

**CRITICAL FACTORS AFFECTING THE PRACTICE OF  
ALTERNATIVE DISPUTE RESOLUTION METHODS IN  
BUILDING PROJECTS IN SRI LANKA**

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Degree of Master of Science in Construction Law and Dispute  
Resolution

Department of Building Economics

University of Moratuwa  
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## **ABSTRACT**

### **Critical factors affecting the practice of alternative dispute resolution methods in building projects in Sri Lanka**

The construction industry is a unique and complicated industry that interacts with a variety of stakeholders with differing attitudes, abilities, and degrees of knowledge in the construction process, all of whom must work together to achieve their own objectives and realize their own benefits. Therefore, conflicts, disputes and claims are higher in the construction industry while comparing with other industries. Disputes can arise at any time during the period of a construction project. A dispute is one of the key factors which burdens the successful completion of the project.

Mechanism adopts to resolve any dispute arises during the execution of construction project is vital to the success of a project. There are two main ways of resolving disputes in a construction project which are litigation and Alternative Dispute Resolution methods. Due to the disadvantages in Litigation, ADR mechanisms are commonly used mechanisms to settle dispute in the construction industry. However, existing ADR mechanisms are also have various demerits. It is important to identify the factors which are affecting on building projects in Sri Lanka to promote and effectively use ADR methods as a dispute resolution mechanism.

The literature review was used to develop research framework for this study. Through literature review, twenty-two factors that are affecting the practice of ADR methods in the building projects were found. Then, a questionnaire survey has been undertaken to identify the impact of those factors on the practice of ADR methods in the building projects in Sri Lanka. Data collected through the questionnaire survey was analysed using mean weighted rating and identified twenty two factors were ranked according to the significant level of factors. As an example, the top five factors are savings in cost, the enforceability of the decision, the flexibility of procedure, savings in time, and reduction in project disruption. Finally, the findings of this research can be used to develop a model to select the most suitable ADR method by comparing it with the other available ADR methods and developing new ADR methods to mitigate the drawbacks of existing ADR methods.

**Keywords: Alternative dispute resolution, Dispute, Critical factors, Sri Lanka**

## DEDICATION

*To my family,  
who were always there to encourage me.*

## **ACKNOWLEDGEMENT**

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## **LIST OF ABBREVIATIONS**

ADR	: Alternative Dispute Resolution
CIDA	: Construction Industry Development Authority
DAB	: Dispute Adjudication Board
DRA	: Dispute Resolution Adviser
DRB	: Dispute Review Boards
ICTAD	: Institute for Construction Training and Development
SBD	: Standard Bidding Document

# **01.INTRODUCTION TO THE RESEARCH**

## **1.1 Background**

A country's rapid development is ensured by the development of the construction industry, whereas the construction industry plays a major role in the economy of a country (Central bank of Sri Lanka, 2017). The construction industry is becoming more complex and involves more capital investments. Nowadays, developing countries are seeking to raise infrastructural facilities (Idowu, Ogunbiyi, & Hungbo, 2015). Sri Lanka was suffered by terrorist war for nearly 30 years. However, after the terrorist war, government of Sri Lanka commenced various types of infrastructure development projects in the country (Abeynayake, 2017).

Further, the construction industry has hard and aggressive characteristics due to short term and opportunistic relationship (Tazelaar & Snijders, 2010). Therefore, conflicts, disputes and claims are higher in the construction industry while comparing with other industries (Enshassi & Rass, 2008). In addition, disputes are inescapable factor in the construction industry. Thus, the construction industry is suffering frequently due to disputes between parties in construction contracts. Project complexity and value, improper planning, poorly drafted contract documents, financial issues, communication gap are few of the main issues which cause disputes during the construction (Patel & Shah, 2017). Furthermore, Çakmak (2016) identified some causes of disputes which are forming in relation to the unit price, delays and extension of time, contract documents, contractual matters, variations, contract documents and payments.

Construction contract is a document which presents legal relationships between parties. And, it includes agreement, conditions of contract and other documents which are forming part of the contract. Conditions of contract is the first thing to refer if there is any dispute arise due to a contract (Rodriguez, 2018).

According to the Mashwama, Aigbovboa and Thwala (2015), construction disputes results in less output, loss of business sustainability, less profitability, delays, hammering of professional reputation, loss of business relationships, cost overruns and

hammering of company reputation. However, disputes can be resolved using number of procedures such as litigation and other methods (Chong & Zin 2012). Litigation is recognized as a decisive and legally enforceable method in worldwide (Abeynayake, 2017). Previous researchers found that the litigation is not suitable for resolving disputes in construction industry. Due to the reason that, litigation cost is comparatively higher than other methods, judges are not well-known about construction terms and technology, time consuming and negative effect on business relationships. In addition, litigation has several drawbacks such as stressfulness, inflexibility, formality and pre-determined remedies (Abeynayake, 2019). Therefore, ADR methods are suggested as alternatives to litigation process, especially to high cost and time consumption in litigation (Weidner & Helmut, 1998). Most of countries in the world are using ADR methods to resolve conflicts and disputes in construction industry (Idowu et al., 2015). In previous few decades, ADR methods have become popular in the construction contract and the application of ADR methods depends on situation (Bvumbwe & Thwala, 2011).

Disputes in Sri Lankan construction industry are generally arising under different contracts. Litigation can be identified as a civil dispute resolution procedure which governs under District Courts. Sri Lankan construction industry is seeking for fast and cost-effective dispute resolution methods to overcome drawbacks of litigation process. In this point, ADR methods become popular in the Sri Lankan construction industry to settle construction disputes (Abeynayake, 2019). There are four ADR methods which are well recognized in the Sri Lankan construction industry. They are Negotiation, Mediation, Adjudication and Arbitration (Abeynayake, 2017). In past years, those ADR methods are popular in Sri Lankan construction industry (Gunasena, 2010). In local context, Arbitration can be identified as only ADR method which comes under a legislative framework, since it has been enacted by Arbitration Act of Sri Lanka No. 11 of 1995 (Abeynayake, 2019).

All existing dispute resolution methods have advantages and disadvantages. Further, different types of factors may affect the practice of ADR methods (Chong & Zin 2012). It is important to identify the factors which affect the practice of ADR methods for effective use of ADR methods (Alshahrani, 2017).

## **1.2 Research problem**

There is a possibility of raising disputes at any time in the construction projects. Dispute resolution is a significant factor which drives a project to its success. Various factors affecting the practice of ADR methods. In order to enhance the practice of ADR methods as a dispute resolution mechanism to resolve construction disputes in Sri Lankan construction industry, it should be necessary to identify the factor. Thus, this research focuses to identify the factors which are affecting the practice of ADR to improve the future performance of practice of ADR methods. Furthermore, the construction industry can be divided as infrastructure development and building construction. In order to provide accurate and depth solution in the study, the research has further narrow down to building projects. In addition, the research problem of this study is: “What are the critical factors which are affecting the practice of ADR methods as dispute resolution mechanism in construction contracts related to building construction in the Sri Lankan construction industry”.

## **1.3 Aim and Objectives**

### **1.3.1 Aim**

Aim of the research is to identify the critical factors affecting the practice of ADR methods as dispute resolution mechanism in construction contract related to building projects in the local construction industry.

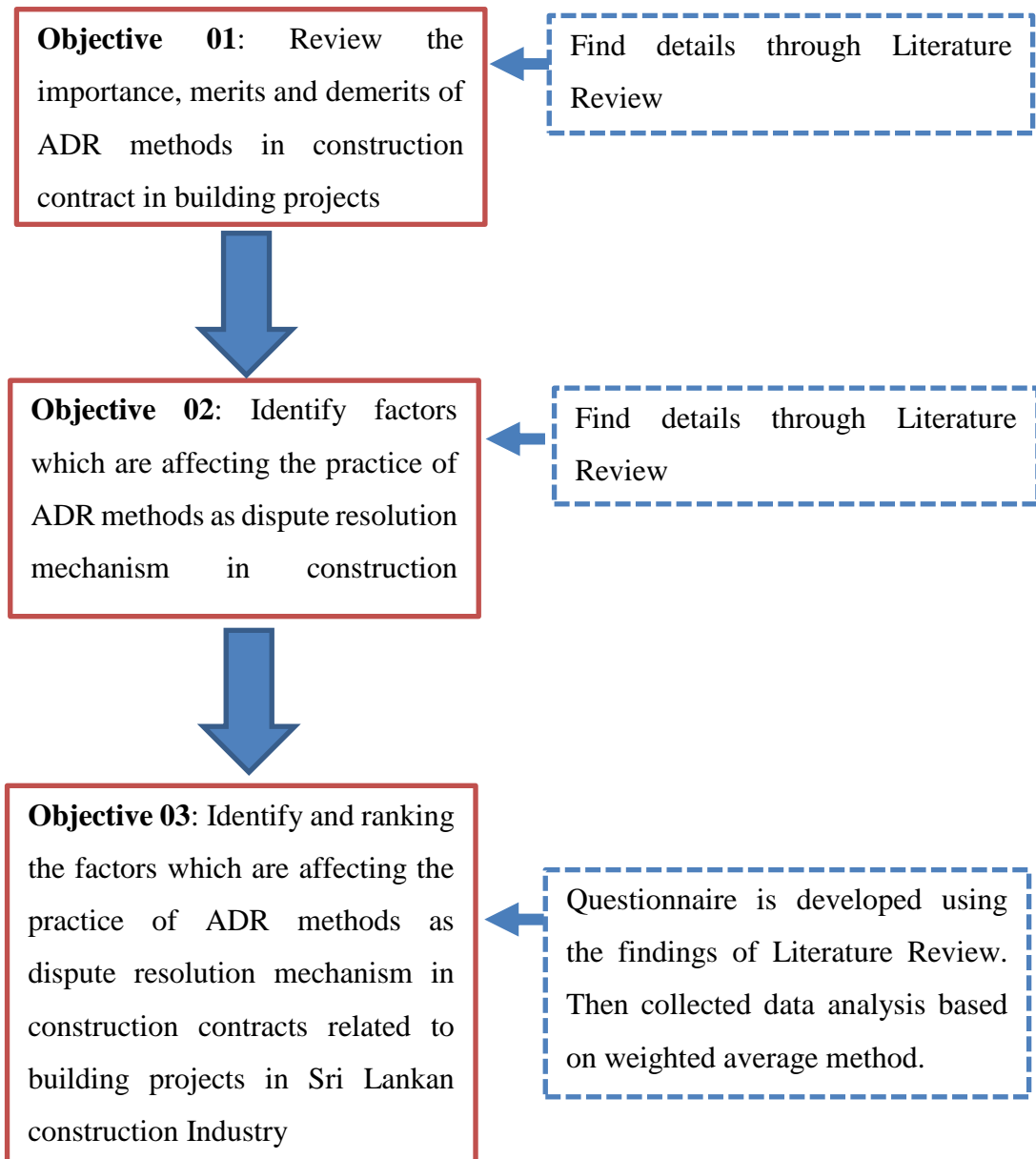
### **1.3.2 Objectives**

Objectives of the research are as follows;

1. Review the importance, merits and demerits of ADR methods in construction contract in building projects
2. Identify factors which are affecting the practice of ADR methods as dispute resolution mechanism in construction contracts
3. Identify and ranking the factors which are affecting the practice of ADR methods as dispute resolution mechanism in construction contracts related to building projects in Sri Lankan construction Industry

### **1.4 Research methodology**

The literature survey were undertaken to establish the importance, merits and demerits of ADR methods in construction contract and factors affecting the practice of ADR methods. Books, journals, magazines, electronic media and the internet were used as resources for the literature survey. Quantitative research approach was adopted for this study. Moreover, the purposive sampling were used in the data collection phase to identify the resource persons. This research was conducted in three phases as explained below in Figure 1.1.



**Figure 1.1: Research methodology**

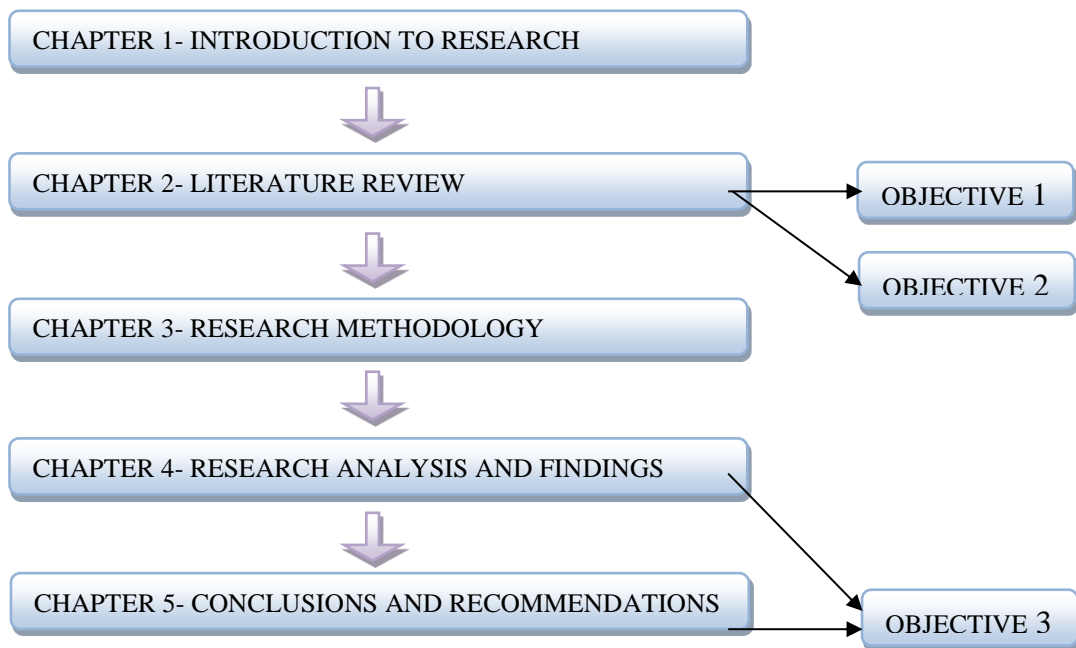
### **1.5 Scope and limitations of the research**

This research is limited only to building construction projects in Sri Lanka. In this research, all disputes in relation to the building construction projects in Sri Lanka were taken into consideration.

## 1.6 Chapter breakdown

The whole research was divided into five chapters. The first chapter is introduction to research which contains a research background, research problem, aim and objectives, research methodology and scope and limitations. The second chapter is the literature review and it was established the importance, merits, demerits and factors affecting the practice of ADR methods in construction contract. Under this chapter, it is expected to fulfill objectives one and two.

Then, the third chapter is the research methodology which explains the methodical approach adopted to conduct the research. The next chapter is research analysis and findings which provides decisions by processing collected information. Objective three was accomplished under this chapter. Conclusion and recommendation is the final chapter and objective three is accomplished under this Chapter with future research directions. Chapter Breakdown is shown in Figure 1.2.



**Figure 1.2: Chapter breakdown**

## **02. LITERATURE REVIEW**

### **2.1 Introduction**

This chapter targets to pool the current knowledge and research efforts which have done related to the research area and to solve the research problem. Firstly, conflicts and disputes in construction industry were analysed to identify role of conflicts and disputes in the industry. Secondly, causes and impacts of disputes were identified in building projects. Thirdly, the discussion extended to the dispute resolution methods which includes history, dispute resolution in the Sri Lankan construction industry, litigation and ADR methods. After that, the literature has been extended towards the contractual implication of ADR methods in Sri Lankan Building Projects. Finally, the discussion developed further into factors affecting the practice of ADR methods.

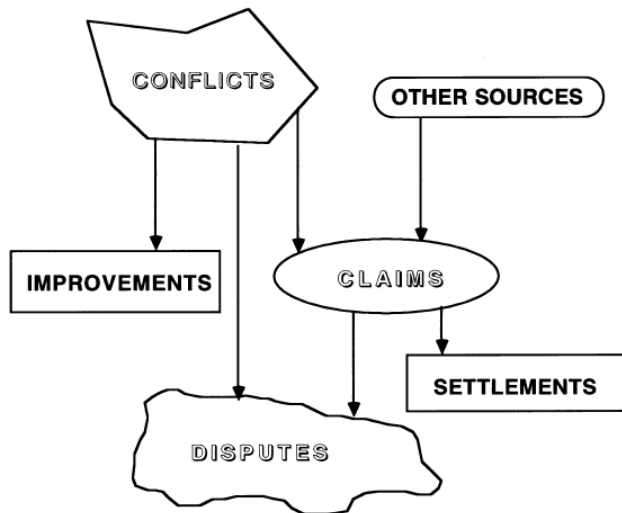
### **2.2 Conflicts and disputes in construction industry**

The construction industry, unique and complex industry which interact with different stakeholders who has different perceptions, skills and different levels of knowledge in the process of construction to work together to achieve their own goals and to fulfil their own benefits (Sameer, Magar and Parkar, 2016). Brown and Marriott (1995) highlighted that conflict is a doubt, disagreement, controversy interaction and mismatched behaviour. The stakeholders of any construction project have different insights related to the project. Thus, conflicts or ambiguities related to a same matter within a project, cannot be avoided. And, if these conflicts/ ambiguities are not properly handled or resolved, those matters will immediately process to a disputes.

According to Black (2009), a ‘dispute’ is a conflict or controversy; a conflict of claims or rights and an assertion of a right, claim, or demand on one side, met by contrary claims or allegations on the other. As per Morgan (2008),

“Dispute is a contentious issue that the parties to a construction contract disagree upon, or would be likely to disagree upon, and which needs to be resolved by some means or other, either within or outside the contract”

The basic relationships between conflicts, disputes and claims in construction industry are explained in Figure 2.1 (Kumaraswamy, 1997).



**Figure 2.1: Relationships between conflicts, disputes and claims**

### **2.3 Causes of construction disputes in building projects**

Dispute is one of the key factors which burden the completion of the project (Soni, Pandey, & Agrawal, 2017). Therefore, it is important to be focused on reasons of conflicts and disputes to complete the project within scheduled time, cost and quality. According to University College of estate management (2019), construction disputes can be arisen due to the combination of environmental and behavioral factors. And, the basic factors that steer the growth of construction disputes are uncertainty, contractual problems and behavior.

- Uncertainty - The nonconformity between the available information and required information to undertake the work is known as uncertainty (University College of estate management, 2019)

- Contractual Problems – Standard forms of contract includes the each parties' risks and obligations. However, sometimes such agreements are not appropriate for a project which involves long-term transactions due to uncertainty. The disputes are mostly arisen due to improper drafting of contract document because that the tenders are speedily made and adequate attention is not given to the changes in contract work, unusual site conditions really encountered and other sub-clauses. Thus, it causes the suspension of work, variations, re-inspection and acceptance, termination, possession prior to completion, price fluctuation due to inflation, increase of rate of work progress and ambiguity in drawings and specifications (University College of estate management, 2019)
- Behaviour - In a matter either party may try to get something from other party in terms of monetary or the time. Yet, the parties to the prevailing contract may have a different perception related to the facts and it affects their ability to arrive at an agreement. Some time, a party might merely refuse the duty in an effort to escape from liability (University College of estate management, 2019)

The ways of peoples' interaction is a main factor for the disputes occurrence on building contracts. Even though a lot of disputes are based on opinions about technical or legal points, disagreement develops when parties become stubborn on accepting other's view. However, the construction industry are hard to realise completely because the relationships between the parties and the boundary line of the industry are unclear (Murdoch & Hughes, 2001). Further, in relation to University College of estate management (2019), the causes of construction disputes are as follows;

- Acceleration – Usually, commercial property owners be adamant to accelerate the construction project (University College of estate management, 2019)

- Co-ordination - Construction process contains numerous activities, large amount of stakeholders, various company or firms, interested with diversified set of talents and capabilities and constantly subject to the volatility of the environment (Thobakgale, Aigbavboa, & Thwala, 2014). And, complex projects involve several specialist trades such as electrical works and mechanical installations. Therefore, the co-ordination is one of the significant causes. Thus, conflict arises, if the work is not properly co-ordinated (University College of estate management, 2019)
- Culture – Personnel is needed to imagine, initiate, design and plan provided resources such as material and plant, construct, , manage and handle, testing and commissioning and repair the defects until construction contract get completed. Such personnel may reach from different backgrounds and social classes (University College of estate management, 2019)
- Differing goals - Peoples occupied on a huge construction contract are employed by various companies, including those engaged as manufacturers, traders, workers and professionals. Each of them works for different organisations and each organisation have their own aims and objective to meet their targets, which might differ to other competing organizations and can cause disputes (University College of estate management, 2019)
- Delays - Disputes commonly occur in relation to delays. Therefore, most construction contracts include provision for the extension of time for completion (University College of estate management, 2019)
- Design - Defaults in designs which incurs an additional cost lead (University College of estate management, 2019)
- Employer's representatives/ Engineer - The characteristics of the Employer's representatives/ Engineer (such as behaviour, engagement to work, administrating the contract etc.) and so on is crucial to avoid the disputes. However, it has noticed some decisions taken by these persons which are biased towards the Employer has generated considerable number of disputes (University College of estate management, 2019)

- Project complexity - A proper risk assessment has to be conducted for a complex project before a contract is entered. However, it is not done often (University College of estate management, 2019)
- Quality and workmanship - The specification may be unclear and each party may have different interpretation on the subject, which creates a dispute between parties (University College of estate management, 2019)
- Site conditions - If the contract have unclear explanation such as which party is to obtain the risk for the site conditions, disputes are unavoidable and adverse site conditions hinder the construction progress or it needs expensive remedy (University College of estate management, 2019)
- Tender – If unreasonably short time has given to examine the tender documents, planning, conduct a risk assessment, calculate the rates and conclude the whole process with a commercial review, obtaining competitive price for the bid might impact in adverse manner (University College of estate management, 2019)
- Variations/ Change orders – Instructing variations/change orders to partially completed work or for the works which almost going to finish can raise many disputes related to the project (University College of estate management, 2019)
- Value engineering – Lacking a comprehensive definition for the value engineering including the criteria for evaluating the value engineering proposal and method of dividing the savings can cause the disputes between the contractor and the employer (University College of estate management, 2019)

One of the general sources of disputes are identified as variations such as site conditions, variations which are issued by client, design errors and so on; ambiguity in contract documents; noncompliance with payment clauses; time extension due to delay in design drawings, delay in possession of site and so on; damages; and professional negligence (Cheung & Yiu, 2006).

Meanwhile, Kumaraswamy (1997) has identified few other main causes for rising claims and disputes such as erroneous design information, insufficient data related to site, delays in Employer's response to the contractor's queries and lack of communications, impractical deadlines, improper contract administration, act of god events, imprecise tender details and poor risk allocation.

As per McGeorge et al. (2007), root causes of disputes are Resources & Constraints such as poor initial scoping, unrealistic time targets, unworkable cost, poor tendering, unclear contract documentation, unfair and unclear risk allocation, poor communication, lack of information, unsuitable contract type, lack of empathy trust, inflexible project team member behaviour, lack of team spirit and competence and insufficient long term inter-firm relationship.

Additionally, Abeynayake (2014) has founded below factors as reasons for disputes in local construction industry; Delay occurs with finalizing detailed drawings, scrutinizing variation proposals, confirming verbal instructions to the Contractor

- Delays occurs due to insufficient details in drawings
- Delay occurs with exceptionally adverse weather conditions or due to unforeseen physical conditions
- Conditions of the site get differ while comparing with the details given at the time of tendering.
- Delaying the engineers instructions
- Lack of financial arrangement by both the parties
- Fail to meet the contract requirement or follow or reluctance to fulfil with the goal of the Contract or follow the industry standards while performing the contract
- Failure of the client to handover site within the stipulated time in the contract
- Price Escalations
- Liquidated damages

It is crucial to separate the common root causes of major disputes (Kumaraswamy, 1997).

## **2.4 Impact of disputes on building projects**

Disputes are significantly impact on successful completion of a project (Sameer, Magar, & Parkar, 2016). Time and cost overruns are the main effects which can arise due to the disputes and it cause loss to the employer while failing the project requirements (Thobakgale, Aigbavboa, & Thwala, 2014). Additionally, according to Mashwama et al. (2016), impacts of construction disputes are decrease in output, loss of professional reputation, decrease in benefit, loss of business possibility, time and cost overruns, separate in collaboration between parties, loss of company reputation, decrease of respect among parties, replacement of material, work repetition and further increase expenditure of labours and managers.

Unsettled disputes more than three months will naturally call upon the project participants and senior executives of organization in disputes settling process. This creates critical impact on the performance of the project and business operations of both the parties, since it will also delay the assigned work of senior executives by the organization to achieve the goals of the organization (Kumaraswamy, 1997).

Therefore, dispute resolution is an inevitable process to lead towards the success of any construction project by eliminating the time and cost overruns (Cheung, Tam, Ndekugri, & Harris, 2010).

## **2.5 Dispute resolution methods**

Dispute resolution can be identified as a one of key areas that need to be developed when undertaking a construction project (Patel and Shahe, 2017).

### **2.5.1 History**

The parties can choose different ways of dispute resolution techniques to settle their dispute. Such as negotiation, conciliation, mediation, arbitration, litigation and DRB. Dispute resolution methods other than litigation are defined to as ADR techniques (Yates & Smith, 2007).

Normally litigation has been used as the primitive way of solving a dispute in the construction industry (McGeorge et al. (2007). ADR methods were firstly identified

in late 1960s in the United States due to deficiencies in tradition litigation process i.e. time overruns, cost overruns and bad relationships (Gould, 1999).

Further, according to the Lord Woolf's (1986), Implementing ADR is inevitable requirement to 'Access to Justice' when settling the disputes, reasonably, speedy and impartially. This becomes a one reason to enhance the practicing ADR methods in the United Kingdom. Moreover, ADR method has been identified as a mechanism which has the potential to improve the level of access to the justice system between the people (Law Teacher, 2018).

In general, a dispute resolution process can be either non-binding or binding. However, there are differences where a traditionally non-binding ADR method's decision can be used in the contract as a binding resolution. And final decision of a resolution is crucial for a successful result. The ability of a procedure is to grant a settled outcome and the agreed outcome or decision enforced by a third party may be useless, if one party disagreed or proceeds with another action. This is not mean that the non-binding mechanisms does not convey an effective answer for disputes. On the other hand, according to the literature study, non-binding ADR methods provides positive results in construction disputes, mediation is 85% successful (Madden, 2001).

However, litigations and arbitrations make final and binding decision, though through informal processes can achieve quick and effective solution for disputes. A disputing party has followed number of methods and resources to resolve disputes in construction industry. Those procedures range since traditional litigation processes to ADR processes. The development of dispute settlement processes has directed to the growth of ADR methods (McGeorge et al., 2007). ADR techniques are being developed due to the dissatisfaction of the legal system (Brown & Marriott 1993). Mashwama et al. (2016) has recognized Negotiation, mediation, adjudication, DRB, arbitration and litigation as effective and efficient dispute settlement methods.

### **2.5.2 Dispute resolution in Sri Lankan construction industry**

The local construction industry requires a time and cost effective dispute settlement method. The litigation is the conventional method of solving dispute (Abeynayake, 2014). Due to the critical issues like time and cost overruns, high risk environment in litigation, parties in many contracts were searching for alternative methods to settle the disputes in outside the court building (Elziny, Mohamadien, Ibrahim, & Fattah, 2014). Therefore, ADR processes are established and practiced in construction industry (Patterson, 2015). In addition Abeyaratne (as cited in Gunasena, 2010) stated that, ADR methods were not new to the Sri Lankan society from the ancient kings' days, even though it was not practiced precisely in the present environment. The process of traditional approaches of disputes resolution were altered in accordance to the modern business requirement and for the worldwide use.

Currently Sri Lanka is practicing negotiation, mediation, adjudication and arbitration as ADR methods to resolve the disputes. ADR mechanisms should have the features such as confidentiality, fair, flexibility, understanding between the parties, inexpensive, fast resolution, hearing by the qualified persons, capability to handle technical matters, minimum time-consuming process and so on (Abeynayake, 2014).

Moreover, relevant legislation frameworks were introduced by the local parliament to provide the enforcement power of decision taken by some ADR methods. Primarily, Arbitration Act No.11 of 1995 of Sri Lanka has introduced to control the arbitration proceedings. Additionally, mediation processes are tuned by Mediation Board Act No. 72 of 1988 and its amendments. And, the Commercial Mediation Center of Sri Lanka Act No. 44 of 2000, Mediation Boards (Special kind of disputes) Act No. 21 of 2003 and its recent amendment Act No 04 of 2011 were enacted to regulate the stated issue (Abeynayake, 2014).

In Sri Lankan Construction Industry, CIDA has established the adjudication and arbitration methods as a direct step to settle the construction disputes in the first revised edition of SBD which is published in the year 2006 (Abeynayake, 2014). According to the CIDA/SBD/02, General Conditions of Contracts, Sub Clause 19.2,

“Any dispute of whatever nature arising out of or in relation to this agreement shall in the first instance be attempted to be resolved by way of adjudication”.

Therefore, according to the second edition of SBD/02, Adjudication is the first method to resolve dispute and unless the dispute is not resolved through adjudication can solve it through Arbitration.

In order to solve the disputes arising from the construction works, some provisions are regulated in the Construction Industry Development Act No.33 Of 2014 (Jayalath, 2014). This Act describes three number of ADR methods that shall be followed in case of dispute has been arise. They are conciliation, mediation and adjudication. However, special Appeal Board was initiated in the Act to hear the appeal on decision which is awarded through ADR procedures. Firstly, the dispute may be settled by mediation or conciliation whenever the parties to the contract encounter any dispute which is related to the contract. If conciliation or mediation mechanisms are fail to provide a proper solution for a dispute, parties can move to the adjudication as the next alternative. The parties who are dissatisfied with the adjudicator’s decision, may appeal to the Appeals Board (Parliament of the Democratic Socialist Republic of Sri Lanka, 2014). As mentioned above, In order to resolve the dispute as per this Act, a certain procedure to be followed.

### **2.5.3 Litigation**

The state judicial system has facilitated the litigation as the system of dispute settlement. Even though, litigation is a formal procedure, it is complex in nature. Further, according to the county of the judicature, the rules and procedures are varied (Kelleher, Mastin, & Robey, 2015). As a general, any kind of dispute rising among the parties to a contract could be resolved in court. The selection of court differs according to the size and nature of dispute, location and so on. In accordance with financial limit of each claims the court is different. Therefore, the size of dispute is needed. A plaintiff who is unhappy with a decision in the Technology and Construction Court could appeal to the Court of Appeal. However, an appeal can be done only when the

permission is given by either the Court of Appeal or trial judge. (Murdoch & Hughes, 2001).

In Sri Lanka, the Constitution and the Judicature Act No. 02 of 1978 governs the courts and their jurisdictions. As per the aforementioned legal provisions, “the original civil jurisdiction which seriously affects the contractual matters in the construction industry are vested on District Courts except where the cause of action has arisen out of some commercial transactions of more than five million rupees. The jurisdiction vested in the Commercial High Court established by High Court of Provinces (Special Provisions) Act No. 10 of 1996. According to the procedural law of Sri Lanka the appellate jurisdiction of construction disputes is vested on Civil Appellate High Courts, Court of Appeal and Supreme Court of the Democratic Socialist Republic of Sri Lanka (Abeynayake, 2014).

#### **2.5.3.1 Merits of litigation**

Third parties can be joined in the action. However, only two parties to the contract is bound in arbitration. The construction industry involves various stakeholders and as usual, in a dispute more than two parties are involved. If another party is needed to the arbitration proceedings, a separate provision to be agreed by the parties. However, third party access is possible in the litigation (Murdoch & Hughes, 2001).

When a dispute is basically regarding a law point, it is better to be settled by a judge rather than by an arbitrator who does not have any legal qualification. When a dispute is on specific point of law, official referee can solve the disputes on a construction summons; which is a fast and simple process without the involvement of full-scale court process (Murdoch & Hughes, 2001).

If the dispute is resolved through the court case, the solution becomes a piece of the public record to use in upcoming court cases. Litigation supports to resolve a problem, with mandatory deadlines and the court requirements cannot be ignored. The parties to the contract can point out previous judgements in related cases to reinforce their arguments. In the litigation process, the rules with evidence are much stringent. If the case is strong, litigation provides no way to slip the case by speculation. The main

benefit in the court case is, even though it has held for a longer period, finally it will provide an outcome (Jones, 2019).

### **2.5.3.2 Demerits of litigation**

Litigation is a complex process. It involves more steps and phases before the initiation of trial. Pre-trial stages consume more time. Only wealthier party benefits through litigation process. This is a procedure of winning arguments. Therefore, it is not suited for solving problems. If a lawyer with convincing skill is appointed to argue for the case, it is easier to convince Judge and jury. Therefore, litigation process is useful for wealthier party to afford to hire an experienced lawyer (Murdoch & Hughes, 2001).

In larger corporations, lawyer is retained to resolve disputes through litigation process and the court proceedings happen yearly and it consumes significant cost and time at the end (Jones, 2019). In addition, the usage of the law court for settling disagreements is expensive, unsure and time-consuming. Further, the settling process is held in public (Murdoch & Hughes, 2001).

Litigation is not suited for the disputes which arise due to technical matters. The fact is that the jury or judges may not possess sufficient knowledge on technical matter of the dispute between the parties. Insufficient knowledge of judge board including the judge might cause erroneous decisions and which then proceed to the higher courts. Moreover, litigation is an adversarial process, which means the reasonable solution is doubtful, through winning arguments and evidences any party can win the case. The decision of court may be unacceptable for either party, it creates impact to the commercial relationship of the parties (Law Teacher, 2018).

Transactional costs are higher for litigation process. The cost incurred due to the occurrence of the dispute is known as transactional cost. It includes direct costs such as payments to barristers, claim managers, accountants, and other specialists; indirect overheads such as wages and related cost for standing lawyers, managers, and witness and so on and unforeseen costs such as the inefficiencies, extended time, decrease in quality which happen to the construction process and impact to the good faith between the parties. And, the cost incurred due to dispute avoidance is known as indirect costs.

Costs can incur with regard to the dispute environment of projects such as cost related to the resolution of dispute or claim, rework, reduction in productivity, time allocation of senior level management to settle conflicts, decrease in reputation, delays, diminishing of quality and drop in business relations between the parties (Kumaraswamy, 1997).

#### **2.5.4 ADR methods**

Solving construction dispute is hard when the feasible sources are limited and the dispute is complicated. An accurate way of an ADR strategy is demanding for dispute management (Patel & Shahe, 2017). Kovach (as cited in Alshahrani, 2017) stated that, ADR methods can be defined as a method by which disputes are solved privately without litigation process in the public courts (Kovach, 2004). ADR methods can be classified as binding and non-binding processes. The growth of ADR techniques has gradually developed from self-deterministic to involvement of third parties methods over the years (McGeorge et al., 2007). In accordance with the Love, Davis, Ellis and Cheung (2010), the case laws evidently designate that most of the disputes which arise in construction industry are settled by means of ADR processes.

ADR methods are introduced to provide precedence to confront avoidable disputes and reduce the strength and impact of unavoidable disputes, and it is a smart answer to the costly methods of resolving disputes that afflict the construction industry in many countries (Kumaraswamy, 1997). According to Zylva (as cited in Gunasena, 2010) in Sri Lanka, construction sector stakeholders have implemented and used a variety of ADR procedures. In the Sri Lankan construction industry, ADR processes such as negotiation, mediation, adjudication, and arbitration are frequently used and established.

##### **2.5.4.1 Negotiation**

Negotiation is a globally recognised and efficient method of settling disputes (Yates & Smith, 2007 and Richbell, 2008). And, it is the procedure where parties arrive to a mutually advantageous agreement. This is a speedy, economic and efficient ADR method where parties solve the dispute by direct communication (Sameer, Magar,

Parkar, 2016). Negotiation is a preferred dispute resolution method to protect business relationship between the parties. This technique requires parties to a disagreement to converse their differences and describe their positions in relation to their viewpoints (Yates & Smith, 2007 and Sameer, Magar, Parkar, 2016). All negotiations contain a basic goal of strengthening the relationship between the parties than while it started (Sameer, Magar, Parkar, 2016 and Richbell, 2008). Therefore, this needs a great deal of mutual trust, confidence and belief that issues be able to sort out throughout mutual discussions and meetings (Sameer, Magar, & Parkar, 2016). Negotiations can be carried out by the disputing parties or professional negotiators who are hired to guide parties while conducting negotiations (Yates & Smith, 2007). The successful negotiations involve successful communication and eagerness to settlement, and the negotiating parties' requirements to be met. Negotiations can be conducted publicly or privately, based on their nature and the desires of the parties (Richbell, 2008).

#### **2.5.4.1.1 Merits of negotiation**

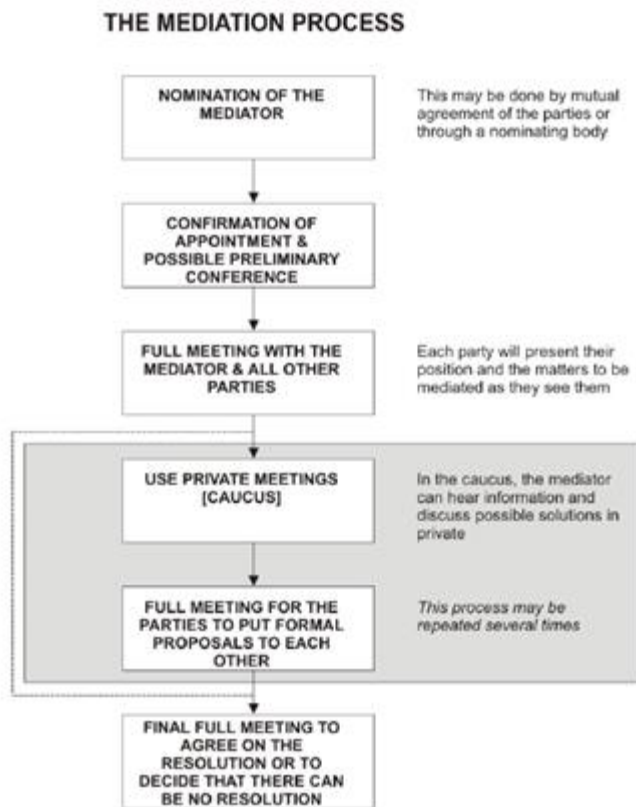
Negotiation is speedy, less costly, and it helps to uphold business relationships (Yates & Smith, 2007). The negotiation process can be extremely advantageous, if both the parties start to respect each other's benefits and started to follow an interest based approach until parties reach to their desired outcomes. Further, negotiation mechanism encompass with the benefits like informality, flexible and voluntary. Since negotiation has informal method of conduct, it doesn't have any set of rules imposed by the law. This aid both the parties to, accept or reject the proposal until they reach to a mutually agreeable resolution. Additionally, negotiation is a flexible mechanism and thus, parties can try to select type of negotiation process that they need to undertake or else parties shall direct their requirement to the legal counsel. Negotiation process facilitates both the parties to participate voluntarily in the negotiation and if needed withdraw at any time of the process (Jones Divorce Mediation, 2017). Moreover, studies in Nigeria establish that even though the negotiation is a simplest processes, it has high success rate, save cost and time for both parties and enhance the good relationship between the parties (Jones Divorce Mediation, 2017).

#### **2.5.4.1.2 Demerits of negotiation**

Negotiation is voluntary in nature. Thus there might be situations it will not reach to a destination where both the parties are agreed and parties will look for another mechanism to resolve their dispute. Further, parties can use negotiation as a stalling tactic. It means negotiation can be used to prevent a party from obtaining their benefits through other ADR methods. Additionally, due to the power imbalance and no middle person to take the control, reaching for a fair solution might not be easy (Jones Divorce Mediation, 2017).

#### **2.5.4.2 Mediation**

Mediators perform as a peacemaker among disputants. Mediation is an informal procedure in which the parties are guided by neutral third parties to a voluntary, consensual and negotiated settlement. And, the disputes are not judged or arbitrated by mediators. Model for the mediation process shown in Figure 2.2. More recently, there is a growing international awareness of the merits of mediation as a dispute settlement mechanism (Gould, 2004).



**Figure 2.2: Model for the mediation process**

Source: McGeorge et al (2007)

#### **2.5.4.2.1 Merits of mediation**

Preservation of business relationship, inexpensive, time saving, voluntariness, creative agreement, flexibility, neutrality, fairness and higher levels of satisfaction are some of the unique characteristics of mediation which overcomes disadvantages in other ADR methods (Abeynayake, 2014). Additionally, mediation is comparatively quick. There are many mediators available and they are willing to support parties who are trying to settle a dispute. A clogged court schedule and sessions are not in mediation. Thus, it can be simply planned at any mutually convenient time and locations of the parties and the mediator (Jones Divorce Mediation, 2017). As well as, mediation is comparatively simple and which contains simple procedural or evidentiary rules which must be followed. Additionally, mediation allows the parties to change the scope of their dispute. Furthermore, mediation enables for flexible solutions and agreements to be reached. In addition, resolution which is achieved in mediation is satisfied to both

parties than court judgments. Because both parties agree freely to any conclusion reached during negotiation, obligations in a settlement are likely to be satisfied than obligations imposed by a court (Jones Divorce Mediation, 2017).

#### **2.5.4.2.2 Demerits of mediation**

If parties in the mediation process have the mentality to settle the dispute through the court process, then the settlement agreement by mediation is impossible. Therefore, a settlement agreement is not always possible under mediation process and risk presents in mediation. Further, in mediation, a party's "ammunition" is exposed to the opposing party. Additionally, if mediation fails, disputing parties know each view and prepare for the trials accordingly. The chance of winning for the disputing parties is critical. There is a no any procedural and legitimate protections assured by the courts in mediation. Sometimes, the lack of formal procedures may be end up in loss. Mediation between parties with varying levels of knowledge and power, as well as unequal amounts of resources, may result in unfair settlement as the low positioned party is unsecured (Jones Divorce Mediation, 2017).

No legal grounds in mediation. Additionally, formal finding process is unavailable in mediation. If a party to the contract does not address his case fully without hearing the other party's opinion, cannot compel the party to disclose the whole case. The party requesting disclosure must have trust on the other contracting party's good faith, which may not be sufficient (Jones Divorce Mediation, 2017).

Due to the lack of awareness about the mediation and social beliefs, Kuwait has got more barriers when implementing the ADR methods within the country. Furthermore, it has proven to be the one of the key challengers to mediation in employment for conflict construction (Alshahrani, 2017).

A research in relation to the mediation in the UK construction industry has grouped the barriers in to six categories such as absence of social react toward these methods; a culture bound with litigation; improper preparations and arrangements regarding awareness of ADR strategies; obstacles to the process; absence of confidence and security; and use of adjudication procedure (Abdullah, 2015). In Kuwait, lack of

knowledge in mediation and social response about its usage have created new barriers to ADR methods and they have proven to be the main barriers for the use of mediation to solve construction disputes (Alshahrani, 2017).

#### **2.5.4.3 Conciliation**

Conciliation is a private, unofficial process where neutral third person guides the parties to reach at a settlement of dispute. Moreover conciliation is a process where final resolution comes through compromising. . In this process, parties who disputed, reach at a settlement with the assist of the impartial person by get rid of the dispute matter encountered through establishment of various alternatives. It doesn't provide an award such as arbitral award (Patel & Shahe, 2017). It means that Conciliation is a process of convincing parties to attain agreement (Sameer, Magar, & Parkar, 2016). A conciliator shall be an independent and impartial third party who assists the parties to reach agreement by persuasion and suggestion whenever dispute arises. Further, conciliators do not take sides, obtain decisions or make judgments (Murdoch & Hughes, 2001).

##### **2.5.4.3.1 Merits of conciliation**

The conciliator is usually a legal specialist in the disputed area. And, the conciliation process conducts privately. Thus, zero risk of loss of reputation. The parties can go to court if they unsatisfied with the outcome. The parties can schedule the time and date according to their convenient. Thus, the process is flexible. If parties have a belief in achieving solution through conciliation, then the dispute can be resolved. This process is less costly than solving dispute through litigation. The process is informal and parties should feel comfort (Get Revising, 2016).

##### **2.5.4.3.2 Demerits of conciliation**

Conciliation is not a legally binding process. Additionally, judgment is not guaranteed finally. Parties may not take the procedure seriously if it is informal. Furthermore, there are no appeals or legal aid available (Get Revising, 2016).

#### **2.5.4.4 Expert determination**

Expert determination is one of the ADR methods. An independent third party is selected to resolve the dispute in expert determination. The third party is an expert in the contractual matters. Unless the contracting parties agreed otherwise at the beginning, the expert's decision is binding on them. The determination by an expert is mainly suitable for evaluation disputes or technical problems which can be resolved by a technical expert, rather than legal issues. It can also be used for matters such as rent adjustments, insurance disputes, and border disputes and so on. This ADR method is perfectly suited to disputes between multi parties due to its flexibility and informality. The person whom the parties agreed can be act in the capacity of expert. They can be designated before the initiation of dispute, or can be selected by the related institute of the expert (Designing Buildings Wiki, 2019).

The decision of an expert may be included in the contract of the parties to settle any dispute, or it can be used to solve a current dispute in preference to the dispute resolution method well-defined in the contract (Designing Buildings Wiki, 2019). Usually, conditions of contract include, if the resolution of disputes is in relation to the expert determination method. Usually, the expert determination which ultimately become final as well as binding, seeks from experienced and impartial experts with skills and knowledge in the area of particular dispute such as employee grievances or specific construction materials. Both parties must follow given steps to assign an expert who can hear the case with adhering to the contractual arguments and to identify the suitable methods to bring the parties to a settlement (Alshahrani, 2017). Usually, this ADR method is used by combining with one or more dispute resolution method, such as litigation, mediation and so on. Through expert determination, the parties can settle a part of the dispute which they are not wish to resolve through mediation by saving time and money (Designing Buildings Wiki, 2019).

##### **2.5.4.4.1 Merits of expert determination**

Expert determination is a confidential process which is less adversarial. And, it helps contracting parties to retain their good working relationship (Designing Buildings Wiki, 2019). Statutory rules are unavailable. Therefore, the procedure is flexible. And,

the parties can insert their particular terms and conditions in the contractual clauses which are related to the expert determination. (Harper James Solicitors, 2019). It delivers a cost and time efficient resolution to settle complex problems (Designing Buildings Wiki, 2019). The parties to the contract control the procedures and they are free to select the characteristics of the experts in relation to the knowledge and understanding of the area of dispute. In addition, the expert can perform as an investigator as well (Minter Ellison, 2014).

Generally, Expert determination is simple and inexpensive when compared with arbitration or litigation proceedings. Further, the expert's decision is frequently binding. Thus, the procedure of expert determination provides finality (Harper James Solicitors, 2019). The expert's determination is final and binding on the parties. There may be a provision allowing the parties a certain amount of time after the determination to formally reject the decision in writing. If no refusal is received within the time range, the decision is final and binding on both parties. If the determination is rejected, the parties may decide to take the case to arbitration or to court (Chartered Institute of Arbitrators Ireland Branch, 2020).

Unlike arbitration, the expert does not have to refer back to the parties before rendering the decision (Designing Buildings Wiki, 2019). This is not only protecting commercially sensitive matters but also the commercial relationships. If the expert completes the determination neglectfully, the parties can sue the expert. However, if the judge provides a false judgement, he or she cannot be sued and, in arbitration only there are four limited grounds to take legal action against an arbitrator. (Harper James Solicitors, 2019). In addition, expert determination process is inexpensive (Minter Ellison, 2014).

#### **2.5.4.4.2 Demerits of expert determination**

The delegation of the expert is determined by the terms and conditions of the contract (Minter Ellison, 2014). Expert determination is unsuitable for the settlement of disputes where disagreement over factual matters is on larger area or dispute on interpretation of the law (Harper James Solicitors, 2019).

There is a possibility of appeal by challenging the expert's decision. And, due to the appeal there is an additional cost and uncertainty on expert's determination. The losing party disagrees on enforcement of the decision which is given by the expert. Therefore, the losing party seeks for further legal action (Harper James Solicitors, 2019). In addition, the expert decision has to be enforced by court process. The powers of experts are limited to the terms and conditions which are mentioned in the contract. Further, the evidence testing process and assertions are unavailable (Minter Ellison, 2014).

#### **2.5.4.5 Dispute Review Boards (DRB)**

DRB is a less frequently used ADR process. In Europe, DRB is in practice for nearly 25 years and in United States, DRB was accepted in the 2000s. DRB can be used to resolve disputes in construction projects and it prevents to take action to settle the dispute through arbitration or litigation (Yates & Smith, 2007). In United Kingdom and Europe, this ADR method is becoming popular (Richbell, 2008).

The composition of three numbers of construction professionals form a DRB. And, they are selected at the commencement of the project to hear and solve disputes by providing recommendations whenever disagreements arise between parties. Additionally, claims are submitted on a regular basis during construction (Gould, 2004 and Yates & Smith, 2007). Among composition of members, each party select one member and the members who are appointed by both the parties selects a member to act as a chairman of the DRB. The authority is granted to DRB by the contracting parties. The recommendation of DRB is temporarily accepted until it revised by litigation or arbitrator (Richbell, 2008).

According to the Yates and Smith (2007), DRB has to go through the contract and visit the site prior to provide a decision on a dispute. Some of the construction projects contains a DRB on site itself and they conduct a weekly meeting with the representatives of the parties to resolve disputes to proceed with the contract without any further delay. Patel and Shahe (2017) found that, usually, DRB is available in contracts with long duration. Most of the time, the DRB is formed immediately afterwards the contract is made.

#### **2.5.4.5.1 Merits of DRB**

According to Harmon (2009), the merit of this ADR method is that it is greater than mediation and arbitration. DRB is designed to be quicker, inexpensive and to suit for solving disputes arise in construction. The panel is cherry picked by the parties with professionals who respected; experience in the particular type of construction project; recognize technicalities of the dispute; and has the ability to understand drawings, specifications, and conditions of contract. The time wastage is minimal, due to the reason that the DRB is available in the project from the commencement of the project and it knows the progress and issues of the project. In addition, while the dispute initiates, it can be resolved by the DRB which is accessible at site throughout the construction.

#### **2.5.4.5.2 Demerits of DRB**

The DRB process is such an expensive system. Due to the non-binding feature of DRB which is a risk and project may delay and drag by unsettled disputes (Gould, 2004).

#### **2.5.4.6 Adjudication**

In Adjudication, a decision is provided by a neutral third party. And, until the decision is revised through arbitration or litigation, the contracting parties are bound by it. This ADR method can be used to resolve commercial disputes between parties. The adjudicator is an unbiased individual who is not involved in the daily activities of the contract and is neither an arbitrator nor a judge appointed by the state; the adjudicator can use his or her powers under the terms of the contract; both parties are bound by the adjudicator's decision; and parties' corporations are not required in this process. The adjudicators' decisions are often stated to be binding until the contract is completed and at the point any party may seek arbitration to appeal the decision (Gould, 2004).

##### **2.5.4.6.1 Merits of adjudication**

The decisions of the adjudication process are private and confidential; unbiased; serious; enforceable; moral; impersonal; organized in a process; tensions attenuated

by time; and strengthen the system. Through Adjudication, the decision can be provided in a short time. In Addition, the process of adjudication is flexible and it costs lesser than litigation and arbitration. The Adjudicator can do the investigation alone to solve the dispute. A creative solution can be found by the adjudicator and it may be advantageous than the judgement which is given by the court. The decision of the adjudicators is bound on the contracting parties until it is revised or overturned by arbitration or litigation. Further in nature itself, Adjudication is less formal (Gould, 2004).

#### **2.5.4.6.2 Demerits of adjudication**

By Adjudication, the probability of damage to the parties' relationship is high. Adjudication is less formal. The outcome of the Adjudication is win loose. Therefore, the level of parties' satisfaction at the end of the process is low. Additionally, there are some other demerits too. They are contains the probability of losing; sometimes unfair; comprises imposed dispute resolution; may include incorrect settlement; adversarial and may restrict the dispute and the contracting parties' views; inflexibility; traditional; may be problematic and may be unproductive (Gould, 2004).

#### **2.5.4.7 Arbitration**

Arbitration is an effective method to settle disputes impartially, confidentially, on time and economically (Gould, 2004). In this ADR method, an arbitrator who is the third party, examines the evidence and provides a binding decision (Nigmatullina, 2016). Most of the countries realize arbitration as a competent and potential technique of settling disputes. Award given by an arbitration proceeding is enforceable (Abeynayake, 2008). In addition, arbitration is the favoured method of dispute settlement which is internationally recognized as a flexible and effective replacement to expensive and time consumable litigation (Gould, 2004). However, both parties shall agree to present their dispute to commence the arbitration proceedings (Nigmatullina, 2016). Arbitration is a statutory controlled process, where members of the tribunal are chosen by the discretion of the parties to the dispute (Gould, 2004)

#### **2.5.4.7.1 Merits of arbitration**

The benefits of arbitration proceedings are discussed below.

**Cost:** Arbitration is less costly than litigation when the case is the simple one. Arbitration does not require much legal preparation (UpCounsel, 2019).

**Timeliness:** Arbitration for a simple case is probably consumes lesser time when compared the time needed to wait for a trial in litigation (Murdoch & Hughes, 2001). Arbitration is informal and flexible in relation to the time schedule (UpCounsel, 2019).

**Technical complexity:** The legal issues of the dispute may clearly identify in the contract. However, the technical matter related to the dispute is better to be sort out by the technically qualified arbitrator (Murdoch & Hughes, 2001).

**Convenience:** Arbitration is convenient for both parties and arbitrators. It means that the schedule of hearings and place can be selected by the parties and arbitrator in their discretion. However, in an arbitration process, there is a less chance for the involvement of lawyers and experts on a complex case (Murdoch & Hughes, 2001).

**Privacy:** In an arbitration proceeding of a larger construction, it is difficult to maintain confidentiality completely. However, main people within the construction field and professionals are involved. Litigation is held in the public area. It means that the dispute between two companies can be heard and opened to the general public which is not confidential. Therefore, there is publicity in litigation when compared with arbitration (Murdoch & Hughes, 2001).

**Commercial expediency:** Through arbitration process, the contractual relationship between the parties may be continued due to the nature of confrontational of this ADR process (Murdoch & Hughes, 2001).

**Fairness:** In litigation none of the parties have the control over the jury or the selection of judge. However, in arbitration the arbitral award can be agreed by both the parties and result in a fair solution and parties also agree to select the panel of arbitrator who have experience in relation to the particular area of dispute (UpCounsel, 2019).

**Finality:** The chance of finality is higher in arbitration due to only four numbers of limited situations to appeal against the arbitral award (UpCounsel, 2019).

**Agreeableness:** Arbitration encourages the contracting parties to achieve a solution to the dispute together. Therefore, this ADR process issues an agreeable result as often (UpCounsel, 2019).

**Simplified Procedures:** Neither party is required to employ an attorney to represent them (UpCounsel, 2019).

#### **2.5.4.7.2 Demerits of arbitration**

There are also some disadvantages of arbitration which are mentioned below.

**No Appeals:** The procedure of formal appeal is unavailable in arbitration. Therefore, the decision of the arbitration is final. Even though any party senses that the decision was unfair, unjustifiable, or partial, parties could not make appeal (UpCounsel, 2019).

**Cost:** Even though the arbitration proceeding is cost effective one, it won't make sense if only minimum money is spent by the parties (UpCounsel, 2019). As usual, the arbitration process is cheaper than the court proceedings. However, this is not true in case of complex construction disputes (Murdoch & Hughes, 2001).

**Rules of Evidence:** A particular regulations have to be followed to accept the evidence by a judge in litigation process. However, in arbitration, Arbitrators can utilize all the information that takes to his or her consideration (UpCounsel, 2019).

**Lack of Cross-Examination:** The arbitration proceedings usually consist of documents as evidences and do not include witnesses or cross examination of witnesses (UpCounsel, 2019).

**Lack of Consistency:** The standard rules and regulations are not in arbitration. Thus, it makes difficult to maintain consistency. There is a chance that the arbitrator act bias in cases where there is a mandatory provision in the contract regarding solving dispute through arbitration (UpCounsel, 2019).

**Lack of Evidence:** Arbitration is not based on evidence. The parties have to trust the experience of the panel of arbitrators on making the precise award (UpCounsel, 2019).

#### **2.5.4.8 Med-Arb**

Med-Arb is known as a hybrid ADR method which consists of two stages (Gould, 2004). This process joints two well recognized dispute resolution processes into single hybrid process to settle disputes. In Med-Arb, combine the characteristics of both mediation and arbitration process are used to resolve a dispute. And, the neutral third party acts both the roles as mediator and arbitrator (Baril & Dickey, 2014).

During the first stage, the dispute is tried to solve amicably between contracting parties under mediation. If unable to settle through mediation, the dispute to be settled through arbitration which is the second stage (Gould, 2004). It is easier for the mediator to identify the role that the arbitrator to be performed while conducting arbitration, through the knowledge learnt during mediation process or the process can be passed to an arbitrator (Cotney Construction Law, 2019).

##### **2.5.4.8.1 Merits of Med-Arb**

Med-Arb provides construction organisations the chance to generate a resolution individually prior to move into the arbitration process. If the parties wish to protect their relationship on business, they may not prefer to settle through arbitration as a first choice. By using a med-arb ADR method, firms can protect them from the expense in relation to the re-beginning with another arbitrator. This ADR process be able to treat the disputing cases. Thus, only the disputes with critical nature to be dealt with arbitration (Cotney Construction Law, 2019). Due to the understandings of the arbitrator regarding the issue, he or she is in a better position to assist the parties on the matter and at what time to hold a process of mediation (Department of Justice Canada, 2015).

Early settling is achieved with Med-Arb. It also saves time and money by avoiding lengthy proceedings. Furthermore, any med-arb settlement might be converted into a formal award by the tribunal. Furthermore, if the contracting parties are unable to reach an agreement during mediation, there is no need to waste time looking for a new

arbitrator because the mediator will also function as the arbitrator. Med-Arb is a flexible process that allows disputants to switch between two ADR methods: mediation and arbitration. Moreover, remedies which could not be provided as an arbitral award, can be served as alternatives through mediation agreements (Department of Justice Canada, 2015).

#### **2.5.4.8.2 Demerits of Med-Arb**

The possibility of partiality is there. It means, if the mediator fails, he or she will perform as an arbitrator. However, he or she may act bias in the appearance of arbitrator whose decision is more probable to be final. Therefore, the parties in the dispute dislikes to disclose all the weaknesses in their case while in the mediation process. The dispute resolver has to be acted in two positions as mediator and arbitrator. As a result, switching positions between facilitator and decision maker is challenging. A party may be forced to follow the neutral third party's unfavorable decision as a means of resolving the dispute. During settlement negotiations, the arbitrator may find it difficult to avoid being swayed by "without prejudice" disclosures. If the mediation process is used as a litmus test for the parties' strong arguments, there is a risk. The information which are gathered through caucus sessions of the Med-Arb Process may create the possibility for the parties to challenge during arbitration process (Department of Justice Canada, 2015).

#### **2.5.4.9 Dispute Adjudication Board (DAB)**

A DAB consists of experienced, respectful, neutral and self-regulating technical adjudicators. The panel is generally formed prior to the commencement of project and visits the construction site in regular intervals. The contract documents, construction related drawings and specifications are provided to the DAB to be familiar with the project and the stakeholders who are involved in the project. In addition, the DAB is kept updated on project progress. The representatives of Client and Contractor meet by the DAB in periodical site visits and boost the settlement of disputes which are arisen while performing the contract. Whenever any disputes arise during performing the works and unable to settle between the parties, the decision is achieved through the DAB (Adel & Anisi, 2017).

#### **2.5.4.9.1 Merits of DAB**

The key benefit is the members of DAB are involved in the project since the commencement of the project and therefore they are aware of the ongoing construction activities of the project. Furthermore, with the knowledge of the other party, the Employer or Contractor can seek an explanation, view, or assistance from the DAB, and so the disputes may be minimized or eliminated totally. DAB is a greatest choice to settle dispute among the parties, due to the reason that the confidentiality can be maintained up to some level between the parties. In order to preserve time and money, DAB is a perfect mechanism to follow when compared with the litigation. Through DAB, the relationship between the parties can be preserved. The parties' satisfaction towards the dispute resolution procedure and the final outcome is high in DAB. Moreover, this ADR method provides innovative solutions for the settlement of disputes which are unavailable in trials of court proceedings. Due to the rapid, cost effective and satisfiable solutions, employer is happy to resolve dispute through DAB. Therefore, the business between the parties is developed in future as well (Ekanayake, 2013).

#### **2.5.4.9.2 Demerits of DAB**

Contractors in Sri Lanka expect the members of DAB to represent them as a lawyer in a court. Many contractors do not understand that the DAB members are playing impartial role. Therefore, they are reluctant to pay the agreed amount for the members of DAB which could raise dispute between the parties (Ekanayake, 2013).

#### **2.5.4.10 Mini-trial**

The disputing parties to be present their disputes to a board which is formed with themselves. For example, the client's and contractor's representatives will conduct a trial in front of a panel of senior executives from their respective organizations. However, it is crucial that this panel should have the required power to reach and execute decisions, and also that its representatives should not have been involved in any personal dispute up to now (Murdoch & Hughes, 2001). The most suitable method to resolve factual disputes are mini trial. The term 'mini trial', on the other hand, is a

misnomer. It is not a speed-up legal procedure. Furthermore, in the Sri Lankan construction industry, mini-trials are unpopular (Abeynayake, 2014).

#### **2.5.4.10.1 Merits of Mini-trial**

The benefits of Mini-trials include: a quick procedure that is less expensive and time consuming than litigation; the process causes less disruption to the project between the parties and allows the business relationship to continue; dispute resolution is in the hands of the parties; and the hearing allows the parties to hear each other's perspectives and discuss their strengths and weaknesses (Department of Justice Canada, 2015).

#### **2.5.4.10.2 Demerits of Mini-trial**

The disadvantages of Mini-trial are the time and cost consumed for the mini-trial process become useless if the dispute has resolved through negotiations between parties or mediation; If this ADR process unsuccessful, the time which have taken will delay settlement which will be achieved through the other ADR process; the trial-like character of the preparation and hearing may continue to separate the positions of the parties rather than encourage an atmosphere of collaboration from the outset; the management to be willing to solve the dispute as soon as possible, if they busy with another works, it may harm the progress; and if the parties are not corporates with the management, then the time which have spent by the senior management will be wasted (Department of Justice Canada, 2015).

### **2.6 Contractual implication of ADR methods in Sri Lankan building projects**

The system or the process to be followed for the settlement of dispute during the contract is usually recognised in the beginning of the contract by the parties (McGeorge et al., 2007 and Kumaraswamy, 1997). And, the standard forms of contract precisely stated the risks and responsibilities of parties to the contract (University College of estate management, 2019)

#### **SBD/01 contractual provisions**

According to the Sub clause 24.1 in ICTAD/SBD/01 in ICTAD (2007), disputant parties shall give first priority to adjudication. If adjudication process fail, then

disputant parties can go for arbitration. As per sub clause 25.8, if parties did not refer the dispute to Arbitration within 28 days of the adjudicator's written communication, adjudicator's written communication will be final and binding (Institute for Construction Training and Development, 2007).

#### **SBD/02 contractual provisions**

According to the ICTAD/SBD/02 sub clause 19.2 in ICTAD (2007), disputant parties shall give first priority to adjudication. If adjudication process fail, then dispute will further proceed to the arbitration. As per sub clause 19.3, if parties did not refer the dispute to Arbitration within 28 days of the adjudicator's written communication, adjudicator's written communication will be final and binding (Institute for Construction Training and Development, 2007).

#### **SBD/03 contractual provisions**

According to the ICTAD/SBD/03 sub clause 14.1 in ICTAD (2007), disputant parties shall give first priority to adjudication. If adjudication process fail, then dispute will further proceed to the arbitration. As per sub clause 14.2, if parties did not refer the dispute to Arbitration within 28 days of the adjudicator's written communication, adjudicator's written communication will be final and binding (Institute for Construction Training and Development, 2007).

#### **SBD/04 contractual provisions**

According to the ICTAD/SBD/04 sub clause 19.3 in ICTAD (2007), disputant parties shall give first priority to adjudication. If adjudication process fail, then disputant parties can go for arbitration. If parties did not proceed for Arbitration within 28 days of the adjudicator's written communication, adjudicator's decision will be final and binding (Institute for Construction Training and Development, 2007).

The Construction Industry Development Act No.33 of 2014 mentioned the path of resolving disputes in relation to the construction activities (Jayalath, 2014). There are three number of dispute resolution methods such as conciliation, mediation and adjudication can be used to settle dispute as per the said Act [The CIDA Act].

However, a special Appeal Board has been established to hear appeals about the outcome or award of ADR techniques (Parliament of the Democratic Socialist Republic of Sri Lanka, 2014).

If the parties come across any disagreements which are related to the contract, firstly it could be solved by conciliation or mediation. The disagreements which are not be able to settle with above ADR methods can be achieved conclusion through adjudication as a second choice. If the parties are unsatisfied with the adjudicator's decision, Parties may appeal through the Appeals Board which was introduced in the said Act. As above, there is a particular procedure to be taken to resolve the dispute according to the said Act (Parliament of the Democratic Socialist Republic of Sri Lanka, 2014).

Standard forms of contract precisely mention the dangers and responsibilities of each party. Such inflexible contractual agreements might not be suitable for long-term contracts which is conducted under uncertainty (University College of estate management, 2019). Due to the high level of uncertainty and complexity, each and every detail and contingencies of the projects are impossible to predict at the beginning. Therefore, the circumstances which are unclear in the contract arise often. The interpretation of terminologies such as conflicts, claims and dispute shall state in the contract clearly to get rid of escalation of disputes (Alshahrani, 2017). Mostly, parties set the system to settle dispute at the initiation of the contract (McGeorge et al., 2007). Usually, the procedures for resolving disputes are included in contracts, and it appears that the sections relating to dispute resolution are given insufficient attention during contract negotiations and preparation of contract documents. (Kumaraswamy, 1997). Due to the limits on the appeal, there is an increase in challenges to a decision of an expert. Additionally, those challenges incur expenses and creates uncertainty. Thus, in order to reduce the risk of challenging, it is crucial to draft the clauses of conditions of contract carefully (Harper James Solicitors, 2019).

## **2.7 Factors affecting the practice of ADR methods**

Jayasena and Kavinda (2012) have identified factors which are affecting the practice of dispute resolution. They are neutrality; speed and cost; voluntariness; fairness; flexibility in issues, experience and the knowledge in construction; preservation of relationship; precise contract; degree of control by parties; enforceability; scope of remedy to satisfy interest; consolidation; range of issues; strategy and agreement; binding decisions; formality; consensus agreement; privacy; relative cost and confidentiality. Those factors have prioritised globally as degree of control by the parties; voluntariness; confidentiality of the process; flexibility; speed to obtain; relative cost; preservation of business relationship; neutrality; range of issues; privacy of the proceeding; knowledge in construction; binding nature of the decision; fairness; consensus agreement; consolidation; enforceability of the decision; formality; liability for opponent's cost; creative solution; scope of remedy to satisfy interest in ascending order.

The factors which makes the ADR methods a success is known as critical success factors. They are rapidity, decrease in disruption of projects, flexibility of processes, cost and human power savings and proper communication between the parties with better assurance in preserving business affairs (Alshahrani, 2017).

Voluntary basis, flexibility, fair treatment and proceeding speed are affecting the practice of ADR (Chong and Zin as cited in Alshahrani, 2017). Lu et.al (as cited in Alshahrani, 2017) also noticed, reputation, cooperation and trust, time, judgement execution and emotion as the five main significant factors which leads ADR methods to success; Cheung (as cited in Alshahrani, 2017) mentioned less cost, relationship maintaining and fast resolution are also some advantageous outcomes.

Further, Alshahrani (2017) has identified flexibility, cost, speedy, confidentiality, parties ability to control, preservation of business relationships, third party control on the process, enforceability, degree of cultural difference, addressing power imbalance, degree of formality, relationships between parties, remedies, type of contract and local law system as factors which are affecting the ADR processes.

Significant characteristics can be classified as speedier process; costs incurred; protect confidentiality of disputants (maintaining relationship); flexible procedures; secure privacy; enforceability of the award/ decision; confidentiality of the proceedings; fair hearing; bendiness of the award/ decision; parties' autonomy in the proceeding and definite remedy (Abeynayake, 2014).

According to Patel and Shahe (2017), the several factors are as follows (refer Table 2.1);

**Table 2.1.Factors for practice of ADR method**

<b>Factors</b>	<b>Description</b>
<b>Overall Duration</b>	Overall duration is calculated by time seized to settle the arisen dispute in the construction project. It is not easy to examine amount of time taken to resolve the dispute because it rely upon on various criteria like complexity and involved disputants
<b>Relative cost</b>	Relative cost is the total expense encountered in arriving a dispute resolution. The processes are less complicated and the relative cost incurred is less than those incurred during arbitration and litigation.
<b>Flexibility in issue, strategy and agreement</b>	ADR mechanism is an aggregate term representing dispute settlement methods like dispute review board, mini-trial and mediation. These methods are considered 'flexible' due to rigid juridical laws are not practiced and the elements of process can be made suitable to obtain the demands of the disputing parties participating in the dispute resolution process.
<b>Confidentiality</b>	An impact element of arbitration and mediation in which parties involved in a dispute are not granted to share any of the information to the public except by mutual approval of the disputing parties. These methods are selected whereas parties wish to keep the matter confidential.
<b>Preservation of relationships</b>	Long relationship is a main feature in the business management. Positive relationship is settled on the ground of common interests, mutual respect and trust. Good relationship wants struggle and the guarantee of the parties engaged to preserve a positive relationship.
<b>Degree of control by parties</b>	Disputing parties have more control over the arrangement and content of the procedure in Alternative dispute resolution rather than in formal legal system and to a lower degree to arbitration. In mediation process, the impartial person serves as a coordinator. Disputing parties have a great participant role in deciding the outcome
<b>Degree of control by neutral</b>	In Alternative dispute resolution procedures, the impartial person has a role of responsibility to the disputing parties and to perform duty of no partiality should be done during guiding parties in coming at a resolution.
<b>Binding decisions and enforcement</b>	A resolution made using negotiation or mediation process without using the recorded agreement is not binding. In arbitration, arbitrator made arbitral award and in court, judges gave decisions which are binding and enforceable.
<b>Neutrality and Fairness</b>	In dispute settlement procedure, the impartial person has a role of responsibility to the disputing parties and to perform duty of no partiality should be done during guiding parties in coming at a resolution. He should help the disputing clients to reach a resolution and should made attempt to remove biases between them.
<b>Lawyer's influence</b>	In the dispute settlement process, lawyers are possibly to involve by contractors, especially where dispute contain a legal matter.
<b>Legal system</b>	Parties want to resolve the dispute through legal system to avoid damage to someone's reputation and conflicts of law

As per Marale, Kanase, and Khandare (2017), flexibility, economy, enforceability, speed, relation, confidentiality, fairness, privacy, bindingness, control and remedy are affecting the practice of ADR methods.

The significant factors for success of ADR, rely on resilience, speed, reputability, economic issues and trust. Moreover, it needs to consider how social and awareness factor can be overcome in order to facilitate the process of contractual relationship improvements (Alshahrani, 2017).

The literature review found that the several researches identified the factors which are affecting the practice of ADR methods in construction projects around the world. Based on the literature, twenty-two factors were summarized and listed in Table 2.2. Those identified factors were used to prepare the questionnaire.

**Table 2.2: Summary of factors**

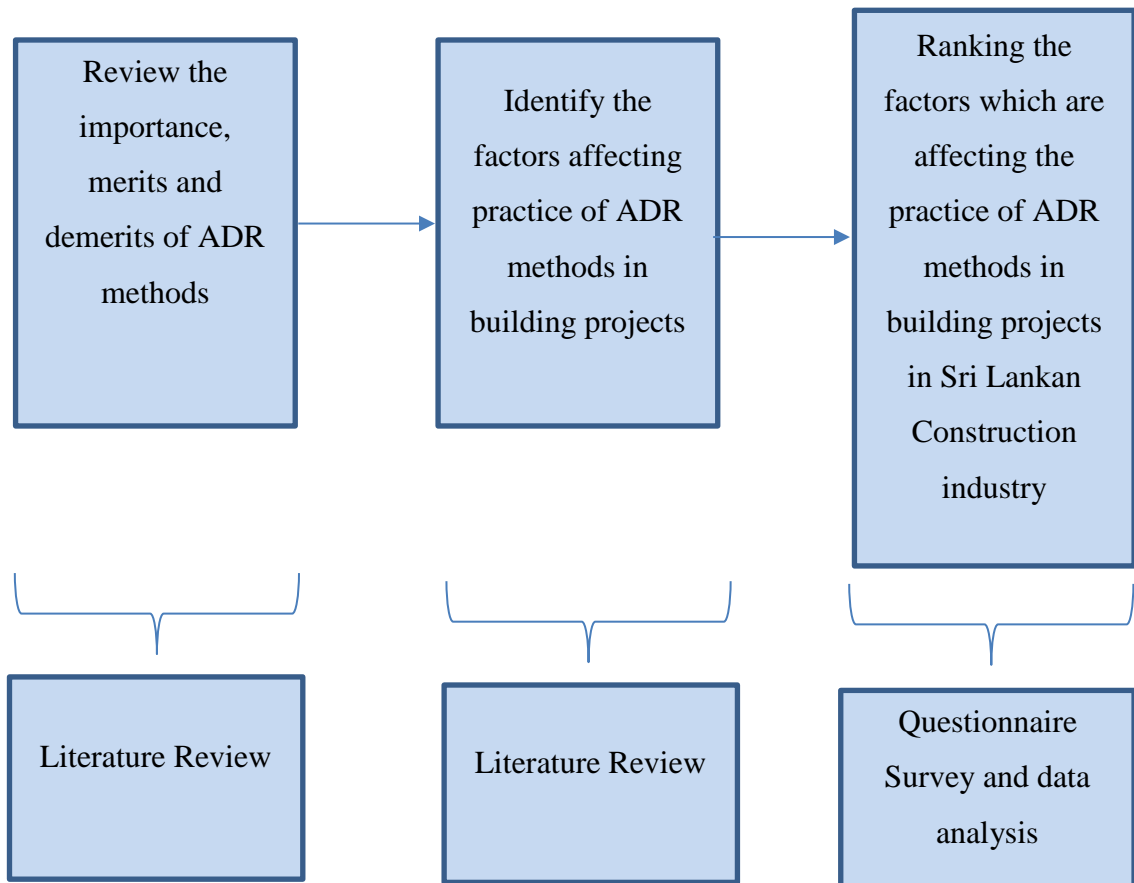
<b>Summary of factors</b>	
<b>Factors</b>	<b>Reference</b>
Addressing power imbalance	(Alshahrani, 2017)
Binding decisions and enforcement	(Jayasena & Kavinda, 2012), (Alshahrani, 2017) , (Abeynayake, 2014), (Patel & Shahe, 2017), (Marale, Kanase, & Khandare, 2017)
Confidentiality of the process	(Abeynayake, 2014), (Marale, Kanase, & Khandare, 2017), Murdoch & Hughes (2001), (Jayasena & Kavinda, 2012), (Lu et.al, as cited in Alshahrani, 2017), (Patel & Shahe, 2017), (Marale, Kanase, & Khandare, 2017)
Consensus Agreement	(Jayasena & Kavinda, 2012), (Cheung, as cited in Alshahrani, 2017), (Abeynayake, 2014)
Creative Agreement	(Abeynayake, 2014), (Jayasena & Kavinda, 2012), (Cheung, as cited in Alshahrani, 2017), (Alshahrani, 2017), (Marale, Kanase, & Khandare, 2017)
Degree of control by neutral	(Gould, 2004), (Patel & Shahe, 2017)

<b>Summary of factors</b>	
<b>Factors</b>	<b>Reference</b>
Degree of control by the parties	(Jayasena & Kavinda, 2012), (Alshahrani, 2017), (Patel & Shahe, 2017), (Marale, Kanase, & Khandare, 2017)
Enforceability of the decision	(Jayasena & Kavinda, 2012)
Fair hearing and treatment	(Jayasena & Kavinda, 2012), (Chong & Zin, as cited in Alshahrani, 2017), (Lu et.al, as cited in Alshahrani, 2017), (Abeynayake, 2014), (Marale, Kanase, & Khandare, 2017)
Flexibility and formality of procedure	(Jayasena & Kavinda, 2012), (Alshahrani, 2017), (Chong & Zin, as cited in Alshahrani, 2017), (Abeynayake, 2014), (Patel & Shahe, 2017), (Marale, Kanase, & Khandare, 2017),
Highest degree of success	(Alshahrani, 2017)
Improvement in working relationships	(Jayasena & Kavinda, 2012), (Alshahrani, 2017), (Lu et.al, as cited in Alshahrani, 2017), (Cheung, as cited in Alshahrani, 2017), (Patel & Shahe, 2017)

<b>Summary of factors</b>	
<b>Factors</b>	<b>Reference</b>
Increased communication between parties	(Jayasena & Kavinda, 2012), (Alshahrani, 2017), (Lu et.al, as cited in Alshahrani, 2017),
Knowledge in Construction	(Jayasena & Kavinda, 2012)
Lawyer's influence:	(Patel & Shahe, 2017)
Local legal system:	(Alshahrani, 2017), (Patel & Shahe, 2017)
Neutrality and Fairness:	(Jayasena & Kavinda, 2012), (Patel & Shahe, 2017)
Reduced project disruption	(Alshahrani, 2017)
Savings in cost	(Jayasena & Kavinda, 2012), (Alshahrani, 2017), (Cheung, as cited in Alshahrani, 2017), (Abeynayake, 2014), (Patel & Shahe, 2017), (Marale, Kanase, & Khandare, 2017)
Savings time	(Jayasena & Kavinda, 2012), (Alshahrani, 2017), (Chong & Zin, as cited in Alshahrani, 2017), (Lu et.al, as cited in Alshahrani, 2017), (Cheung, as cited in Alshahrani, 2017), (Abeynayake, 2014), (Patel & Shahe, 2017), (Marale, Kanase, & Khandare, 2017)
Type of contract	(Alshahrani, 2017)
Voluntary basis	(Jayasena & Kavinda, 2012), (Chong & Zin, as cited in Alshahrani, 2017),

## 2.8 Research framework

Enhancing the use of ADR to resolve construction dispute is important to achieve better outcome. Number of factors are impacted on practice of ADR. It is important to find the highly affected factors to enhance the use of ADR to resolve construction dispute. Research Framework shown in Figure 2.3.



**Figure 2.3: Research framework**

## **2.9 Summary**

Beginning of this chapter is focusing on exchange of ideas of the arena in construction disputes. This discussion leads the literature review to identify the causes of construction disputes and their impacts in the building projects. In the middle of the discussion the literature review specifies dispute resolution methods and alternatives to those by comprehensively describing their backcloth, merits and demerits. Additionally, the contractual provision given by the standard form of contracts related to the ADR methods were briefly explained to build the path to final part of the literature review.

Explained the final part of the literature review discusses about the factors affecting the practice process of ADR methods and those factors were tabulated within the same discussion for a better understanding.

## **03.RESEARCH METHODOLOGY**

### **3.1 Introduction**

The purpose of this chapter is to state the methodology that was undertaken to carry out this research successfully. Hence, the philosophy of the research is described initially. Discussions on Chapter 02 explain the literature background related to the topic. In this chapter, research approach is discussed while identifying the key aspects. It is followed by the research technique in which data collecting and analyzing methods to be utilized are stated. Therefore, this chapter explained the research design, research methods, data collection methods, and data analysis methods and data analysis techniques.

### **3.2 Research Philosophy**

The research philosophy is a system of assumptions and beliefs regarding the improvement of knowledge. Research philosophies are distinguished into three types of research assumptions which are ontology, epistemology and axiology. The assumptions in relation to the nature of reality are focused by ontology. Ontology is sub divided into two concepts such as subjectivism which knowledge is predetermined and objectivism which knowledge is not pre- determine. Epistemology concentration on acceptable knowledge in a field of study and it is sub divided into two concepts known positivism which knowledge need to be scientific and interpretivism which knowledge needs to be opinion of the people. Axiology focus on values incorporates with the study and it is sub divided into two concepts known as value free which researcher's values are not incorporated into the analysis and value laden which researcher's values such as knowledge and experience are incorporated to the analysis (Saunders, Lewis, & Thornhill, 2016).

This research is focusing on identifying factors that are affecting the practice of ADR methods in construction contracts. Since there are different factors were identified from different researchers, this study has pre-determined factors. Hence this research will emphasize on quantitative analysis. In addition researcher's knowledge and

experience will involve to this research due to subjective nature of the data collection and analysis.

Therefore, the research philosophy of this study should be interpretivism with respect to epistemological way of thinking about the research philosophy, subjectivism with respect to ontological way of thinking about the research philosophy and value laden with respect to axiological way of thinking about the research philosophy.

### 3.3 Research design

Wyk (2008) express research design as an overall plan to connect conceptual research problem to convenient pragmatic research. Overall design for this research presented in Figure 3.1.

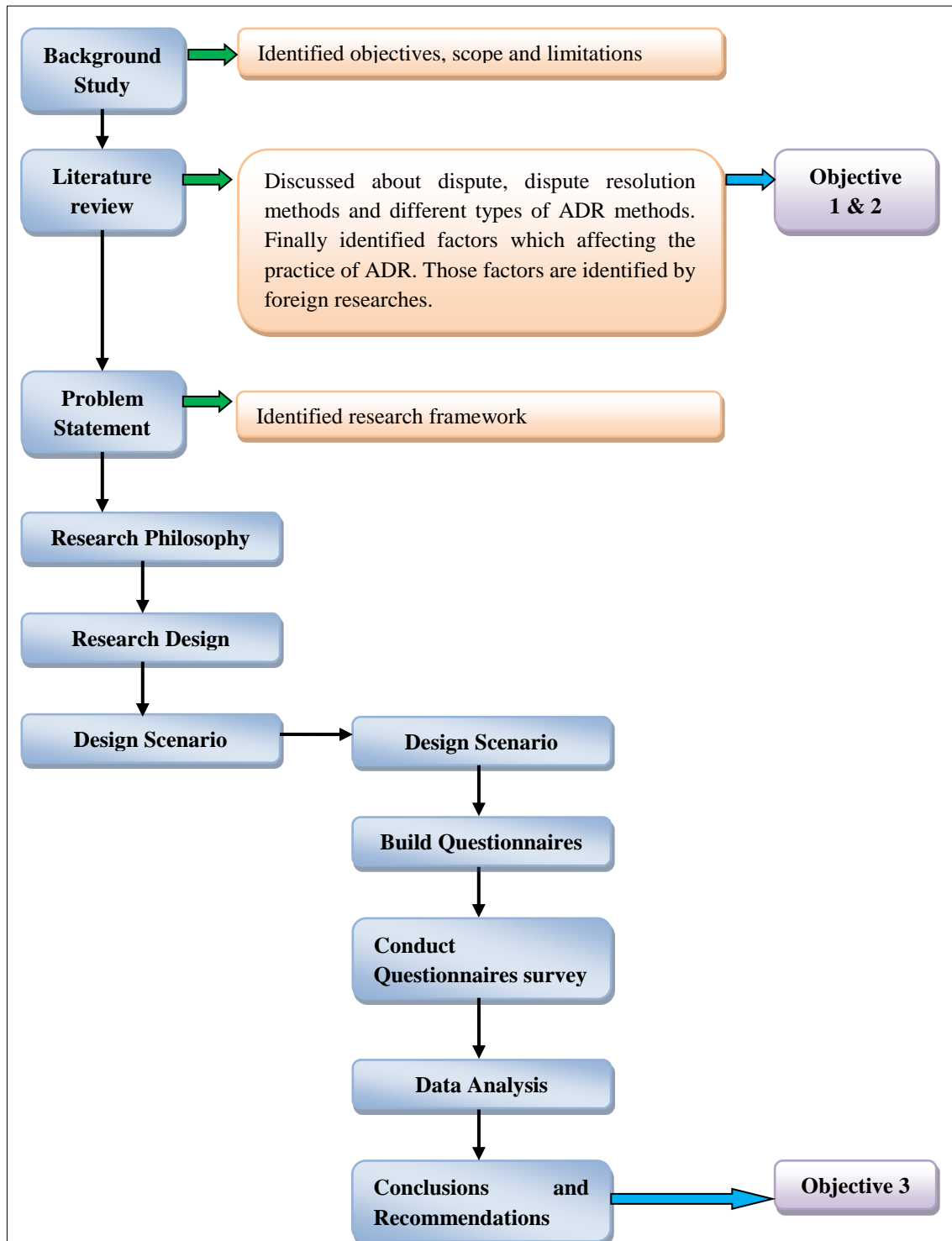


Figure 3.1: Research design

### **3.4 Research approach**

Research approaches mean plans and procedures for research which consisting assumptions to detailed methods of data collection, analysis, and interpretation. There are three main approaches those are qualitative, quantitative and mixed methods (Creswell, 2014).

Quantitative research approach is selected for this study due to the reason that it can be used to examine the relationship among variables.

### **3.5 Research techniques**

After selecting the research approach, appropriate research techniques were identified to operate the research. The principles and processes followed to capture and analyze the collected data are indicated under research techniques (Creswell, 2014).

### **3.6 Data collection**

Data collection techniques are used to collect information systematically about objects of study. Research input is known as data. It can be divided as primary data and secondary data. A collection of original data done by the researcher is called as primary data. As well as secondary data signifies information which has collected previously for another purpose other than the problem in hand (Saunders, Lewis, & Thornhill, 2016).

This is an exploratory research, because research is focusing on the ranking of already identified factors. According to Saunders, Lewis and Thornhill (2009) exploratory research can be used to gain a better understanding of a phenomenon or obtain new perceptions in order to introduce develop hypothesis. In this study focusing on ranking factors, questionnaire survey is chosen as primarily technique of data collection. In questionnaire survey, each respondent are asked to respond to the same set of questions in a pre-determined order. According to that, primary data for the research was collected through questionnaires under the survey research approach.

### **3.6.1 Sample selection**

In most of research it would be impracticable to collect data from whole population. In this situation have to select a sample to collect data (Saunders, Lewis, & Thornhill, 2016).

According to Saunders, Lewis, & Thornhill (2016), there are two types of sampling techniques. They are non-probability sampling and probability sampling. The purposive sampling under non probability sampling is the sampling method for this research. It means the research is obtained information from the individuals who meets the specific criteria. The criteria which was adopted to identify eligible participants for the questionnaire survey is, professionals (Chartered Quantity Surveyor/ Chartered Engineer/ Chartered Architect and lawyer (Attorney-at-Law)) who are involved in ADR process and having more than ten years of experience in the construction industry among consultants, contractors and client organizations and arbitrators.

Saunders, Lewis, & Thornhill (2016) have suggested a minimum sample size from twelve (12) to thirty (30) participants. Considering that, 15 number of the respondent from each respondent group such as consultants, contractors and client organizations and arbitrators were selected.

### 3.6.2 Data analysis

MWR are calculated to rank the significant factors which are affecting the selection of ADR methods in Building construction projects in Sri Lanka. The equations of MWR is shown below;

$$\text{Mean Weighted Rating} = (\sum V_i * F_i) / n$$

Where,

- $V_i$  - Rating of each factor
- $F_i$  - Frequency of responses
- $n$  - Total number of responses

### 3.7 Summary

This chapter captures the method in which the research was conducted. Findings from the literature and similar researches are conveying most suitable option need to adopt by this kind of research will be quantitative research approach. Additionally, this chapter is discussed on preferred data collection and data analyzing techniques to undertake this research successfully.

## **04.RESEARCH ANALYSIS AND FINDINGS**

### **4.1 Introduction**

This chapter presents the analysis of the collected data in the study. Quantitative survey was conducted to capture the industry perception on “Critical factors affecting the practice of alternative dispute resolution methods in building projects in Sri Lanka”. The collected data were analyzed with mean weight rating method. As a whole, this chapter leads to achieve objective 3 of this research.

### **4.2 Background information of questionnaire survey**

Questionnaire survey was carried out from the selected sample containing different members of the construction industry to review the different aspects of each member’s view to critical factors affecting the practice of alternative dispute resolution methods in building projects. Hence, the main focus of the data collection was to identify the critical factors affecting the practice of ADR methods as dispute resolution mechanisms in construction contracts related to building projects in the Sri Lankan construction industry.

Aforementioned questionnaire survey was conducted with sixty numbers of experienced professionals representing contractors, clients, consultants, and arbitrators, who are involved in ADR practice and currently practicing in the Sri Lankan construction industry. Dispute resolution process is a complex process. Thus, when exploring an area of alternative dispute resolution, professionals who are involved in this process have a great level of impact to the final outcome of the research. This impact comes with their experiences in the dispute resolution process, knowledge of dispute resolution process, level of involvement in the area of dispute resolution process and so on. Therefore only the specialists who have been involved in dispute resolution process have been chosen to collect the data for this research.

The profile of each respondent is summarized in Table 4.1. The criteria for selecting the respondents were described under Section 3.6.1 of Chapter 03. Questionnaire surveys were conducted to capture the information related to the key areas of the research. The questionnaire survey format was attached in Appendix A.

**Table 4.1: Profile of the respondents**

<b>Organizations/ Employment</b>	<b>Area of Expertise</b>	<b>Experience</b>	<b>Number of Respondents</b>
Contractor organizations	Chartered Quantity Surveyor	More than 10 years in building construction and involved in ADR practice	5
	Chartered Engineer		4
	Chartered Architect		3
	Lawyer (Attorney-at-Law)		3
Consultant organizations	Chartered Quantity Surveyor	More than 10 years in building construction and involved in ADR practice	5
	Chartered Engineer		4
	Chartered Architect		3
	Lawyer (Attorney-at-Law)		3
Client organizations	Chartered Quantity Surveyor	More than 10 years in building construction and involved in ADR practice	5
	Chartered Engineer		4
	Chartered Architect		3
	Lawyer (Attorney-at-Law)		3
Arbitrators	Chartered Quantity Surveyor	More than 10 years in building construction and involved in ADR practice	5
	Chartered Engineer		4
	Chartered Architect		3
	Lawyer (Attorney-at-Law)		3

### **4.3 Overview of findings**

It was evident from the literature findings that there are both merits and demerits in each ADR practices. Table 4.2 shows the negative and positive impacts of each factor. In addition, it presents the respondent rate as a percentage from each individual respondent group for each factor and overall percentage were calculated based on the total response which was obtained from all four respondent groups. According to the collected data, twenty factors have positive impact and Lawyer's influence and Local legal system have negative impact on practice of ADR methods in building projects in Sri Lanka (refer Table 4.2).

Table 4.3 represents the number of responses for each level of impact for all twenty two factors individually and whether it provides a positive or negative impact on practice of ADR methods in building project in Sri Lanka.

**Table 4.2: Type of impact**

Factor	The Percentage of respondent rate of individual respondent groups for each factor									
	Contractor organizations		Consultant organizations		Client organizations		Arbitrators		Overall percentage	
	N	P	N	P	N	P	N	P	N	P
Addressing power imbalance	-	100%	-	100%	-	100%	-	100%	-	100%
Binding decisions and enforcement	-	100%	-	100%	-	100%	-	100%	-	100%
Confidentiality of the process	-	100%	-	100%	-	100%	-	100%	-	100%
Consensus Agreement	-	100%	-	100%	-	100%	-	100%	-	100%
Creative Agreement:	-	100%	-	100%	-	100%	-	100%	-	100%
Degree of control by neutral	6.67%	93.33%	6.67%	93.33%	13.33%	86.67%	6.67%	93.33%	8.33%	91.67%
Degree of control by the parties	-	100%	6.67%	93.33%	6.67%	93.33%	-	100%	3.33%	96.67%
Enforceability of the decision	-	100%	-	100%	-	100%	-	100%	-	100%
Fair hearing and treatment	-	100%	-	100%	-	100%	-	100%	-	100%
Flexibility of procedure	-	100%	-	100%	-	100%	-	100%	-	100%
Highest degree of success	-	100%	-	100%	-	100%	-	100%	-	100%
Improvement in working relationships	-	100%	-	100%	-	100%	-	100%	-	100%
Increased communication between parties	-	100%	-	100%	-	100%	-	100%	-	100%

Factor	The Percentage of respondent rate of individual respondent groups for each factor									
	Contractor organizations		Consultant organizations		Client organizations		Arbitrators		Overall percentage	
	N	P	N	P	N	P	N	P	N	P
Knowledge in Construction	-	100%	-	100%	-	100%	-	100%	-	100%
Lawyer's influence	93.33%	6.67%	86.67%	13.33%	80%	20%	100%		90%	10%
Local legal system	100%	-	86.67%	13.33%	86.67%	13.33%	93.33%	6.67%	91.67%	8.33%
Maintaining Neutrality and Fairness	-	100%	6.67%	93.33%	6.67%	93.33%	-	100%	3.33%	96.67%
Reduced project disruption	-	100%	-	100%	-	100%	-	100%	-	100%
Savings in cost	-	100%	-	100%	-	100%	-	100%	-	100%
Savings in time	-	100%	-	100%	-	100%	-	100%	-	100%
Type of contract	6.67%	93.33%	-	100%	13.33%	86.67%	-	100%	5%	95%
Voluntary basis	6.67%	93.33%	-	100%	6.67%	93.33%	-	100%	3.33%	96.67%

*Note:*

N: Negative impact

P: Positive impact

**Table 4.3: Summary of responses from questionnaire survey**

Factor	Number of response for level of impact					Type of impact	
	1	2	3	4	5	Negative	Positive
Addressing power imbalance	-	-	2	37	21		x
Binding decisions and enforcement	-	-	1	35	24		x
Confidentiality of the process	-	8	40	11	1		x
Consensus Agreement	2	-	9	30	19		x
Creative Agreement:	1	4	6	26	23		x
Degree of control by neutral	-	7	34	19	-		x
Degree of control by the parties	1	-	5	37	17		x
Enforceability of the decision	-	-	2	17	41		x
Fair hearing and treatment	-	-	4	29	27		x
Flexibility of procedure	-	-	4	13	43		x
Highest degree of success	2	-	4	36	18		x
Improvement in working relationships	-	5	10	30	15		x
Increased communication between parties	-	3	10	26	21		x
Knowledge in Construction	-	8	16	36	-		x
Lawyer's influence	4	18	37	1	-	x	
Local legal system	-	-	18	41	1	x	
Maintaining Neutrality and Fairness	-	-	9	34	17		x
Reduced project disruption	-	-	5	22	33		x
Savings in cost	-	-	-	19	41		x
Savings in time	-	-	-	21	39		x
Type of contract	8	20	27	5	-		x
Voluntary basis	1	1	25	26	7		x

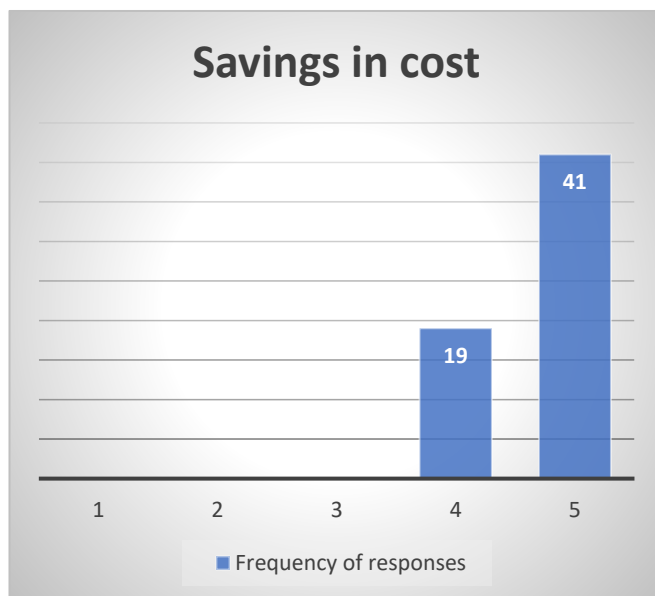
The respondents highlighted that several factors had a high impact on the ADR practices while some had a lesser impact. Accordingly, Table 4.3 illustrates that the impact of the identified factors varies from very high to very low. Correspondingly “Savings in cost” was identified with a 4.68 mean weighted rating as the fact which has the highest impact on the ADR practices. On the other hand, “Type of contract” was identified factor as which has very low impact on the ADR practices with 2.48 mean weighted rating very high.

#### 4.4 Discussion on factors that have an impact on practice of alternative dispute resolution methods

It is evident from the literature findings that various ADR practices are influenced by different factors. Correspondingly the following section discusses the factors which the respondents identified as having positive or negative impact on the ARD practices.

##### 4.4.1 Discussion on factors that have positive impact on practice of ADR methods

###### 4.4.1.1 Savings in cost

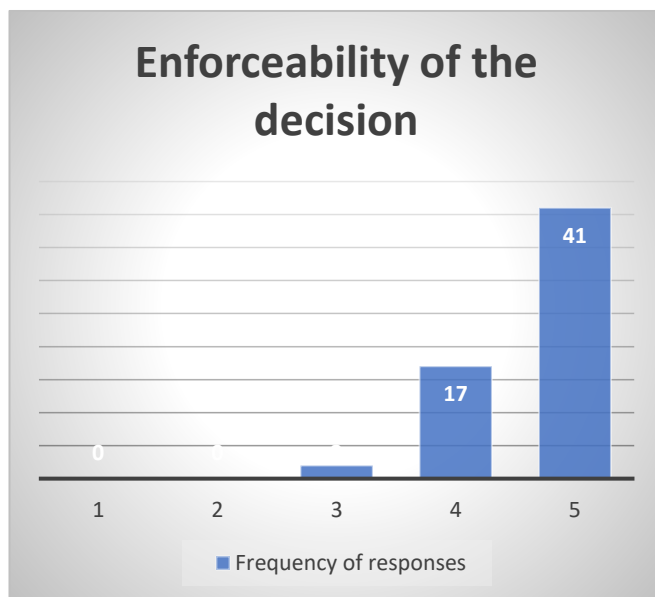


**Figure 4.1: Savings in cost**

All respondents agreed that “Savings in cost” enforces positive impact on ADR practices. Correspondingly the respondents (41) have highlighted “Savings in cost” as a factor having a very high impact with a mean weight score of 4.68. ADR methods are less cost consuming compared to the other methods. Cost of such procedures will be costly in terms of money and time. Even though, in the ADR method, these costs can be greatly reduced due to lesser durations. In addition, no legal rights are required in this process. On the other hand, there are no lawyers involved in ADR practice.

Therefore, compared with other methods, the attorney fee for ADR practice is very low. In this case, the respondents agreed that in the analysis results, the “cost savings” in ADR practice are very high and significant than “enforceability of the decision”.

#### 4.4.1.2 Enforceability of the decision

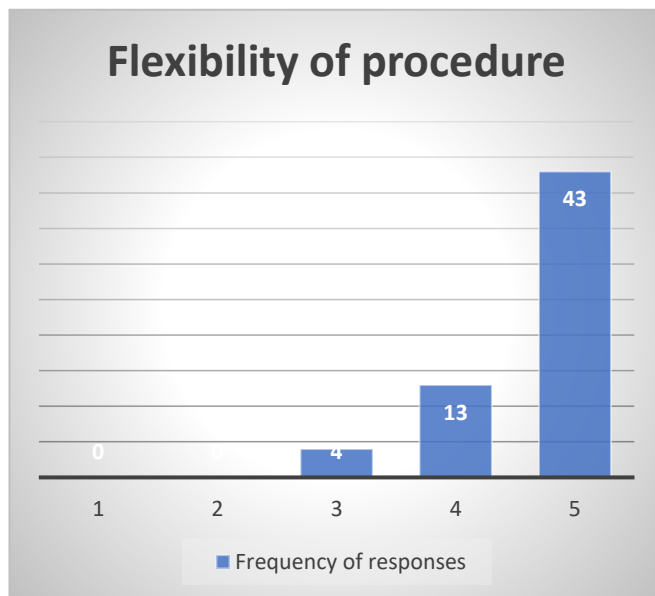


**Figure 4.2: Enforceability of the decision**

All respondents agreed that “Enforceability of the decision” enforces positive impact on ADR practices. However, “Enforceability of the decision” has lesser positive impact on practice of ADR methods when comparing with “Savings in cost”. Major of the respondents agreed that "enforceability of decisions" is an important factor in ADR practice. Majority of respondents (41) ranked it as a "very high" impact factor, while seventeen (17) respondents considered it to be a "high" impact factor. Accordingly, the respondents have given a mean weight of 4.65 to this factor. As mentioned above, there is no strong binding on decision given by some ADR methods except arbitration. Therefore, in ADR methods, the implementation ability (enforceability) of decision-making is very low. On the other hand, ADR methods is a philosophy that encourages rather than enforces resolution. Due to this nature, this

factor has become a very important factor in the practice of ADR methods in the construction industry.

#### 4.4.1.3 Flexibility of procedure

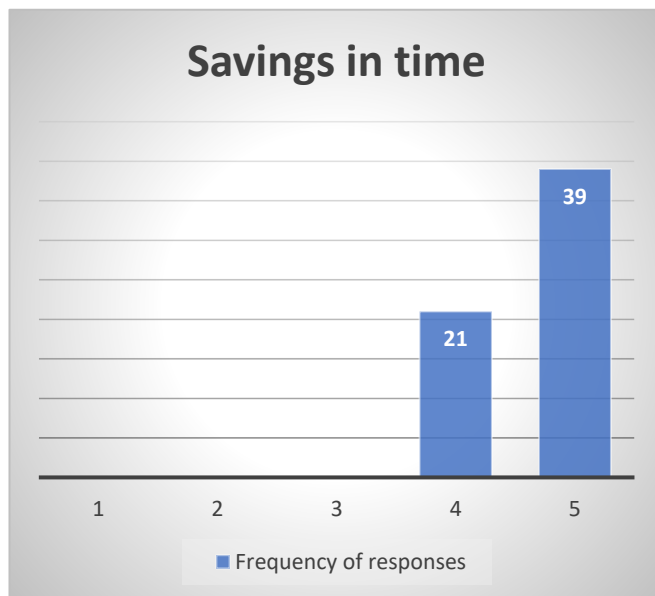


**Figure 4.3: Flexibility of procedure**

All respondents agreed that “Flexibility of procedure” enforces positive impact on ADR practices. However, “Flexibility of procedure” has same positive impact on practice of ADR methods when comparing with “Enforceability of the decision”. Correspondingly 43 respondents have highlighted “Flexibility of procedure” as a factor that imposes a very high impact on ADR practices with a mean weight score of 4.65. Compared to the disputes resolution methods like Arbitration, other ADR methods have a flexible procedure. Each ADR method has its own rules and those are different from each other. The only conclusion that can be drawn about ADR methods is a very general one. As far as international commercial disputes are concerned, ADR methods is recognized worldwide. Many ADR methods have been developed for domestic disputes. However, they are equally applicable in international forums. Therefore the “Flexibility of procedure” is very general and simple compared to the

other methods. Hence, the majority of respondents have agreed that this factor has a very high impact on the ADR process.

#### 4.4.1.4 Savings in time



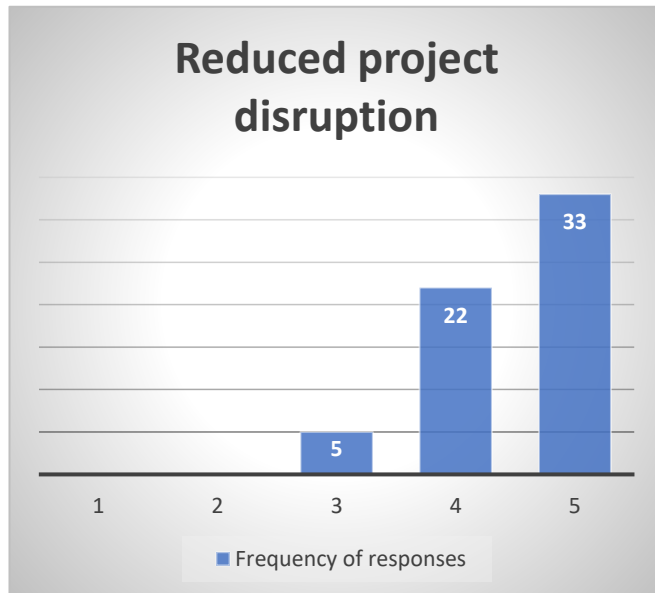
**Figure 4.4: Savings in time**

All respondents agreed that “Savings in time” enforces positive impact on ADR practices. However, “Savings in time” has same positive impact on practice of ADR methods when comparing with “Flexibility of procedure”.

Correspondingly, the majority of respondents (39) have agreed that “Savings of time” is a factor that has a very high impact on the ADR practices with a mean weight score of 4.65. Litigation is an expensive and tedious process that involves a lot of time and cost consumption. Accordingly, the contemporary contracts are perused to incorporate arbitration clauses with a view of solving issues amicably. Furthermore, the respondents agree that the flexible nature of the ADR methods enables the parties to decide in a shorter period and minimum cost. On the contrary since the decision of the ADR practices are not binding, if the parties are not satisfied with the decision the process can be dragged to end up with litigation. Nevertheless, it can be stated that

ADR practices are time-saving. “Savings in time” in ADR practice are high and significant than “Reduced project disruption”.

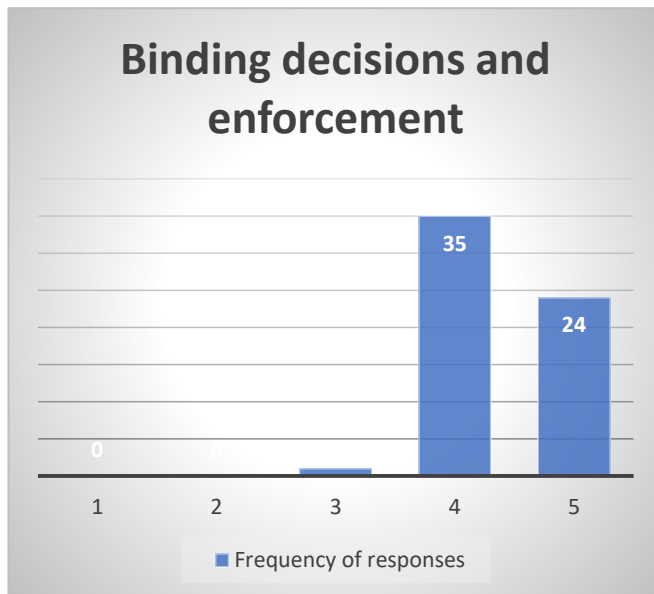
#### 4.4.1.5 Reduced project disruption



**Figure 4.5: Reduced project disruption**

All respondents agreed that “Reduced project disruption” enforces positive impact on ADR practices. However, “Reduced project disruption” has lesser positive impact on practice of ADR methods when comparing with “Savings in time”. The majority of the respondents (33) agreed that “Reduced project disruption” enforces a very high impact on ADR practices with a mean weight score of 4.47. Accordingly, compared with other dispute resolution methods, the overall duration of the ADR process is short. In this case, it is less likely that the project will be interrupted due to the ADR process. Therefore, it is important to note that in ADR practice, “Reduced project disruption” plays an important role compared to the “Binding decisions and enforcement”.

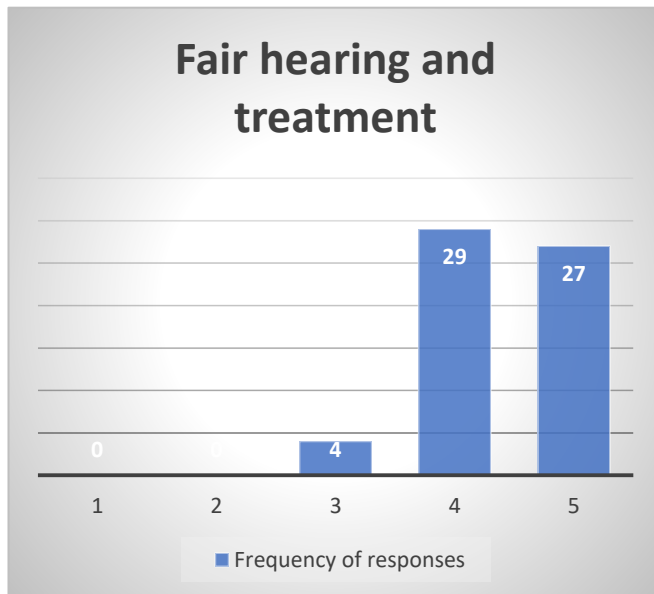
#### 4.4.1.6 Binding decisions and enforcement



**Figure 4.6: Binding decisions and enforcement**

All respondents agreed that “Binding decisions and enforcement” enforces a high positive impact on ADR practices with a mean weight score of 4.38. However, “Binding decisions and enforcement” has lesser positive impact on practice of ADR methods when comparing with “Reduced project disruption”. Accordingly, it is evident from the literature review findings that all of the identified ADR methods imply a binding decision on parties. Furthermore, the decision by same ADR method is not strictly enforceable. If the parties are not satisfied with any decision the parties can move on to another ADR solution. Therefore, these ADR methods are quite flexible and if it is required by parties, they also can be enforceable.

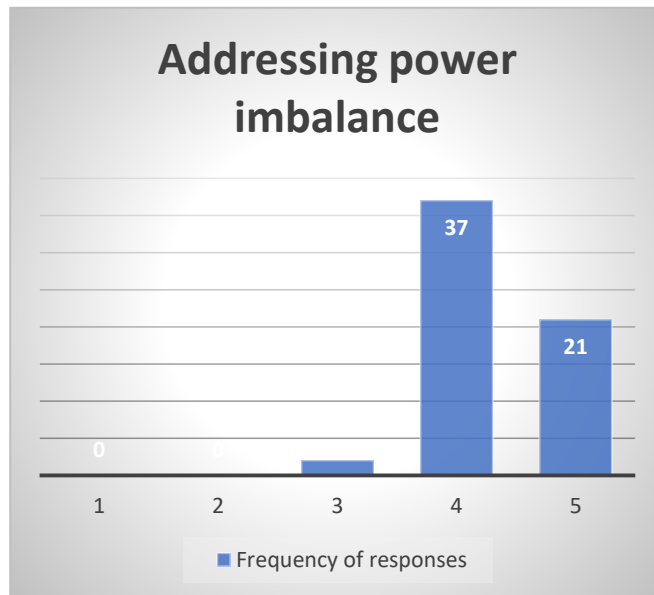
#### 4.4.1.7 Fair hearing and treatment



**Figure 4.7: Fair hearing and treatment**

All respondents agreed that “Fair hearing and treatment” enforces positive impact on ADR practices. However, “Fair hearing and treatment” has same positive impact on practice of ADR methods when comparing with “Binding decisions and enforcement”. "Fair hearing and treatment" is another important factor, which was considered very important by twenty seven (27) respondents in the survey results with a mean weight of 4.38. However, with the exception of "negotiation" most of the ADR actions involve third party other than the parties to the contract. The third party is a neutral person or group and has the responsibility to perform their duties fairly and impartially. In this case, fair hearing and treatment play a major role in providing good decisions to solve the problems in ADR practice. Therefore, this factor has a very important impact on ADR practice than “Addressing power imbalance”.

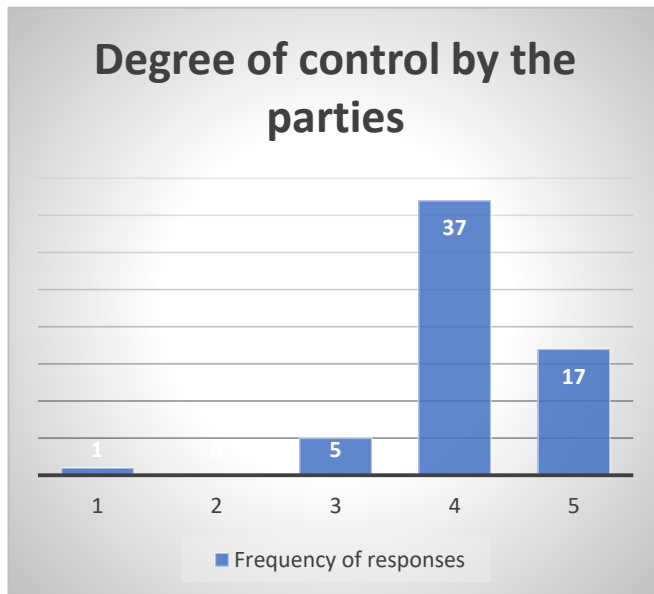
#### 4.4.1.8 Addressing power imbalance



**Figure 4.8: Addressing power imbalance**

The respondents have given a mean weight score of 4.32 to the factor, “Addressing power imbalance”. However, “Addressing power imbalance” has lesser positive impact on practice of ADR methods when comparing with “Fair hearing and treatment”. Accordingly, all the respondents have agreed that this factor has a positive impact on ADR practices. Furthermore, 21 respondents have agreed that this factor implies a high impact on the ADR practices. Effective dispute resolution should have the ability to address this power imbalance and reduce that imbalance. Correspondingly it is apparent that the ADR practices are lacking the ability to address the power of imbalance and neutralize it. “Addressing power imbalance” in ADR practice are high and significant than “Degree of control by the parties”.

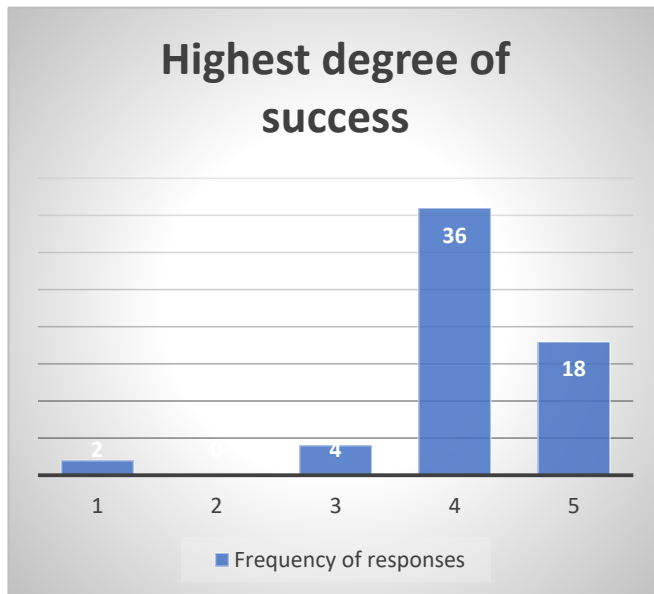
#### 4.4.1.9 Degree of control by the parties



**Figure 4.9: Degree of control by the parties**

All respondents agreed that “Degree of control by the parties” enforces positive impact on ADR practices. However, “Degree of control by the parties” has lesser positive impact on practice of ADR methods when comparing with “Addressing power imbalance”. Considering the findings of the analysis, majority of respondents (37) have confirmed that it is a highly significant factor in the ADR process. Accordingly, the respondents have given a mean weight of 4.15 to this factor. Thus, the ‘degree of control by parties’ has a severe impact compared to the “Degree of control by neutrals” in the ADR processes. In addition, most decisions in ADR practice are non-binding except arbitration. Therefore, the degree of control of the parties has a major impact on the resolution of issues through informal discussions and arrangements between the parties to the dispute. “Degree of control by the parties” in ADR practice are high and significant than “Highest degree of success”.

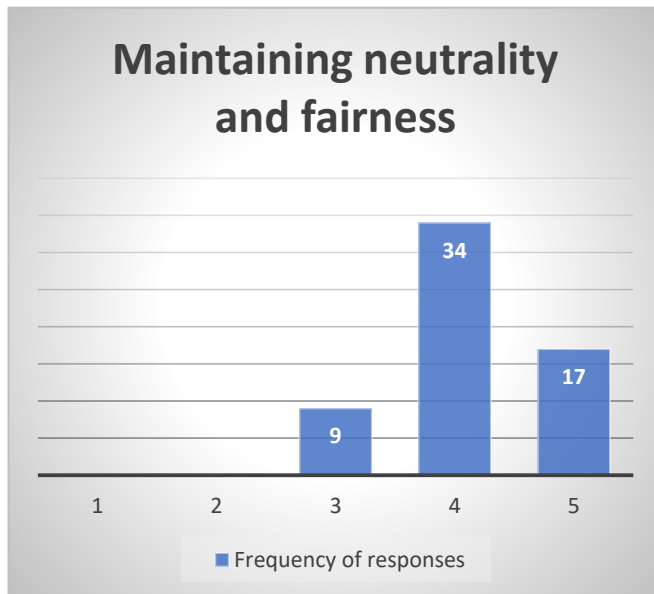
#### 4.4.1.10 Highest degree of success



**Figure 4.10: Highest degree of success**

All respondents agreed that “Highest degree of success” enforces positive impact on ADR practices. However, “Highest degree of success” has lesser positive impact on practice of ADR methods when comparing with “Degree of control by the parties”. Accordingly, 36 respondents have placed “Highest degree of success” as a factor that imposes a high impact on ADR practices with a mean weight score of 4.13. It is apparent that some disputes do not have a legal solution or better resolved outside the conventional legal system. Hence in such a situation’s ADR practices are more successful than legal solutions. Even though, the ADR practices are less formal in some circumstances litigation may seem the most successful method. Correspondingly, the confidential nature and flexible nature because of responsiveness to the individual view of the parties peruses the parties to be more complying to the decisions. Furthermore, ADR practices promote the goodwill of both party, and help to reduce further conflicts. Therefore, because of the above-mentioned reasons the ADR practices are proven to be more successful than conventional litigation.

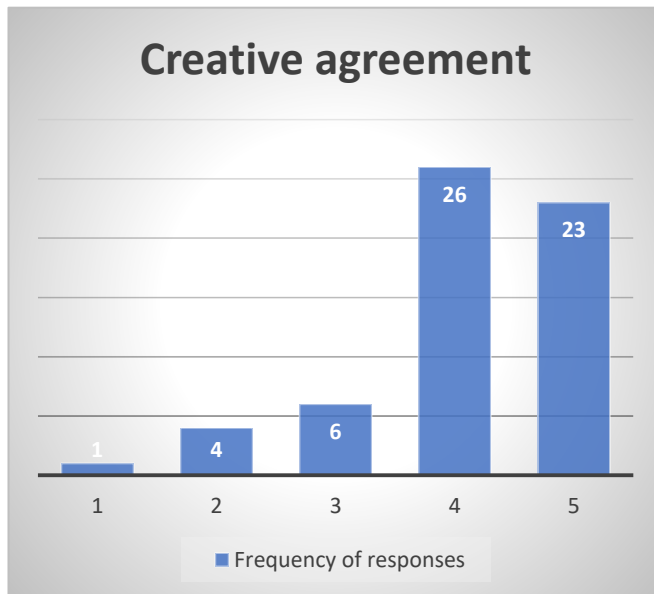
#### 4.4.1.11 Maintaining neutrality and fairness



**Figure 4.11: Maintaining neutrality and fairness**

All respondents agreed that “Maintaining neutrality and fairness” enforces positive impact on ADR practices. However, “Maintaining neutrality and fairness” has same positive impact on practice of ADR methods when comparing with “Highest degree of success”. 34 out of 60 respondents have identified “Maintaining naturality and fairness” as a factor having a high impact on ADR practices with a mean weight score of 4.13. ADR methods involves third party acting as a neutral person in the dispute resolution process. This third party has a responsibility to act fairly and impartially. Therefore, it is necessary to “Maintaining Neutrality and Fairness” in ADR practice in terms of providing fair decisions. The third party will be appointed by the two main parties, and the two parties will give preference to the selection. Therefore, neutral and fair treatment is essential for the parties to maintain proper ADR practices. “Maintaining neutrality and fairness” in ADR practice are high and significant than “Creative Agreement”.

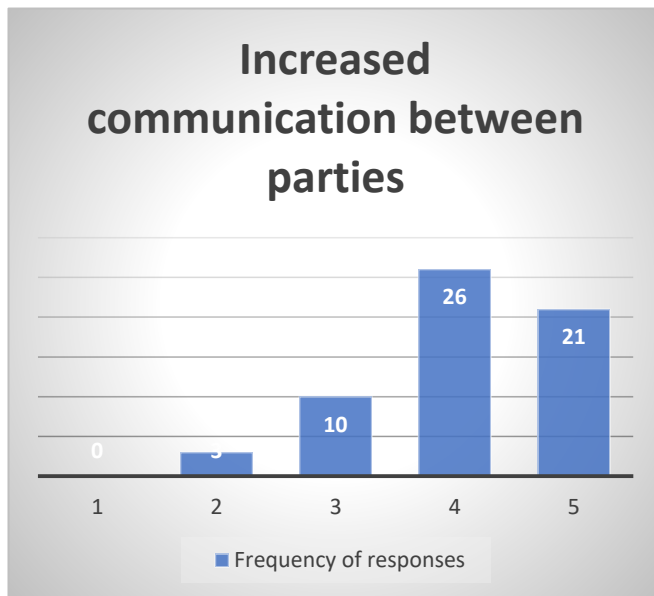
#### 4.4.1.12 Creative agreement



**Figure 4.12: Creative agreement**

All respondents agreed that “Creative Agreement” enforces positive impact on ADR practices. However, “Creative Agreement” has lesser positive impact on practice of ADR methods when comparing with “Maintaining neutrality and fairness”. Accordingly, 26 respondents agreed that creative agreement has a high impact on ADR practices with a mean weight score of 4.10. Usually, a third party in the ADR process will suggest recommendations in a creative way to resolve the problem. Results of this process have not been bound to a set of general conditions. In this case, unlike traditional methods, many new conclusions can be found through the ADR process. “Creative Agreement” in ADR practice are high and significant than “Increased communication between parties”

#### 4.4.1.13 Increased communication between parties

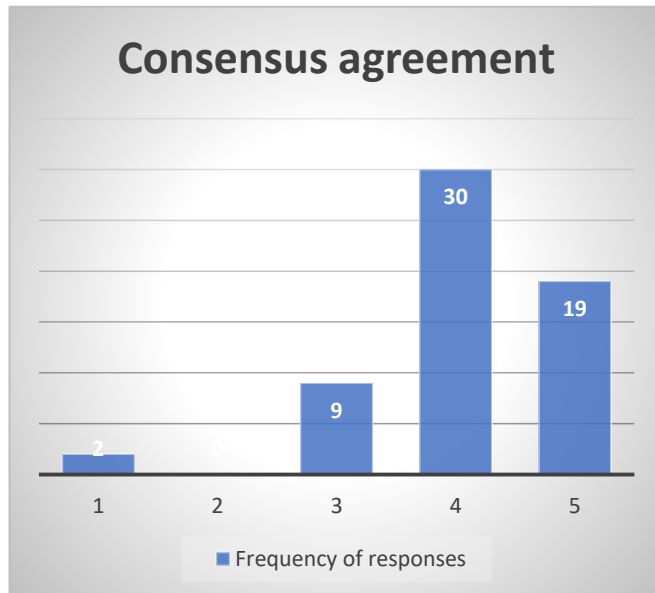


**Figure 4.13: Increased communication between parties**

All respondents agreed that “Increased communication between parties” enforces the positive impact on ADR practices. However, “Increased communication between parties” has lesser positive impact on practice of ADR methods when comparing with “Creative Agreement”. Increased communication between parties has been ranked as a ‘high’ significant factor by the majority of the respondents with a mean weight score of 4.08. Communication can make our argument stronger, and it can also make it more susceptible to outside influences. ADR methods is a way to resolve disputes and it depends entirely on communication. Through communication, we receive and transmit news, information, ideas, and express our feelings, thoughts, desires, and intentions about disputes, and we can understand various factors through this effective communication and create the necessary background for resolving disputes (especially for the third party who hear the dispute). On the other hand, decisions of ADR methods can be used for other dispute resolution methods such as arbitration and litigation. In this case, communication becomes more important, because, in the court, evidence is part of determining the outcome of the case, but while resolving disputes through ADR methods, communication is the whole and soul of other procedures. “Increased

communication between parties” in ADR practice are high and significant than “Consensus Agreement”.

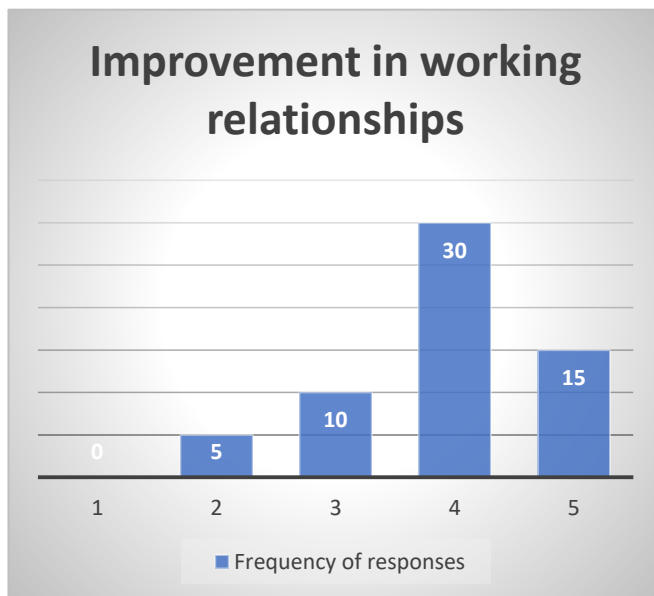
#### 4.4.1.14 Consensus agreement



**Figure 4.14: Consensus agreement**

All respondents agreed that “Consensus Agreement” enforces positive impact on ADR practices. However, “Consensus Agreement” has lesser positive impact on practice of ADR methods when comparing with “Increased communication between parties”. The majority of the respondents (30) agreed that consensus agreement has a high impact on ADR practices with a mean weight score of 4.07. The ADR process is completely consensual. The parties cannot be forced to do something, and they can withdraw from ADR processed it at any time. Furthermore, the decisions are given as opinions. Either party can be agreeing or disagree. Therefore, the consensus agreement is occurring through ADR processes and it has been considered as a factor with a high impact on ADR practice are high and significant than “Improvement in working relationships”.

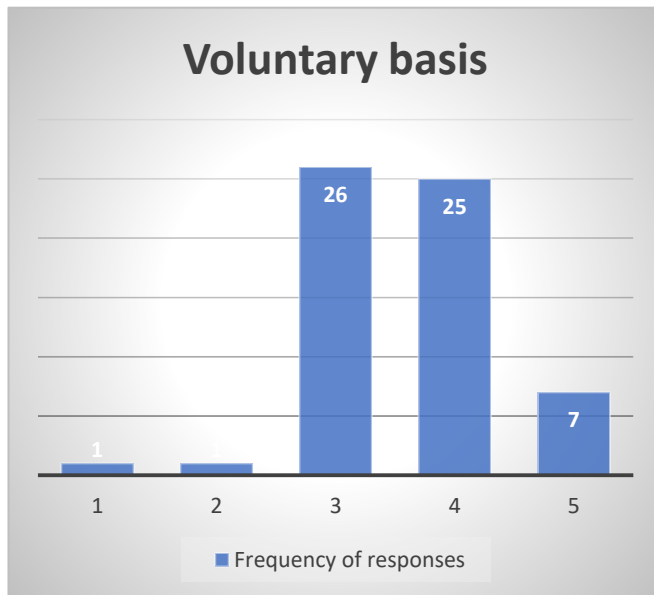
#### 4.4.1.15 Improvement in working relationships



**Figure 4.15: Improvement in working relationships**

All respondents agreed that “Improvement in working relationships” enforces positive impact on ADR practices. However, “Improvement in working relationships” has lesser positive impact on practice of ADR methods when comparing with “Consensus Agreement”. Respondents have suggested that “Improvement in working relationships” is a factor that has a medium impact on the ADR process with a mean weight score of 3.92. ADR methods are structured to strengthen future workplace relationships. Especially because in ADR methods the notion of “us vs them” does not exist. Therefore, these methods enable the parties to choose an appropriate path that addresses their needs and tailor that path accordingly to their needs. Similarly, ADR methods can produce better results that are favorable to both parties. In contrast to a legal decision, decisions on ADR methods are based on parties. Correspondingly, the nonbinding and flexible nature allows the parties to move on to another solution if the decision is not favorable. Since the outcome of ADR methods is simply suggestions to facilitate settling the dispute amicably. “Improvement in working relationships” in ADR practice are high and significant than “Voluntary basis”.

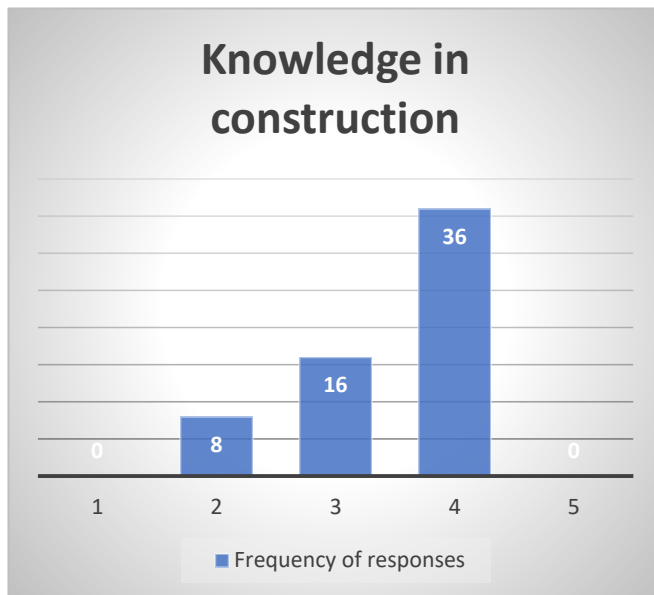
#### 4.4.1.16 Voluntary basis



**Figure 4.16: Voluntary basis**

All respondents agreed that “Voluntary basis” enforces positive impact on ADR practices. However, “Voluntary basis” has lesser positive impact on practice of ADR methods when comparing with “Improvement in working relationships”. Correspondingly, respondents have agreed that “Voluntary basis” is a factor that has a high impact on the ADR practices with a mean weight score of 3.60. “Voluntary basis” in ADR practice are high and significant than “Knowledge in construction”.

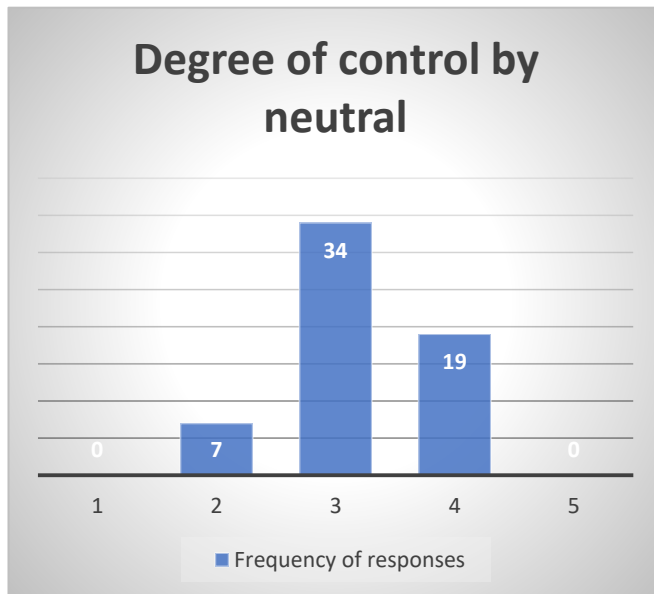
#### 4.4.1.17 Knowledge in construction



**Figure 4.17: Knowledge in construction**

All respondents agreed that “Knowledge in construction” enforces positive impact on ADR practices. However, “Knowledge in construction” has lesser positive impact on practice of ADR methods when comparing with “Voluntary basis”. Accordingly, respondent have agreed that “knowledge in construction” is a factor which impacts the ADR practices in a medium manner with a mean weight score of 3.47. The professionals who are involved in ADR practices should have sound knowledge in construction to provide a just and equal suggestion to the parties who are in dispute. Furthermore, it is evident that without sound knowledge of the construction background a fair decision cannot be given. Accordingly, the arbitrators should have sound knowledge in construction to interpret the issue and provide a fair judgment. “Knowledge in construction” in ADR practice are high and significant than “Degree of control by neutral”.

#### 4.4.1.18 Degree of control by neutral

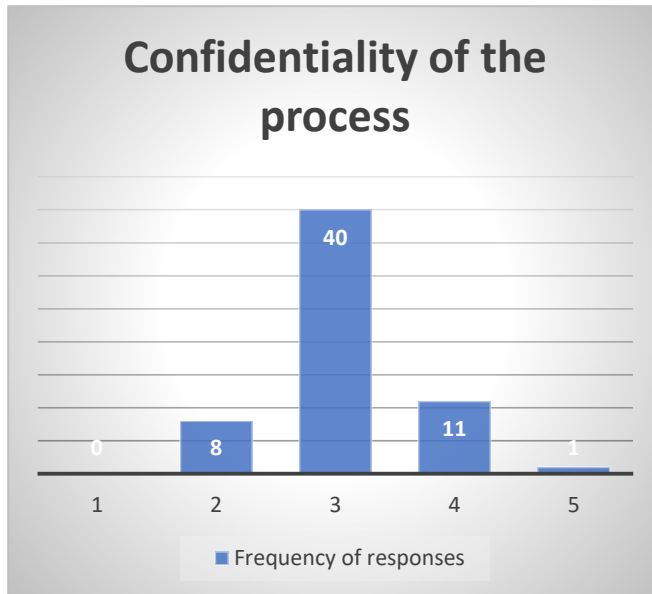


**Figure 4.18: Degree of control by neutral**

All respondents agreed that “Degree of control by neutral” enforces positive impact on ADR practices. However, “Degree of control by neutral” has lesser positive impact on practice of ADR methods when comparing with “Knowledge in construction”.

Throughout the analysis, it was confirmed and most of the respondents (34) have agreed the “Degree of control by neutral” has a medium impact on ADR practices with a mean weight score of 3.20. On the other hand, when a neutral party has control over the results and processes involved in reaching an agreement, this will also ease the atmosphere of confrontation between the disputing parties. Further, this is an important factor as the neutral party can vary degrees of control over the conflict resolution process. “Degree of control by neutral” in ADR practice are high and significant than “Confidentiality of the process”.

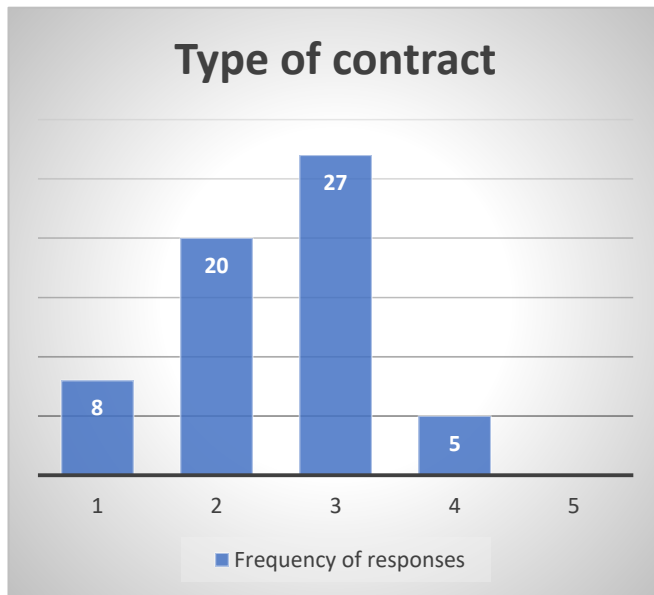
#### 4.4.1.19 Confidentiality of the process



**Figure 4.19: Confidentiality of the process**

All respondents agreed that “Confidentiality of the process” enforces positive impact on ADR practices. However, “Confidentiality of the process” has lesser positive impact on practice of ADR methods when comparing with “Degree of control by neutral”. Respondents (40) have identified “Confidentiality of process” as a fact that has a medium impact on ADR practices with a mean weight of 3.08. A considerable number of respondents have been agreed that the “Confidentiality of the process” has a medium impact on the ADR practices. As mentioned above, the precautions for the dispute are discussed within all parties and there is no need to disclose the results to the general public. Therefore, there is high level of confidentiality in ADR procedures and that can be listed as a medium important factor in ADR practice. “Confidentiality of the process” in ADR practice are high and significant than “Type of contract”.

#### 4.4.1.20 Type of contract

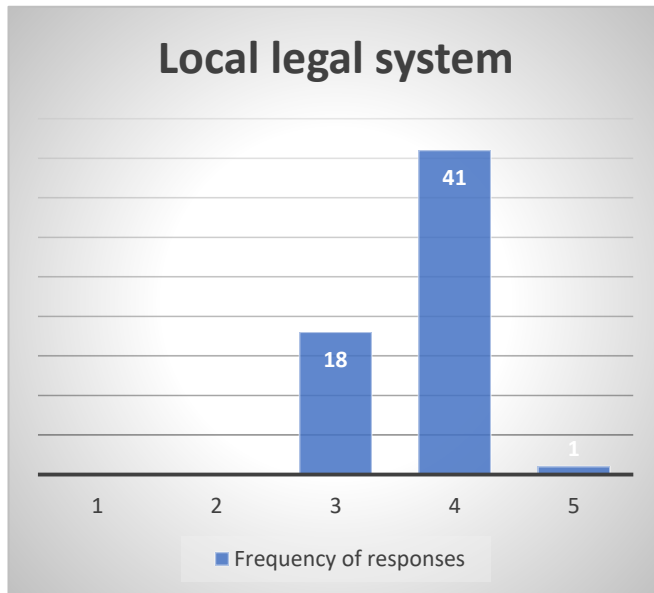


**Figure 4.20: Type of contract**

All respondents agreed that “Type of contract” enforces positive impact on ADR practices. However, “Type of contract” has lesser positive impact on practice of ADR methods when comparing with “Confidentiality of the process”. Correspondingly, respondents have agreed that “Type of contract” is a factor that has a medium impact on the ADR practices with a mean weight score of 2.48. Type of contract has considerable impact on selection of ADR methods.

#### 4.4.2 Discussion on factors that have negative impact on practice of ADR methods

##### 4.4.2.1 Local legal system

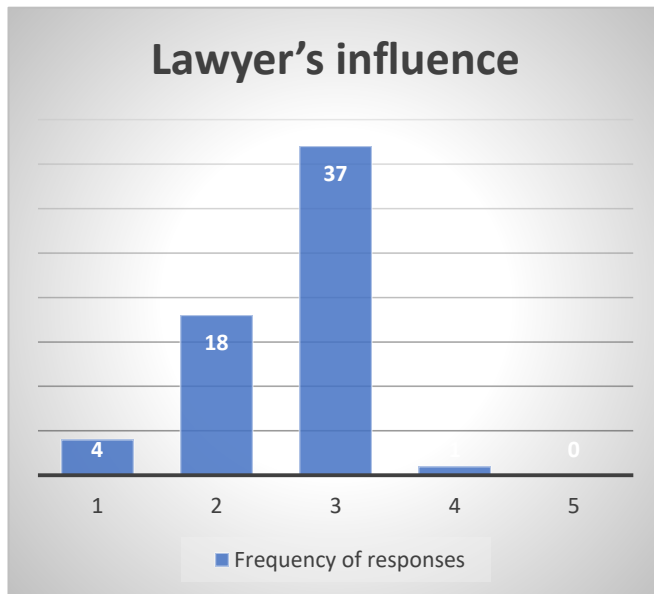


**Figure 4.21: Local legal system**

All respondents agreed that “Local legal system” make negative impact on ADR practices.

Correspondingly, the “local legal system” is proposed by the respondents as a factor having a considerable impact with a mean weight score of 3.72. There is no provision or separate act for enforcing the decisions provided by any ADR method under the local legal system except arbitration. However arbitration process has been defined with the local standard Conditions of Contracts such as SBD/01, SBD/02, SBD/03 and SBD/04 where the arbitral award can be enforced under local legal system according to the Arbitration act In this case, this factor is listed as a highly effective factor in ADR practice. “Local legal system” in ADR practice are high and significant than “Lawyer’s influence”.

#### 4.4.2.2 Lawyer's influence



**Figure 4.22: Lawyer's influence**

All respondents agreed that “Lawyer’s influence” enforces negative impact on ADR practices. However, “Lawyer’s influence” has lesser negative impact on practice of ADR methods when comparing with “Local legal system”.

Most respondents (37) believe that this factor has a medium impact on the practice of ADR with a mean weight of 2.58. As mentioned above, decisions of ADR methods are not binding and cannot be legally influenced. Therefore, the possibility of lawyers participating in ADR process is low. Unlike other dispute resolution practices, if disputes are resolved through ADR practices, lawyers will not have an impact on the dispute, which will save the time and cost of all parties involved in the dispute.

#### 4.5 Discussion on findings

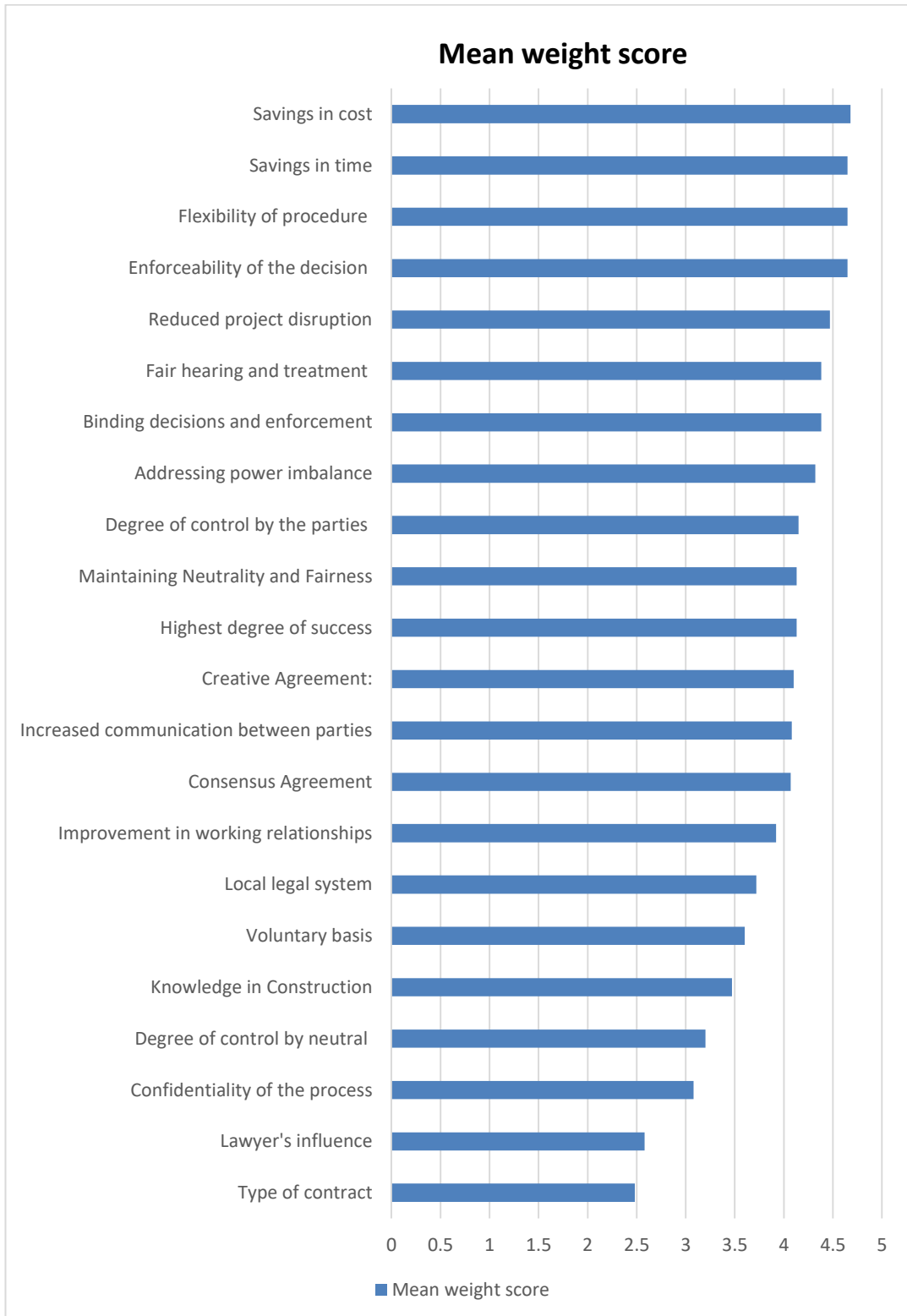
This discussion is focused on interpreting and analyzing the findings of the data analysis with the findings of the literature review. Accordingly, this Section compares the findings of the literature review chapter with the findings of the data analysis chapter.

After analyzing the data collected from a questionnaire survey conducted from a sample of 60 respondents, 22 different factors which impact the ADR practices in building projects were ranked using mean weight score. Accordingly, the respondents have categorized these factors as having positive and negative impacts on ADR practices. The above findings are shown in Table 4.3. In addition, the factors which are affecting the practice of ADR methods has shown in a bar chart in a descending order based on the Mean Weight Score (Refer Figure 4.23).

**Table 4.4: Factors affecting the practice of ADR methods- rank by the mean weight score**

Rank	Factor	Mean weight score	Type of impact	
			Positive impact	Negative
1	Savings in cost	4.68	x	
2	Enforceability of the decision	4.65	x	
3	Flexibility of procedure	4.65	x	
4	Savings in time	4.65	x	
5	Reduced project disruption	4.47	x	
6	Binding decisions and enforcement	4.38	x	
7	Fair hearing and treatment	4.38	x	
8	Addressing power imbalance	4.32	x	
9	Degree of control by the parties	4.15	x	
10	Highest degree of success	4.13	x	
11	Maintaining Neutrality and Fairness	4.13	x	

Rank	Factor	Mean weight score	Type of impact	
			Positive impact	Negative
12	Creative Agreement:	4.10	x	
13	Increased communication between parties	4.08	x	
14	Consensus Agreement	4.07	x	
15	Improvement in working relationships	3.92	x	
16	Local legal system	3.72		x
17	Voluntary basis	3.60	x	
18	Knowledge in Construction	3.47	x	
19	Degree of control by neutral	3.20	x	
20	Confidentiality of the process	3.08	x	
21	Lawyer's influence	2.58		x
22	Type of contract	2.48	x	



**Figure 4.23: Factors affecting the practice of ADR methods**

Furthermore, the respondents have placed savings in cost, enforceability of the decision, flexibility of procedure, savings in time, reduced project disruption, binding decisions and enforcement, fair hearing and treatment, addressing power imbalance, degree of control by the parties, highest degree of success, maintaining neutrality and fairness, creative agreement, increased communication between parties and consensus agreements as factors having a high positive impact on selection of the ADR methods. Further, improvement in working relationships, voluntary basis, knowledge in construction, degree of control by neutral and confidentiality of the process are factors having a medium positive impact and type of contract having a low positive impact on selection of the ADR methods. In addition, local legal system factors having a medium negative impact and lawyer's influence having a low negative impact on selection of the ADR methods.

The literature findings highlight that Chong and Zin (2012) have identified voluntary basis, flexibility, fair treatment, and proceeding speed as the critical factors which affect the success of the ADR practices. On the other hand, the literature findings suggest that according to Lu, Zhang, and Pan (2015) reputation, cooperation and trust, time, judgment execution and emotion are the critical success factors of ADR practices. Accordingly, the high impact factors identified by the respondents have equal characteristics of the factors identified in the literature review. Accordingly, the respective charts in the data analysis section represent the view of the respondents on each factor.

#### **4.8 Chapter summary**

This chapter discussed the data analysis and research findings of this study. Quantitative surveys were conducted to collect data regarding the critical factors affecting the practice of ADR methods in building projects. The collected data were analysed using the mean weight score technique. Accordingly, objectives 1, 2, and 3 of the research were achieved. The analysis was concluded by attaining the final objective of the research by identifying and ranking the factors which are affecting the practice of ADR methods as dispute resolution mechanism in construction contracts related to building projects in Sri Lankan construction Industry. Finally, the research findings were summarized and verified with the literature findings in this chapter. The next chapter will focus on drawing out conclusions and giving recommendations from the research.

## **05.CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter is focused on developing the conclusion and making recommendations based on previous chapters. Conclusion and recommendations solely represent information gathered through questionnaire survey and other methods. Additionally, this chapter suggests further research areas where future researchers should focus on.

### **5.2 Summary of the study**

Dispute resolution techniques plays a significant part in the construction industry. Different types of dispute resolution methods are used worldwide and ADR methods were identified as appropriate methods to resolve disputes. Those ADR methods have some disadvantages and number of factors affect the practice of ADR methods. Thus, literature review of this study has identified the factors which may affecting the practice of ADR methods.

Data collection was carried out based on questionnaire survey and this survey to rank the factors which were found in Literature review. All the respondents were professionals (Chartered Quantity Surveyor, Chartered Engineer, Chartered Architect and lawyer -Attorney-at-Law) who are involved with ADR practice and more than ten years of experience in the construction industry among consultants, contractors and client organizations and arbitrators. Final conclusions and recommendations were drawn based on the information collected through questionnaire survey.

### **5.3 Conclusions**

ADR mechanisms are commonly used to settle a dispute in the construction industry. It is important to identify the factors which are affecting the practice of ADR methods in building projects in the Sri Lankan construction industry and their level of significance. This research focused to find and rank factors that are affecting the practice of ADR methods in building projects in the Sri Lankan construction industry.

Twenty-two factors were identified and ranked based on their significant level (high to low). Further, factors were categorized into two groups as having positive and

negative impacts on ADR practices. Those factors were presented in Table 4.4 and Figure 4.23.

Using the findings of this research, a model can be developed to select the most suitable ADR method by comparing it with the other available ADR methods and establishing new ADR methods to mitigate the drawbacks of existing ADR methods.

#### **5.4 Recommendations**

Existing ADR methods have some disadvantages, those are disturbance for the successful outcome of ADR practice. This research ranked the factors which are affecting the practice of ADR methods in building projects in Sri Lanka based on their level of impact. Further study recommends to use these factors to identify the most suitable ADR method according to the party's requirements and establishing new ADR methods using the research findings to mitigate the drawbacks in existing ADR methods.

#### **5.5 Limitations of research**

There are number of limitations were arisen when undertaking this research. This research is limited only to building construction projects in Sri Lanka. This study only considered construction industry professionals who are familiar with dispute resolution practice.

#### **5.6 Further research directions**

The research directions which can be done as further research with related to ADR practice are as follows;

- Establish framework to rank existing ADR methods.
- Establish new ADR methods to mitigate existing disadvantages in current ADR methods.
- Identified factors that are affecting the practice of ADR methods in infrastructure development in Sri Lanka.

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## APPENDIX A: QUESTIONNAIRE SURVEYS FORMAT

### GENERAL INFORMATION

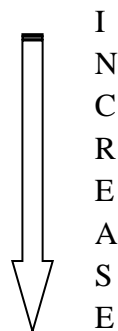
1. Name of the respondent (Optional): .....
2. Name of the organization (Optional): .....
3. Designation of the respondent: .....
4. Experience:

*How many years you worked in Sri Lankan construction industry? (Please tick with "X")*

Less than 10 years	
10 years or more than 10 years	

**Note:** Please mark your answer with "X" in the provided boxes against a criterion to specify its rank/ level as appropriate.

LEVEL OF IMPACT	
Very low	1
Low	2
Medium	3
High	4
Very high	5



I have identified factors which may be affected on selection of ADR instead of litigation in construction industry. In following factors, you have to identify that factor has whether positive impact or negative impact on use of ADR methods in Sri Lankan building construction industry. The identify level of impact of each factors.

- 1) Addressing power imbalance : In an employment relationship, the employee is generally in an inferior position.

Positive impact     Negative     1     2     3     4     5

- 2) Binding decisions and enforcement

Positive impact     Negative     1     2     3     4     5

- 3) Confidentiality of the process: Maintain the confidentiality of information obtained or generated on behalf of parties they assist during the dispute resolution proceeding.

Positive impact     Negative     1     2     3     4     5

- 4) Consensus Agreement: Consensus agreement doesn't mean that all people achieve everything they want; it simply means that everyone agrees to live with the terms decided by the group.

Positive impact     Negative     1     2     3     4     5

- 5) Creative Agreement: The beauty of using an ADR proceeding is that it allows for solutions to problems that the more traditional protest and litigation processes cannot provide.

Positive impact     Negative     1     2     3     4     5

6) Degree of control by neutral : *the impartial person has a role of responsibility to the disputing parties and to perform duty of no partiality*

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

7) Degree of control by the parties : *Disputing parties have more control over the arrangement and content of the procedure in Alternative dispute resolution rather than in formal legal system*

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

8) Enforceability of the decision

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

9) Fair hearing and treatment

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

10) Flexibility of procedure

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

11) Highest degree of success

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

12) Improvement in working relationships

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

13) Increased communication between parties

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

14) Knowledge in Construction

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

15) Lawyer's influence: In the dispute settlement process, lawyers are possibly to involve by contractors, especially where dispute contain a legal matter

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
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16) Local legal system: Parties want to resolve the dispute through legal system to avoid damage to someone's reputation and conflicts of law.

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

17) Maintaining neutrality and fairness: ADR can be neutral to the law, language and institutional culture of the parties, thereby avoiding any home court advantage that one of the parties may enjoy in court-based litigation, where familiarity with the applicable law and local processes can offer significant strategic advantages.

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

18) Reduced project disruption

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

19) Savings in cost

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

20) Savings time

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

21) Type of contract

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

22) Voluntary basis

<b>Positive impact</b>	<b>Negative</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
------------------------	-----------------	----------	----------	----------	----------	----------

According to your experience, if there are new factors which are influencing on use of ADR method in Sri Lankan building construction industry you can mention in the given space.

**FACTORS**

**LEVEL OF IMPACT**

.....	<input type="checkbox"/>
.....	<input type="checkbox"/>
.....	<input type="checkbox"/>
.....	<input type="checkbox"/>
.....	<input type="checkbox"/>
.....	<input type="checkbox"/>