

**EFFECTIVENESS OF NEGOTIATION AS A METHOD
OF ALTERNATIVE DISPUTE RESOLUTION IN SRI
LANKAN CONSTRUCTION INDUSTRY**

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Declaration

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

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Abstract

Disputes are a critical problem in the construction industry and an effective alternative dispute resolution (ADR) method is a crucial requirement. Studies on ADR practices in Sri Lanka denote that negotiation is the preferred and initial ADR method over other methods. However many disputes go beyond negotiations and recent research at international context identifies negotiation failures as a common scenario. This study aims to determine the effectiveness of negotiation as an ADR method in Sri Lankan construction industry. Seven outcome taxonomies of construction dispute negotiations comprising three effective outcomes and four ineffective outcomes were identified via comprehensive literature review. Based on the findings a framework was developed to determine the effectiveness of negotiation. A questionnaire survey was carried out among senior professionals who had direct exposure to disputes in the Sri Lankan construction industry and their responses were analysed to arrive at findings. The findings indicate that negotiation is an effective ADR method because effective outcomes such as conflict reduction and maintenance of relationship could be achieved. Hence Negotiation could be recommended as the best initial ADR method to be attempted. However, the possibility of achieving the most desired outcome, problem solving is not satisfactory. Attitudes of parties, lack of negotiation skills among industry professionals, cultural differences among parties, lack of participation of competent professionals, use of negotiation as a time passing tactic and professional discrimination were found out as the major barriers to achieve problem solving outcome. Several areas shall be developed to overcome the effect of such barriers and obtain maximum effective outcomes from negotiations. The results of the study enable researchers and practitioners to gain deep understanding on the current negotiation practices and suggestions to overcome the barriers to achieve effective negotiation outcome.

Key words: Negotiation, effectiveness, ADR method, dispute, construction

Dedication.....

To my Loving Grandmother

Mrs. Matilda Gogerly

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List of Abbreviations

ADR	Alternative Dispute Resolution
DAB	Dispute Adjudication Board
FIDIC	International Federation of Consulting Engineers
ICTAD	Institute for Construction Training and Development
NPA	National Procurement Authority

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INTRODUCTION TO RESEARCH

1.1 Introduction

Disputes are critical problem in the construction industry. Use of Alternative Dispute Resolution (ADR) methods to solve construction disputes has gained great momentum during recent years. Negotiation is identified as an important ADR method due to its advantageous nature. However, recent research reveals difficulties and challenges in construction dispute negotiation which ultimately leads to inefficient negotiations and frequent negotiation failures (Cheung & Chow, 2011; Cheung, Yiu & Chow, 2012; Ren, Shen, Xue, & Hu, 2011). However an effective ADR method shall be capable to bring an effective outcome to the dispute resolution.

1.2 Background

“Construction industry disputes are common and the amounts in dispute are frequently quite high”(Halligan, Zack, Bult and Pray, 2013, para 1). Disputes are identified as a common feature in the construction industry (Ashworth and Hogg , 2002; Cheung, 1999).The intrinsic tendency for disputes in industry was further emphasized by (Shapiro, 2005, p. 2) stating that, “the very nature of the construction process ensures that the never-ending tug-of-war between the major construction protagonists will likely to be with us forever.” Inherent features in the construction industry such as complexity, involvement of coordinated effort of a temporarily assembled team comprising various professionals with different goals and higher exposure to unforeseen circumstances ultimately leads to disputes (Turner and Turner as cited in Gunasena, 2010 ; Walker as cited in Jayasena and Kavinda., 2012).

“Though the term ‘dispute’ is to be given the meaning in ordinary sense, a dispute in construction contracts essentially takes a different dimension. A dispute in

construction is neither an issue nor a claim pending settlement” (Jayalath , 2010,p. 476).

There are several adverse consequences of disputes. They tend to delay the projects and have impact upon quality of work. Further, disputes lead to incur not only direct costs such as salaries of in-house lawyers, company managers, employees but also indirect costs due to inefficiencies and delays (Love, Davis, Jefferies, Ward & Chesworth , 2007). Ultimately disputes lead to destroy reputation and business relationships (Love, et al., 2007). As such, disputes in construction projects can be identified as a critical problem that needs attention.

Due to the intrinsic tendency for disputes, resolution of dispute is inevitable part of the construction project management (Cheung, 1999). “Satisfactory dispute resolution reduces antagonism and uncertainty, thereby improving working relationships, hence contributing positively towards project success” (Abeynayake & Wedikkara, 2012, para.1).

Court processes by means of litigation is traditionally the primary means of dispute resolution in the construction industry. In addition to litigation there are several alternative dispute resolution methods to solve disputes. “Alternative dispute resolution (ADR) is a voluntary approach that parties to a contract can agree upon for resolution of disputes outside the courts” (Jayasena and Kavinda, 2012).

Limited number of courts and drawbacks of traditional legal system had resulted to move the contractual parties in construction projects seeking ADR methods. “Over the last few decades the perceived shortcomings of litigation, with its costs, delays, and adversarial relationship have led to the growing preference for ADR methods”(Abeynayake & Wedikkara, 2012, para.1). Further, “disputes in the construction industry are often quite complex, thus making it difficult to present issues clearly to non- technical tiers of fact” (Halligan et al.,2013, para.1). Negotiation, mediation, adjudication and arbitration can be identified as widely used and recognized ADR methods in Sri Lanka (De Zylva, 2006).

In Sri Lankan context widely used standard forms of contract are “ICTAD (2007) standard bidding document” for national competitive bidding contracts and “FIDIC

(1999)/2010 conditions of contract for construction” for international competitive bidding contracts. There are contractual provisions for application of tiered ADR methods such as adjudication, Dispute Adjudication Board (DAB), amicable settlement and arbitration.

Although the standard conditions of contract has provisions for DAB and arbitration, both methods have drawbacks when applied to Sri Lankan context. Adjudication is not popular in Sri Lanka due to lack of awareness, attitudes of the parties, lack of competent adjudicators, absence of legal framework to enforce the decision and perception of high cost (Abeynayake & Wedikkara, 2012). “The main criticism is that arbitration has become too similar to court procedures- the very evil that was sought to be overcome by the new act” (Kanag- Isvaran , 2011, p.170).

The FIDIC (1999) and FIDIC (2010) conditions of contract encourage negotiation because attempts for amicable settlement shall be taken before referring the matter to arbitration. In addition, section 14.1 of the Arbitration Act No.11 of 1995 encourages settlement of dispute by parties themselves during the arbitration.

Negotiation is defined as a “communication for the purpose persuasion; the preeminent mode of dispute resolution” (Goldbery et al., as cited in Pickavance, 2007, p.434). Negotiation is a process of working out an agreement by direct communication between two or more parties (Pickavance, 2007). In negotiation, a compromise is achieved by the dispute parties without intervention from a third party (Murtoaro & Kujala, 2007).

Negotiation has been recognized as an important ADR method in resolving construction disputes at international context due to the economical nature, speed, simplicity, confidentiality and flexibility (Chan & Suen, 2005; Chong & Zin, 2012; Klein, 2006; Levin, 1998; Ren et al., 2011; Riad et al., as cited in Enshasi, 2008; Shapiro, 2013). Further, negotiation is considered as an important dispute prevention mechanism (Love et al., 2007; Murtoaro & Kujala, 2007). Negotiation is considered the most preferable (Hoogenboom and Dale as cited in Murtoaro & Kujala, 2007) because it prevents dispute amongst project parties and keeps good relationships (Murtoaro & Kujala, 2007). This is the initial step of ADR process as per stair step model (Ranjuthkumar, Omar, Uff as cited in Gunasena,2010). “ Negotiation is an

art, and negotiation in construction is a high form of that art, since it requires deliberate application of techniques and strategies aimed at a specific goal” (Levin, 1998, p.121). As such, negotiation has been a topical research area to both academics and practitioners.

In the research carried out in Sri Lanka by Jayasena & Kavinda (2012) negotiation was identified as the preferred choice among ADR methods. Gunasena (2010) found that negotiation is the accepted initial method used to resolve disputes in Sri Lankan context which complies with the stair step model. However, only few studies have been carried out regarding the negotiation in Sri Lankan construction industry. Therefore it is of vital importance to study about the negotiation practices in Sri Lanka.

As per Ren et al. (2011) dispute negotiations in construction projects is often time and cost consuming, frustrating and deliver low outcomes. The inherent features in construction dispute negotiations such as contractual obliged self-interested relationship, information asymmetry, dual role of the engineer, unequal bargaining positions and complexity create the negotiation challenging (Dudziak & Hendrickson, 1988; Marzouk & Moamen, 2007; Ren, Anumba & Ugwu, 2003; Ren et al., 2011; Shapiro, 2013). Dispute negotiation is often difficult, adversarial, and inefficient; and in the worst cases, lead to arbitration and litigation (Hu as cited in Ren et al., 2011). “One of the serious challenges for construction project dispute negotiation is keeping the negotiating parties at the table” (Cheung et al., 2012, p.597). “Failure in construction project dispute negotiation is not uncommon” (Cheung & Chow, 2011, p.1071).

1.3 Research Problem

Even though negotiation is the preferred and accepted initial method used in Sri Lanka as per the recent research and recommended method in the standard conditions, most disputes go beyond negotiation and need to be solved using other costly and timely ADR methods. An effective ADR method shall be successful in producing a desired result, an effective outcome to the dispute resolution (Oxford

dictionary, 2000). Thus there is need to seek does negotiation really provide a desired successful outcome when it is applied to Sri Lankan context or are there any barriers to achieve effective negotiation outcome?

1.4 Aim

The aim of this study is to determine the effectiveness of negotiation as a method of alternative dispute resolution in Sri Lankan construction industry.

1.5 Objectives

- To identify the effective outcomes of construction dispute negotiations.
- To identify negotiation practices and any barriers to effective construction dispute negotiation outcomes in Sri Lankan context.
- To propose suggestions to overcome the barriers towards effective negotiation outcomes in Sri Lankan construction industry.

1.6 Research Methodology

A comprehensive literature survey was carried out to understand the knowledge on the area of study. Employing a quantitative research strategy, survey method was selected as appropriate research approach. Questionnaires were developed from the information extracted via the literature review and was further developed in accordance with pilot survey. The developed questionnaires were electronically mailed to professionals in the construction industry who had more than five years of experience and direct exposure to disputes. The respondents were selected via purposive sampling. The obtained likert type data was analysed in order to measure weighted mean score of negotiation outcome taxonomies. In addition, the barriers to obtain effective negotiation outcomes were identified from the questionnaire survey.

1.7 Scope and Limitations

Although there are several contractual relationships between the parties and possible disputes related to construction contracts, the disputes between the contractor and client in a separated contract was considered for this research to avoid complexity. As per FIDIC (1999) and FIDIC (2010) dispute arises only after rejection of claim by the engineer or dissatisfaction with the decision of the engineer. This research study is limited only to the negotiations carried out after arise of dispute and the negotiation attempts carried out prior to arise of dispute is not considered.

1.8 Chapter Breakdown

CHAPTER 01:	INTRODUCTION: Gives an overview of the dissertation and justifies the research problem. Further it demonstrates aim, objectives, research methodology, scope and limitations.
CHAPTER 02:	LITERATURE REVIEW : The important information related to the study extracted from the comprehensive literature review carried out is demonstrated in this chapter.
CHAPTER 03:	RESEARCH METHODOLOGY : Illustrates the research methodology adopted for the study and techniques used for data collection and data analysis.
CHAPTER 04:	RESEARCH FINDINGS AND DISCUSSION : The findings of the study are presented in this chapter.
CHAPTER 05:	CONCLUSIONS AND RECOMMENDATIONS : Conclusions of the study with recommendations and suitable further research areas are presented in this chapter.

1.9 Chapter Summary

This chapter describes the background, research problem, aim and objectives, scope and limitations of the research and provides a brief description to research methodology.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter focuses on identification of key area pertaining to this study through comprehensive literature review. The literature review shall provide the reader with a summary of the ‘state of art’- the extent of knowledge and the main issues regarding the topic which inform and provide rationale for the research (Fellows & Liu, 2003). The analysis of existing knowledge regarding the subject area in order to fulfil the above requirement is the main aim of this chapter.

2.2 Disputes in the Construction Industry and Need of ADR Methods

Construction is a complex process that requires the coordinated effort of a temporarily assembled multiple-party organisation of many discrete groups, each having different goals and needs, and each expecting to maximise its own benefit (Walker as cited in Jayasena & Kavinda, 2012). As a result of complexity, differences in interests among the participants and different working environments disputes have become a common feature in construction projects (Ashworth and Hogg, 2002; Cheung, 1999; Jayalath, 2010).

The Construction Industry Institute (as cited in Love et al., 2007) defines a dispute as, “a problem or disagreement between the parties that cannot be resolved by on-site project managers”. The process of originating a dispute was graphically revealed by Acharya and Lee (as cited in S. Mitkus & Mitkus, 2013) as per figure 2.1.

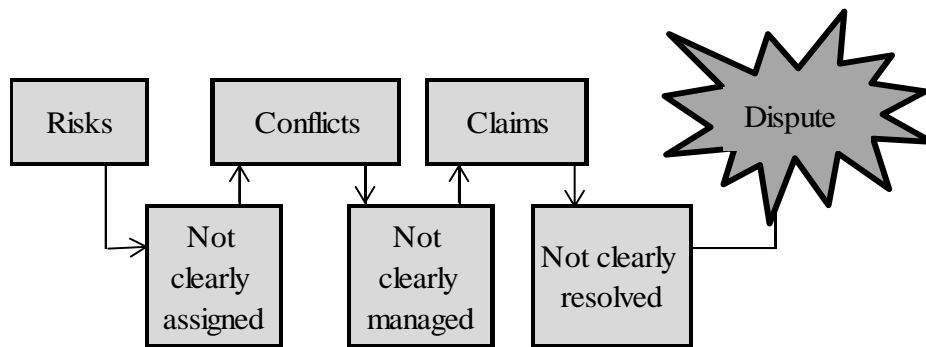


Figure 2.1 : Risk, conflict, claim and dispute continuum model

Source :(Acharya and Lee as cited in S. Mitkus & Mitkus, 2013)

As shown in figure 2.1, conflicts can quickly turn into disputes if not properly managed and dispute is often regarded as a form of conflict that is made public and requires resolution (Brown and Marriott as cited in Jayasena & Kavinda, 2012).

Cheung (1999) states that in present day's complex construction projects, resolving disputes have become an inevitable part of project management. Even though most disputes were settled on the job site at an informal meeting between the relevant parties on earlier times, an amicable solution by informal discussion is not practical when the complexity of dispute increases (Gunasena,2010).

Parties are legally binding to the decision provided at litigation for the dispute. However, there are several disadvantages in litigation such as expensiveness, higher time consumption, stress, inflexibility and formality of court processes, restricted scope of claims and remedies as well (Abeynayake & Wedikkara, 2012; Chong and Zin,2012; Gunasena,2010; Kanag-Isvaran, 2011). Due to the above drawbacks of the litigation the use of Alternative Dispute Resolution (ADR) techniques in construction have gained great momentum during recent years (Abeynayake & Wedikkara, 2012; De Zylva, 2006).The term "ADR" is often used to describe a wide variety of dispute resolution methods that are short of or alternative to, full-scale court processes (Centre for Democracy and Governance as cited in Abeynayake & Wedikkara , 2012).

Several methods were found out as the ADR methods used to resolve disputes in construction industry such as negotiation, arbitration, mediation, expert

determination , adjudication, dispute resolution advisor, dispute review board, mini trial and med arb (Chan & Suen, 2005; Chong & Zin, 2012).

However during the research carried out on various countries only few methods were found out as the most commonly used ADR methods. They are negotiation, mediation, adjudication and arbitration (Chan & Suen, 2005; Chong & Zin, 2012; Cheung, 1999; De Zylva, 2006; Global construction disputes report, 2013; Jayasena & Kavinda, 2012). Chong & Zin (2012) present stages of dispute resolution as per figure 2.2.

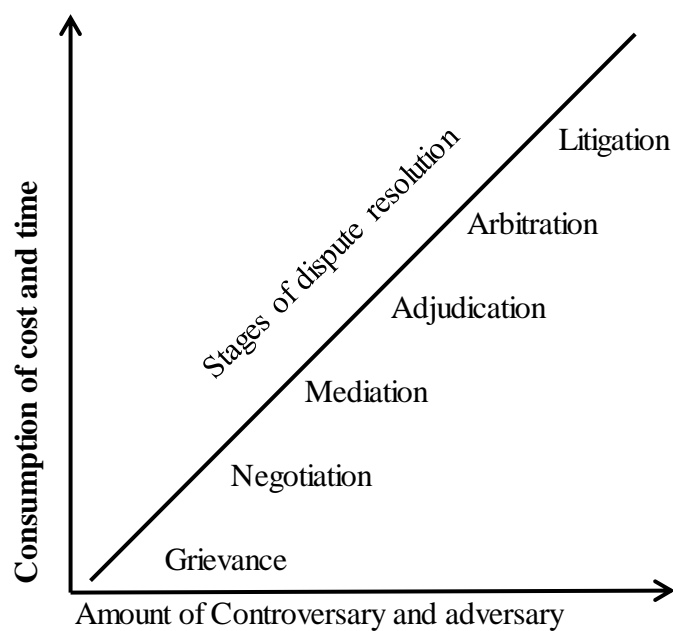


Figure 2.2 : Stages of dispute resolution

Source: (Groton, 1992; Cheung et al., 2000) as cited in Chong & Zin ,2012

As shown in figure 2.2 by Chong & Zin (2012) grievance is identified as the first stage but they consider that grievance itself is not a method of dispute resolution as it provides basis for dispute. The initial step of alternative dispute resolution is negotiation. It is a process of working out an agreement by direct communication between two or more parties (Pickvance, 2007).The next step mediation is a private informal process in which parties are assisted by one or more neutral third parties in

their efforts towards settlement (Pickvance, 2007). The important feature is, the mediator does not decide the outcome. The next method is adjudication. Adjudication can be defined as a process where a neutral third party gives a decision, which is binding on the parties in dispute unless or until revised in arbitration or litigation (Chong & Zin, 2012; Pickvance, 2007). Adjudicators receive their powers from the agreement between the parties (Gunawansa, 2013).The next ADR method is arbitration. This is a private formal dispute resolution process that allows disputes to be determined by a tribunal chosen by the parties (Pickvance, 2007). The process is subjected to statutory controls and the award is final and binding (Gunawansa, 2013; Pickvance, 2007).

As per figure 2.2, Chong & Zin (2012) recommend to use initial method first and then to go for next method only if parties fail to resolve dispute using previous method. According to Chong & Zin (2012) consumption of cost and time and the amount of controversy and adversary increases with the methods used for dispute resolution. Love et al. (2007) supports above view by explaining that controversy and adversary increases due to increase in involvement of third parties during each stage. A similar hierarchy of ADR methods was suggested in the stair step model by Cheung (1999). According to Gunasena (2010) the stair step model was supported by many authors such as Omar (2007) and Uff (2005). Hence to obtain maximum benefit from using ADR method instead of litigation, first attempt shall be the initial step recommended.

Accordingly among the ADR methods used in the construction industry, negotiation has been recommended by several academics as the suitable initial ADR method to resolve construction disputes (Cheung, 1999; Chong & Zin, 2012; Gunasena, 2010). Even though negotiation is identified as an important ADR method very few studies have been conducted on construction dispute negotiation (Dudziak & Hendrickson, as cited by Yousefi et. al., 2010; Murtoaro and Kujala, 2007; Ren et al., 2011). Hence it is of vital important to study about negotiation. This study focuses on the theoretical background and practical application of negotiation in the construction industry.

2.3 Negotiation

As per Fisher, Ury and Patton (1991), negotiation is a back and forth communication designed to reach an agreement when you and the other side have some interests that are shared and others that are opposed. “Negotiation is a process through which parties move from their initially divergent positions to a point where agreement may be reached” (Steele and Beasor as cited in Kolmakova, 2011). “To negotiate means to confer with others in order to reach a compromise in agreement” (concise oxford dictionary as cited in Pickavance, 2007, p. 440). Shapiro (2013, p.1) defines it as a “problem-solving process in which two or more people voluntarily discuss their differences and attempt to reach a shared decision on their common concerns.” However from the above stated definitions that are much similar in views it is evident that ultimate purpose of the process is reaching agreement acceptable to all parties through communications.

2.4 The Negotiating Process

The negotiating process that will be repeated until parties reach an agreement is denoted in Figure 2.3.

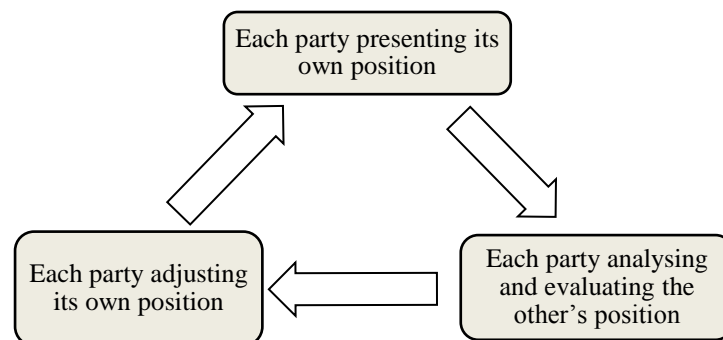


Figure 2.3. The negotiating process

Source: Adapted from Gunawansa (2013)

As presented in figure 2.3, in negotiations each party shall present own positions. Thereafter each party will analyse and evaluate the position of other party and adjust

own position accordingly .Thereafter the parties will present their positions again. The process will continue until parties reach agreement regarding the positions.

2.5 Negotiation Styles

In the negotiation process parties may use different approaches. Many researches have been carried out to investigate the tendency to use these approaches. “Each approach begins a fundamentally similar two dimensional framework and then applies different labels to its five key points” (Lewicki, Saunders & Minton, 1999, p. 19). The figure 2.4 represents the strategies that parties may pursue depending on the amount of conflict between concern about own outcomes and concern about other’s outcome.

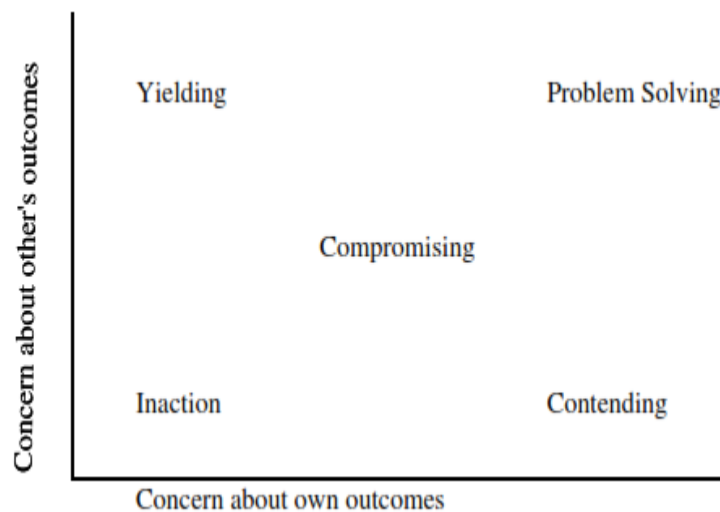


Figure 2.4 : The dual concerns model

Source: (Pruitt & Rubin as cited in Lewicki et al., 1999)

Savage, Blair and Moronson (as cited in Lewicki et al., 1999) proposed a similar model for choice of the negotiation strategy. According to this model negotiator’s unilateral choice of strategy is reflected in the answers to two questions shown in two axis of figure 2.5.

		Substantive outcome important?	
		Yes	No
Relational outcome important?	Yes	Collaboration	Accommodation
	No	Competition	Avoidance

Figure 2.5 : Choosing an initial negotiation strategy

Source: (Savage, Blair and Moronson as cited in Lewicki et al., 1999)

Competing (contending) style is used when negotiators need to get quick results. This style is based on the “I win – You lose” theory. According to Pruitt & Rubbin (as cited in Lewicki et al., 1999, p. 21), “Parties who employ this strategy maintain their own aspirations and try to persuade the other party to yield.”

Accommodating (yielding) style is the opposite of competing style because it is based on “I lose – You win” theory. It is aimed on the preservation of relationships between parties (Volkema as cited in Kolmakova, 2011). It points out that the accommodating style involves some tendency to help the other party even if it means giving up your own needs and also to focus on issues that both sides agree on rather than those of disagreement.

Collaborating (problem solving) style is based on “ I win – You win” theory. It is aimed at meeting of all interests and on the creation of mutual value. “Collaboration involves exploring individual and mutual interests in an effort to satisfy everyone’s needs” (Volkema as cited in Kolmakova, 2011, p.13).

The negotiator who uses avoiding style (inaction) tries to avoid not only issues or the other party but negotiation itself (Volkema as cited in Kolmakova, 2011). It presupposes the loss of both parties, so the result is “I lose – You lose”. The avoiding is used in situations where the issue of negotiation is not important for both sides of negotiation. Also it is applied as an effective defence against the competing style.

“Compromising is a partial-win, partial-lose proposition, where you get something what you want but not everything, and likewise for the other party” (Volkema as cited in Kolmakova, 2011, p.14). This style is used in when business negotiators are dealing with someone who they know and trust. The most important fact in the compromising is to understand that the negotiator wins something but also loses something.

2.6 Negotiation Types

Based on relationship and behaviour of negotiators several types of negotiations can be identified as discussed below.

2.6.1 Distributive negotiation and integrative negotiation

There are two basic types of negotiation that has been categorised by researchers on the basis of relationship between negotiators. They are distributive negotiation and integrative negotiation. Table 2.1 denotes the main features of these two styles.

Table 2.1: Main features of distributive negotiation and integrative negotiation

Source: Adapted from Kolmakova(2011) and Stokke (2011)

Distributive negotiation	Integrative negotiation
Focused on “win-lose” outcome	Focused on “win-win” outcome
“slicing the pie”	“expanding the pie”
Based on the impersonal nature of negotiation	Based on the collaborating style
Not used to create a relationship	Contribute in creating a long-term relationship
Parties try to protect own benefits. No one will focus attention to the other party’s interests.	Parties try to achieve results that are beneficial to both parties.
Only one party will win.	Both parties get something.

2.6.2 Principled negotiation

The idea of principled negotiation was introduced by Fisher et al. (1991). At Harvard negotiation project they developed principled negotiation as an alternative to positional bargaining. Positional bargaining occurs when people negotiate according to their positions or statements of what they want to get out of the situation. Positional bargaining can take one of two forms: soft, and hard. Fisher et al. (1991) argues that being hard or soft in negotiation process is not effective. They propose principled negotiation; negotiating on the merits. Principled negotiation comprises following steps.

1. Separate people from the problem.
2. Focus on interests, not positions.
3. Invent options for mutual gain.
4. Insist on using objective criteria.

Fisher et al. (1991) suggests that you look for mutual gains wherever possible, and that where your interests conflict, you should insist that the result be based on some fair standards independent of the will of either side. Table 2.2 denotes how it differs from positional bargaining.

Table 2.2 : Comparison of principled negotiation with soft and hard bargaining

Source: Fisher et al. (1991)

Problem		Solution
Positional Bargaining: Which Game Should You Play?		Change the Game Negotiate on the Merits
Soft	Hard	Principled
Participants are friends.	Participants are adversaries.	Participants are problem-solvers.
The goal is agreement.	The goal is victory.	The goal is a wise outcome reached efficiently and amicably.
Make concessions to cultivate the relationship.	Demand concessions as a condition of the relationship.	Separate the people from the problem.
Be soft on the people and the problem.	Be hard on the problem and the people.	Be soft on the people, hard on the problem.
Trust others.	Distrust others.	Proceed independent of trust.
Change your position easily.	Dig in to your position.	Focus on interests, not positions.
Make offers.	Make threats.	Explore interests.
Disclose your bottom line.	Mislead as to your bottom line.	Avoid having a bottom line.
Accept one-sided losses to reach agreement.	Demand one-sided gains as the price of agreement.	Invent options for mutual gain.
Search for the single answer: the one they will accept.	Search for the single answer the one you will accept.	Develop multiple options to choose from; decide later.
Insist on agreement.	Insist on your position.	Insist on using objective criteria.
Try to avoid a contest of will.	Try to win a contest of will.	Try to reach a result based on standards independent of will.
Yield to pressure.	Apply pressure.	Reason and be open to reasons; yield to principle, not pressure.

2.7 Negotiation as an ADR Method in the Construction Industry

Numerous research confirmed that negotiation in the most commonly practiced ADR method for resolving disputes of construction projects (Chan & Suen ,2005;Cheung ,1999; Chong & Zin, 2012). Further, as per the research findings negotiation is considered the most preferred technique for resolving construction disputes (Cheung ,1999 ; Hoogenboom and Dale as cited in Marsouk and Moamen, 2007; Ren, et al. ,2003; Marsouk and Moamen, 2007; Meredith and Mantel as cited in Anthopoulos and Xristianopoulou, 2012). According to Bierschenk (as cited in Anthopoulos and Xristianopoulou, 2012) a project can be conceived as an “arena” of negotiation for all the involved groups. Actually, project implementation is a continuous process of negotiation (Anthopoulos and Xristianopoulou, 2012). As per Ren et al. (2003) negotiation plays an important role in resolving claims, preventing disputes, and keeping a harmonious relationship between project participants. Furthermore, in the research carried out by Chan and Suen (2005) the experts suggested that negotiation should be employed as the first method to resolve disputes.

2.7.1 Advantages of negotiation

Several advantages of resolving construction disputes using negotiation were critically emphasised by the above researchers. Following advantages illustrated in figure 2.6 were identified by them as the reason for negotiation being most common and preferred ADR method in the construction industry.

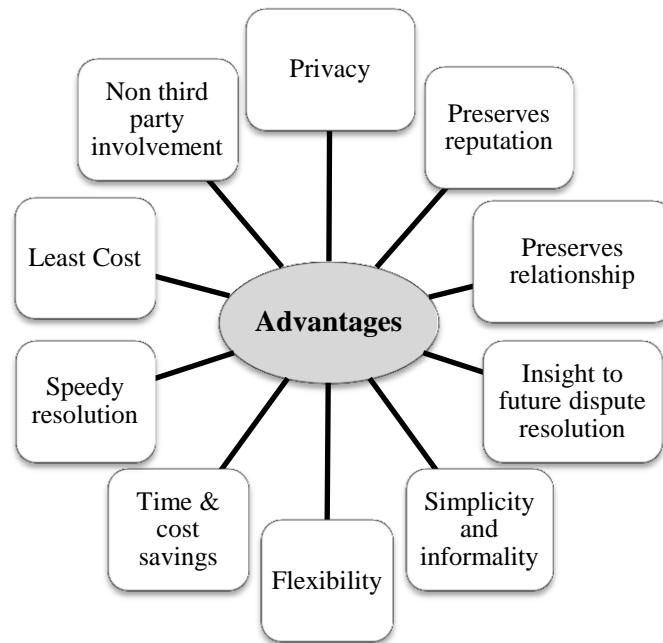


Figure 2.6: Advantages of negotiation

Non third party involvement

Unlike mediation and arbitration, negotiation does not involve a third party in the process of resolution (Chan & Suen,2005).Therefore when a dispute arises parties have ability to step into negotiation immediately without seeking for third party experts.

Least cost

As per Chong & Zin (2012) and Klein (2006) it is the least expensive method of ADR. The process is carried out by parties themselves. Therefore fees required in other methods for hiring third party experts are not required for this method. Further, the parties could carry out the process without unnecessary cost because they have freedom to select a preferred venue, even the worksite. The parties have freedom to use face to face communication, telephone, fax, e mail, video conferencing or any other suitable cost effective method for communication.

Speedy resolution

Negotiation has been identified as a speedy process (Chan & Suen ,2005; Chong & Zin, 2012, Klein,2006; Shapiro,2013). Due to non-third party involvement the parties have ability to arrange frequent meetings and try to resolve dispute within shortest possible time and parties who attempt to resolve dispute do not need to study the background of the dispute because they are already familiar to the circumstances which enables to achieve a speedy outcome.

Time and cost savings

As per Shapiro (2013) cost savings could be achieved via this method because negotiations avoid costly and disruptive delays in construction; they enable the contractor to restore cash flow; provide reimbursement for the costs of performing disputed changes. Further, as per Marsouk & Moamen (2007) first it prevents litigation amongst project parties and negotiation saves the time, expenses & efforts that are associated with other resolutions techniques. If the parties become able to solve matter with this initial step higher amount of time and cost that shall be utilized for further stages such as mediation, arbitration and litigation could be saved.

Flexibility

Flexibility has been identified as another advantage of negotiation process (Chan & Suen, 2005; Marsouk & Moamen, 2007). The parties have absolute freedom with respect to the form, process and type of agreement (Chong & Zin, 2012). The parties can decide upon the participants, time, place, communication method and any other variable which complies with their contract. The parties involved have total control over negotiation as they can choose required documents, required professional assistance where necessary(Klein,2006).

Simplicity and informality

Simplicity and informality are another advantages (Chan & Suen , 2005). It is a simple process that involves two parties related to the negotiated issue who will communicate with each other to reach a mutual acceptable agreement by both parties. Unlike other processes parties who are not much familiar with the ADR process also have ability to participate. There is no need to abide by formal conventional procedures such as arbitration or litigation.

Privacy

Chan & Suen (2005) specifies privacy as other advantage. Privacy can be achieved through this method because there is no third party involvement and as the dispute is usually known only by the parties concerned. Even from the contractual parties the management have freedom to decide the personnel who will engage in negotiation and they could select personnel who will safeguard the confidential information. Further, there is no need to call witnesses or review the facts by external experts if the parties do not desire.

Preserve the working relationship

Preservation of relationship is a vital condition to the successful completion of the project (Atkinson, 1999; Bourne and Walker as cited in Anthopoulos & Xristianopoulou, 2012). Negotiation can preserve the working relationship of the parties involved (Chong & Zin, 2012; Klein, 2006; Marsouk & Moamen, 2007; Shapiro, 2013). The cost of loosing the relationship and forming one with another company would be saved if commercial relationships are maintained (Klein,2006). In addition, if lower level management were able to resolve the matter using negotiation it will not affect the relationship of higher level management.

Preserve the reputation of the parties

“It preserves reputations and the adverse notoriety of disputes is often kept from public scrutiny” (Shapiro, 2013, p.3). Due to the confidential nature of the process

the dispute related information is not exposed to outwards which would critically affect the possibility of getting other projects and image of the parties in the industry.

Provide insight to future dispute resolution

As per Shapiro (2013, p.21) “even if negotiations or a mediation fail, they provide a good opportunity for each side to have a look at the other party’s position and strategy for a potential future arbitration or litigation proceeding”. During the negotiation process the parties have ability to gain information related to position and interests of other party and use them for own advantage in the future dispute resolution processes.

2.4.2 Disadvantages of negotiation

Even though there are several valuable advantages of negotiation some of researchers are in the view that there are some disadvantages in the method which has been the reason for practical application of negotiation being difficult. The disadvantages are illustrated in figure 2.7.

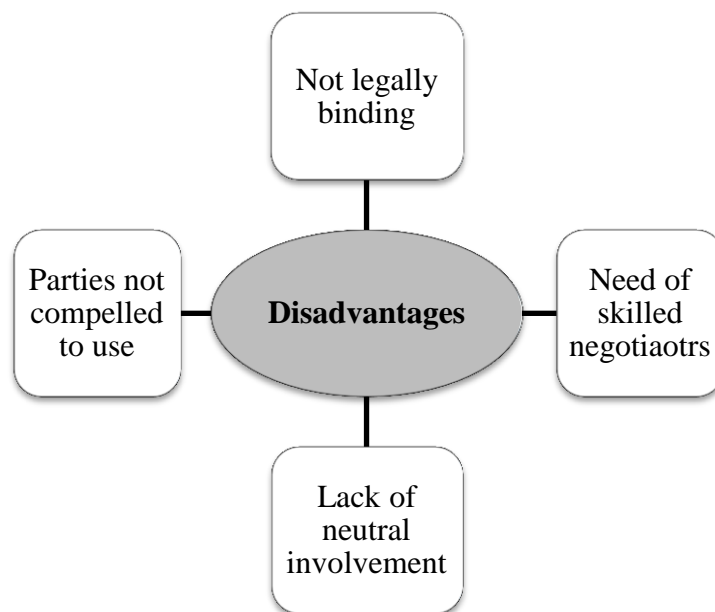


Figure 2. 7: Disadvantages of negotiation

Not legally binding

Whenever the party does not respond as agreed in a negotiated agreement there is no way to enforce it (Gunawansa, 2013; Gunasena,2010). Then the other party has to seek binding ADR methods such as adjudication and arbitration and the time spent for negotiation is wasted.

Need of skilled negotiators

Negotiation is a confidential process carried out with the involvement of parties themselves (Shapiro, 2013). Hence the result or the outcome is highly dependent upon the skill level of negotiators. Hence this method is not suitable if in-house skilled negotiators are not available.

Lack of neutral involvement

Unlike negotiation in other ADR methods such as mediation, adjudication and arbitration neutral third parties are involved “Lack of neutral may reduce chance of reaching agreement, particularly in complex disputes or those involving multi-parties” (Orlando, 2015).

Parties not compelled to use negotiation

The parties are not compelled to use negotiation and Orlando (2015) states it as a disadvantage of the method. Whenever a party needs to withdraw he is free to walk away from the negotiation table. Hence some can use to walk away when the results seems to be less favorable to him.

2.7.3 Special features of construction dispute negotiation

Negotiation in construction has several special features due to the inherent features of construction industry. Disputes related to construction are quite different from simple buying and selling issues that may take place in the business world. Figure 2.8 denotes special features of construction dispute negotiation.

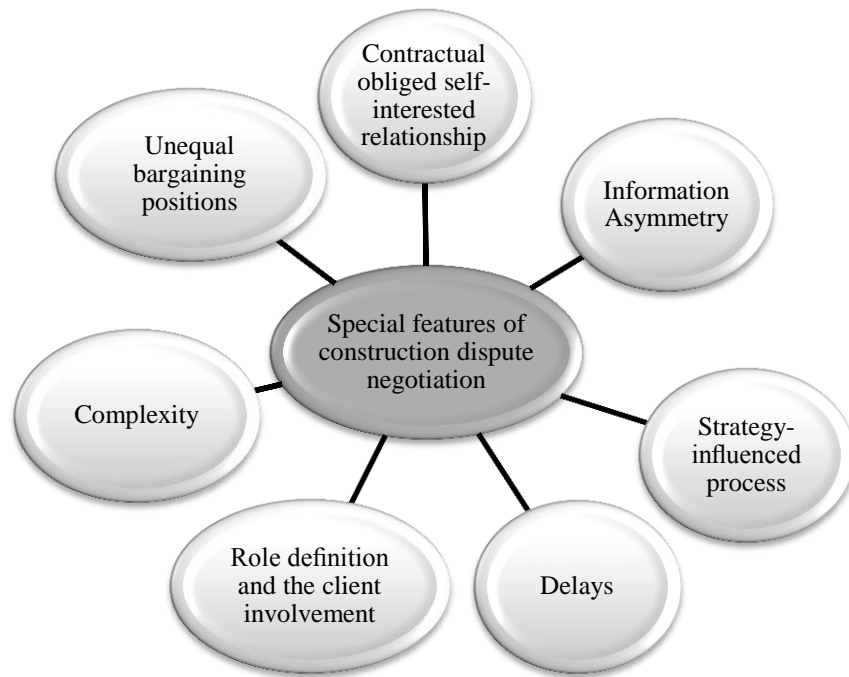


Figure 2.8: Special features in construction dispute negotiation

Source : Adapted from (Dudziak et al. 1988; Ren et al.,2003; Klein, 2006;Marzouk et al., 2007; Shapiro, 2013)

As illustrated in figure 2.8 followings have been identified as special features in construction dispute negotiation.

Contractual obliged self-interested relationship

“Unlike the negotiations in other businesses, nobody can easily walk away from construction claims negotiation even if negotiations fall into deadlock” (Ren et al., 2003, p.684). The parties are bound by the contract itself and negotiations are conducted within the framework of the contract. If a negotiation ends in conflict, the negotiating parties are forced to step into next ADR method as per the contract that they can hardly afford.

Information asymmetry

Due to their different roles, each participant has different perspectives on a project. The client knows about final functional requirements, budget and the financial status of the project. The engineer may be well aware of the client’s requirements, contract

documents and specifications. The contractor has detailed information about actual cost and labour norms, progress, claimable situations and possible consequences. Each party has different expertise and will try to use its specific information and expertise to explain, argue and persuade the other party to accept its offer (Ren et al., 2003).

Strategy- influenced process

The contractor and the engineer often adopt a number of strategies in an attempt to draw the settlement point from the middle towards their expected outcomes. “ Either or both parties may inflate the opening demands; misrepresent their positions or interests; withhold sensitive or potentially damaging information; use threatening behaviour; or adopt an intransigent stance until the other side is ready to move” (Ren et al.,2003, p.683).

Delays

Negotiation process in case of claims negotiation is time consuming due to substantial delay between the submission of documents and negotiations (Marzouk & Moamen, 2007). “During negotiation, a party may adopt a time consuming strategy to expect to benefit from the opponent’s time pressure or emotional exhaustion” (Ren et al.,2003, p. 684). “Most project managers consider negotiation as the most time and energy-consuming activity in claims management” (Ren, et al. ,2003, p.683). This has been further emphasised by Klein (2006) stating that,

It is not always the quickest form of resolution, because both parties have to be in a position of wanting to settle the dispute and move on from it and it might be some time before one of the parties is in the position of wanting to settle and conclude the dispute.

Above comments reveal that even the negotiation is identified as quick ADR method, the actual circumstances and behavior and attitude of parties might bring different outcome.

Role definition and the client involvement

The dual roles of the engineer as an independent professional expert and an agent of the client place him in a conflicting position in claims management. Such conflicting roles often become a major contributor to the inefficiency of claims negotiation because the engineer tends to discourage those claims resulting from his defaults (Ren et al., 2003). The engineer is likely to take advantage of the low client intervention, which finally increase the difficulty of negotiations and the possibility of disputes.

Complexity

The associated issues of the construction disputes are diverse, numerous and complex process between various contractual parties (Marzouk & Moamen 2007; Shapiro, 2013). Negotiation on work contracts can involve complex issues such as completion date, arbitration procedures, special work item compensation, contingency allowances as well as the overall price (Dudziak & Hendrickson ,1988).

Unequal bargaining positions

“In the construction industry, there are some inherently unequal bargaining positions, including the situation that often pertains when contractors bid for construction projects” (Shapiro, 2013, p.4). The contractor is required to bid based upon the bidding documents produced by the owner and engineer which will define the contractual obligations and legal relationship between the parties. Therefore, the opportunity for contractors to engage in meaningful negotiations is minimal (Shapiro, 2013).

2.4.4 Barriers to effective construction dispute negotiation

Some of researchers are in the view that there are some barriers in the method which has been the reason for practical application of negotiation being ineffective.

Cultural differences among parties

The cultural background of the disputants could also lead to different approaches being taken in resolving disputes under negotiation (Tinsley as cited in Chong & Zin, 2012). In international competitive bidding contracts the parties comprise various nationalities and professionals that belong to different cultural backgrounds. Negotiation effort of such parties will not always end in a solution because misunderstandings due to cultural differences will prevent proper identification of interests and positions. Yet, to make it successful, the negotiation demands cooperative effort from the disputants (Cheung, 1999; Edwin and Henry as cited in Chong & Zin, 2012).

Lack of negotiation skills among industry professionals

Inadequate negotiation skills and knowledge among construction professionals have been identified as one of the major reasons for ineffective negotiation (Dudziak & Hendrickson, 1988; Dunning, 1992; Ezulike and Hoare, 1998; Ren et al., 2003; Scott & Billing, 1990; Shapiro, 2005; Tyrill as cited in Love et al., 2007).

Negotiation skills are critical to the speedy and efficient resolution of construction disputes and hence formal training in negotiation should be key ingredient in any successful ADR program (Shapiro, 2005). It is an essential skill that senior management should learn and master (Chan & Suen, 2005). To fill the above gap several new innovations was carried out. Dudziak & Hendrickson, (1988) developed a paper based game of simulation contract negotiation and Yoyuenyong ,Hadikusumo, Ogunlana, & Siengthai (2005) have developed virtual construction negotiation game with the aim to provide opportunity to construction professionals to learn or refine negotiating skills.

Not suitable for resolving every kind of disputes

Even though negotiation is the preferred method it is not suitable for resolution of every dispute. The dispute that arises from complex legal, contractual or technical

issues cannot be resolved by the contractual parties alone because they need additional experts in relevant area to resolve the matter (Chong & Zin , 2012; Levin, 1998).

2.8 Negotiation as an ADR Method in the Sri Lankan Construction Industry

Most of the international competitive bidding contracts of complex nature in Sri Lanka are based on FIDIC(2010) Conditions of Contract. FIDIC (2010) provides following procedure for resolution of disputes as per figure 2.9.

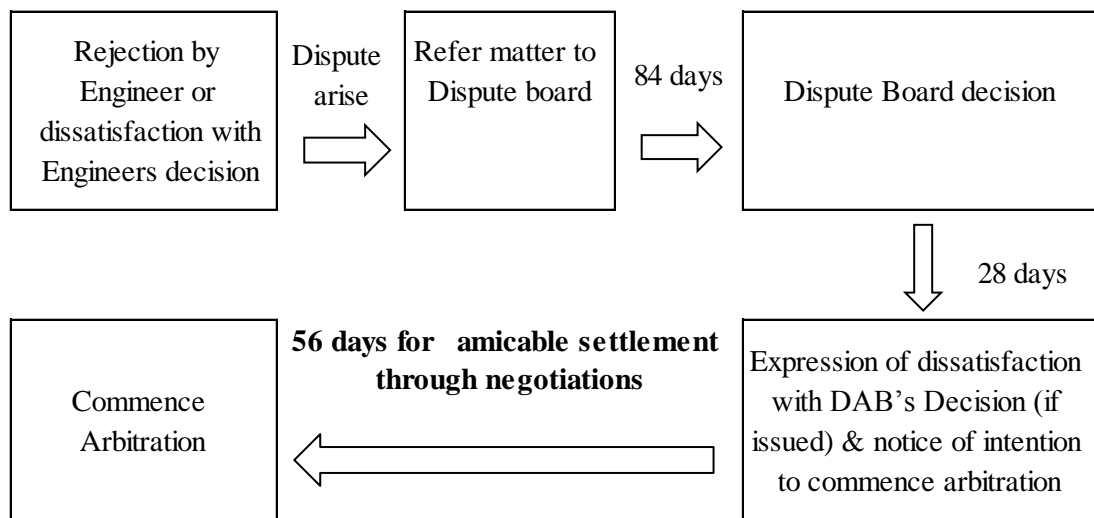


Figure 2.9: Dispute resolution procedure as per FIDIC conditions of contract

Source: Adopted from FIDIC(2010)

As illustrated in figure 2.9, in case of failure of settlement acceptable to both parties the matter will be referred to dispute board. If parties become unsatisfied with the decision of dispute board the matter will be referred to arbitration. However FIDIC (2010) recommends the parties at their endeavour to amicably settle the matter through negotiation before stepping to costly arbitration. The procedure recommended by the conditions provides guidance to resolve disputes using negotiation. However, it also has provisions to resolve matters that cannot be resolved by simple negotiation using more structured methods such as dispute board and arbitration.

As per De Zylva (2006) majority of disputes can often be resolved without outside intervention and it is to the contractor's advantage to resolve the disputes directly via the most obvious method; negotiation because other methods tend to have unpalatable side effects.

Gunaseena (2010) found that negotiation is the first method accepted to resolve disputes. However most of the Sri Lankan practitioners were in the view that unavailability of enforceability and non bindingness of the outcome as reasons for negotiation being not suitable for resolving every dispute. Study of Jayasena and Kavinda(2012) revealed that negotiation is the preferred choice of ADR. Further, the study revealed that bindingness of decision and enforceability of decision had low priority score in local context. Hence the findings differ to the findings of Gunaseena (2010).

Even though research indicate the preference for negotiation, no further research has been carried out to investigate about the negotiation as an ADR method in resolving disputes in Sri Lankan context. Even in the international context project negotiations have not been studied very systematically in the literature (Anthopoulos & Kristianopoulou, 2012; Dudziak & Hendrickson, 1988; Murtoaro & Kujala, 2007 ; Yousefi ,Hipel, & Hegazy,2010).

2.9 Outcomes of Construction Dispute Negotiation

The better the negotiation, the better the outcome (Fells, 2013). Negotiators are often encouraged to achieve a win-win outcome but win-win outcome is not achievable as we would like to think (Fells, 2013). Dispute negotiation is often difficult, adversarial, and inefficient; and in the worst cases, lead to arbitration and litigation (Hu as cited in Ren et al., 2011). Dispute negotiations in construction projects deliver low outcomes (Ren et al., 2011). “Not every negotiation can achieve the expected outcome” (Cheung et al. ; Yiu et al.; Yiu and Lee as cited in Lu, Zhang & Li, 2015). As such negative nature of construction negotiation outcomes are highlighted in recent studies.

Cheung, Yiu and Yeung (2006) studied about outcomes in construction dispute negotiation. Based on comprehensive literature review (Friedman et al. ,2000; Gross and Guerrero, 2000; Prein,1976; Rahim et al., 2000) they developed seven taxonomies of negotiation outcomes. Taxonomy is a system by which categories are related to one another by means of class inclusion (Rosch as cited in Cheung et al.,2006) .The taxonomies of negotiation outcomes are as follows.

- 1) Problem solving
- 2) Relationship maintained
- 3) Conflict reduction
- 4) Inaction
- 5) Conflict escalation
- 6) Relationship deterioration
- 7) Further disagreement

Problem solving is the most desired outcome of negotiation. This relates to solution formation, conflict reduction and achievement of compliance. “In construction industry, this negotiation outcome is ideal if a dispute is settled with a solution that satisfies the goals and needs of the parties” (Cheung et al.,2006).

In addition to problem solving there are other effective outcomes. Relationship maintained outcome means preservation of relationship after negotiation. This is a positive outcome because some of the needs of the parties are satisfied (Cheung et al., 2006). Conflict reduction is another effective outcome. Even the dispute was not resolved conflict reduction can be identified as a positive outcome because lesser chance for future disputes and such outcome is favoured by disputants (Cheung et al., 2006).

Inaction is characterised by withdrawal and postponement of negotiation process (Cheung et al., 2006). “Withdrawal is a situation where a negotiator loses interest in continuing with the discussion and leaves the negotiation table” (Cheung and Chow, 2011, p.1071).Inaction is undesirable because chance of resolution become remote (Rahim as cited in Cheung et al., 2006). Therefore inaction is an ineffective

outcome. Conflict escalation outcome is characterised by a higher level of conflict. (Cheung et al., 2006) identifies conflict escalation as negative implication as the dispute is unlikely to be resolved with an escalating conflict. Relationship deterioration is other ineffective outcome. Relationship between negotiators may have impact not only on current dispute but also on other disputes related to the project. Further, it may have impact upon future business relationships between the parties.(Cheung et al.,2006) identifies this as a critical factor in tackling the conflict. Further disagreement after the negotiation can be identified as other ineffective outcome.

2.10 Effectiveness of Construction Dispute Negotiation

A conceptual framework is an interconnected set of ideas about how a particular phenomenon is related to its parts and it serves as the basis for understanding the causal patterns of interconnections across ideas (Svinicki,2010). Based on the above described negotiation outcome taxonomies identified by Cheung et al. (2006) a conceptual framework for determination of effectiveness of construction dispute negotiation can be presented as per figure 2.10.

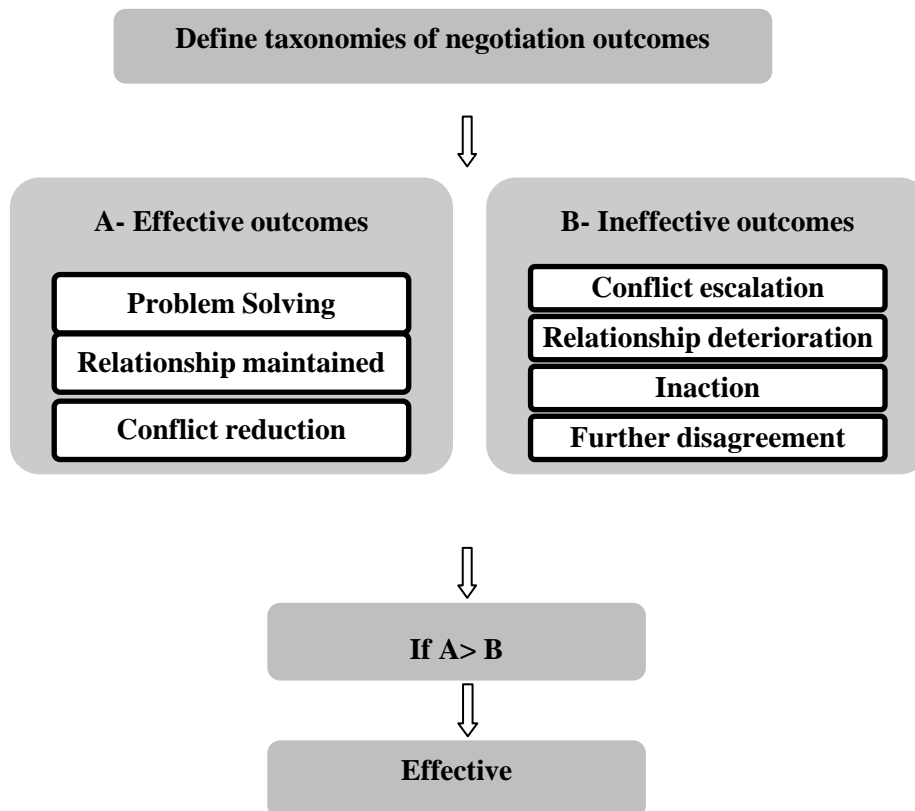


Figure 2.10: Conceptual framework for determination of effectiveness

Source: Adapted from Cheung et al. (2006)

As illustrated in figure 2.10 among the seven taxonomies of negotiation outcomes, problem solving, relationship maintained and conflict reduction can be identified as effective outcome taxonomies (Rahim 1992 as cited in Cheung et al., 2006). On contrary conflict escalation, relationship deterioration, inaction and further disagreement can be identified as ineffective outcome taxonomies (Rahim 1992 as cited in Cheung et al.,2006).

The Oxford dictionary (2000) defines the effectiveness as “the degree to which something is successful in producing a desired result.” Hence an effective ADR method shall be capable to bring effective outcome to the dispute resolution. If the possibility of achieving effective outcome taxonomies is higher than the possibility of achieving ineffective outcome taxonomies, negotiation could be determined as an

effective ADR method capable to bring effective outcome. Accordingly this research intends to determine the effectiveness of negotiation as a method of alternative dispute resolution in the Sri Lankan construction industry based on the above conceptual framework.

2.11 Chapter Summary

This chapter describes about the disputes in the construction industry, need of ADR methods and the importance of negotiation. Theoretical explanations on the negotiating process, negotiation styles and types are provided. This chapter also describes about advantages, disadvantages, inherent features & challenges in construction dispute negotiations and the outcome taxonomies of negotiation. Based on the effective and ineffective negotiation outcome taxonomies identified during literature review a conceptual framework was developed to determine the effectiveness of negotiation.

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this chapter is to introduce the research design of this study, describe research approach, explain the population and sampling frame, describe the procedure used in designing the instrument and collecting the data, including methods implemented to maintain validity and reliability of the instrument and provide an explanation of the methods to be used to analyze the data.

3.2 Research Design

Tan (2002) defined research design as the plan for getting from research question to the conclusions. Consequently, it addresses all the issues in executing a research project from the identification of research problem to reporting and concluding the research. Research design adopted for the study is shown in figure 3.1.

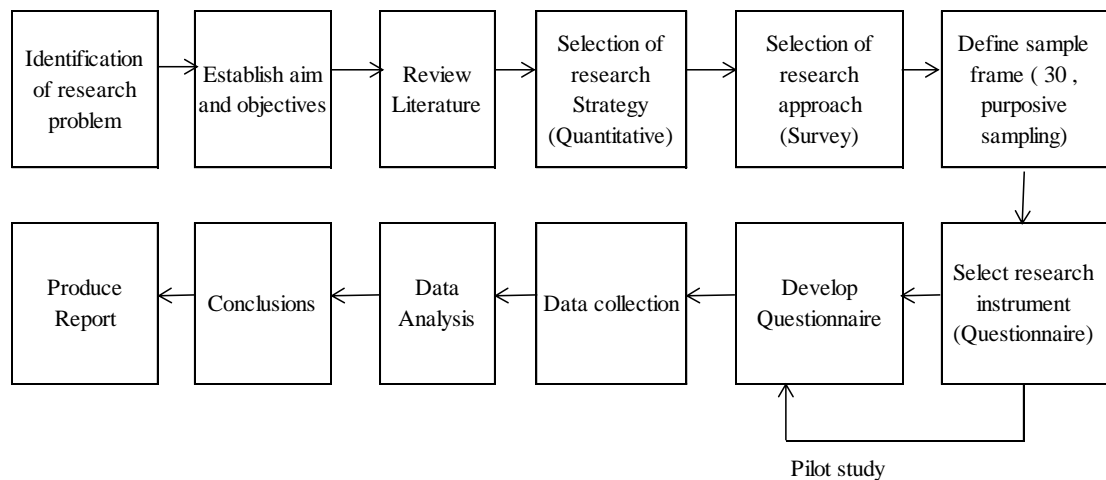


Figure 3.1 : Research design

3.3 Research Strategy

Quantitative research is defined as an inquiry into a social or human problem, based on testing a hypothesis or a theory composed of variables, measured with numbers, and analyzed with statistical procedures (Creswell as cited in Naoum, 1998).

Qualitative research is subjective in nature and emphasizes meanings, experiences etc (Naoum, 1998). There are two categories of qualitative research namely exploratory and attitudinal. Attitudinal research is used to subjectively evaluate the opinion of a person towards a particular question (Naoum,1998). In this study the data related to experiences of people was obtained and analysed using statistical method. However an in depth evaluation of opinions was not carried. Hence this study falls into the category of quantitative research.

3.4 Research Approach

There are research approaches such as experiments and surveys, case study, ethnography, action research and grounded theory (Baron, 2008). Among available methods case study and surveys were possible methods. Case studies are appropriate for the explanatory and interpretive work (Baron, 2008). Hence case study would be difficult task because of lack of availability of details due to confidential nature of negotiations. Unlike a case study, a purpose of a survey is not to consider a specific case in-depth but to capture the main characteristics of the population at any instant (Tan , 2002). Accordingly, the survey approach was chosen as the most suitable approach.

3.5 Data Collection

3.5.1 Population and sampling frame

The population of the research is professionals with exposure to disputes in Sri Lankan construction industry. Due to the time and cost limitations it was impossible to carry out the research using population. Therefore use of appropriate sample was necessary.

The objective of sampling is to provide a practical means of enabling the data collection with manageable volume of data while ensuring that the sample provides a good representation of the population (Baron, 2008; Fellows and Liu, 2003). Hence determination of appropriate sample size was vital important.

For determination of sample size factors such as purpose of the study, population size, level of precision, the level of confidence, and the degree of variability in the attributes being measured shall be considered (Miaoulis and Michener as cited in Israel, 2013). Considering above factors, formulas were developed by several academics to calculate sample size. However the formulae have few unknowns and as a solution Roscoe (1975) suggested rules of thumb to determine sample size and recommends size of thirty or more as sufficient (Hill, 1998). Further, samples larger than thirty ensure the researcher the benefits of central limit theorem (Janes , 2001; Roscoe as cited in Hill,1998). Considering above factors, target minimum sample size of thirty participants was determined as appropriate.

As per (Fischler, 2015) non probability selection of participants is done because they are available, convenient or represent some characteristic the investigator wants to study. There are four categories of non-probability sampling; convenience sampling, voluntary sampling snowball sampling and purposive sampling (Neville, 2007). Purposive sampling enables to use researcher's judgement to choose respondents that are presented or are available that best meet the objectives or target groups (Neville, 2007).

Among the professionals in the construction industry all are not involved in disputes and therefore collection of data from random sample would not provide meaningful data. Hence the participants were selected using non probability purposive sampling method.

The sampling criterion selected by the researcher was the professionals in the Sri Lankan construction industry who possess more than five years of experience with real exposure to disputes.

3.5.2 Research instrument selection

In order to collect data two possible instruments were identified. They were questionnaires and interviews. However questionnaire survey was selected as the most suitable research instrument to gather data considering the factors described below.

- The data required to be obtained was not in depth answers where interview is a must.
- In interviews interviewee tends to give instant answers to questions without deep thinking and that may lead to reveal inaccurate information which is not their true view.
- For a busy professional it is difficult to allocate time for an interview but such person is capable to answer a mailed questionnaire in a possible time.
- Interviewing professionals is a difficult task within the allocated time frame for data collection.
- In interviews nonverbal communications will have an impact on the responses and recordings (Fellows and Liu, 2003).

However, questionnaires have their weaknesses. The answers have to be accepted as final and inappropriate where spontaneous answers are wanted (Moser and Kalton as cited in Fellows & Liu, 2003). The respondent can see all the questions before answering any of them, and the different answers therefore cannot be treated as independent. Further, The researcher cannot be sure that the right person completes the questionnaire (Moser and Kalton as cited in Fellows & Liu, 2003).

3.5.3 Development of questionnaire

The questions should be unambiguous, easy to answer and request for answers shall be given in unthreatening form (Fellows & Liu, 2003).Hence necessary measures were taken to avoid constructing a complex and lengthy questionnaire. Closed questions with number of responses determined by the researcher may constrain the responses artificially (Fellows & Liu, 2003). Therefore open ended questions were included where possible. Possibility of getting further clarification is rare in one way communication methods such as postal questionnaires (Fellows & Liu, 2003). Acknowledging the above difficulty, further discussions were held with the respondents who provided important views to open ended questions. Ethical issues were considered and name and organization details were not requested from the respondents (refer Appendix -A for questionnaire).

The questionnaire was accompanied by a covering letter where the purpose and legitimacy of the questionnaire was explained. In order to emphasize confidentiality of data, assurance was provided confirming that data will not be used for any purposes other than the research (refer Appendix- B for covering letter).

The research intended to study the experiences of professionals regarding outcomes of negotiations carried out and to identify any barriers to effective negotiation in Sri Lankan context. In order to study about the outcomes of dispute negotiation, the data on degree of agreement of respondents regarding statements related to main taxonomies of negotiation outcomes found out in the literature survey were collected. Barriers to effective negotiation prevailing at international context found out during the literature survey and pilot survey was listed out. The views of participants regarding each barrier were collected. Further, opportunity was provided to disclose any other barriers via open ended question.

Likert response alternatives are widely used for surveys (Fellows & Liu, 2003; J.H.N. Boon & Boon, 2012; Simon & Goes , 2013). For this study Likert items were used to measure respondent's attitudes to questions. The answers for experiences on negotiation outcomes were recorded on a five number choices as follows.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither agree nor disagree
- 4 = agree
- 5 = strongly agree

The views regarding barriers to effective negotiation were recorded on a four number choices as follows.

- 1 = strongly disagree
- 2 = disagree
- 3 = agree
- 4 = strongly agree

The response alternatives of Likert type data can be four, five or seven. Simon & Goes, (2013) argues that Likert himself did not consider number of choices as important issue and therefore it is left to the individual researcher. Researchers assign number of response alternatives arbitrarily according to personnel taste including the deletion of the neutral response (Clason & Dormody as cited in J.H.N. Boon & Boon, 2012; Simon & Goes, 2013). For the view regarding barriers using four response alternatives were determined as appropriate because the respondents selected via non probability sampling and they have ability to provide straight answers without being “neither agree nor disagree”. However as revealed in the pilot survey, regarding the negotiation outcomes some parties had various experiences which are totally different to each other and therefore it was necessary to include the choice “neither agree nor disagree”.

3.5.4 Data collection process

Every respondent needs to understand what is required in the precise sense that the researcher meant it (D. Swetnam & Swetnam, 2000). Further, piloting should ensure that the time required is not unreasonable (Fellows& Liu, 2003).Therefore a pilot survey was carried out to ensure instrument validity and clarity of instructions and items. Three participants similar to those who would be in the study sample but not included in the actual sample were subjected to pilot testing. The questionnaires were submitted to them and face to face discussions were held to receive their comments regarding the questions. Their recommendations were used to further develop the questionnaire.

The second step is actual survey. The sample size of minimum thirty was expected. However a response rate of 30% or greater for a postal/externally sent questionnaire is generally regarded as reasonable (Neville, 2007). Hence to avoid result being bias due to the low response rates the questionnaires were sent to sixty participants comprising professionals from client contractor and consultant organizations. However there were very few professionals in the client organizations that fulfilled the requirements of the sample. There were many consultants that were providing dispute related professional services to contractor and client organizations and hence

many consultants that fulfilled the requirements of the sample were available. (refer table 4.1 for details of participants).

In order to complete the analysis process within time limitations the deadline date of the responses to questionnaire was specified in the covering letter. Further follow up letters along with the questionnaire were electronically mailed to all non-respondents two weeks later. The analysis process was carried out using the responses received up to deadline.

3.6 Analysis Procedure

Methods of data analysis are primarily determined by the research questions to be answered and the level of data being gathered; nominal, ordinal, and/or interval (Baron, 2008). People’s answers to questions in which they are required to express opinions are forms of subjective data (Fellows & Liu, 2003).The data collected are Likert- type ordinal data. An ordinal scale can be considered as an interval scale provided that the distance (“interval) between adjacent points equal when a scale has at least five or seven categories (Bendixen and Sandler as cited in Garson, 2007). Hence the weights of -2, -1, 0, +1 and +2 were allocated to choices accordingly.

Weighted mean score was used to analyse the data obtained from the questionnaire survey. The weighted mean score for each factor of negotiation outcome was computed to deliver an indication of the importance of the factor. The formula used is as follows.

$$WMS_i = \frac{\sum (w_j * F_{ij})}{n} \quad (-2 \leq W_j \leq 2)$$

Where,

WMS_i -weighted mean score on ‘i’ th factor

w_j-Weight of the choice type j (-2≤ W_j ≤2)

F_{ij} - Frequency of responses for choice type j for ‘i’ th factor

n - Total number of responses

Thereafter the weighted mean score values of negotiation outcome taxonomies were computed using the above results and the following formula.

$$W_a = \frac{(\sum W_i)}{N}$$

Where,

W_a - Weighted mean score on a th negotiation outcome taxonomy

W_i -Weighted mean on each factor

n - Total number of factors for 'a' th taxonomy= 2

To calculate the total weighted mean score of effective negotiation outcome taxonomies and ineffective negotiation outcome taxonomies the weighted mean score values of each type were added together.

3.7 Chapter Summary

This chapter describes summarized outline of research design and research methodology. Moreover justifications for the selection of quantitative research design as research approach, survey method as research methodology and purposive sampling as sampling method is provided. The reasons for selecting questionnaire as data collection technique and measures adopted to avoid weakness of using questionnaire are described. Finally, data analytical techniques and statistical formulas used for analysis are explained.

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

The findings obtained by analysis of the data in the questionnaire survey using the statistical analysis method described in chapter 3 are presented in this chapter. Further the important factors found out during the discussions with the participants of the survey are presented. In addition, the comparisons of findings with the literature review of the study and interpretation of the researcher is described in this chapter. Finally a discussion on research findings is provided.

4.2 Details of participants and response rate

The questionnaires were electronically mailed to sixty professionals among clients, consultants and contracting organizations. The details of responses obtained are presented in table 4.1.

Table 4.1 : Details of participants and response rates

Type of Organization	Questionnaire sent	Responded	Response rate	Percentage of sample
Consultant	25	17	68%	52%
Contractor	20	9	45%	27%
Client	15	7	47%	21%
Total	60	33	55%	100%

As shown in table 4.1, a satisfactory response rate of 55% was achieved. The analysis was carried out using the responses obtained from the 33 professionals. As per the view of the researcher the comparison of results among the participants of client, consultant and contractor organizations is meaningless because most of the participants change their jobs during their carrier and the responses to the questionnaire emphasise their total experience obtained during several type of

organizations. Further, there were consultants that provide contract management services to both contractor and client organizations. The composition of sample in accordance with the position is presented in table 4.2.

Table 4.2: Details of participants by position

Position	Quantity
Chief Quantity Surveyor	5
Chief Resident Engineer	1
Claims Consultant	1
Claims Engineer	2
Claims Specialist	1
Contract Specialist	4
Engineer Contracts	3
General Manager- Construction	1
Manager Contracts	2
Procurement Specialist	2
Project Director	3
Senior Quantity Surveyor	8
Total	33

As shown in table 4.2, the participants are professionals that hold senior positions in the construction industry. Seven participants had 5-10 years of experience. The majority of thirteen participants had 10-20 years of experience. There were eleven participants that had 20-30 years of experience. There are very few participants that had more than thirty years of experience. Only two participants were found to have more than thirty years of experience.

In the questionnaire the participants were requested to provide details about number of dispute negotiations they have participated during last five years with regards to disputes between client and the contractor. All participants had experienced more than five dispute negotiations during last five years. There were only 12% participants that had experienced 5-10 dispute negotiations. There were 21% of participants that had participated for 10-20 dispute negotiations and 27% of the

participants had experience on 20-30 dispute negotiations. However the majority of 40% had participated for more than thirty dispute negotiations.

As such the sample consists of participants who possess good exposure construction dispute negotiations. Further, the result denotes that dispute negotiation is a common phenomenon in the Sri Lankan construction industry.

4.3 Dispute Negotiation Practices in the Sri Lankan Construction Industry

To identify the negotiation practices in Sri Lanka it was required to identify the stages in dispute resolution process that parties attempted to solve the dispute using negotiation. In addition it was required to identify about stages of dispute resolution process that achieved resolution of dispute using negotiation. Hence the participants were requested to provide details on their negotiation experiences during their carrier for disputes between client and contractor.

4.3.1 Use of negotiation

In the questionnaire participants were requested to provide details about the negotiation experiences during their carrier. The table 4.3 shows the experiences of the sample regarding the stages of the dispute resolution process that parties attempted for negotiations.

Table 4.3 : Stages of ADR process attempted for negotiation

Stage of dispute resolution	Number	Percentage
Before going for Adjudication, DAB or Dispute Board	33	100%
Before going for Arbitration (If no DAB appointed)	30	91%
After Adjudication, DAB or Dispute Board but before going for Arbitration	27	82%
Amicable Settlement promoted during Arbitration	17	52%
After Arbitration award (After application made by one party to the court to set aside the arbitration award and during the time of pending the decision of the court)	6	18%

As shown in table 4.3, 100% of the sample had experience on attempts to solve the disputes using negotiation before going for other ADR methods such as adjudication or dispute board. Adjudication, dispute adjudication board and dispute board are the initial dispute resolution methods that shall be attempted as per ICTAD (2007), FIDIC (1999) and FIDIC (2010) respectively. During the pilot survey it was revealed that in some projects Dispute Adjudication Boards(DAB) is not appointed even the appointment of DAB at the commencement is required as per the conditions of contract. In such circumstances, disputed parties attempt to solve the dispute using negotiation before going for costly Arbitration. 91% of the sample had such experience. Based on the above result, not appointing a DAB at the commencement of the project can be identified as a common practice in Sri Lankan construction industry. Further above results denote that negotiation is widely used as initial method for dispute resolution in Sri Lankan construction industry.

81% of the sample had experience in negotiations carried out subsequent to adjudication or dispute board but before going for arbitration. As per FIDIC (1999)/FIDIC (2010) the parties shall attempt amicable settlement if dissatisfied with the DAB/dispute board decision before going for arbitration. The percentage is less compared to above described stages because some disputes would have been resolved by the initial attempt for negotiation or during adjudication or dispute board.

52% had experience regarding the amicable settlement promoted during the arbitration. Section 14.1 of the Arbitration Act no.11 of 1995 encourages settlement by parties themselves during the arbitration. As revealed during the pilot survey and further discussions with the participants of the sample, in most arbitration proceedings the arbitrators award decision regarding entitlement of the contractual parties and they encourage negotiating the quantification of entitlement of disputed issue (amount of cost, time etc.) between parties themselves.

Arbitration award of a dispute is final and binding as per section 19.1 of the Arbitration Act no.11 of 1995. As per the section 32.1 of the Act, parties could submit application to High Court to set aside the award. However during the pilot

survey it was revealed that some parties try to influence the other party to negotiate the dispute after the arbitration award. They apply to the High court to set aside the arbitration award knowing that there is no grounds for challenge but intending to delay payments or to hide own mistakes. Thereafter they invite the other party for negotiations during the time of pending the court decision to set aside the arbitration award. As per the results of the study 18% of the sample had such experience. However such practice is not ethical and the benefits of using ADR methods could not be achieved because attempts for both ADR methods and court proceedings will ultimately lead to wastage of time and cost.

As described above, negotiation can be identified as a widely used ADR method and initial ADR method used in the Sri Lankan construction industry. Hence findings of the study confirm the findings of Jayasena & Kavinda (2012) that identified negotiation as the preferred choice and Gunasena (2010) that identified negotiation as the accepted initial method in Sri Lankan context. Further the result illustrate that irrespective of the contractual provisions, attempts for negotiations are carried out at various stages of dispute resolution process.

4.3.2 Resolution of dispute using negotiation

In the questionnaire the participants were requested to answer regarding their experience on resolution of the dispute using negotiation during their carrier. The result compared with the experience of participants on use of negotiation is presented in table 4.4.

Table 4. 4 : Comparison of experiences of negotiation attempts and dispute resolution

Stage	Number of participant s attempted	Number of participant s resolved	Percentage from the attempted
Before going for Adjudication, DAB or Dispute Board	33	30	91%
Before going for Arbitration (If no DAB appointed)	30	26	87%
After Adjudication, DAB or Dispute Board but before going for Arbitration	27	8	30%
Amicable Settlement promoted during Arbitration	17	8	47%
After Arbitration award (After application made by one party to the court to set aside the arbitration award and during the time of pending the decision of the court)	6	2	33%

As presented in table 4.4, from the participants had experience of negotiations before going for adjudication, DAB or dispute board 91% experienced resolution of dispute using negotiation. From the participants that had experience of negotiations before going for arbitration when there is no DAB is appointed 87% experienced resolution of dispute using negotiation. The result shows that satisfactory percentage of participants had experienced resolution of dispute using negotiation when it is applied as the initial ADR method.

From the participants that had experience of negotiation after adjudication, DAB or dispute board but before going for arbitration, 30% had experienced resolution of dispute using negotiation. The result shows that there is significant difference between usage of negotiation as second optional ADR method and initial ADR method. As per the further discussions had with some of the participants the reason behind comparatively low percentage was that reluctance of the satisfied party to go against the decision of the adjudication, DAB or dispute board. Especially in government projects participants believe that they would be forced to face audit queries if they arrive at a contrary agreement to decision of adjudicator. However as

per the conditions of contract, they shall negotiate if the other party is dissatisfied with the adjudication, DAB or dispute board decision.

From the participants that had experience of negotiations promoted during arbitration, 47% had experienced resolution of dispute using negotiation. The percentage is comparatively low than using negotiation as initial method but higher than using negotiation as second optional ADR method. From the discussions with participants it was found out that in most arbitration proceedings the arbitrators award decision regarding entitlement of the contractual parties and encourage negotiating the quantification of entitlement between parties themselves. Whenever the entitlement and major issues related to dispute is solved it becomes easy for the parties to negotiate over other issues. However in disputes of complex nature even if the parties try negotiation during arbitration they fail to achieve resolution.

From the participants that had experience on negotiation carried out after application made by one party to the court to set aside the arbitration award and during the time of pending the decision of the court, only 33% had experienced resolution of dispute. During the discussions with the few participants who had such experience it was found that whenever a foreign contractors need to settle all the disputes and leave the country at the earliest they tend to come into a resolution without consideration of substantive outcome. Their main concern is to solve the dispute somehow than wasting time pending the judgment of the court.

4.4 Effectiveness of Dispute Negotiations in the Sri Lankan Construction Industry

In order to determine the effectiveness of the negotiation the participants were requested to indicate their view regarding the factors related to the negotiation outcome taxonomies. The results are presented in table 4.5.

Table 4. 5 : Weighted mean score values of factors

No.	Outcome	Weighted Mean score	Rank
1	Problem solving		
1.1	The solution found satisfied the goals and needs of both parties.	-0.39	12
1.2	Optimal and creative solution to problem was found.	-0.09	8
2	Relationship maintained		
2.1	Some of each party's needs were satisfied, but not all of them.	0.85	1
2.2	Relationship between the negotiators was kept in consideration for future interaction.	0.55	3
3	Conflict reduction		
3.1	Conflict was reduced to some extent and less future disputes were likely made.	0.33	5
3.2	Conflict was reduced to some extent but it was difficult to reach an agreement.	0.48	4
4	Inaction		
4.1	The negotiators lost the interest to continue and left the negotiation from a threatening situation (Withdrawal).	-0.59	14
4.2	The negotiators tried to postpone the issue until a better time.	0.64	2
5	Conflict escalation		
5.1	More task conflict was experienced.	-0.18	9
5.2	The dispute became difficult to resolve because conflict was escalated during negotiation process.	-0.33	10
6	Relationship deterioration		
6.1	Task conflict was turned into relationship conflict.	-0.45	13
6.2	The negotiators ignored the needs and expectations of the other.	-0.03	7
7	Further disagreement		
7.1	There were further disagreements or escalations in conflict .	-0.36	11
7.2	Both sides were talking, but were unable to make any progress toward a solution.	0.33	5

The results in table 4.5 present important information regarding the nature of negotiation outcomes in the Sri Lankan construction industry. The factor 'Some of each party's needs were satisfied, but not all of them' received the highest score. From the discussions with participants it was found out that when there are several disputed issues pending resolution regarding a certain dispute at least some issues would be solved via negotiation. As such, their clarification complies with the results of the survey.

The factor related to inaction ‘The negotiators tried to postpone the issue until a better time’ obtained second rank. Accordingly it can be identified as a common phenomenon in the Sri Lankan construction industry. Further, the results confirm the views of Marzouk & Moamen (2007) that stated, a party may adopt a time consuming strategy during negotiation. Delays have been identified as an inherent feature in construction dispute negotiations (Klein ,2006; Ren et al.,2003) and situation in Sri Lanka does not differ.

‘Relationship between the negotiators was kept in consideration for future interaction’ placed third. The result confirms the view of Murtoaro Kujala (2007) that states negotiation keeps good relationships. This result also indicates the effect of culture. In Sri Lanka relationship between parties are considered as necessary for obtaining future projects from the same client. This is further confirmed by the lower rank obtained by the factor ‘Task conflict was turned into relationship conflict’ which shows that relationship conflicts are rare in construction dispute negotiations in Sri Lanka.

In addition to above factors, there are few other factors with positive weighted mean score value which denote that such factors are common in Sri Lankan context. They are ‘conflict was reduced to some extent even it was difficult to reach an agreement’ and ‘less future disputes were likely made’ and ‘both sides were talking, but were unable to make any progress toward a solution’.

‘Withdrawal’ obtained the lowest rank which denotes that withdrawal is a very rare experience in the Sri Lankan construction industry. Therefore nature of negotiation outcomes in Sri Lanka differ from the findings of Cheung & Chow (2011) that states withdrawal as common feature in construction dispute negotiations.

As per the results ‘The solution found satisfied the goals and needs of both parties’ ranked 12 in negotiation outcomes. Absolutely it is the ultimate target of the negotiating parties. However in the Sri Lankan context such outcome is not significantly achievable. As found out during the discussions unequal bargaining positions of parties was one reason behind the result because often contractor side

has less bargaining power when compared to government clients because he needs to maintain future relationships as well to survive in the industry. Unequal bargaining power was identified by Shapiro (2013) as an inherent feature in construction dispute negotiation. Further discussions revealed that misrepresentation as other reason. Ren et al. (2003) has identified this as inherent feature in construction dispute negotiation.

There are few other factors with negative weighted mean score value. Hence optimal and creative solution to problem, more task conflict , difficulty to resolve due to escalation of conflict during negotiation process, ignorance of the needs and expectations of the other and further disagreements can be identified as less frequent outcomes of construction dispute negotiations in Sri Lankan context.

However during the analysis of the data an interesting observation was made. It was observed that at least few participants had selected “agree” or “strongly agree” response alternatives for all the above negotiation outcome factors (refer appendix-C). Therefore every negotiation outcome factor listed above has been experienced by at least few participants and hence every outcome factors are possible in construction dispute negotiations in Sri Lanka. Further the result confirms the validity of the negotiation outcome factors identified by Cheung et al. (2006) because all the above factors have been experienced by at least one participant.

It was observed that at least few number of participants had selected “disagree” or “strongly disagree” response alternatives for all the above negotiation outcome factors (refer appendix 3) except one factor. The excepted factor was that ‘some of the each parties needs were satisfied, but not all of them’ which obtained first rank. As such this factor can be identified as a highly possible outcome in Sri Lankan context.

The weighted mean score values of negotiation outcome taxonomies were calculated and the results are presented in figure 4.1.

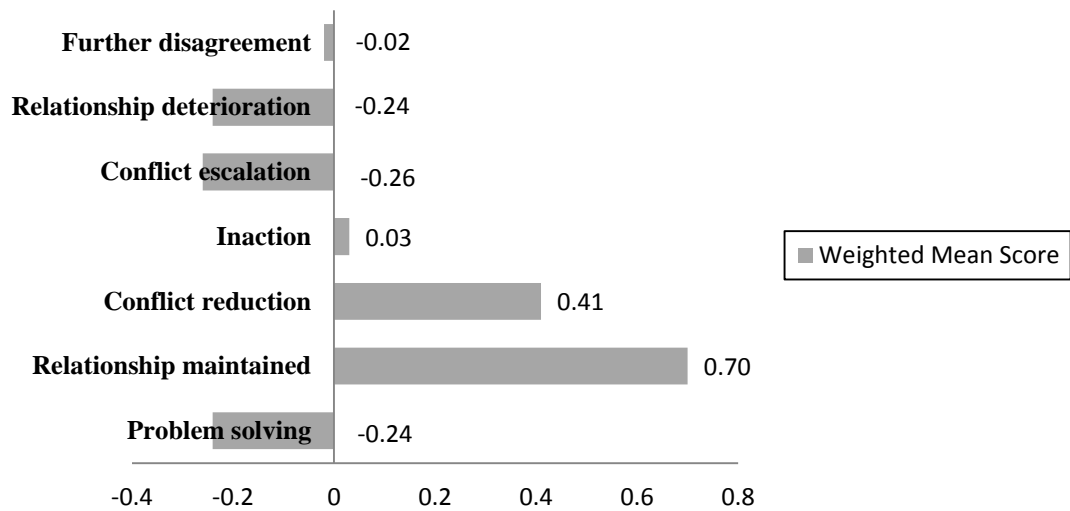


Figure 4. 1 : Weighted mean score values of negotiation outcome taxonomies

As presented in figure 4.1, ‘relationship maintained’ has the highest weighted mean score of 0.70. ‘conflict reduction’ also has a weighted mean score of 0.41. Both above outcome taxonomies are effective. The result shows that satisfactory level of effective outcomes such as maintenance of relationship and reduction of conflict could be achieved by using negotiation.

However the ultimate desired result of ADR method is problem solving and as per the result it has a weighted mean score of -0.24. Accordingly a satisfactory level of problem solving could not be achieved via construction dispute negotiations in Sri Lanka. The findings comply with the Cheung et al. (2006) that stated failing to reach a negotiated settlement in construction is not uncommon. As found out via the discussions dual role of the engineer and unequal bargaining positions are common issues in Sri Lanka that create the negotiation challenging. These are identified as the inherent features in construction negotiations (Ren et al., 2003; Shapiro, 2013). Hence the effect of such is unavoidable. In addition to above unavoidable issues several barriers that prevent parties from effective negotiation outcome was revealed during the study. The result shows the importance of avoiding the effect of such barriers to obtain the most desired outcome, problem solving.

Among the ineffective outcome taxonomies only ‘inaction’ has a positive weighted mean score value of 0.03. This is linked with the barrier found out during the study

because use of negotiation as a time passing tactic was identified as common practice in Sri Lankan construction industry.

‘Relationship deterioration’ and ‘conflict escalation’ have obtained negative mean score values of -0.24 and -0.26 respectively. The result shows that such ineffective outcome taxonomies are rare in construction dispute negotiations in Sri Lanka. Further, negative values obtained demonstrates the accuracy of the results because the effective taxonomies which are opposite to above such as ‘relationship maintained’ and ‘conflict reduction’ have obtained positive weighted mean score values. The further discussions with the participants revealed that they had very rarely experienced conflict escalation and relationship deterioration and even such had relationship with the personality characteristics of particular negotiator.

Summarising the above results the total sum of weighted mean scores of effective and ineffective negotiation outcome taxonomies is presented in table 4.6.

Table 4. 6 : comparison of effective and ineffective outcome taxonomies

Outcome taxonomy type	Total of Weighted Mean Scores
Effective	0.87
Ineffective	-0.49

As presented in table 4.6, total value of weighted mean scores of effective negotiation outcome taxonomies is 0.87. In accordance with the weights allocated for response alternatives it is higher than the median weight ‘0’ and lies between ‘neither agree nor disagree’ and ‘agree’ response alternatives. The total value of weighted mean scores of ineffective negotiation outcome taxonomies is -0.49. The value is lower than the median weight ‘0’ and lies between ‘neither agree nor disagree’ and ‘disagree’ response alternatives.

Hence according to the results there is tendency of achieving effective outcome than ineffective outcome via construction dispute negotiation. On the basis of above negotiation can be identified as an effective ADR method in the Sri Lankan construction industry that provides effective outcomes as a whole.

Even though the overall result of the study indicates that negotiation as effective ADR method as per the developed framework, there are further areas to be developed. As illustrated above even though a satisfactory level of effective outcomes such as conflict reduction and relationship maintenance is possible, the level of achieving problem solving outcome is not satisfactory. Therefore it is of vital importance to understand reasons behind inability to achieve ‘problem solving’ negotiation outcome which is the most important outcome from any ADR method and to adopt necessary measures accordingly.

4.5 Barriers to Effective Negotiation Outcome in the Sri Lankan Construction Industry

The views of participants regarding the barriers to dispute negotiation found out during literature review and pilot survey were collected during the survey. The results are presented in figure 4.2.

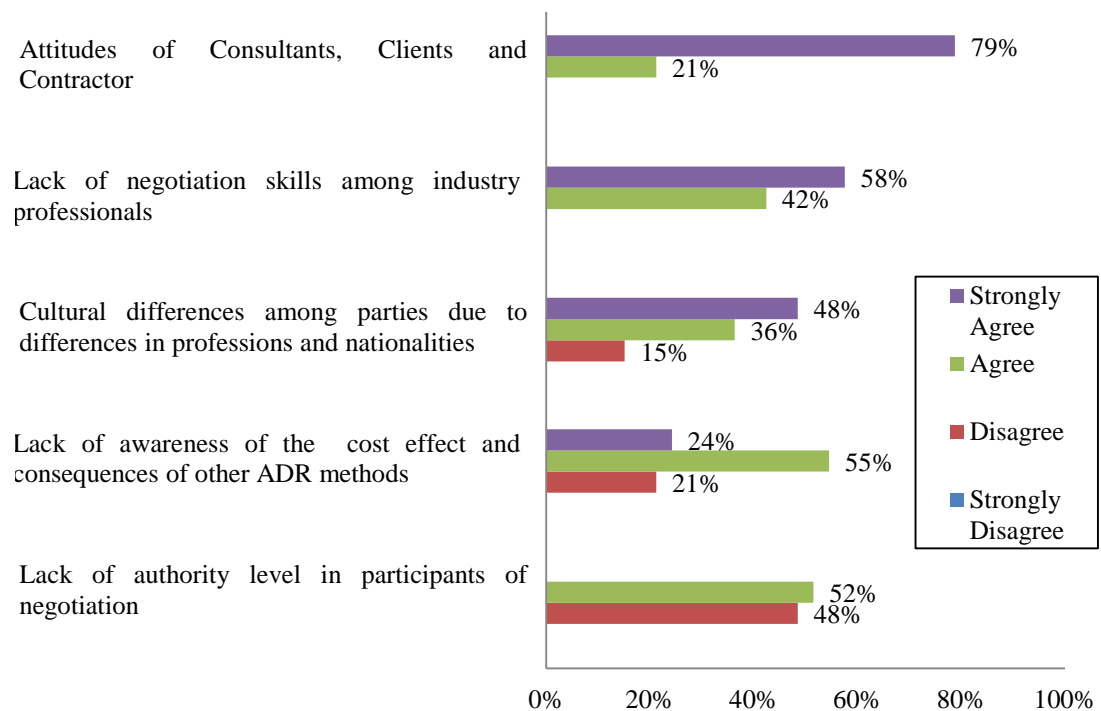


Figure 4.2 : The views on barriers to effective dispute negotiation outcome

As presented in figure 4.2, the participants agree that all the barriers listed above are prevailing in the Sri Lankan construction industry. The attitude of consultants, clients and contractors can be identified as the major barrier because 79% of

participants strongly agree and 21% agree on it. The further discussions with the participants revealed their experiences on pre- judged mind set of consultant (ex: if contractor's performance poor, don't want to determine claim on merits) and attitudes of disputed parties who believe matter cannot be solved using negotiation and attitude of avoiding responsibility of decision making.

Among the participants of the survey 58% strongly agree and balance 42% agree that lack of negotiation skills among industry professionals as a barrier. This was identified as one of the major reasons for ineffective negotiation at international context (Dudziak & Hendrickson, 1988; Dunning, 1992; Ezulike and Hoare, 1998; Ren et al., 2003; Scott & Billing, 1990; Shapiro, 2005; Tyrill as cited in Love et al., 2007). The result denotes that situation in Sri Lankan construction industry is similar.

'Cultural differences among parties due to differences in professional background and nationalities' was identified as a barrier to obtain effective negotiation outcome by several researchers (Cheung, 1999; Edwin and Henry as cited in Chong & Zin, 2012; Tinsley et al., as cited in Chong & Zin, 2012). As per the results of the study it is a significant barrier in Sri Lankan construction industry. 48% participants strongly agree and 36% agree on it. There are several foreign contractors engaged in major construction projects in Sri Lanka. Hence participation of various nationalities in dispute negotiations is possible. Further, discussions revealed that some top management participate for negotiations without involvement of the relevant professional related to disputed issue. When the professional backgrounds of the participants are different their perceptions also differ and it becomes a barrier to settlement.

24% of the participants strongly agree and 55% agree that lack of awareness of the cost effect and consequences of other costly ADR methods as a barrier to obtain effective outcome from dispute negotiation. Parties shall attempt to solve dispute via negotiation because consumption of least cost and time and the least amount of controversy and adversary than other ADR methods (Chong & Zin, 2012). However in the Sri Lankan construction industry some are not aware of the cost effect and

other consequences of using other ADR methods such as adjudication and arbitration. Moreover 21% of participants had different view. Most of them are in the opinion that even the parties are aware they do not consider about it because expenses related to subsequent ADR methods shall be borne by someone else (ex: organization, government, funding agency) and not by themselves. However such unethical behaviour is not suitable for a professional who is bound to safeguard the public interest as per professional ethics.

52% agree that lack of authority of negotiators as a barrier to obtain effective outcome from dispute negotiation. However 48% disagree with the above. Therefore there are different views regarding this barrier. During the discussions with participants of survey it was found out that even the authority is there most negotiators try to avoid authority. However on contrary some had their own experiences related to influence of top management or other stakeholders upon the decision making on negotiated disputed issues. The participants of negotiation were sometimes not granted the authority of decision making. Hence such practice also could be identified as a barrier to settlement of the dispute.

In addition to the barriers listed in the questionnaire, the participants were requested to describe any other barriers they had encountered during the negotiations. The responses revealed very important findings because they had listed several other barriers. The findings are presented in table 4.7 including the number of participants specified each barrier.

Table 4. 7 : Barriers to effective negotiation outcome

Barrier	Number of participants
Lack of participation of disputed issues competent professionals to represent client , contractor and consultant for negotiations	18
Use of negotiation as a time passing tactic	7
Professional discrimination	7
Influence of stakeholders and top management	4
Government regulations and management structure	4
Age discrimination	3

From the sample, eighteen participants revealed that lack of participation of professionals who possess structured education on dispute related issues as a barrier. To obtain problem solving outcome professionals that have ability to take correct decisions shall be participated as negotiators to represent client, contractor and consultant. Due to the higher number of responses this can be identified as a major barrier. During the discussions participants highlighted about lack of involvement in contract specialised professionals. Some participants were in the opinion that issue is lack of availability of professionals competent in both technical and contractual aspects. It was revealed about experiences on participation of technical experts or top management as negotiators without any contractual knowledge. Top management have participated for negotiations without the relevant professional even the in-house competent professionals were available. As such, this barrier exists due to the absence of proper delegation of responsibilities.

Seven participants from the survey confirmed that use of negotiation as a time passing tactic as a barrier to obtain effective outcome. Sometimes negotiation has been used just because the parties shall attempt for amicable settlement in case of dissatisfaction of DAB or adjudication decision as per the contractual provisions. Such parties attend to negotiation without a target of arriving resolution. This was further confirmed by the unsatisfactory percentage resolution experiences in negotiations after DAB or adjudication of this study (refer table 4.4). The higher

weighted mean score value of 0.64 obtained by the outcome factor ‘the negotiators tried to postpone the issue until a better time’ also confirms it (refer table 4.5). Discussions with participants confirmed it is a frequent tactic used by government organizations to avoid from decision making responsibilities. Some parties have used negotiation as a time taking mechanism with the hidden intention to delay the payments.

Seven participants have specified that professional discrimination as a barrier to obtain effective outcome from the negotiations. Thus the results show that there is significant level of professional discrimination. As confirmed via discussions this has a relationship with the lack of participation of competent professionals in the subject area for negotiations because participants that lack in competency might discriminate competent professionals. However discussions with participants revealed that this issue has a relationship with ego problems of participants because most participants in higher positions do not like to acknowledge their lack of competencies.

In a construction project in addition to the contractual parties there are several stakeholders such as funding agencies and government. The responses revealed the experiences of negotiators on the unnecessary influences of such stakeholders that prevent the negotiators from a genuine settlement. However such behaviour of stakeholders is unethical. The reputation of the Sri Lankan construction industry is affected when the foreign contractors and professionals experience such influences. Further some participants have experienced the influence of in-house top management even the authority of decision making is legitimately granted to participants of the negotiation. Discussions revealed this as a common issue in consultancy organizations if the dispute occurs due to default of the consultant.

Four participants specified that management structure and regulations of the government as a barrier. It was found via discussions that in government projects most of the officers of top management participate for negotiations without competency in disputed areas. They tend to use negotiation as a time passing mechanism and are reluctant to arrive at a settlement because their main aim is to

avoid audit queries. Furthermore the importance of barrier was confirmed by some of the participants of the government sector because they have highlighted the importance of avoiding audit queries rather than resolution of the dispute. The bureaucratic management system has prevented the participation of relevant competent professional and the decision making process regarding the construction disputes. Therefore it is of vital importance to amend the existing management structures of the government to avoid such issues.

Three participants have specified age discrimination as a barrier to obtain effective negotiation outcome. Such practice would be related to traditional thinking pattern and culture of Sri Lankan society. Even though not a significant barrier it also has effect on the negotiation outcome.

4.6 Discussion

As described above there are several barriers that prevent achieving an effective negotiation outcome. If the effect of such barriers were minimized the contractual parties will be able to obtain more effective outcomes. Furthermore, the parties would be more benefited from the advantageous features of negotiation.

Attitudes of parties prevent achieving an effective negotiation outcome. Even though the dual role of Engineer has identified as a challenge in construction dispute negotiations the Engineer to the contract shall act in professional and ethical manner. It is unethical to misrepresent during negotiations and use time passing tactics to discourage negotiation efforts. In client and contractor organizations parties shall consider about the future business relationships and try to resolve problem using negotiation.

‘Cultural differences among professionals due to differences in professional background and nationalities’ was identified as other major barrier. The negotiators that participate for negotiations with other nationalities shall act their best to respect and understand other party. It would be important to focus attention to techniques in principled negotiation identified by Fisher et al. (1991) such as separate people from

the problem. As experienced professionals it is important to understand background of other professions and appreciate other professions. The results of the study further denote that there is professional discrimination and age discrimination in the industry that works as barrier to achieving effective negotiation outcome. Such issues are related to the cultural aspects of the Sri Lankan society but cannot be accepted from competent professionals. Hence the findings express the weaknesses of attitudes and behaviour of the practitioners and highlight the vital importance of implementing proper ethics and correct attitudes among professionals.

Lack of negotiation skills among industry professionals is other critical issue that needs attention. Every professional involved in construction disputes shall understand the importance of negotiation skills and shall focus attention to improve own negotiation skills. Gaining theoretical knowledge on negotiation tactics and preplanning and monitoring of negotiation process would be effective measures. Organization perspective and institutional perspective actions shall be taken to improve the negotiation skills among professionals involved with dispute negotiations.

Lack of awareness of the cost effect and consequences of other ADR methods is also a barrier that prevents achieving an effective negotiation outcome. Hence the study results denote the need of making the industry practitioners more aware of the ADR methods available to resolve construction disputes.

An important finding of the study was that most of the negotiations were carried out with lack of participation of competent professionals for negotiations to represent client, contractor and consultant. If the participants of the negotiation do not have thorough understanding of the disputed issues their ability to adjust their interests and positions is limited and it will highly impact on the outcome of negotiation. This circumstance again shows the need of organization perspective measures to make arrangements to participate relevant competent professionals for negotiations. The best solution to the above barrier would be recruiting competent professionals. If in-house competent professionals are unavailable the best solution would be to obtain service of external consultants competent in relevant area. If the matter contains

complex contractual and technical issues the parties could use two participants that have expertise in different areas. Even the top management needs to participate for negotiation due to authority issues it would be better to obtain the involvement of the relevant professionals. In the long run it is beneficial adopt necessary measures to improve the competencies of in-house professionals.

The results also show that within some organizations there are problems in delegating decision making powers that prevent achieving effective negotiation outcome. It is very important to delegate sufficient decision making powers to negotiators to enable them to arrive at agreement with the other party. If not the negotiation attempts would be wastage of time and money. If the powers cannot be delegated the top management could participate for negotiation with the relevant professional.

Use of negotiation as a time passing tactic was found as another critical barrier. Such kind of practice is wastage of resources. In organization perspective it is of important to have proper plan for dispute resolution and necessary measures to plan and monitor the work program to achieve resolution on disputed issues. If the ineffectiveness of negotiation was identified during the monitoring necessary decisions shall be taken to change the situation or to refer the dispute to other ADR method.

The unnecessary influence of other stakeholders and top management upon negotiated issues was also found as a barrier. It is of vital importance to understand own role of the particular project by the each stakeholder entity and act within the own scope. The top management shall consider not only about the short term benefits but also about the long term relationships and reputation before influencing negotiators.

Some barriers inherent to the government entities were identified during the study. The government management structures prevent participation of competent professional for negotiations with sufficient decision making powers. In addition need of maintaining accountability for auditing purposes prevents the government

officers from arriving settlements during negotiation. However if the disputes of government projects could be resolved via negotiation it will result to savings of public money incurred for other costly ADR methods. Hence the government shall focus attention to take necessary measures to reduce barriers to achieve effective negotiation outcomes. Change in government regulations and management structure is necessary to achieve firm decisions during negotiations while maintaining accountability.

4.7 Chapter Summary

The dispute negotiation practices in Sri Lankan construction industry found out during the questionnaire survey are described in this chapter. Based on the results of the study, the nature of negotiation outcomes and the various barriers that prevent achieving effective negotiation outcome are explained. A discussion is provided on the important issues related to findings and suggestions to overcome the barriers found out.

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter mainly provides conclusions and recommendations based on the findings discussed in previous chapter. Recommendations have been given as practical measures to overcome the barriers towards effective negotiation outcomes in the Sri Lankan construction industry. In addition, the limitations of the research and the further research directions are discussed within this chapter.

5.2 Conclusion

The aim of this study was to determine the effectiveness of negotiation as an ADR method in the Sri Lankan construction industry. Having focused on such aim, three objectives were formulated. The first objective was successfully achieved through literature review. The second objective was achieved by analysing the data obtained via the questionnaire survey. Not only the results obtained by analysing the data obtained in questionnaire survey but also the discussions with some of the participants of the survey, review of literature and experience of the researcher in the Sri Lankan construction industry were useful to achieve the third objective.

During the literature review seven taxonomies of negotiation outcomes were identified. Problem solving, relationship maintained and conflict reduction were found as three effective outcome taxonomies. On contrary inaction, conflict escalation, relationship deterioration and further disagreement were found as four ineffective negotiation outcome taxonomies. Using the identified negotiation taxonomies a framework was developed to determine the effectiveness of negotiation.

A questionnaire survey was conducted to collect the views of professionals who had direct exposure to disputes. The analysis was carried out using responses obtained from thirty three professionals.

As per the findings negotiation is widely used in Sri Lanka as initial ADR method before going for initial ADR method specified in the conditions of contract. Hence the result confirms the previous studies. Negotiation is also used as second ADR method after adjudication, DAB or dispute board but before going for arbitration as specified in conditions. Further, negotiations are carried out as amicable settlement attempts promoted during arbitration and also even after the arbitration award when one party challenges the award. The result indicates that negotiation is widely used at various stages of the dispute resolution process irrespective of the contractual provisions. There is possibility of achieving resolution via negotiation at any stage. However the possibility of resolution of dispute is higher when it is used as the initial method than using after failure to resolve via other ADR methods. Accordingly negotiation can be recommended as the most suitable ADR method for initial attempt of dispute resolution.

All the seven negotiation taxonomies found out in literature review, were identified as possible outcomes in construction dispute negotiations in Sri Lanka. However relationship maintained, conflict reduction and inaction were identified as common outcome taxonomies. Relationship deterioration, conflict escalation, problem solving and further disagreement were identified as less possible negotiation outcome taxonomies.

Effective outcomes such as relationship maintained and conflict reduction could be identified as most common outcomes. Hence negotiation could be identified as an ADR method suitable when the preservation of relationship is important. Further, even the dispute is of very complex nature at least some of the issues could be solved via the negotiation. It will ultimately lead to savings of cost and time that may have to incur if the dispute was directly referred to other ADR method. Accordingly, even for the disputes of complex nature negotiation can be recommended as the most suitable method.

Inaction is a common ineffective outcome in construction dispute negotiations in Sri Lanka. The postponing of the disputed issue was identified as a common factor. Among the barriers to effective dispute negotiation outcome, use of negotiation as a

time passing tactic was found as common practice in the industry. Although Ren et al.,(2003) identified adopting a time consuming strategy as common in construction dispute negotiations, the practice in Sri Lankan construction industry is severe. Such practice would prevent both parties from time savings expected by using ADR methods.

Other ineffective outcome taxonomies such as relationship deterioration, conflict escalation, and further disagreement were found to be less common outcomes. This result shows effect of cultural values of the country upon construction dispute negotiations. Further it highlights the importance of studying the construction dispute negotiation practices of individual countries which may vary according to cultural and other aspects.

As per the overall results, total weighted mean score of effective outcome taxonomies is higher than the ineffective outcome taxonomies. Hence based on the developed framework, negotiation could be identified as an effective ADR method in the Sri Lankan construction industry.

The total weighted mean score of effective outcome taxonomies is higher due to the higher weighted mean score values obtained by relationship maintained and conflict reduction. However above outcomes could be considered only as additional benefits from dispute resolution and the most desired outcome from an ADR method is problem solving. The possibility of achieving problem solving outcome in Sri Lankan construction industry is not satisfactory. Hence it is of vital importance to focus attention to the reasons that prevent achieving problem solving outcome.

Several barriers that prevent achieving an effective negotiation outcome were identified via the study. Lack of negotiation skills among industry professionals and cultural differences among parties due to differences in professional background & nationalities were found to be the major barriers for achieving effective negotiation outcome at international context. The above are significant barriers prevailing in the Sri Lankan construction industry. In addition several other barriers that prevent effective negotiation outcome were found through the study. The 'attitudes of

consultants, clients and contractors is the major barrier in Sri Lankan construction industry. Further, lack of participation of competent professionals for negotiations, use of negotiation as a time passing tactic, professional discrimination and lack of awareness of the cost effect and consequences of other costly ADR methods were identified as the influential barriers that prevent effective negotiation outcome. Not limited to above influence of stakeholders and top management, government regulations and management structure and age discrimination were found to be less dominant barriers.

Identified barriers highlight the urgent need of attitudinal changes, competency development and improvement of negotiation skills among construction professionals. In addition the importance of amendment of regulations to encourage using negotiation as initial ADR method and proper delegation of responsibilities could be identified.

5.3 Recommendations

Based on the results of the study the followings can be suggested as necessary actions to overcome the barriers to achieve effective negotiation outcome.

The universities that conduct undergraduate and post graduate courses related to construction industry could take very important steps to avoid the barriers described above. The recommended actions are as follows.

- The courses shall comprise the education regarding the ADR methods and education to improve competencies on dispute related areas.
- Implementing proper ethics and correct attitudes among students.

Failure of negotiations due to prevailing barriers is an immense loss in organization perspective. Therefore organizations shall attempt to overcome such barriers through following means.

- Recruit competent professionals required for dispute negotiations.

- If in-house competent professionals are unavailable obtain the service of competent external consultants
- Facilitate further studies or training programmes for in-house professionals to improve competency areas required for negotiations.
- Short term workshops to improve negotiation skills among professionals in the organization.
- Use paper based game of simulation contract negotiation developed by Dudziak & Hendrickson, (1988) and virtual construction negotiation game developed by Yoyuenyong et al., (2005) to refine negotiating skills among professionals.
- Awareness programs on ADR methods to make the professionals aware of the consequences of ADR methods.

The role of government in overcoming the barriers to effective negotiation outcome is very high. The followings can be recommended as necessary measures to be adopted by the government.

- The sub clause 5.4.14 of the NPA (National Procurement Authority) procurement guidelines encourages using arbitration when a dispute arises. It shall be amended in such a way to encourage using negotiation as initial ADR method and to go for arbitration only if negotiation fails. In addition a time limit shall be defined for the negotiation attempts to be carried out.
- The Clause 50 of the Construction Industry Development Act of 2014 encourages mediation and conciliation as ADR methods for settlement of construction disputes. The Clause 51 of the same encourages adjudication. The part – ix (settlement of disputes) of the Act shall be amended to incorporate negotiation as recommended initial ADR method.
- The sub clause 19.2 of the ICTAD (2007) standard bidding document recommends using adjudication as the initial ADR method to resolve construction disputes. The Construction Industry Development Authority could adopt necessary measures amend the dispute resolution clauses in ICTAD (2007) standard bidding document in such way to incorporate

negotiation as the initial ADR method and adjudication as subsequent ADR method.

- Government client organizations related to construction could develop checklist for construction dispute negotiations that enables proper monitoring of the negotiation process. Such checklist would be useful to prevent use of negotiation as time passing method and to maintain accountability and transparency of decisions taken.
- The proper delegation of responsibilities to relevant competent professional within the government organization.

It was found out that some parties apply court to set aside the arbitration award intentionally to delay the settlement of dispute. Government organizations shall set up provisions to obtain advice and recommendation from relevant competent professional (ex; legal officer) within the organization before referring to court for setting aside such award.

The professional bodies could adopt following measures to overcome barriers to effective negotiation outcome.

- Necessary measures to improve and maintain professional ethics.
- Continuous professional development events or short term workshops could be arranged to improve competencies required for negotiation, to improve negotiation skills of the professionals and to improve the knowledge on ADR methods.

5.4 Limitations of the Research

As discussed in chapter 1 this study was limited to the disputes between the contractor and client in a separated contract to avoid complexity. Also, this research study is limited only to the negotiations after arise of dispute and the negotiation attempts carried out prior to arise of dispute is not considered. In addition the results are based on the views obtained via the questionnaire survey and further discussions with the participants. However, in this study the parameter used to determine the

effectiveness is outcome of negotiation. However other parameters such as time and cost are also related to effectiveness.

5.5 Further Research Directions

Followings could be given as suggestions for further research on dispute negotiations in Sri Lankan construction industry, which emerged out of the study carried out.

➤ **A study on how barriers affecting effective negotiation outcome**

Several barriers affecting effective negotiation outcome were found out during the study. Hence a study on how barriers affecting negotiation outcome would be important. In addition studies on above area could be conducted about private sector projects and public sector projects separately.

➤ **A study on competency areas of negotiators required for effective negotiation outcome**

The lack of participation of competent professionals was found to be a major barrier to achieve effective outcome. Hence it is important to carry out a study to identify the competency areas required for negotiators to achieve effective negotiation outcome.

➤ **A study on time effect of construction dispute negotiations**

During the study it was found out about use of negotiation as a time passing mechanism. Hence it is important to study the time effect of construction dispute negotiations.

References

- Abeynayake, M. and Wedikkara, C. (2012). Special features and experiences of the full term dispute adjudication board as an alternative dispute resolution method in the construction industry of Sri Lanka. Retrieved from: www.buildresilience.org/2013/proceedings/files/papers/375.pdf
- Anthopoulos, L.G. , & Xristianopoulou , A. (2012). *Negotiation models for managing projects*. (Master of Project Management thesis). Technological Education Institute of Larissa. Greece. Retrieved from : [http:// Anthopoulos Christian opoulou _NegotiationModels PM.pdf](http://Anthopoulos Christian opoulou _NegotiationModels PM.pdf)
- Arbitration Act No 11 Of 1995. Sri Lanka legislative enactments, Ministry of Justice of Sri Lanka.
- Ashworth, A., & Hogg, E. (2002). *Willis's practice and procedure for the quantity surveyor*. (11th ed.). London: Blackwell Science.
- Baron, M.A. (2008). Guidelines for writing research proposals and dissertations. Division of Educational Administration. University of South Dakota. Retrieved from: www.regent.edu/acad/schedu/pdfs/residency/.../dissertation_guidelines.pdf.
- Boon, J.H.N., & Boon D.A. (2012). Analysing likert data. *Journal of Extension*, 50(2) , 12-14.
- Chan, E.H.W., & Suen, H.C.H. (2005). Dispute resolution management for international construction projects in China. *Management Decision*, 43 (4), 589 – 602. Retrieved from: <http://dx.doi.org/10.1108/00251740510593576>
- Cheung, S.O. (1999). Critical factors affecting the use of alternative dispute resolution process in construction. *International Journal of Project Management*, 17, 189-194.
- Cheung, S.O., Yiu, T.W., Yeung S.F. (2006). A study of styles and outcomes in construction dispute negotiation. *Journal of Construction Engineering and Management*, 132(8).805-814.

- Cheung, S.O., Chow, P.T., and Yiu, T.W. (2009). Contingent use of negotiator tactics in construction dispute negotiation. *Journal of Construction Engineering and Management*, 135(6).466-476.
- Cheung, S. O., Chow, P.T. (2011). Withdrawal in construction project dispute negotiation. *Journal of Construction Engineering and Management*, 137, 1071–1079.
- Cheung, S. O., Chow, P.T., Yiu, T.W. (2012). A cusp catastrophe model of withdrawal in construction project dispute negotiation. *Automation in Construction*, 22, 597–604.
- Chong, H. Y., & Zin, R.M. (2012). Selection of dispute resolution methods: factor analysis approach. *Engineering, Construction and Architectural Management*, 19 (4), 428 – 443.
- De Zylva , E. (2006). Alternative dispute resolution systems for construction contracts. In Kanag-Isvaran , K., & Wijeratne, S. S. (Eds), *Arbitration Law in Sri Lanka.*(3rded.). (pp. 117-138). Sri Lanka : Deepanee printers and publishers.
- Dudziak, W., & Hendrickson, C. (1988). Simulation game for contract negotiations. *Journal of Management in Engineering*, 4(2), 113-121. Retrieved from:<http://gdi.ce.cmu.edu/docs/simulation-game.pdf>
- Dunning, W.E. (1992). *Negotiating Engineering and construction contracts*. [Master of Engineering Thesis]. University of Florida.
- EC Harris- Built Asset Consultancy. (2013). *Global construction disputes report*. (Report No. 3). Retrieved from: http://www.Echarris.com/reference/news/construction_disputes_report.aspx
- Ezulike, E.I., & Hoare, D. j. (1998). The need for education in alternative dispute resolution in the construction industry. *Engineering, construction and Architectural management*, 5 (2), 144-149.

- Fells, R. (2013). *Effective negotiation; from research to results*. Cambridge University Press. Retrieved from: <http://www.cambridge.org>.
- Fellows. R., & Liu. A. (2003). *Research methods for construction*. (2nd ed.).USA. Blackwell science LTD.
- FIDIC. (1999). *Conditions of contract for Construction for building and engineering works designed by the Employer*. (1st ed.). Switzerland: International Federation of Consulting Engineers.
- FIDIC. (2010). *Conditions of contract for Construction for building and engineering works designed by the Employer*. (MDB Harmonized ed.).Switzerland: International Federation of Consulting Engineers.
- Fischler, A.S. (2015). *Writing chapter 3*. Retrieved from: www.fischlerschool.nova.edu/v/.writing_chpt3_quantitative_research_m..
- Fisher, R., Ury, W., & Patton, B. (1991). *Getting to yes- negotiating agreement without giving in*. New York: Houghton Mifflin Company.
- Garson, D. (2007). Data level and measurement. Retrieved from: <http://www2.chass.ncsu.edu/garson/pa765/datalevl.html>.
- Gunasena, K.B.D. (2010, February). Performance of critical attributes in alternative dispute resolution; A study in Sri Lankan construction industry. *SLQS Journal*. (42- 48).
- Gunawansa, A. (2013). *Introduction to alternative dispute resolution*. [Lecture notes] . University of Moratuwa, Department of Building Economics, Moratuwa, Sri Lanka.
- Halligan, D.W. , Zack, J.G. , Bult, A.K., Pray, J. (2013) . *Disputes avoidance, resolution and alternative dispute resolution*. Retrieved from: www.bhfs.com/.../Chapter%2011%20-%20Dispute%20Avoidance,%20R

- Hill, R. (1998). What sample size is enough in internet survey research? *interpersonal Computing and Technology: An Electronic Journal for the 21st Century*, 6(4), 1-10.
- ICTAD. (2007). *Standard Bidding Document- Procurement of works Major Contracts.* (2nd ed.). Sri Lanka: Institute for Construction Training and Development.
- Israel, G.D. (2013). *Determining sample size.* (PEOD6.) UF/IFAS Extension. Gainesville: Department of Agricultural Education and Communication. University of Florida. Retrieved from: <https://edis.ifas.ufl.edu/pdffiles/PD/PD00600.pdf>
- Janes, J., (2001). Survey research design, *Library Hi Tech*, 19 (4), 419 – 421.
- Jayalath, C. (2012). *Contractual dimensions in construction.* (p. 147). USA: iUniverse.
- Jayasena, H. S., and Kavinda, Y.H. (2012). Most appropriate dispute resolution strategy for Sri Lankan construction industry. *World Construction Conference 2012 – Global challenges in construction industry.* (pp. 180 – 187). Retrieved from: http://www.academia.edu/1772691/Most_Appropriate_Dispute_Resolution_Strategy_for_Sri_Lankan_Construction_Industry
- Kanag-Isvaran , K. (2011). A comment on the operation of the Arbitration Act- Has it worked? In Kanag-Isvaran , K., & Wijeratne, S. S. (Eds.), *Arbitration Law in Sri Lanka* (3rd ed.). (pp 169-178). Sri Lanka : Deepanee printers and publishers.
- Klein, H. (2006). *Alternative dispute resolution procedures used to resolve construction disputes in the UK .FIG Congress 2006- Shaping the Change,* (pp. 8-13). Retrieved from: https://www.fig.net/pub/fig2006/papers/ts08/ts08_04_klein_0862.pdf
- Kolmakova, M. (2011). *Strategies and tactics of effective business negotiation.* [Bachelor thesis]. Tomas Bata University, Zlin. Retrieved from: https://dspace.k.utb.c2/bitstream/handle/kolmacova_2011_bp_pdf

- Levin, P. (1998). *Construction contract claims, changes & dispute resolution*. (2nd ed.). Reston: ASCE Press.
- Lewicki, R.J., Saunders, D.M., & Minton, J.W. (1999). *Negotiation*. (3rd ed.). United States of America: McGraw Hill Companies.
- Love, P., Davis, P., Jefferies, M., Ward, P., & Chesworth, B. (2007). McGeorge, D. (Eds.), *Dispute avoidance and resolution- a literature review* (Report No. 1). Australia: Cooperative Research Centre for Construction Innovation. Retrieved from: http://www.construction-innovation.info/images/pdfs/Literature_Review.Pdf
- Lu, W., Zhang, L., & Li, Z. (2015). Influence of negotiation risk attitude and powers on behaviours and outcomes when negotiating construction claims. *Journal of construction engineering and Management*, 141 (2), 1 – 11. Retrieved from: [http://dx.doi.org/10.1061/\(ASCE\)CO.1943-7862.0000927](http://dx.doi.org/10.1061/(ASCE)CO.1943-7862.0000927)
- Marsouk, M., & Moamen, M. (2007). A framework for estimating negotiation amounts in construction Projects. *Construction Innovation*, 9 (2), 133 – 148. Retrieved from: <http://www.emeraldinsight.com/doi/pdfplus/10.1108/1471417091090795>
- Mitkus, S., & Mitkus, T. (2013). Causes of conflicts in a construction industry: A communicational approach. *Procedia - Social and Behavioral Sciences*, 110, 777 – 786. Retrieved from: www.sciencedirect.com
- Murtoaro, J., & Kujala, J. (2007). Project negotiation analysis. *International Journal of Project Management*, 25, 722–733. Retrieved from: <http://ac.els-cdn.com/S026378>
- Naoum, S.G. (1998). *Dissertation research and writing for construction students*. Great Britain: Genesis Typesetting.
- Neville, C. (2007). *Introduction to research and research methods*. University of Bradford School of Management.

- Orlando, A. (2015). *Advantages and disadvantages of dispute resolution processes*. Retrieved from: <http://www.blaney.com/sites/default/files/other/advantages.Pdf>
- Oxford dictionary (7thed)*. (2000). retrieved from: www.oxforddictionaries.com/definition/english/effectiveness
- Pickavance, K. (Ed.) (2007). *Construction law and management*. Great Britain: Interactive Sciences Ltd.
- Ren, Z., Shen, G.Q., Xue, X.L., Hu, W.F. (2011). Lessons Learned from principled negotiation in international construction projects. *Journal of legal affairs and dispute resolution in Engineering and construction*,3,123-132.
- Ren, Z., Anumba, C.J., & Ugwu, O.O. (2003). The development of a multi-agent system for construction claims negotiation. *Advances in Engineering Software*, 34, 683–696.
- Scott, B., Billing, B. (1990). *Negotiating skills in engineering and construction*. Great Britain: Redwood Burn Ltd.
- Shapiro, B. (2005). Inherent conflicts in the construction industry and the structure of contracts. *Fundamentals of construction contracts understanding the issues conference*. Vancouver.
- Shapiro, B. (2013). *Dispute resolution/prevention negotiation techniques*. Retrieved from: <http://www.shk-dispute-prevention-negotiation-techniques.pdf>
- Simon, M.K., & Goes, j. (2013). *Dissertation and scholarly research; Recipes for success (2nded)*. United States of America.
- Svinicki. M. D. (2010). *A guidebook on conceptual frameworks for research in engineering education*. University of Texas.
- Swetnam. D., & Swetnam. R.(2000).*Writing your dissertation(3rded)*.Glasgow: Bell & Bain Ltd.

- Stokke, R.A. (2011). *An investigation of culture and creativity on negotiation*. [Master of Business research]. QBT Business School.
- Tan, W. (2002). *Practical research methods*. Singapore: Pearson Education Asia Pte Ltd.
- Yaoyuenyong, C. , Hadikusumo, B.H.W., Ogunlana, S.O., & Siengthai, S. (2005). Virtual construction negotiation game- An interactive learning tool for project management negotiation skill training. *International Journal of Business & Management Education*, 13(2), 21-36. Retrieved from: <http://professionalprojectmanagement.blogspot.com/2009/12/virtual-construction-negotiation-game.html>
- Yousefi, S., Hipel, K.W., & Hegazy, T. (2010). Attitude-based strategic negotiation for conflict management in construction projects, *Project Management Journal*, 41 (4), 99-107.

Questionnaire

Key words:

Negotiation: This is a process of working out an agreement by direct communication between two or more parties (Pickvance, 2007).

Dispute: This research study is limited only to

* The disputes between Client and Contractor.

* Negotiations after arise of dispute due to dissatisfaction with the Engineer's determination

Please indicate (x) in the relevant box

- 1) Your current organization type :

Consultant	
Contractor	
Client	
Other (Please specify)	

- 2) What position will describe you most:

Quantity Surveyor	
Engineer	
Architect	
Project Manager	
Contracts Manager	
Other (Please specify).	

- 3) Your experience in years

5-10	10-20	20-30	more than 30

- 4) As per your experiences at what stages dispute negotiations were carried out and at what stages the disputes were resolved using negotiation?

No.	Stage	Attempted to do negotiation		Resolved dispute	
		Yes	No	Yes	No
1	Before going for Adjudication or Dispute Board				
2	After Adjudication or Dispute Board but before going for Arbitration				
3	Before going for Arbitration (If no DAB appointed)				
4	Amicable Settlement promoted during Arbitration				
5	After Arbitration award (when one party attempts to set aside via court proceedings)				

- 5) For how many dispute negotiations have you involved during last five years? Please specify number if possible.

less than or equal to 5	more than 5 but less than or equal to 10	more than 10 but less than or equal to 20	more than 20 but less than or equal to 30	more than 30

- 6) Please indicate degree of agreement according to your view on following statements regarding the outcomes in your dispute negotiation experiences.

No.	Reason	1	2	3	4	5
		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	Problem solving					
1.1	The solution found satisfied the goals and needs of both parties					
1.2	Optimal and creative solution to problem was found.					
2	Relationship maintained					
2.1	Some of each party's needs were satisfied, but not all of them.					
2.2	Relationship between the negotiators was kept in consideration for future interaction.					
3	Conflict reduction					
3.1	Conflict was reduced to some extent and less future disputes were likely made.					
3.2	Conflict was reduced to some extent but it was difficult to reach an agreement .					
4	Inaction					
4.1	The negotiators lost the interest to continue and left the negotiation from a threatening situation (
4.2	The negotiators tried to postpone the issue until a better time					
5	Conflict escalation					
5.1	More task conflict was experienced.					
5.2	The dispute became difficult to resolve because conflict was escalated during negotiation process.					
6	Relationship deterioration					
6.1	Task conflict was turned into relationship conflict.					
6.2	The negotiators ignored the needs and expectations of the other.					
7	Further disagreement					
7.1	There were further disagreements or escalations in conflict.					
7.2	Both sides were talking, but were unable to make any progress toward a solution.					

7) Do you think followings as barriers to achieve effective outcomes from dispute negotiations in the Sri Lankan Construction industry?

No.	Reason	1	2	3	4
		Strongly Disagree	Disagree	Agree	Strongly Agree
1	Cultural Differences among parties due to differences in professional background and nationalities				
2	Lack of negotiation skills among industry professionals				
3	Lack of awareness of the cost effect and consequences of other dispute resolution methods such as Adjudication and Arbitration.				
4	Attitudes of Consultants, Clients and Contractor				
5	Lack of authority level in participants of negotiation				

8) In addition to the listed above, are there any other barriers ? Please describe.

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Covering Letter

Subject: Request to participate for a Survey on “**Effectiveness of negotiation as a method of alternative dispute resolution in Sri Lankan construction industry.**”

Dear Sir/ Madam,

Dissertation- M.Sc. in Construction Law and Dispute Resolution

I am a student following above course at the Department of Building Economics, University of Moratuwa. In order to fulfill a mandatory requirement of the degree course, I’m engaged in a research study under the topic “**Effectiveness of negotiation as a method of alternative dispute resolution in Sri Lankan construction industry.**”

I would be grateful if you could kindly answer to the attached questionnaire and email me at shiroma1982@yahoo.com before 31st December 2015. The questionnaire may take about 15 minutes to complete. If you have any questions or would like further information, please do not hesitate to contact me.

Any data provided will be treated as confidential and used for the purposes of this research only. The identity of respondents will not be revealed.

Thanking you.

Yours truly,

S.P.W. Amaradiwakara,
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University of Moratuwa.
Mobile: 0718302047
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Referees:

Supervisor

Dr. Gayani Karunasena
Senior Lecturer
Faculty of Architecture,
Department of Building Economics,
University of Moratuwa.
Contact No:0112650738

Summary of Responses

No.	Outcome factor	Response alternative	Number of responses
1.1	The solution found satisfied the goals and needs of both parties	Strongly Disagree	7
		Disagree	9
		Neither agree nor disagree	7
		Agree	10
		Strongly Agree	0
1.2	Optimal and creative solution to problem was found.	Strongly Disagree	7
		Disagree	7
		Neither agree nor disagree	3
		Agree	14
		Strongly Agree	2
2.1	Some of each party's needs were satisfied, but not all of them.	Strongly Disagree	0
		Disagree	0
		Neither agree nor disagree	7
		Agree	24
		Strongly Agree	2
2.2	Relationship between the negotiators was kept in consideration for future interaction.	Strongly Disagree	1
		Disagree	3
		Neither agree nor disagree	9
		Agree	17
		Strongly Agree	3
3.1	Conflict was reduced to some extent and less future disputes were likely made.	Strongly Disagree	1
		Disagree	7
		Neither agree nor disagree	8
		Agree	14
		Strongly Agree	3
3.2	Conflict was reduced to some extent but it was difficult to reach an agreement .	Strongly Disagree	0
		Disagree	5
		Neither agree nor disagree	8
		Agree	19
		Strongly Agree	1
4.1	The negotiators lost the interest to continue and left the negotiation from a threatening situation (Withdrawal).	Strongly Disagree	5
		Disagree	17
		Neither agree nor disagree	2
		Agree	8
		Strongly Agree	0

No.	Outcome factor	Response alternative	Number of responses
4.2	The negotiators tried to postpone the issue until a better time	Strongly Disagree	0
		Disagree	6
		Neither agree nor disagree	5
		Agree	17
		Strongly Agree	5
5.1	More task conflict was experienced.	Strongly Disagree	0
		Disagree	16
		Neither agree nor disagree	7
		Agree	10
		Strongly Agree	0
5.2	The dispute became difficult to resolve because conflict was escalated during negotiation process.	Strongly Disagree	2
		Disagree	14
		Neither agree nor disagree	10
		Agree	7
		Strongly Agree	0
6.1	Task conflict was turned into relationship conflict.	Strongly Disagree	1
		Disagree	15
		Neither agree nor disagree	15
		Agree	2
		Strongly Agree	0
6.2	The negotiators ignored the needs and expectations of the other.	Strongly Disagree	0
		Disagree	10
		Neither agree nor disagree	14
		Agree	9
		Strongly Agree	0
7.1	There were further disagreements or escalations in conflict.	Strongly Disagree	3
		Disagree	12
		Neither agree nor disagree	12
		Agree	6
		Strongly Agree	0
7.2	Both sides were talking, but were unable to make any progress toward a solution.	Strongly Disagree	0
		Disagree	7
		Neither agree nor disagree	10
		Agree	14
		Strongly Agree	2