institutions provide adequate supervision and administration, arbitrators cannot act beyond their limits, which is indirect advantage in institutional arbitration. Most importantly, institution holds the full

responsibility throughout the arbitration process where parties do not need to take any additional effort as per R3 and R9. Furthermore, R1 and R2 pointed out institutional arbitration provide time limit to complete the arbitral process, which cannot be found in ad-hoc arbitration.

4.3.4.2 Disadvantages of using institutional arbitration method in Sri Lankan construction industry

Figure 4.19 represents the coding structure of different views of experts on disadvantages of using institutional arbitration method in Sri Lankan construction industry.

Nodes			
Name	Sources	References	
Disadvantages of using institutional arbitration method in Sri Lankan con	9	9	
Limited time frame	3	3	
High cost	4	4	
Bureaucracy	2	2	
Strict procedures	3	3	
Less awareness regarding institutional arbitration	1	1	

Figure 4.19: Disadvantages of using institutional arbitration in Sri Lankan construction industry

Institutional arbitration is usually involving high cost due to administrative fees for the use of facilities and getting services from the institution. This was identified as a disadvantage in institutional arbitration according to four respondents. According to R1, R7 and R10, parties may face difficulties with allocated time for arbitral proceedings since institutional arbitration involving pre agreed time limit where parties require to respond within this limited time frames. In compliance with that, R1 stated, *“disputant parties in Sri Lanka do not have enough knowledge to deal with institutional arbitration since they cannot even submit their submissions on time. Thus, it is very difficult for Sri Lankans to adopt for these limited time frames”*. Further to the respondent, it is recommended to have fixed time frame to resolve disputes in Sri Lanka as people usually require strict rules and guidance to keep them on the track.

Specially, sometimes ad-hoc arbitration can incur more cost than institutional arbitration as parties and arbitrators can drag the process drastically since it does not contain a time limit to resolve the dispute. Other than that, bureaucracy within the institution may lead additional cost and unnecessary delays in the proceedings as per R2 and R6. Besides, procedures stipulated by institution are rigid as those cannot be changed based on the requirements of the parties and nature of the dispute, which ultimately result in lengthy procedures and high cost according to R4.

4.3.4.3 Facilitation from legal system of Sri Lanka for institutional arbitration

Subsequent question of the interview guideline was focused to obtain experts' opinions regarding sufficiency of facilitation from prevailing legal system of Sri Lanka towards institutional arbitration. Out of ten respondents, nine respondents were stated that assistance from prevailing legal system of Sri Lanka is adequate, but there are minor adjustments to be made. Pointing out areas to be amended, R3 stated "*once an interim award is granted, whether the other party can take an action against it is a grey area in Arbitration Act*". Furthermore, R4 mentioned that timeframe to provide arbitral award should be specified in the Act. Further to the respondent, a proper institute for arbitration should be established under the Arbitration Act, because current institutions are not proper professional bodies to carryout institutional arbitration. Besides, R5 stated that prevailing legal system of Sri Lanka is adequate for institutional arbitration, however, not much facilitate for ad-hoc arbitration.

In addition to above, experts were requested to provide their thoughts regarding currently functioning arbitral institutions whether they provide proper assistance for institutional arbitration in Sri Lanka. Thus, eight respondents were stated that prevailing institutions provide satisfactory level of assistance for institutional arbitration. In accordance with that, R6 explained "*yes, nothing to explain, institutions have a good set of rules and procedures, expertise to overcome party disagreements half way through the process and review awards at the end*". However, two respondents were not agreed with the above and they stated that service from the institutions as full professional capacity is not there. Further, most of the respondents mentioned that institutions should further expand their facilities to serve better.

4.3.4.4 Challenges faced by arbitrators when practicing institutional arbitration in Sri Lankan construction industry

Under this question, challenges faced by arbitrators in using institutional arbitration method in Sri Lankan construction industry which is part of the third objective of the study was analysed using NVivo 11 software. Challenges identified by all the respondents were summarised as shown in Figure 4.20.

Nodes			
Name	Sources	Reference	
Challenges faced by arbitrators in using institutional arbitration method	9	9	
Arbitrators have to stick to the time	3	3	
Arbitrators have to follow strict rules & guidelines	7	7	
Less knowledge and awareness among arbitrators	2	2	
Disagreements in selecting arbitrators	2	2	

Figure 4.20: Challenges faced by arbitrators when practicing institutional arbitration

Out of ten respondents, only nine respondents were answered to this question and most frequently mentioned challenge by the respondents was arbitrators are bound to follow strict rules and guideline stipulated by the institution. Moreover, arbitrators required to comply with the limited time provided by the institution as per R1, R7 and R10. In view of that, R1 mentioned “*arbitrators also have to stick to the time. So, they have specific time frame for giving the decision and they also have to follow the strict guidelines*”. Further to R2 and R10, inadequate knowledge and awareness among arbitrators pursuant to institutional arbitration can be identified as another challenge faced by arbitrators when practicing institutional arbitration. Besides, R3 and R9 mentioned that disagreements between parties and the institution can happen since panel of arbitrators are nominated by the institution, which is another challenge faced by arbitrators.

4.3.4.5 Strategies to overcome the challenges when practicing institutional arbitration in Sri Lankan construction industry

The next question of the interview guideline was focussed to find strategies to overcome the above identified challenges when using institutional arbitration in Sri Lankan construction industry. Responses were summarised in below Figure 4.21.

Nodes		
Name	Sources	Reference
Strategies to overcome the identified challenges in using institutional arbitra	9	9
Full commitment of parties	3	3
Train arbitrators to carry out institutional arbitration	3	3
Provide preferred list of arbitrators to select	1	1
Establish proper institution under the Act	1	1
Periodically update rules and procedures	1	1

Figure 4.21: Strategies to overcome the challenges when practicing institutional arbitration

Since institutional arbitration comprising with strict rules and limited time frame, parties must give their full commitment to comply with the requirement of institution in order to resolve the dispute successfully as per R1, R6 and R7. Furthermore, as less knowledge and awareness as a key challenge when practicing institutional arbitration in Sri Lanka, experts including R1, R4 and R10 suggested that, proper training should be given for arbitrators focusing to carry out institutional arbitration. In addition to that, R2 stated, *“more and more industry professionals should enter in to the arbitration. Paper qualifications of arbitrators are not enough, their practical experience in construction industry matters the most”*. Furthermore, as institutions comprising with strict rules and guidelines, R6 suggested to periodically update the rules and procedures of institutions based on current requirements and should not allow them to become obsolete. Moreover, to overcome disagreements in selecting arbitrators, R3 proposed institutions to give preferred list of arbitrators to the parties and ask them to select sole arbitrator or three arbitrators as they wish. Additionally, R4 mentioned that, a proper institute for arbitration should be established under the Act, which comprising with adequate facilities and capacity to deal with institutional arbitration to overcome most of the challenges faced by arbitrators and parties.

4.3.5 Comparison of Ad-hoc and Institutional Arbitration in Sri Lankan Construction Industry

In order to evaluate the applicability and appropriateness of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry as third objective of the research, experts were asked to provide their opinions by comparing ad-hoc and institutional arbitration together in terms of different factors. Responses received from experts were summarised in Table 4.2.

Table 4.2: Comparison of ad-hoc and institutional arbitration in Sri Lankan construction industry

Factor	Ad-hoc Arbitration	Institutional Arbitration	Both	Cannot specify
Less expensive	3	2		5
Less time consuming	2	6		2
More flexible	10			
Provide legally valid, accurate and impartial arbitral award		2	8	
Require more corporation between parties	10			
Suitable for prevailing legal system of Sri Lanka	3	5	2	
Most feasible to carryout in Sri Lankan construction industry	7	3		
Most convenient form of arbitration based on arbitrators	5	5		
Most suitable form of arbitration in overall	3	7		

As per respondents' opinions, five respondents were stated that, it is very difficult to specify one form of arbitration out of ad-hoc and institutional based on their cost. Because, in some instances, ad-hoc arbitration can consume more time to resolve the dispute due to the absence of time limit which can eventually result in high cost. In contrast, when some simple cases refer to institutional arbitration, it may involve more cost than ad-hoc arbitration if it refers to ad-hoc arbitration. In accordance with the above, R2 stated *"I cannot exactly specify. Some complex cases of ad-hoc arbitration*

also involve higher cost". When respondents were questioned regarding the time for arbitration, six respondents were mentioned that institutional arbitration consumes less time duration than ad-hoc arbitration. In line with this, R3 mentioned "*time depends on the complexity of the dispute. Averagely institutional arbitration requires less time*". Moving forward, all the respondents were agreed that ad-hoc arbitration provides more flexible procedures to be followed by the parties. Afterwards, parties were questioned on which form of arbitration provide legally valid, accurate and impartial arbitral award. Eight respondents were stated that both ad-hoc and institutional arbitration provide legally valid, accurate and impartial arbitral award. Nevertheless, R2 and R4 mentioned "*cannot say exactly. But institutional arbitration award is reviewed by another party, therefore it provides more accurate award*". Moreover, all the respondents were given same answer for the next question, which is ad-hoc arbitration as the form of arbitration which require more corporation between parties.

Five respondents were stated that, institutional arbitration is the most suitable form of arbitration for prevailing legal system of Sri Lanka. Accordingly, R3 mentioned, "*institutional arbitration is suitable because it is always linked with the court*". However, R1, R7 and R8 stated that ad-hoc arbitration is much suitable where R2 and R6 mentioned both ad-hoc and institutional arbitration are suitable for prevailing legal system of Sri Lanka. Moreover, respondents were asked to provide their opinions regarding, which form of arbitration is most feasible to carry out in Sri Lankan construction industry. Seven respondents were stated that ad-hoc arbitration is most feasible to carry out in Sri Lankan construction industry and three respondents were sated that institutional arbitration is more feasible to carry out. Explaining this, R6 mentioned "*I don't see a preference of one over the other apart from institutional support and well detailed procedural rules of an institution*". Furthermore, five respondents were mentioned that ad-hoc arbitration is the most convenient form of arbitration considering skills, knowledge and experience of arbitrators currently practicing in Sri Lankan construction industry while other five respondents holding their opining as institutional arbitration is more convenient. Accordingly, R2 stated

“ad-hoc arbitration is convenient in terms of arbitrators’ perspective which is not good for parties as arbitrators can drag the process unnecessarily”.

Finally, respondents were requested to provide their opinions regarding the most suitable form of arbitration out of ad-hoc and institutional arbitration methods in overall to Sri Lankan construction industry. Seven respondents were stated that, institutional arbitration is more suitable to Sri Lankan construction industry even though ad-hoc arbitration is feasible to carry out. Justifying this, R2 mentioned *“Institutional arbitration is more suitable as Sri Lankans need strict rules and guidance to keep them into the process. But when consider the applicability, at moment ad-hoc arbitration is more applicable. However, if we can properly practice institutional arbitration in Sri Lanka, it would be much better”.* While agreeing to above, R3 and R4 mentioned that, institutional arbitration is most suitable for Sri Lankan construction industry as it is legally valid, accurate and impartial and there is a recognition for institutional arbitration than ad-hoc arbitration. Moreover, R6 stated that, *“I can see institutional arbitration is more suitable over the other as institutional support for the parties and well detailed procedural rules of the institution because Sri Lankans inherently need strict rules to do works properly otherwise entire process can go wrong”.* In spite of that, three respondents mentioned ad-hoc arbitration as the most suitable form of arbitration to Sri Lankan construction industry. Accordingly, R1 mentioned, *“ad-hoc arbitration is the most suitable form of arbitration because, Sri Lankans cannot easily adhere to the strict time frames and guidelines in institutional arbitration”.* Further to R10, ad-hoc arbitration is more suitable due to its flexible guidelines and procedure.

4.3.6 Strategies to Enhance the Effectiveness of Ad-hoc and Institutional Arbitration in Sri Lankan Construction Industry

Fourth objective of the research is to identify strategies to enhance the effectiveness of ad-hoc and institutional arbitration to the Sri Lankan construction industry. Hence, this question of the interview guideline was developed to approach the fourth objective focusing to ad-hoc and institutional arbitration separately.

Since, strategies specific for each form of arbitration were discussed in above section, respondents were given their opinions pertaining to generic strategies, which can be used to enhance the effectiveness of ad-hoc and institutional arbitration. Thus, strategies proposed by respondents were summarised in Figure 4.22.

Nodes		
Name	Sources	References
Strategies to enhance the effectiveness of ad-hoc and institutional arbitrat	10	10
Encourage industry professionals to become arbitrators	5	5
Prevent involving retired judges with less construction knowledge as a	2	2
Introduce proper procedure for ad-hoc arbitration under the Act	2	2
Increase facilities and capacities of institutions	3	3
Provide more training to arbitrators	4	4

Figure 4.22: Strategies to enhance the effectiveness of ad-hoc and institutional arbitration in Sri Lankan construction industry

Generally, construction industry professionals are the one who most suitable to act as arbitrators with their high level of expertise regarding construction issues than retired judges. Accordingly, R1 and R6 stated that, it is better if parties can prevent retired judges, who do not possess construction knowledge from acting as arbitrators to enhance the effectiveness of ad-hoc arbitration as well as institutional arbitration. Further to five respondents including R1, construction professionals should be train as arbitrators and councillors to prepare submission and to present their cases. Specially focusing to ad-hoc arbitration, a proper procedure should be introduced under the Arbitration Act as there is no specific process to be followed throughout ad-hoc arbitration process. Therefore, R3 mentioned “*even a professional body like CIDA can introduce proper procedures to follow. Then no dispute regarding procedures will arise in ad-hoc arbitration*”.

Furthermore, R1, R4 and R7 stated that, facilities and capacities of prevailing institutions in Sri Lanka should be increased to enhance the effectiveness of arbitral proceedings. Accordingly, R5 stated, “*Institutions should have clear identification on their duty. It is not only to appoint a panel and do proceedings. Institutions should be a theoretical institution, which consisting of every kind of professionals in the*

construction industry as arbitrators". Moreover, R1, R2, R6 and R10 proposed to provide proper training programs for arbitrators to develop their skills and knowledge in arbitration to enhance the effectiveness of arbitration.

4.4 Discussion

Arbitration is a dispute resolution mechanism which is alternative to litigation. In construction industry, arbitration existing as a significant part of dispute resolution as it contains dispute resolver with adequate industry related technical and legal knowledge. According to findings of the study, there is a demand for arbitration in Sri Lankan construction industry as well but awareness regarding arbitration is not in a satisfactory level to compete with international market. However, the most significant feature of arbitration is that it provides detailed analysis on the case by allowing sufficient time for parties to present their submissions unlike in other ADR methods.

In terms of both literature findings and study, there are two forms of arbitration namely ad-hoc and institutional. Further to the findings of the study, ad-hoc arbitration is the most frequently used form of arbitration in Sri Lankan construction industry. The major reason for selecting ad-hoc arbitration is the cost effectiveness for simple cases according to experts but this can be vary based on the nature of the dispute and commitment of the parties. Specifically, ad-hoc arbitration has the potential to drag the process unavoidably as there is no proper supervision and procedures. Moreover, as parties not well aware of the process, arbitrators decide the procedure which will ultimately depends upon the capabilities of arbitrators in ad-hoc arbitration. The major challenge faced by arbitrators when using ad-hoc arbitration is controlling time of the proceedings. Therefore, sufficient procedural rules should be introduced under the Arbitration Act to overcome this.

Majority of the international contractors and upper-level local contractors tend to go for institutional arbitration. Most importantly, institutional arbitration contains proper procedures and administration which is a major reason why parties chose institutional arbitration over ad-hoc arbitration. The reliability of rules and procedures are high in the institutions as they are pre tested through practice over a long period of time.

Basically, institutional arbitration engaged with high cost due to administrative fees and for use of facilities which may identified as a disadvantage. In contrast, ad-hoc arbitration even incurs high cost when arbitral proceedings subjected to drag through long period of time due to the absence of time limit. In addition to that, arbitrators have to follow strict rules and guidelines same as disputant parties which is a major challenge faced by arbitrators when dealing with institutional arbitration in Sri Lankan construction industry. Therefore, arbitrators should properly train to carry out institutional arbitration as a remedy for above.

Further to outcome of the study, skills and knowledge of arbitrators practicing in Sri Lanka is generally not in an adequate level which is only enough for domestic arbitration but not enough for international arbitration in terms of both ad-hoc and institutional arbitration. Moreover, prevailing legal system of Sri Lanka is adequately facilitating for ad-hoc and institutional arbitration but there are minor adjustments to be made like introducing time limit to issue the arbitral award under the Arbitration Act.

As a summary of the discussion, it can be emphasised that all respondents have agreed with the findings from literature survey and they have further provided more information with their experience and expertise. As stated by respondents, ad-hoc arbitration is the most feasible form of arbitration in Sri Lankan construction industry. However, in overall, institutional arbitration can be recognised as the most suitable form of arbitration for Sri Lankan construction industry based on its number of advantages. Most importantly, parties and arbitrators should give their best commitment to adhere to the rules and procedures of the institutions to end the arbitration successfully.

4.5 Validation of Findings

Research validation basically provides an opportunity to review the research findings and allow the findings to be verified from subject matter experts. Accordingly, final outcome of this research was presented to three arbitrators who have expertise

knowledge in Sri Lankan arbitration for the verification and validation. Table 4.3 presents the details of experts who involved to the validation of research findings.

Table 4.3: Details of experts for validation

Expert	Designation	Experience in arbitration
E1	Arbitrator, Attorney at Law, Chartered Engineer	Over 20 years in construction dispute resolution as arbitrator
E2	Arbitrator, Adjudicator, Management Consultant	Over 18 years in construction dispute resolution and 12 years practicing as arbitrator
E3	Arbitrator, Contract Specialist, Chartered Engineer	11 years in construction dispute resolution and 8 years practicing as arbitrator

Industry experts agreed with the findings and satisfied with the final outcome of the research. They specifically mentioned that, even though disputant parties and arbitrators may not comfortable with strict rules and procedures of the institutions, country like Sri Lanka should have strict rules and guidelines to bind the parties in to the process which is only can be obtained through institutional arbitration. Moreover, one expert requested to carry out further research regarding particular areas where arbitrators need more training to develop their skills.

Validation was conducted successfully with the guidance given by the three experts and as a result they accepted institutional arbitration as the most suitable form of arbitration for resolving disputes in Sri Lankan construction industry. Figure 4.23 indicates the summary of research findings, which was validated by three experts.

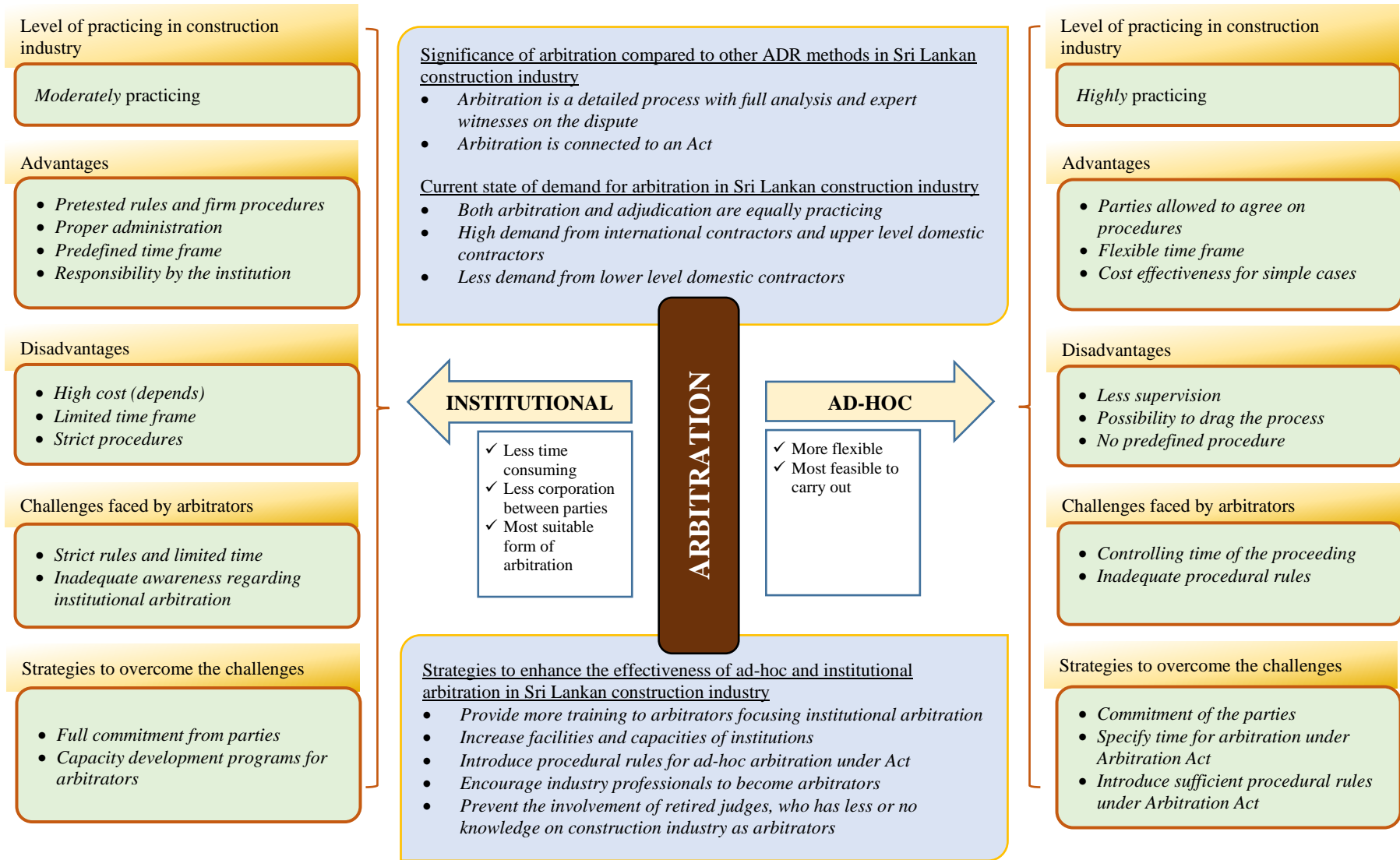


Figure 4.23: Summary of research findings

Key findings of the study have summarised under major topics. According to the above, arbitration is significant in Sri Lanka as it contains comprehensive procedure with full analysis on the dispute, which have legal backing through Arbitration Act. Further, there is a high demand for arbitration from international and upper-level domestic contractors in Sri Lanka, while having less demand from lower-level domestic contractors.

As Figure 4.23 shows, ad-hoc arbitration is highly practicing in Sri Lankan construction industry compared to institutional arbitration, because of having advantages like party autonomy in terms of deciding procedures, flexible time frame and cost effectiveness for simple cases. In spite of that, less supervision and controlling time are prevailing as disadvantages for ad-hoc arbitration. Arbitrators also face challenges when controlling time of the proceedings and sometimes due to inadequate procedural rules in ad-hoc arbitration. However, these challenges can be overcome through parties' full corporation to stick to the process and including a provision for time limit and procedural rules to the Arbitration Act as a strategy.

Institutional arbitration is moderately practicing in Sri Lankan construction industry as shown in Figure 4.23. Most importantly, predefined time frame and firm procedures with proper administration are prevailing as advantages of institutional arbitration while high cost, limited time frame and strict procedures sometimes cause problems. When practicing institutional arbitration, arbitrators have to face challenges like strict rules, limited time and inadequate awareness regarding institutional arbitration. However, these challenges can be overcome through full commitment from the parties and conducting capacity development programs for arbitrators.

In addition to the strategies mentioned above, there are few other strategies found through the study to enhance the effectiveness of ad-hoc and institutional arbitration. Accordingly, facilities and capacities of prevailing institutions can be increased for the enhancement of both ad-hoc and institutional arbitration. Further, encouragement programs for construction professionals can be conducted to motivating them to become arbitrators while minimising the involvement of retired judges, who has less or no knowledge on construction industry practices as arbitrators.

4.6 Chapter Summary

This chapter mainly contained a widespread discussion and analysis on the semi-structured interview guideline based on the collected data. The discussion was carried out under key sub categories namely Arbitration in Sri Lanka, current practices of ad-hoc and institutional arbitration in Sri Lankan construction industry, applicability and appropriateness of ad-hoc and institutional arbitration in Sri Lankan construction industry and strategies to enhance the effectiveness of ad-hoc and institutional arbitration. Data validation was done by three experts who have the expertise knowledge in Arbitration. The next chapter is focused to summarise the findings discovered within this chapter together with conclusions and recommendations.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses to conclude the research findings to achieving the aim of the study. Further, this chapter provides recommendations and research areas to be further extended related to suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry.

5.2 Overview of Research and Conclusions

Construction industry is more likely to engage with disputes due to its risk prone work environment and dynamic nature. Therefore, conflicts constantly direct any construction project towards problematic situation by giving rise to project delays, cost overruns or damage to business relationships between parties. Thus, dispute resolution prevailing as vital in construction industry where ADR methods have obtained a massive popularity. As most researchers reveal, arbitration has acquired more demand among other ADR methods with the global recognition of enforceability of arbitral award and due to its comprehensive analysis on the dispute. Basically, Arbitration practicing as two forms in Sri Lanka namely, ad-hoc and institutional, which have their own strengths and weaknesses. Even though there are many researches available regarding ad-hoc and institutional arbitration pertaining to global context, there are less evidences in researches on the suitability of ad-hoc and institutional arbitration for the Sri Lankan construction industry. Therefore, this research was intended to investigate the suitability of both ad-hoc and institutional arbitration for the Sri Lankan construction industry.

A detailed literature survey was conducted with the intention of discovering different types of arbitration and their significance in construction industry as a general overview. It includes different forms of arbitration, their applications, significance, advantages and disadvantages. First objective was achieved through the literature survey.

Moreover, data collection and analysis were carried out to accomplish the remaining objectives of the research. To obtain more comprehensive output from the experts through semi-structured interviews, a qualitative approach was selected for the research. Furthermore, content analysis with the aid of NVivo 11 software was conducted for data analysis as it provides effective data analysis and presentation.

The second objective was to conduct situational analysis on the practice of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry. In accordance with the findings, both ad-hoc and institutional arbitration provide detailed analysis on the case which is one of the major reasons why most parties tend to resolve their disputes through arbitration. However, there are some barriers when carrying out arbitration in Sri Lanka like high cost when compared with other ADR methods. Further, it was identified that, ad-hoc arbitration is the form of arbitration which is mostly used in Sri Lankan construction industry.

After identifying the usage of ad-hoc and institutional arbitration, it was critically analysed the applicability and appropriateness of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry through responses received through semi-structured interviews. With consideration of ad-hoc arbitration, parties are allowed to agree on the procedures of the arbitration in the beginning of the process, which is one of the major advantages. However, there is a major barrier in ad-hoc arbitration, which is the probability to drag the process by consuming more time to resolve the dispute as no limitation has stipulated in ad-hoc arbitration. Therefore, the key challenge for arbitrators involving in ad-hoc arbitration is to control time of the proceedings and it can overcome through the commitment of the parties and by introducing a time limit to provide the arbitral award under Arbitration Act. Moreover, fast-track arbitration can be used as a good solution to overcome delay in proceedings which is an integrated approach of ad-hoc and institutional arbitration involved with short period for a quick resolution.

As far as institutional arbitration is concerned, it contains pre tested set of rules and firm procedures to carryout arbitration, which is a key advantage but parties should bear considerably high cost as a barrier to proceed with it. In contrast, ad-hoc

arbitration has the potential to incur more cost than institutional arbitration as parties and arbitrators are likely to drag the process drastically since it does not contain a time limit to resolve the dispute. However, arbitrators have to follow strict rules and guidelines stipulated by institutions, which is one of the major challenges faced by arbitrators. This can be overcome by providing sufficient training to the arbitrators and through proper commitment of the parties to stick to the process.

After proper analysis on both ad-hoc and institutional arbitration practicing in Sri Lanka, it can be concluded that, institutional arbitration as the form, which consumes less time to resolve the dispute. Further, ad-hoc arbitration can be recognised as the most flexible form of arbitration and both form of arbitration provides legally valid, accurate and impartial arbitral award. Most importantly, ad-hoc arbitration requires more cooperation between parties in order to carry out the arbitration successfully. As per findings of the study, institutional arbitration is most suitable for the prevailing legal system in Sri Lanka and ad-hoc arbitration is most feasible to carryout in Sri Lankan construction industry. Eventually, it can be concluded that, institutional arbitration is the most suitable form of arbitration to resolve disputes in Sri Lankan construction industry when considered as a whole.

Final objective of the research was to propose strategies to enhance the effectiveness of ad-hoc and institutional arbitration to the Sri Lankan construction industry. Most frequently suggested strategy was to encourage more and more construction industry professionals to become arbitrators while minimising the involvement of retired judges with no or less knowledge on construction industry and its practices. Furthermore, it was proposed to provide more training to arbitrators and increase facilities and capacities of prevailing institutions to enhance the effectiveness of arbitration.

The findings of the research were presented to three experts in arbitration and get validated from them for enhance the validity and reliability of the study. Experts were satisfied with the findings and further agreed that, institutional arbitration can be identified as the most suitable form of arbitration for resolving disputes in Sri Lankan construction industry.

5.3 Recommendations for Construction Industry

According to findings of the study, there are number of suggestions related to ad-hoc and institutional arbitration have been made by the respondents who were participated in the data collection for the betterment of construction industry in Sri Lanka. As identified through objectives of the research, below recommendations can be proposed for advancement of the construction industry.

- Introduce capacity development programs for currently practicing arbitrators to develop their skills to carry out institutional arbitration. Since institutional arbitration consist strict rules and firm procedures, arbitrators need proper training to conduct the arbitral proceedings effectively.
- Conduct awareness programs among construction industry professionals regarding ad-hoc and institutional arbitration. Through these programs, inducements can be given for industrial experts to become as arbitrators as there is a need to increase the number of arbitrators who have expertise knowledge regarding construction technical matters.

5.4 Recommendations for Government

According to the experts' opinions, few amendments to the Arbitration Act can be made through involvement of the government as it is the only authorised body to update existing law. Therefore, government should concern on following areas.

- Since ad-hoc arbitration does not comprising with time limit to provide the arbitral award, the government can amend the Arbitration Act by introducing a provision for maximum duration for arbitration. Most importantly, this can prevent unnecessary time and cost involvement in ad-hoc arbitration.
- Introduce proven set of procedural rules under Arbitration Act for ad-hoc arbitration. Unlike in institutional arbitration, ad-hoc arbitration does not equip with specific procedures to follow. Even though arbitrators use civil procedural code as a backing for that, it is recommended to introduce proper procedural rules under Arbitration Act focussing to ad-hoc arbitration.

5.5 Recommendations for Academic Researchers

Arbitration in construction industry is an immense area to do many studies and researches. Some further research areas can be denoted as follows.

- Investigate on requirement of capacity development for arbitrators practicing in Sri Lankan construction industry
- Specific skills and competencies to be possessed by arbitrators to involve in ad-hoc and institutional arbitration in Sri Lankan construction industry
- Investigate the amendments to the Arbitration Act No. 11 of 1995 for the enhancement of ad-hoc and institutional arbitration in Sri Lankan construction industry
- Suitability of ad-hoc and institutional arbitration for resolving disputes in other countries

REFERENCES

- Abeynayake T E, M. D. (2017). *Alternative Dispute Resolution Methods Used in the Construction Industry in Sri Lanka* (Unpublished Thesis Master of Philosophy). University of Moratuwa, Moratuwa, Sri Lanka.
- Abeynayake, M., & Weddikkara, C. (2012). Arbitration as an Alternative Dispute Resolution Method in the Construction Industry of Sri Lanka. In *World Construction Conference 2012 – Global Challenges in Construction Industry*. Retrieved from <http://dl.lib.mrt.ac.lk/handle/123/14828>
- Abeynayake, M., & Weddikkara, c. (2013). *Special Features and Experiences of the Full-Term Dispute Adjudication Board as an Alternative Dispute Resolution Method in The Construction Industry of Sri Lanka*. Retrieved from https://d1wqtxts1xzle7.cloudfront.net/34923597/mahesh_abeynayake.pdf?
- Akkas, N. (2019, February 5). Advantages and disadvantages of the ad-hoc arbitration. Retrieved from <https://turkishlawblog.com/read/article/65/advantages-anddisadvantages-of-the-ad-hoc-arbitration>
- Aksen, G. (1991). Ad-hoc versus institutional arbitration. *ICC IC Arb. Bull*, 2, 8-14.
- Alemayehu, D. (2014). *Review of Arbitration in Ethiopian Construction Industry* (Unpublished master's thesis). Addis Ababa University, Ethiopia.
- Al Hyari, O. H., & Al Ani, A. R. (2021). Post award arbitral tribunal's mandate under the UNCITRAL model law and national laws based thereon. *Heliyon*, 7(7), e07556. <https://doi.org/10.1016/j.heliyon.2021.e07556>
- Aliaj, E. (2016). Dispute resolution through ad-hoc and institutional arbitration. *Academic Journal of Business, Administration, Law and Social Sciences*, 2(2), 241-250. Retrieved from https://iris.uniroma1.it/retrieve/handle/11573/948312/373104/Aliaj_Dispute_2016.pdf
- Allen, M. (2011). *Construction disputes on the rise*. *Construction Law Journal*, 27(6), 525-528. Retrieved from http://building.com.hk/forum/2011_0729const_donr.Pdf

- Al Tamimi, E. (2017). International commercial arbitration in the MENA: Institutional v Ad Hoc: A Wealth of Choice. *Arbitration*, 14-20. <https://www.ciarb.org/media/1403/international-commercial-arbitration-in-the-mena.pdf>
- Alpkokin, P., & Capar, M. S. (2019). Dispute boards in Turkey for infrastructure projects. *Utilities Policy*, 60, 100958. doi:10.1016/j.jup.2019.100958
- Amaradiwakara, S. P. W. (2017). *Effectiveness of Negotiation as a Method of Alternative Dispute Resolution in Sri Lankan Construction Industry* (Unpublished master's thesis). University of Moratuwa, Moratuwa, Sri Lanka.
- Amarasooriya, B., & Abeynayake, M. (2011). *Arbitration as an Effective Mechanism for Dispute Resolution in Construction Industry of Sri Lanka*. Paper presented at 15th Pacific Association of Quantity Surveyors Congress, Colombo, Sri Lanka.
- Amaratunga, D., Baldry, D., Sarshar, M., & Newton, R. (2002). Quantitative and qualitative research in the built environment: Application of “mixed” research approach. *Work Study*, 51(1), 17-31. <https://doi.org/10.1108/00438020210415488>
- Amoatey, C. T., Ameyaw, Y. A., Adaku, E. & Famiyeh, S. (2015), Analyzing delay causes and effects in Ghanaian state housing construction projects, *International Journal of Managing Projects in Business*, 8(1), 198 – 214 doi.org/10.1108/IJ MPB-04-2014-0035
- Anaman, K. A., & Osei-Amponsah, C. (2007). Analysis of the causality links between the growth of the construction industry and the growth of the macro-economy in Ghana. *Construction Management and Economics*, 25(9), 951-961. doi:10.1080/01446190701411208
- Arkin, H. L. (1987). International ad-hoc Arbitration: A practical Alternative. *International Business Lawyer*, 15, 5. Retrieved from <https://heinonline.org/HOL/LandingPage?handle=hein.journals/ib115&div=6&id=&page=>
- Ashworth, A., & Hogg, K. (2002). *Willis's practice and procedure for the quantity surveyor*. Wiley-Blackwell.

- Attar, A. A., Gupta, A. K., & Desai, D. B. (2012). A study of various factors affecting labour productivity and methods to improve it. *IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)*, 11-14. Retrieved from [http://iosrjournals.org/iosr-jmce/papers/sicete\(civil\)-volume1/3.pdf](http://iosrjournals.org/iosr-jmce/papers/sicete(civil)-volume1/3.pdf)
- Bekele, A. (2005). *Alternative Dispute Resolution Methods in Construction Industry: An Assessment of Ethiopian Situation* [Master's thesis]. <http://213.55.95.56/handle/123456789/506>
- Berger, K. P. (2018). Institutional arbitration: Harmony, disharmony and the 'Party autonomy paradox'. *Arbitration International*, 34(4), 473-493. doi:10.1093/arbint/aiy028
- Bhattacharjee, A. (2012). Social science research: Principles, methods, and practices. Retrieved from scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1002&context
- Blackaby, N., Partasides, C., Redfern, A., & Hunter, M. (2009). *Redfern and hunter on international arbitration*. Oxford University Pr.
- Blake, S., Browne, J., & Sime, S. (2014). *A practical approach to alternative dispute resolution*. Oxford University Press (UK).
- Blanke, G. (2008). Institutional versus ad-hoc arbitration: A European perspective. *ERA Forum*, 9(2), 275-282. doi:10.1007/s12027-008-0055-6
- Bluhm, D. J., Harman, W., Lee, T. W., & Mitchell, T. R. (2010). Qualitative research in management: A decade of progress. *Journal of Management Studies*, 48(8), 1866-1891. doi:10.1111/j.1467-6486.2010.00972.x
- Bockstiegel, K. (2012). Commercial and investment arbitration: How different are they today?: The Lalive lecture 2012. *Arbitration International*, 28(4), 577-590. doi:10.1093/arbitration/28.4.577
- Bok, D. (2011). Universities in the marketplace: *The commercialization of higher education*. Retrieved from <https://books.google.lk/books?hl=en&lr=&id=jp333nuZrToC&oi=fnd&pg=PR1&dq=Universities+in+the+Marketplace:+The+Commercialization+of+Higher+Education&ots=7KGCtPTWqJ&sig=my05>

Ngjgkkgzh7W70acSIjW1WM&redir_esc=y#v=onepage&q=Universities%20in%20the%20Marketplace%3A%20The%20Commercialization%20of%20Higher%20Education&f=false

Brooker, P., & Lavers, A. (2010). Perceptions of alternative dispute resolution as constraints upon its use in the UK construction industry. *Construction Management and Economics*, 15(6), 519-526. doi:10.1080/014461997372728

Brown, H. J., & Marriott, A. L. (1999). *ADR principles and practice*.

Carbonneau, T. E. (2014). *Law and practice of arbitration* - (5th ed.). Juris Publishing.

Carneiro, D., Novais, P., Andrade, F., Zeleznikow, J., & Neves, J. (2010). Using case-based reasoning to support alternative dispute resolution. *Advances in Intelligent and Soft Computing*, 123-130. https://doi.org/10.1007/978-3-642-14883-5_16

Central Bank of Sri Lanka Annual Report 2020. (2021). Retrieved from Central Bank of Sri Lanka website: https://www.cbsl.gov.lk/sites/default/files/cbslweb_documents/publications/annual_report/2020/en/5_Chapter_01.pdf.

Chan, P. (2014). A book review of “Best practice in construction disputes – Avoidance, management and resolution”. *Construction Economics and Building*, 14(3), 99. doi:10.5130/ajceb.v14i3.4153

Check, J., & Schutt, R. K. (2012). *Research methods in education*. Retrieved from <https://dx.doi.org/10.4135/9781544307725>

Chen, H. H. (2012). A review of the Taiwanese court’s ruling on ad-hoc arbitral awards. *Asia Pacific Law Review*, 20(1), 89-112. doi:10.1080/10192557.2012.11788256

Cheung, S. (1999). Critical factors affecting the use of alternative dispute resolution processes in construction. *International Journal of Project Management*, 17(3), 189-194. doi:10.1016/s0263-7863(98)00027-1

- Cheung, S., & Suen, H. C. (2002). A multi-attribute utility model for dispute resolution strategy selection. *Construction Management and Economics*, 20(7), 557-568. doi:10.1080/01446190210157568
- Chinyere, I. I. (2011). Procedures and arrangement for dispute resolution management in international construction development projects. *Interdisciplinary Journal of Research in Business*, 1(9), 61-71.
- Chong, H., & Zin, R. M. (2012). Selection of dispute resolution methods: Factor analysis approach. *Engineering, Construction and Architectural Management*, 19(4), 428-443. doi:10.1108/09699981211237120
- Conrad, C. F., & Serlin, R. C. (2011). *The SAGE handbook for research in education: Pursuing ideas as the Keystone of exemplary inquiry*. Retrieved from <https://books.google.lk/books>
- Coutts, C., & Dann, M. G. (2009). *Dispute resolution practice*. London, UK: Sweet & Maxwell Publishers.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). SAGE Publications. http://isites.harvard.edu/fs/docs/icb.topic1334586.files/2003_Creswell_A%20Framework%20for%20Design.pdf
- Danuri, M. S. M., Ishan, Z. M., Mustafa, N. E., & Jaafar, M. S. (2012). A revisit on the current practice of dispute resolution and ADR in the Malaysian construction industry. *Journal of Design and Built Environment*, 10(1). Retrieved from <https://jice.um.edu.my/index.php/jdbe/article/download/5316/>
- Denzin, N. K., & Lincoln, Y. S. (2017). *The SAGE handbook of qualitative research*. SAGE Publications. <https://books.google.com/books?hl=en&lr=&id=AIRpMHgBYqIC&oi=fnd&pg=PP1&dq=The+SAGE+handbook+of+qualitative+research&ots=kpCSyIkkpC&sig=OX7MrW5IzbFess9aGI7WVKzIgeM>
- De Zylva, E. (2006). Alternative Dispute Resolution systems for construction contracts. In K. Kanagisvaran & S. S. Wijeratne (Eds.), *Arbitration law in Sri Lanka* (pp. 117-138). Colombo, Sri Lanka: Institute of Commercial Law and Practice (ICLP), Sri Lanka.

De Zylva, E., 2006. Alternative Dispute Resolution systems for construction contracts.

Drahozal, C. R., & Naimark, R. W. (2005). *Towards a science of international arbitration: Collected empirical research*. Retrieved from <https://books.google.com/books?hl=en&lr=&id=nhu0SnNxxkagC&oi=fnd&pg=PR11&dq=Towards+A+Science+Of+International+Arbitration:+Collected+Empirical+Research&ots=Yksb884Mfi&sig=iWpeDMyP1UWjveDSWsDjk-3k0dE>

Duke, N. K., & Mallette, M. H. (2011). *Literacy research methodologies* (2nd ed.). Retrieved from https://books.google.ae/books?hl=en&lr=&id=KL65kF-1kGkC&oi=fnd&pg=PR1&dq=literacy+research+methodologies&ots=x_ICaRbIDP&sig=3T-lArI1_-g0ZC0pTA4c_7bL2l0&redir_esc=y#v=onepage&q=literacy%20research%20methodologies&f=false

El-adaway, I. H., Ezeldin, A. S., & Yates, J. K. (2009). Arbitral tribunal proceedings case study: Egyptian large-scale construction project. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, 1(3), 147-153. doi:10.1061/(asce)1943-4162(2009)1:3(147)

Elo, S., & Kyanga, S. H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115. doi: 10.1111/j.1365-2648.2007.04569.x

Elziny, A., Mohamadien, M., Ibrahim, H., & Fattah, M. A. (2016). An expert system to manage dispute resolutions in construction projects in Egypt. *Ain Shams Engineering Journal*, 7(1), 57-71. <https://doi.org/10.1016/j.asej.2015.05.002>

Flyvbjerg, B. (2013). Over budget, over time, over and over again managing major projects. In P. W. G. Morris, J. K. Pinto, & J. Söderlund (Eds.), *The Oxford handbook of Megaproject management* (pp. 321-344). Oxford University Press.

Gad, G. M., & Shane, J. S. (2012). A Delphi study on the effects of culture on the choice of dispute resolution methods in international construction contracts. *Construction Research Congress 2012*. doi:10.1061/9780784412329.001

Gad, G. M., Kalidindi, S. N., Shane, J., & Strong, K. (2011). Analytical framework for the choice of dispute resolution methods in international construction projects based on risk factors. *Journal of Legal Affairs and Dispute Resolution in*

Engineering and Construction, 3(2), 79-85. doi:10.1061/(asce)la.1943-4170.0000067

- Garth, B. G. (2015). *International Arbitration: International encyclopedia of the social & behavioral sciences* (2nd ed.). Elsevier. <http://dx.doi.org/10.1016/B978-0-08-097086-8.86039-0>
- Gebken, R. J., & Gibson, G. E. (2006). Quantification of costs for dispute resolution procedures in the construction industry. *Journal of Professional Issues in Engineering Education and Practice*, 132(3), 264-271. doi:10.1061/(asce)1052-3928(2006)132:3(264)
- Goddard, W., & Melville, S. (2004). *Research methodology: An introduction*. Retrieved from https://books.google.ae/books?hl=en&lr=&id=bJQJpsU2a10C&oi=fnd&pg=PA1&dq=Research+methodology:+An+introduction&ots=Xuo6UbER9m&sig=LCUffMXr_4LIT0Kd4ZwYPKb0RHg&redir_esc=y#v=onepage&q=Research%20methodology%3A%20An%20introduction&f=false
- Golafshani, N. (2003, December). Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4), 597-607.
- Golsong, H. (1984). A Guide to Procedural Issues in International Arbitration. In *International Lawyer* (pp. 633-643). Retrieved from <https://scholar.smu.edu/cgi/viewcontent.cgi?article=3720&context=til>
- Govindarajan, M. (2020, February 18). Institutional, statutory and ad-hoc arbitration. Retrieved from https://www.taxmanagementindia.com/visitor/detail_article.asp?ArticleID=8960
- Graffi, L. (2013). *Securing harmonized effects of international arbitration agreements: A comparative analysis of case law and legal doctrine in the United States, France, Italy and Switzerland*. LAP Lambert Academic Publishing.
- Green, S., & Savage, D. (2013, April 1). Ad-hoc V international arbitration. Retrieved from <https://www.charlesrussellspeechlys.com/en/news-and-insights/insights/real-estate/2013/ad-hoc-v-international-arbitration/>

- Gregory, D. W., & Berg, P. A. (2013). Construction Lawyer: Problem or Problem Solver; The Need for Cost-Effective Dispute Resolution in the Construction Industry. *Constr. Law*, 33, 16. Retrieved from <https://heinonline.org/HOL/LandingPage?handle=hein.journals/conlaw33&div=91&id=&page=>
- Gunasena, K. B. D. (2010). Performance of Critical Attributes in Alternative Dispute Resolution (ADR): A Study in Sri Lankan Construction Industry. *Sri Lankan Quantity Surveyors Journal*, 4(10), 42-48. Retrieved from <http://www.slqsuae.org/wp-content/uploads/2012/10/J4.pdf#page=43>
- Gupta, P. K., & Mittal, S. (2011). Commercial Arbitration in India. In *2010 International Conference on Economics, Business and Management*, Manila, Philippines.
- Gupta, P. K., & Mittal, S. (2011). Commercial Arbitration in India. In *2010 International Conference on Economics, Business and Management* (pp. 186-191). Retrieved from <http://ipedr.com/vol2/40-P20019.pdf>
- Halwatura, R. U., & Jayatunga, T. L. (2013). *Health and safety aspects in building construction industry in Sri Lanka*. Retrieved from <http://www.civil.mrt.ac.lk/conference/ICSBE2012/SBE-12-204.pdf>
- Halwatura, R. U., & Jayatunga, T. L. (2013). *Health and safety aspects in building construction industry in Sri Lanka*. Retrieved from <http://www.civil.mrt.ac.lk/conference/ICSBE2012/SBE-12-204.pdf>
- Hancock B., Windridge K., & Ockleford E. (2009). An Introduction to Qualitative Research. The NIHR RDS EM / YH. Retrieved from https://www.rdsyh.nihr.ac.uk/wp.../5_Introduction-to-qualitative-research-2009.pdf
- Harmon, K. M. (2003). Resolution of construction disputes: A review of current methodologies. *Leadership and Management in Engineering*, 3(4), 187-201. doi:10.1061/(asce)1532-6748(2003)3:4(187)
- Harmon, K. M. (2003). Effectiveness of Dispute Review Boards. *Journal of Construction Engineering and Management*, 129(6), 674-679. doi:10.1061/(asce)0733-9364(2003)129:6(674)

- Harris, T. L. (2007). The “Public policy” exception to enforcement of international arbitration awards under the New York convention-With particular reference to construction Disputes. *Journal of International Arbitration*, 24(Issue 1), 9-24. <https://doi.org/10.54648/joia2007003>
- Hartnett, W., & Schafler, M. (2017). *Ad-hoc v. Institutional Arbitration – Advantages and Disadvantages*. Retrieved from ARD Institute of Canada website: <http://adric.ca/wp-content/uploads/2017/09/Hartnett-and-Shafler.pdf>
- Headlam, N., & MacDonald, S. (2010). *Research Methods Handbook*. Retrieved from <http://www.cles.org.uk/wp-content/uploads/2011/01/Research-MethodsHandbook.pdf>
- Hlaing, T. O. (2011). *International commercial arbitration*. Retrieved from https://ecor.yueco.edu.mm/record/394/file_preview/International%20CommeComme%20Arbitration.pdf
- Hober, K., & Kryvoi, Y. (2016). *Law and practice of international arbitration in the CIS region*. Kluwer Law International B.V.
- Hsieh, H., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288. doi:10.1177/1049732305276687
- Illankoon, I. M., Tam, V. W., Le, K. N., & Ranadewa, K. A. (2019). Causes of disputes, factors affecting dispute resolution and effective alternative dispute resolution for Sri Lankan construction industry. *International Journal of Construction Management*, 1-11. <https://doi.org/10.1080/15623599.2019.1616415>
- Ilter, D., & Dikbas, A. (2008). An analysis of dispute resolution literature in construction management journals. In *CIB International Conference on Building Education and Research* (pp. 681-691). Retrieved from <https://www.irbnet.de/daten/iconda/CIB11479.pdf>
- Jaffar, N., Tharim, A. H. A., & Shuib, M. N. (2011). Factors of Conflict in Construction Industry: A Literature Review. In *Procedia Engineering* 20 (p. 193 – 202). doi:10.1016/j.proeng.2011.11.156

- Jalili, M. (1990). Amman Arab convention on commercial arbitration. *Journal of International Arbitration*, 7(Issue 1), 139-142. <https://doi.org/10.54648/joia1990008>
- Jones, D. (2006). Construction project dispute resolution: Options for effective dispute avoidance and management. *Journal of Professional Issues in Engineering Education and Practice*, 132(3), 225-235. doi:10.1061/(asce)1052-3928(2006)132:3(225)
- Jones, P., Comfort, D., & Hillier, D. (2006). Corporate social responsibility and the UK construction industry. *Journal of Corporate Real Estate*, 8(3), 134-150. doi:10.1108/14630010610711757
- K. Kanagisvaran, & S.S. Wijeratne (Eds). *Arbitration law in Sri Lanka*. Colombo (117-138). Institute of Commercial Law and Practice (ICLP), Sri Lanka
- Kanag-Isvaran, K. (2011). A comment of the operation of Arbitration Act-Has it worked. *Arbitration law in Sri Lanka*, 3, 169-178.
- Karimi, A., & Parto, H. (2012). *Domestic Arbitration Law*. Dadgostar Publications.
- Karunaratna, C. S. (2018). *23rd Asia Construct Conference*. Retrieved from <http://www.asiaconst.com/asiacwp/wp-content/uploads/2019/06/Sri-Lanka-Theme-Paper.pdf>
- Katouzian, N. (2004). *General Rules of Contracts*. Tehran, Iran: Sahami Enteshar Publications.
- Kelleher, T. J., & Walters, G. S. (2009). *Smith, Currie and Hancock's common sense construction law: A practical guide for the construction professional* (4th ed.). John Wiley & Sons.
- Keršulienė, V., Zavadskas, E. K., & Turskis, Z. (2010). Selection of rational dispute resolution method by applying new step-wise weight assessment ratio analysis (Swara). *Journal of business economics and management*, 11(2), 243-258. doi:10.3846/jbem.2010.12

- Kirimi, H., & Wanjohi, J. (2019). Factors influencing use of alternative dispute resolution in construction projects: Case of Imenti North Sub County, Meru County. *International Academic Journal of Information Sciences and Project Management*, 3(4), 572-602. Retrieved from http://www.iajournals.org/articles/iajispm_v3_i4_572_602.pdf
- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Kovach, K. K. (2004). *Mediation: Principles and practice*. West Academic Publishing.
- Lawyer, L. A. (2017). The changing character of democracy in the pre and post colonial Cameroon: An old practice, a new word. *Journal of Advanced Research in Social Sciences and Humanities*, 2(1), 43-53. doi:10.26500/jarssh-02-2017-0106
- Layngross, D. (2009). *Construction dispute resolution / Layngross*. Retrieved from <http://www.layngross.com/dispute-resolution.php>
- Lee, C. K., Yiu, T. W., & Cheung, S. O. (2016). Selection and use of alternative dispute resolution (ADR) in construction projects — Past and future research. *International Journal of Project Management*, 34(3), 494-507. doi:10.1016/j.ijproman.2015.12.008
- Lee, R. D., & Kramer, K. L. (2002). Children's economic roles in the Maya family life cycle: Cain, Caldwell, and Chayanov revisited. *Population and Development Review*, 28(3), 475-499. doi:10.1111/j.1728-4457.2002.00475.x
- Lew, J. D., Mistelis, L. A., Kröll, S. M., & Kröll, S. (2003). *Comparative international commercial arbitration*. Retrieved from https://books.google.com/books?hl=en&lr=&id=b1OgnDQ2UnwC&oi=fnd&pg=PR1&dq=Comparative+international+commercial+arbitration&ots=l7_eDJgsRT&sig=MU1qi7qM1i-LcCVsFjuqJd51ewA
- Lowry, L. R., & Wiggins, C. B. (1992). *Negotiation and settlement advocacy for experienced lawyers*. https://books.google.ae/books/about/Negotiation_and_Settlement_Advocacy.html?id=Q9dAPgAACAAJ&redir_esc=y

- Marques, R. C. (2018). Is arbitration the right way to settle conflicts in PPP arrangements? *Journal of Management in Engineering*, 34(1), 05017007. doi:10.1061/(asce)me.1943-5479.0000564
- Marsoof, L. S. (2010). Arbitration Procedure, Law and Facilities in Sri Lanka. In *Arbitration in Commonwealth Countries—An Anthology* (pp. 777-790). Retrieved from https://www.academia.edu/12938711/Arbitration_Procedure_Law_and_Practice_in_Sri_Lanka
- Marsoof, S. (2010). Issues of Jurisdiction, Choice of Law and Enforcement in International Commercial Arbitration: A Sri Lankan Perspective. *Private International Law South Asian States' Practice*, 391-408. doi:10.1007/978-981-10-3458-9_19
- Marzouk, M., & Moamen, M. (2009). A framework for estimating negotiation amounts in construction projects. *Construction Innovation*, 9(2), 133-148. doi:10.1108/14714170910950795
- Mauch, J., & Park, N. (2003). *Guide to the successful thesis and dissertation: A handbook for students and faculty* (5th ed.). CRC Press. https://books.google.ae/books?hl=en&lr=&id=RYW52FWJam8C&oi=fnd&pp=PR3&dq=Guide+to+the+successful+thesis+and+dissertation:+A+handbook+for+students+and+faculty&ots=bl2TICQk7z&sig=sph3mv3e7VR3PST3ffD7iZobo9c&redir_esc=y#v=onepage&q=Guide%20to%20the%20successfus%20thesis%20and%20dissertation%3A%20A%20handbook%20for%20studst%20and%20faculty&f=false
- Menassa, C. C., & Peña Mora, F. (2010). Analysis of dispute review boards application in U.S. construction projects from 1975 to 2007. *Journal of Management in Engineering*, 26(2), 65-77. [https://doi.org/10.1061/\(asce\)me.1943-5479.0000001](https://doi.org/10.1061/(asce)me.1943-5479.0000001)
- Menkel-Meadow, C. J. (2015). *Mediation, Arbitration, and Alternative Dispute Resolution (ADR)* [Doctoral dissertation]. <https://ssrn.com/abstract=2608140>
- Merrills, J. G. (2017). *International dispute settlement*. Cambridge University Press.

- Moore, C. W. (2014). *The mediation process: Practical strategies for resolving conflict*. Retrieved from http://mediation.gov.lk/media/manuals/en/Mediation_Trainees_Manual.pdf
- Nau, D. (1995). Mixing methodologies: Can bimodal research be a viable post-positivist tool? *The Qualitative Report*. <https://doi.org/10.46743/2160-3715/1995.2059>
- Nevisandeh, M. (2016). The Nature of Arbitration Agreement. In *Procedia Economics and Finance* 36 (p. 314 – 320). doi:10.1016/S2212-5671(16)30042-9
- Nguyo, N. R. (2014). *Influence of Arbitration on Dispute Resolution in the Construction Industry: A Case of Nairobi County, Kenya* (Unpublished master's thesis). University of Nairobi, Nairobi, Kenya.
- Nigel, B., Constantine, P., Alan, R., & Martin, H. (2015). 1 an overview of international arbitration. *Redfern and Hunter on International Arbitration*. doi:10.1093/law/9780198714248.003.0001
- Nihaaj, N. M. M. (2016). *Critical analysis of arbitration method used in the construction industry in Sri Lanka* (Unpublished doctoral dissertation). University of Moratuwa, Moratuwa, Sri Lanka.
- Noor, K. B. M. (2008). Case Study: A Strategic Research Methodology. *American Journal of Applied Sciences*, 5(11), 1602-1604. doi:10.3844/ajassp.2008.1602.1604
- Okuntade, T. F. (2014). Causes and effects of conflicts in Nigerian construction industry. *International Journal of Technology Enhancements and Emerging Engineering Research*, 2(6), 7-16. Retrieved from https://www.researchgate.net/publication/317952946_Causes_And_Effects_Of_Conflict_In_The_Nigerian_Construction_Industry
- Olanrewaju, A. L., & Abdul-Aziz, A. (2014). *Building maintenance processes and practices: The case of a fast developing country*. Springer.

- Overcash, A. L. (2015). Introducing a novel ADR technique for handling construction disputes: arbitration. *The Construction Lawyer*, 35(1), 22-53. Retrieved from <https://law.unl.edu/OvercashWinter2015.pdf>
- Ozkan, F., Ozkan, O., & Gunduz, M. (2012). Causal relationship between construction investment policy and economic growth in Turkey. *Technological Forecasting and Social Change*, 79(2), 362-370. doi:10.1016/j.techfore.2011.04.007
- Pena-Mora, F., Sosa, C. E., & McCone, D. S. (2003). *Introduction to construction dispute resolution*. doi:10.7916/D8CZ3CTJ
- Polonsky, M. J., & Waller, D. S. (2011). *Designing and managing a research project* (1st ed.). Thousand Oaks, California: SAGE Publications.
- Preez, O. D. (2014). Conciliation: A founding element in claims management. *Procedia - Social and Behavioral Sciences*, 119, 115-123. <https://doi.org/10.1016/j.sbspro.2014.03.015>
- Rajasekar, S., Philominathan, P., & Chinnathambi, V. (2006). *Research Methodology*. Retrieved from <https://arxiv.org/pdf/physics/0601009v3.pdf>
- Rajoo, S. (2010). Institutional and Ad-hoc Arbitrations: Advantages and Disadvantages. *Journal of Advanced Research in Social Sciences and Humanities*, 3(4). doi:10.26500/jarssh-03-2018-0404
- Rajoo, S. (2010). Institutional and Ad-hoc Arbitrations: Advantages and Disadvantages. *Journal of Advanced Research in Social Sciences and Humanities*, 3(4). doi:10.26500/jarssh-03-2018-0404
- Ranasinghe, A. (2011). *Principles of Natural Justice in Arbitration* (Doctoral dissertation, University of Moratuwa, Moratuwa, Sri Lanka). Retrieved from <http://dl.lib.mrt.ac.lk/bitstream/handle/123/10447/pre-text.pdf?sequence3>
- Redfern, A., & Hunter, M. (2004). *Law and practice of international commercial arbitration*. Sweet & Maxwell.

- Rendell, M. O. (2000). ADR versus litigation. *Dispute Resolution Journal*, 55(1), 69-72. Retrieved from <https://search.proquest.com/openview/37452cbaa585266ed451dcb8e4248043/1?pq-origsite=gscholar&cbl=25210>
- Riley, M., Prenzler, T., & McKillop, N. (2018). Alternative dispute resolution and mediation of complaints against police in Australia and New Zealand. *Police Practice and Research*, 21(1), 3-17. <https://doi.org/10.1080/15614263.2018.1500284>
- Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (2014). *Qualitative research practice: A guide for social science students and researchers*. Retrieved from https://hmmcollege.ac.in/uploads/Qualitative_research_methods.pdf
- Sandelowski, M. (2001). Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. *Research in Nursing & Health*, 23(3), 246-255. [https://doi.org/10.1002/1098-240x\(200006\)23:3<246:aid-nur9>3.0.co;2-h](https://doi.org/10.1002/1098-240x(200006)23:3<246:aid-nur9>3.0.co;2-h)
- Schroeter, U. G. (2017). Ad-hoc or institutional arbitration - A clear-cut distinction? A closer look at borderline cases. *Contemp. Asia Arb. J*, 10(2), 141-199. doi:10.31228/osf.io/bmeur
- Schütze, R. A. (2012). *Institutional arbitration: Article-by-article commentary*.
- Seifert, B. M. (2005). International construction dispute adjudication under international Federation of consulting engineers conditions of contract and the dispute adjudication board. *Journal of Professional Issues in Engineering Education and Practice*, 131(2), 149-157. doi:10.1061/(asce)1052-3928(2005)131:2(149)
- Shah, N., & Gandhi, N. (2011). Arbitration: One Size Does Not Fit All: Necessity of Developing Institutional Arbitration in Developing Countries. *Journal of International Commercial Law and Technology*, 6(4), 232-242. Retrieved from <https://media.neliti.com/media/publications/28786-EN-arbitration-one-size-does-not-fit-all-necessity-of-developing-institutional-arbi.pdf>
- Shokrani, M. (2018). Institutional arbitration versus ad-hoc arbitration: Chinese and Iranian perspectives. *Journal of Advanced Research in Social Sciences and Humanities*, 3(4), 148-153. doi:10.26500/jarssh-03-2018-0404

- Sivasubramaniyan, P. (2012). *Research Methodology: An Introduction*. Retrieved from www.limat.org/data/research/Research%20Methodology.pdf
- Skene, M., & Shaban, R. (2002). *Strategies to avoid and resolve construction disputes*. Borden Ladner Gervais, Vancouver, Canada.
- Song, X., Peña-Mora, F., Menassa, C. C., & Arboleda, C. A. (2012). Insurance as a risk management tool for ADR implementation in construction disputes. *Journal of Construction Engineering and Management*, 138(1), 14-21. doi:10.1061/(asce)co.1943-7862.0000401
- Srinivasan, B. (2013). UNCITRAL Arbitration Rules, 2010: Comment on Certain Revisions. *Indian Journal of Arbitration Law*, 2(2). <https://heinonline.org/HOL/LandingPage?handle=hein.journals/ijal2&div=18&id=&page=>
- Sweet, J., & Schneier, M. M. (2013). *Legal aspects of architecture, engineering and the construction process*. Retrieved from <https://heinonline.org/HOL/LandingPage?handle=hein.journals/cnstrcnl8&div=12&id=&page=>
- Tanielian, A. (2013). Arbitration still best road to binding dispute resolution. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, 5(2), 90-96. doi:10.1061/(asce)la.1943-4170.0000111
- Tao, J., & Wunschheim, C. V. (2007). Articles 16 and 18 of the PRC arbitration law: The Great Wall of China for foreign arbitration institutions. *Arbitration International*, 23(2), 309-326. doi:10.1093/arbitration/23.2.309
- Teo, E. A., & Aibinu, A. A. (2007). Legal framework for alternative dispute resolution: Examination of the Singapore national legal system for arbitration. *Journal of Professional Issues in Engineering Education and Practice*, 133(2), 148-157. doi:10.1061/(asce)1052-3928(2007)133:2(148)
- Thurairajah, N., Haigh, R. P., & Amaratunga, R. D. G. (2006). *Leadership in construction partnering projects: Research methodological perspective*. Retrieved from http://usir.salford.ac.uk/9883/1/leadership_in_construction.pdf

- Tolson, S. (2017). *Alternative Dispute Resolution*. Retrieved from Construction Law Summer School 2017, Gonville and Caius College, Cambridge website: https://www.fenwickelliott.com/sites/default/files/st_-_alternative_dispute_resolution_-_law_summer_school_17.pdf
- Treacy, D., Spillane, J. P., & Tansey, P. (2016). Construction disputes in small to medium enterprise's in Ireland during recession. *International Journal of Law in the Built Environment*, 8(1), 21-41. doi:10.1108/ijlbe-10-2014-0031
- Walker, A. (2007). *Project management in construction*. Oxford, UK: John Wiley & Sons.
- Wallgren-Lindholm, C. (2016). Ad-hoc arbitration v. institutional arbitration. *International Commercial Arbitration*, 61-81. doi:10.1017/cbo9781139519779.006
- Wang, M. (2000). *Are alternative dispute resolution methods superior to litigation in resolving disputes in international commerce?* <https://doi.org/10.1023/A:1008972802830>
- Wibowo, M. A. (2009). The contribution of the construction industry to the economy of Indonesia: A systemic approach. Retrieved from http://eprints.undip.ac.id/387/1/Agung_Wibowo.pdf
- Wimalachandra, L. K. (2007). Alternative methods of dispute resolution. *Junior Bar Law journal*, 2(3), 55-70.
- Wong, C. H. (2011). *Adjudication: Evolution of New Form of Dispute Resolution in Construction Industry* (Unpublished doctoral dissertation). Faculty of Engineering and Science, University of Tunku Abdul Rahman, Malaysia.
- Yan, P. H. (2011). *Anatomy of Construction Disputes* (Doctoral dissertation, City University of Hong Kong, Hong Kong). Retrieved from <http://lbms03.cityu.edu.hk/theses/abt/mphil-bc-b40863803a.pdf>
- Yates, J. K., & Smith, J. A. (2007). Global legal issues for engineers and constructors. *Journal of Professional Issues in Engineering Education and Practice*, 133(3), 199-209. doi:10.1061/(asce)1052-3928(2007)133:3(199)

- Yilmaz, D. V. (2017). International student recruitment in policy and practice: A research from Turkey. *Journal of Advanced Research in Social Sciences and Humanities*, 2(1). <https://doi.org/10.26500/jarssh-02-2017-0101>
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). California: Sage Publications Inc.
- Yiu, T. W., & Lai, W. Y. (2009). Efficacy of trust-building tactics in construction mediation. *Journal of Construction Engineering and Management*, 135(8), 683-689. [https://doi.org/10.1061/\(asce\)co.1943-7862.0000028](https://doi.org/10.1061/(asce)co.1943-7862.0000028)
- Yousefi, S., Hipel, K. W., & Hegazy, T. (2010). Considering attitudes in strategic negotiation over Brownfield disputes. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, 2(4), 240-247. doi:10.1061/(asce)la.1943-4170.0000034

ANNEXURE – A

INTERVIEW GUIDELINE

Edirisinghe S. S.
Dikthalawa,
Batugammana,
Monaragala.
Sri Lanka.
.../.../2021.

.....
.....
.....
.../.../2021.

Dear Sir/Madam,

Dissertation – Interview Guideline (M.Sc. in Construction Law and Dispute Resolution)

I am S. S. Edirisinghe, a Quantity Surveyor who is currently following M.Sc. in Construction Law and Dispute Resolution degree program in Department of Building Economics, University of Moratuwa. As a part of my master’s degree program, I am required to undertake research which could be incorporated in the dissertation to be prepared and submitted at the end of the course of study.

My research investigates the suitability of ad-hoc and institutional arbitration for resolving disputes in Sri Lankan construction industry. The research is conducted under the supervision of Prof. Yasangika Sandanayake, Department of Building Economics, University of Moratuwa. This research intends to collect relevant data from professionals who are knowledgeable and experienced on Arbitration.

I have identified you as a potential participant who could provide me valuable information to this research. I would be grateful if you could participate for an interview within your busy work schedule.

I strongly believe that you would support to my research by sharing your views related to my research topic. The information collected through this interview will be kept strictly confidential and will be used only for the purpose of the dissertation. Any information or particulars will not be disclosed in my report.

Thank you.
Yours faithfully,

.....
S. S. Edirisinghe.
M.Sc. in Construction Law and Dispute Resolution
University of Moratuwa
Telephone: +971525633399
Email: sanjeewaniqs@gmail.com

ANNEXURE A: INTERVIEW GUIDELINE

Name (optional):

Designation:

Name of the Organisation (optional):

Years of Experience:

How long have you been practicing Arbitration in Sri Lankan construction industry?

.....

Part 1 – Arbitration in Sri Lanka

- 1.1. How would you define Arbitration?
- 1.2. Do you think arbitration plays a significant role compared to other ADR methods in Sri Lankan construction industry? If YES, why?
- 1.3. Does Sri Lankan construction industry have enough awareness about arbitration?
- 1.4. What is the current state of demand for arbitration compared to other ADR methods in Sri Lankan construction industry?

Part 2 – Current Practice of Ad hoc and Institutional Arbitration in Sri Lankan Construction Industry

- 2.1. Briefly explain about your experience in practicing arbitration related to construction industry.
- 2.2. What are the benefits that you have found by practicing arbitration in construction industry other than other ADR methods?
- 2.3. Have you come across any kind of barriers when practicing arbitration in Sri Lankan construction industry?
- 2.4. Do you have experience on Ad-hoc arbitration? Please explain.
- 2.5. Do you have experience on Institutional arbitration? Please explain.
- 2.6. Have you used any arbitration method other than ad-hoc or institutional arbitration methods? Please explain.
- 2.7. In your opinion, what is the current level of practicing ad-hoc arbitration in Sri Lankan construction industry?
- 2.8. In your opinion, what is the current level of practicing institutional arbitration in Sri Lankan construction industry?
- 2.9. Based on your opinion, what is the most commonly used form of arbitration in Sri Lankan construction industry? Please explain.

Part 3 - Applicability and Appropriateness of Ad-hoc Arbitration for the Sri Lankan Construction Industry

- 3.1. Why the disputants are using ad-hoc arbitration method to resolve disputes in construction industry?
- 3.2. In your opinion, is ad-hoc arbitration suitable and applicable for Sri Lankan construction industry? Please explain.
- 3.3. In your opinion, what kind of construction disputes can be resolved using ad-hoc arbitration?
- 3.4. In your opinion, do arbitrators practicing in Sri Lanka have enough skills and knowledge to proceed with ad-hoc arbitration?
- 3.5. What are the advantages of using ad-hoc arbitration method in Sri Lankan construction industry?
- 3.6. What are the disadvantages of using ad-hoc arbitration method in Sri Lankan construction industry?
- 3.7. In your opinion, does prevailing legal system of Sri Lanka adequately facilitate for the ad-hoc arbitration? If NO, what are the areas to be amended or added?
- 3.8. In your opinion, do currently functioning arbitral institutions in Sri Lanka provide proper assistance for the ad-hoc arbitration? Please explain.
- 3.9. What are the challenges faced by arbitrators in using ad-hoc arbitration method in Sri Lankan construction industry?
- 3.10. What are the strategies that can be used to overcome the above identified challenges in using ad-hoc arbitration method in Sri Lankan construction industry?
- 3.11. What are the strategies that can be used to enhance the effectiveness of ad-hoc arbitration in Sri Lankan construction industry?

Part 4 - Applicability and Appropriateness of Institutional Arbitration for the Sri Lankan Construction Industry

- 4.1. Why the disputants are using institutional arbitration method to resolve disputes in construction industry?
- 4.2. In your opinion, is institutional arbitration suitable and applicable for Sri Lankan construction industry? Please explain.
- 4.3. In your opinion, what kind of construction disputes can be resolved using institutional arbitration?
- 4.4. In your opinion, do arbitrators practicing in Sri Lanka have enough skills and knowledge to proceed with institutional arbitration?

- 4.5. What are the advantages of using institutional arbitration method in Sri Lankan construction industry?
- 4.6. What are the disadvantages of using institutional arbitration method in Sri Lankan construction industry?
- 4.7. In your opinion, does prevailing legal system of Sri Lanka adequately facilitate for the institutional arbitration? If NO, what are the areas to be amended or added?
- 4.8. In your opinion, do currently functioning arbitral institutions in Sri Lanka provide satisfactory level of service for institutional arbitration? Please explain.
- 4.9. What are the challenges faced by arbitrators in using institutional arbitration method in Sri Lankan construction industry?
- 4.10. What are the strategies that can be used to overcome the above identified challenges in using institutional arbitration method in Sri Lankan construction industry?
- 4.11. What are the strategies that can be used to enhance the effectiveness of institutional arbitration in Sri Lankan construction industry?

Part 5 - Comparison of Ad-hoc and Institutional Arbitration Methods in Sri Lankan Construction Industry

- 5.1. In your point of view, between ad-hoc and institutional arbitration, which form of arbitration is less expensive?
- 5.2. In your point of view, between ad-hoc and institutional arbitration, which form of arbitration is less time consuming?
- 5.3. In your point of view, between ad-hoc and institutional arbitration, which form of arbitration is more flexible?
- 5.4. In your point of view, between ad-hoc and institutional arbitration, which form of arbitration provide legally valid, accurate and impartial arbitral award?
- 5.5. In your point of view, between ad-hoc and institutional arbitration, which form of arbitration require less corporation between parties?
- 5.6. In your point of view, between ad-hoc and institutional arbitration, which form of arbitration is more suitable for prevailing legal system of Sri Lanka?
- 5.7. In your point of view, between ad-hoc and institutional arbitration, which form of arbitration is most feasible to carry out in Sri Lankan construction industry?
- 5.8. Considering skills, knowledge and experience of arbitrators currently practicing in Sri Lankan construction industry, what is the most convenient form of arbitration between ad-hoc and institutional arbitration?

5.9. When comparing above two arbitration methods in overall and based on your opinion, what is the most suitable form of arbitration out of ad-hoc and institutional arbitration methods to Sri Lankan construction industry? Please specify reasons for the answer.

- Thank you very much for your contribution -