

**ANALYSIS OF DISPUTES TOWARDS EFFECTIVENESS  
OF NEGOTIATION IN THE SRI LANKAN  
CONSTRUCTION INDUSTRY: CONTRACTORS'  
PERSPECTIVE**

**Kanthasamy Punitha Viththakan**

**(119328T)**



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**Degree of Master of Science in Construction Law & Dispute  
Resolution**

**Department of Building Economics**

**University of Moratuwa**

**Sri Lanka**

**May 2016**

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**Dissertation submitted in partial fulfillment of the requirements for the Degree  
of Master of Science in Construction Law & Dispute Resolution**

**Department of Building Economics**

**University of Moratuwa  
Sri Lanka**

**May 2016**

## DECLARATION

I declare that this is my own work and dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any University or Institute of higher learning and to the best of my knowledge and believe 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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The above candidate has carried out research for Master Dissertation under my supervision

Signature of the Supervisor:

Date: 11 May 2016

## ABSTRACT

Sri Lankan construction industry is one of the growing industry from the recent past upon end of the three decade civil war. Because of the multi-party involvement in the construction industry and complex in nature, parties are always prone to face numerous disputes in their journey while attempt to safeguard their respective interests. Once the disputes emerged amongst the parties, they seeks suitable ways to solve the disputes in an amicable manner to the parties however it is not always possible for them to reach such amicable solution while maintain the interest of the all parties. Compare with the other approaches available for dispute resolutions, negotiation said to be as easiest, very efficient and economical and less time consuming process. However, the negotiation in the Sri Lankan construction industry is an undesired process for the parties in disputes due to higher rate of its failures.

This research were conducted to analyses disputes towards the effectiveness of negotiation in the Sri Lankan construction industry by identifying the causes for the positive and negative outcome of the negotiations and investigating the relationship between negotiation outcomes to Project characteristics, professionals involved in negotiation, time taken for negotiation, monetary value involved, and causes of dispute etc.

Data was collected and analyzed using document analyses methodology using quantitative data analyses techniques respectively. The research concludes that unethical, unprofessional practice of the construction professionals and appointment of in-house team of client as contract administrators and aging of negotiation along with some of the project characteristics such as types of the client, procurement method etc. were major contributors possess significant relations to the negotiation outcome despite the common factors: unpreparedness, skill level of negotiator, model and tactics, cultural barrier and gender mix in the team were found in the literature review.

**Key world: construction industry, dispute, negotiation, causes of negotiation for failures and successes, Sri Lanka**

## **DEDICATION**

This research dissertation is dedicated to my beloved wife who has given her moral support, encouragement and assistance scarifying her needs and interests to fulfill this MSc program.



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## LIST OF ABBREVIATIONS

ADR	- Alternative Dispute Resolution
APD	- Additional Project Director
BATNA	- Best Alternative to Negotiation Agreement
BOQ	- Bill of Quantities
CEA	- Central Environment Authority
CIDA	- Construction Industry Development Authority
FIDIC	- Federation Internationale DesIngenieursCounseils
GSMB	- Geological Survey and Mining Bureau
ICTAD	- Institute for Construction, Training and Development
SBD/01	 University of Moratuwa, Sri Lanka. Standard Bidding Document/01 Electronic Theses & Dissertations www.lib.mrt.ac.lk
SBD/02	Standard Bidding Document/02
CB	- Central Bank of Sri Lanka
LKR	- Sri Lankan Rupees
Mn	- Million

## CHAPTER ONE: INTRODUCTION

### 1.1 Background of the Study

The construction industry is a major contributor for the economy of a country. In Sri Lanka, the construction industry contributes 8-10% to Gross Domestic Product annually and it shows an increasing trend over the past decade (CB, 2015). While construction industry is being a major contributor to the economy, it is found as a major source that creates numerous disputes among the stakeholders mainly employer, engineer and the contractors who ultimately compelled to getting remedies approach commercial high courts of the country (www.lawnet.lk). It is impliedly reveals the fact that disputes in construction industry was sometimes unable to resolve without an intervention of a neutral third party. Thus the question of the effectiveness of the negotiation arisen in the context of the Sri Lankan construction industry (Gunawansa, 2012).

In a dynamic, competitive and ambiguous business environment of the construction industry the negotiation, one of the Alternative Dispute Resolution (ADR) mechanisms, is critically important to achieve the successful completion of the contract meeting the scope, time, cost & quality and ultimately to the survival of the business entity (Brown, 2012).

Negotiation is a bargaining process between two or more parties and seeking to discover a common ground and reach an agreement to resolve disputes. It generally refers to win-win negotiation where both or all parties involved end up with equally beneficial or attractive outcome. It is a problem-solving approach where both parties perceive the process of Negotiation as a process to find a solution to a common problem (Guauri, 2003).

According to Baron (1989), it is estimated that the managers dedicate approximately 20% of their time for negotiation to resolve disputes. In another study conducted by Gulliver (1976) reveals that the estimated time spent for negotiation is 50% from the

total time of the project manager. Despite of this amount of time spent for negotiation by managers, the outcomes of negotiation are mostly not desired for parties in concern.

## **1.2 Problem Justification**

Stakeholders in the construction industry particularly contractors and employers spend their valuable time and money on litigation and arbitration or other Alternative Dispute Resolution (ADR) mechanisms where a third party involvement exists without finding solution through negotiation where resolution is speedy and inexpensive. In addition, the public fund is wasted considerably for providing infrastructure facilities for litigation (Gunawansa, 2012.)

If stakeholders are able to settle their disputes through negotiation amicably, then they can save their time, money and maintain their long lasting stakeholder relationship. Similarly, the government playing major role as employer can reduce the expenditure in the form of fee or providing infrastructure facilities for litigation or international arbitration. The budgetary deficit of the country could be minimized and the money saved through negotiation can be allocated for other essential needs in the country in the immediate future to bring the county as either “Wonder of Asia” or “Economic Hub” in the South Asian Region (Mahanamawage, 2012). This research therefore analyses the disputes which were resolved through negotiation in order to promote the effective use of negotiation in the industry.

## **1.3 Aim and Objectives of the Research**

### **1.3.1 Aim**

The main focus adapted for this research is to investigate the means of improving the effective use of negotiation in the construction industry. This focus is achieved through the analyses of disputes resolved through negotiation.

### 1.3.2 Objectives

The main objectives of this research are:

- ✓ To find out the causes for successful and unsuccessful negotiation outcome in the Sri Lankan Construction Industry.
- ✓ To investigate the relationship between project characteristics, professionals involved in negotiation, and negotiation outcome.
- ✓ To identify the means of improving effective use of negotiation in the Sri Lankan Construction industry.

### 1.4 Research Methodology

The research methodology of this study is illustrated by a form of flow chart in the Figure 1. In the initial stage, a comprehensive literature survey has been carried out to understand the subject of the research problem and to identify the process of the negotiation in the international dimensions. The aim and objectives are set based on the review of literature.

Secondly, the data collection and analysis are performed. The data is collected through document analyses. Quantitative data analyses techniques has been adopted in this research to analyse the collected data. The data collected from the document analyses is analysed quantitatively.

Lastly, conclusions and recommendations were drawn based on syntheses of the research findings.

### 1.5 Scope and Limitations

The scope of the research is limited to

- Negotiation in dispute resolution and excludes the negotiation in the context of formation of contracts

- Contractor's Perception
- Case study of thirty events that was occurred within last five (05) years
- The contractors who possess ICTAD (CIDA) Grade C1 in Civil Engineering Disciplines

## 1.6 The Structure of the Research

The structure of this research is mainly divided into five Chapters. Those are:

### 1) Chapter One: Introduction

This chapter is designed to give an outline of the Research at a glance which includes background of the problem in question, aim and objectives of the research, methodology is adopted to this research and what are the other chapters are taken part in this research.

### 2) Chapter Two: Literature Review

This chapter is designed as customary requirements in any scientific research in order to review the past literature for the area of interest in question for the researcher where published and peer reviewed books, magazines, paper articles, research papers, unpublished thesis for master and doctoral degrees and conference papers are the focus materials to abstract required data and compare and contrast the findings.

### 3) Chapter Three: Research Methodology

The purpose this chapter is to give details of the methodological approach of the research that is adopted by the researcher in his study to find the factors influencing Negotiation Outcome in the Construction Industry of Sri Lanka. The methodology of this research consist the research process, theoretical framework established through literature survey, what is the population considered, sample size determination from the population, data collection process and data analyzing techniques as a minimum.



#### **4) Chapter Four: Data Collection and Analysis**

This chapter is introduced and designated to present the data collected from the data collection process in a meaningful format and to analyze the collected data by means qualitative and or qualitative forms as stipulated in the Research Methodology and to derive results and findings.

#### **5) Chapter Five: Conclusion and Recommendation**

This chapter is designated to review the achievement of the aim and objectives the research and to derive conclusion or sets of conclusion from the research based on the results and findings from the analysis of the collected data. Further it is used to recommend suitable model for successful negotiation and also to recommend for any potential areas for future researches.



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## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

Literature review involves a comprehensive review of published and unpublished secondary sources of data in the area of specific interest of researcher. The secondary data sources to find the information on the research topic are text books, journals, newspapers, magazines, conference proceedings, master's dissertation, doctoral thesis, government publications, financial & marketing report and World Wide Web sites etc. The purpose of the literature review is to ensure that the important variables that are likely influence the problem situation are not left out from the study.

Negotiation is widely used as a preferred tool in the construction industry for the amicable settlement of various conflict, disputes and claim situations amongst the alternative dispute resolution mechanisms as it is simple, easiest, most efficient, time & cost saving approach if conducted properly (Ren et al., 2011).

This chapter presents the review of literature on definition of negotiation, the inevitability of the negotiation in the construction industry, rules and regulations in negotiation and factors that generally influence the successful negotiation.

### **2.2 Definition of Negotiation**

The word 'Negotiation' came from the Greek word 'negotia' it means in Greek 'to carry on business' (Hendson, Hendson & Herbi, 1996). An early day definition refers negotiation as "a process of combining conflicting positions into a common position, under a decision rule of unanimity" (Kissinger, 1969).

Negotiation is part of life and, in general, the first form of communication with other people to express their needs and wants in their day to day life from the inspection of the human life in the planet. It can be a verbal or non-verbal like body language or sign language etc. For an example a newly born baby crying when feels hungry and until feeding by mother (Ross, 2005).

Negotiation is not a science, not a situation in which winning is everything or not an event of continuity because the parties involved, their motive and goals are all different and are subject to change at any time during the negotiation process, but it is an art of winning what you desire by compromising with other party (Ross, 2005).

In the context of the business world, negotiation is summation of all the ways and means by which we convey information regarding what we desire, what we want or what we expect from other people.

According to Gulliver (1979), Negotiation is a problem solving process in which people attempt to reach a joint decision on matters of common concern in the situations where they are in disagreement, conflict and disputes.

### **2.3 Is Negotiation Inevitable in the Construction Contracts?**

The construction industry is not like other industries consists numerous stakeholders such as Funding Agencies, Government Authorities, Employer, Engineer, Contractor, various types of Subcontractor, Suppliers, etc. Contract agreements are formed between the parties in the construction industry in order to receive products and services or can benefit from the services by their performance towards the other party. Though contract agreements are drafted by the experts defining scope of the contract, obligations and responsibilities of the parties, the understanding and interpretation of the contents of the contract document generally differs from the viewpoint of the parties. Once the misunderstanding or deferent interpretation occurs it will affect the ultimate interest of the parties and generate claim situations contractually either for additional cost or additional time or both in order to safeguard their interest based on the facts and figures however settlement of all the claims by the other party amicably is seldom thus which creates abundant disputes where negotiation begins to seek amicable settlement before initiate any action to seek remedies through other ADR mechanisms stipulated in the contract or expensive litigation as negotiation is simple, easiest, most efficient, time & cost saving approach if conducted properly. Therefore negotiation is inevitable in the construction contracts as long as the claims and disputes exist.

## 2.4 Rules and Regulations for Negotiation

Life of the people and the rules and regulation are inseparable from each other in the modern era. When drive a car the driver should obey the speed limits traffic rules placed by relevant government authority. Similarly an employee should strictly adhere to the office rules and the employer to follow standards and regulations of the labour department in the county. Similarly when you plan to build a house, regulations of the relevant authority, for example Urban Development Authority must be followed.

However, the only thing in the universe which has no hard and fast rules or regulation is the Negotiation where lying, cheating and deception is permitted to the extent. But, it is not necessarily mean that the people can behave unethically or illegally in Negotiation (Ross, 2005).

## 2.5 Negotiation Principle and Process

The fundamental principle of any negotiation is to satisfy underling interest of the parties in negotiation and not anything else. Therefore it is not a matter of using any principles or process which should consist of following three criteria:

- It must produce or create wise agreement (it can be defined as “one which meets the legitimate interests of each side to the extent possible, resolves conflicting interests fairly, is durable, and takes community interests into account”) if the agreement is possible.
- it should be efficient in terms of time and cost incurring for negotiation than other options
- it should improve the relationship of the parties under negotiation or at least not spoil the relationship between the parties of the negotiation

The negotiation process is taken place in five stages as described below according to Pruitt (1981).

Stage 1: Prepare for negotiation by setting their goal, the resistant point and design their first offer which is generally greater that the set goal. If not, plan for negotiation

exploring underlying reasons for party's objectives and goals in terms of financial situation, legal issues, moral perspectives and psychological needs of the parties.

Stage 2: Bring the matter of interest to the negotiation table and put forward their first offers. If not, parties set aside their egocentric attitude and concentrate only on the problem and exchange information about their interest and needs in order to find out where they are in the same page and where they are in disagreement.

Stage 3: Exchange information and try to substantiate their viewpoint and interest. If not, parties conduct brainstorming session and invent numbers of alternatives that can fulfill the parties underlying interest.

Stage 4: commence bargaining to reach compromise by analysis and compromise of certain interest. If not, parties select most viable solution which satisfy mutual gains from the alternatives

Stage 5: Reach settlement agreement and walk away with dissatisfaction to one party and damaged the relationship; If not, reach settlement agreement and walk away maximizing their mutual gains while enhancing the relationship. If no wise agreement reached, the party can initiate the BITA (the best alternative to the negotiated agreement) to receive remedy.

## **2.6 Factors influencing the Negotiation Outcome**

Though negotiation is widely used in the construction Industry, it is much more complex than negotiation in any other context as the negotiation take place to solve the conflict or disputes that could not be resolved through contractual claims and face unique challenges such as difficulty in decision and reaching concession sacrificing their interest, diversity of intellectual background of the representative of the parties, bounded self-interested relations, engineer's well established position in the contract, intense involvement of the client (Ren et al, 2012).

The success of a negotiation depends on many factors according to the previous studies. In general, any negotiation fails because of the inability to deal with the

emotions and tactics of the participants which caused mainly by lack of information or lack of commitment to exercise their vested power and authority (Jayalath, 2012).

There are studies conducted during the past about impact on the outcome of the negotiation by the negotiation theories and practice, negotiation preparation, negotiation process, negotiation defence, negotiation skills and tactics which has been reviewed below.

### **2.6.1 Substance of the negotiation**

Most of the negotiations are failed not because of the substance. Fisher and Ury (1991) emphasized that credibility or legitimacy of the substance under negotiation is the key factor to derive successful negotiation outcomes. If any party to the negotiation, make false allegations, manipulating the facts in their favour and put forward their demands to other party, then it will be hard to find a compromise point between the parties resultantly it will lead to win-lose (or loose-win) situation.

### **2.6.2 Preparedness for negotiation**

According to the study conducted by Donaldson (1996), it is emphasize that Preparation for negotiation is one of the key to success in negotiation. It is generally stated that completeness of preparation is victory of the half of the battle. Therefore the party who prepared well for negotiation is more advantage and high probability of winning the negotiation in his favour than the party with lesser preparation. The preparation involves many steps which includes but not limited to setting goal what negotiator want to achieve, thoroughness of the matter in negotiation, create alternative options for amicable solutions by compromise or corporative, any solutions that you should avoid, compilation of documentary evidence for substantiation of your side, forecast the expectation and arguments that will be bring forward by the other side and ready with counter arguments for it in your hand etc.

The detailed preparation is generally give a successful outcome in any negotiation (Dolan, 2010).

### 2.6.3 Skills and intelligence of negotiator

The skills of the negotiator were emphasized as a vital factor in many studies conducted previously for the success of a negotiation. As negotiation is a complex social process which takes place in a particular context, the required skills of a negotiator in a specific negotiation situation are determined by the context itself, degree of formalities required, the characteristic of the other party in negotiation (Woo & Prud' home, 1992). Exceptionally the utmost important skill of a negotiator for any kind of negotiation is communication skill.

In a study conducted by Robins (2005), individual spent their 70% of the working hours to communicate with others in the form of dialogue, writing, reading, listening and observing the body language. Therefore ineffective communication inhibits the success outcome of any negotiation process amongst the parties. It is stated in a study "Poor communication kills the deal (Salacuse, 1991). Clear communication is the first foundation for successful negotiation (Forsyth, 2009).

Communication can be through verbal and non-verbal forms or in written form. "Gestures and body language communicate just as effectively as communication by words" (Axtell, 1991). Thomson (2001) identified nonverbal communications in his study as that eye contact, tone & pitch of the voice, how close seated with the other party, facial expression, body movement and gesture, how the strong the grip in shake hands etc. which convey a series of clues about the true feelings of the other party. Therefore any negotiator must be able to understand the body language also to obtain a successful outcome.

In the context of negotiation, the communication skill possess multi dimension such as skill of expressing their side or the intended message clearly and precisely to understand by the other side, ability to maintain the dialog alive by answering the questions of the other side and raise questions to understand the other side, the skill of using and detecting non-verbal language, the ability persuade the other party of the ideas and listening proactively (Hammond, 1979).

Fisher and Davis (1987) stated that “a successful negotiator needs to know how to express themselves clearly, to capture the other party’s attention and must know how to question and listen effectively the other side”

Establishment of trust, confidence, and relationship between the parties could be done through Communication that is why Lewicki, Minton & Saunders (2000a) identified as “communication is the heart of the negotiating process”. If the heard is weak then the outcome will be an ill-fated one.

Cognitive Intelligence is another requirement to a negotiator to bring successful outcome in any negotiation as the negotiator is to comprehend the complex ideas, make rational decisions and plan course of actions based on the facts and figures, make judgment, manage vast amount of information, create multiple proposals, take trade of decision and contingent agreement etc. (Gardner, 1983).

In the studies were conducted to analyze the effect in the outcome by emotion of the negotiator found that negotiator who balanced his emotion achieved desired outcome than the negotiator who influenced by emotion (Beneliel, 2009). Managing emotions of their own and emotions of the other is known as emotional intelligent and it consist the characteristic of self-awareness, empathy, self-motivation, patience and self-regulation. Therefore the negotiator must possess above characteristics for the ability to bring successful outcome (Daniel, 2005).



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Social intelligence is the ability to understand the other people and their motivations, and how to work cooperatively with them. Socially intelligent negotiators are good in finding various solutions in an acceptable manner to the problems, active listener, entertain interactions and excel in group organization, lead them and coordination of activities of the group (Gardner, 1983).

#### **2.6.4 Selection of model of the negotiation**

According to the literatures reviewed, it is found there are two general models used in negotiations. Based on the theoretical framework of the Negotiation, it is named as **Adversarial Model** and **Problem Solving Model**. However, it is very seldom to find



the version of single Model in a particular negotiation as negotiators used the both Models as and when necessary during the negotiation process to counter other side. (Meado, 1984)

The negotiation process described in the existing academic literature has discussed about many models in negotiation. Those are:

- ✓ Competitive Model: negotiate with the intension of wining by manipulations
- ✓ Zero Sum Model: negotiate with the aim of giving other party nothing
- ✓ Individualistic Model: negotiate with ego
- ✓ Distributive Bargaining Model: negotiate to share the fixed pie
- ✓ Cooperative Model: negotiate the true intention to solve the problem.
- ✓ Collaborative Model: negotiate exchanging information freely.
- ✓ Integrative Bargaining Model: negotiate find mutually beneficial solution.
- ✓ Principled Negotiation Model: negotiates giving importance to the merit of the problem.

However some of the varieties of negotiation models, Zero Sum Model, Individualistic Model and Distributive Bargaining Model are showing similar characteristics such as

- a) Facts and law rationales are manipulated to advance and defend position
- b) Most commonly used one
- c) Emphasizes the maximizing of the parties gains
- d) Based on the cost benefit analysis
- e) Constitutes a zero sum game

And other set of models namely Cooperative Model, Collaborative Model, Integrative Bargaining Model and Principled Negotiation Model show some other characteristics/ similarities such as

- a) Due diligence given to merit of the problem, not for ego of the individuals
- b) Both parties genuinely attempt for mutually beneficial solutions
- c) Both part's needs or interests are identified and focused
- d) Information is freely exchanged

However, these models can be categorized based on the characteristic identity into two distinct models of negotiation. One is adversarial model and other one is problem solving model.

1) Adversarial Model

It is most commonly used in the legal negotiation where it is focused on winning in the sense of maximizing the likelihoods the client prevails. Further, it is engage in largely manipulative and competitive process in which a series of concession is made from initial position to arrive at a compromise point.

Competitive Model, Zero Sum Model, Individualistic Model and Distributive Bargaining Model are called as Adversarial Model.

The advantage of this model are mainly effective when only mater obtainable is a single objective, negotiation process is less complex & time consume and works well when the parties dislike each other. In contrast to cooperative solution. (Fisher & Ury, 1981)



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2) The Problem Solving Model.

The problem solving model focuses to identify the parties underlying interest or needs to create a broader range of potential solutions going out of the box.

The advantages of the problem solving model are usually result in greater satisfaction to both parties, negotiations are experienced less intense and irritability, both parties true needs or interests are often fulfilled and maintains interpersonal relationship and future business relationship between the parties (Fisher & Ury, 1981).

Despite the above models are in practice, the communication skills of negotiator is also play vital role in achieving a successful outcome through Negotiation. According to previous research a successful negotiator must be able to

- express themselves in a clear and precise manner;

- encourage dialog, by asking question and giving answers;
- use and detect non-verbal language
- listen, preferably in a pro-active manner, clarifying and rephrasing in their own words the content of the message; and
- persuade the other party of their ideas, arguments and viewpoints

The appropriateness of the models for an event of successful negotiation is depends on many factors. There is a very famous statement that was made by a revolutionist and a freedom fighter “our enemy determines the weapons we should take”. It is very relevant for our context too that is selection of the negotiation model for a party is determined by the model adopted by their counterpart. Apart and according to Kitzner (1991), the nature of the dispute where remedy is only money, differences of bargaining leverage where nonexistence of interdependency, the nature of the relationship such as short term or long term and the time pressure to reach an agreement are also decide the selection of the particular model.

However, there is a multi-billion rupees worth question that is, it to possible to switch from adversarial model to problems solving model or wise versa in a particular negotiation process by the parties? Because when the moment party has used the adversarial model, they are influenced by the egoism which will not allow them to step down from their previous position (Kitzner, 1991).

### **2.6.5 Strategies and tactics in negotiation**

Fisher & Urey (1991) described in his well-known publication in conflict resolution titled “Getting to Yes” that there are Four (04) major strategies identified in the Negotiation:

- 1) Competitive bargaining
- 2) Corporative bargaining
- 3) Mixed bargaining (Competitive & Corporative)
- 4) Principled bargaining synchronizing the people, Interest, Options and Criteria where:

People: Separate the people from the Problems

Interest: Focus on interest based approach than not focus in the positional bargaining

Option: Discover alternative solution for mutual benefit

Criteria: Insist of the usage of objective criteria that is based on the merit of the problem in negotiation

According to Karrass (1974), in intimidation different forms is used as one of tactics in negotiation put the other party into defence side to win the negotiation. The intimidation forms are threat of law suit, use of expert in the subject matter, create tension raising stake or using threat, uncomfortable seating arrangement, embarrassing etc.

The other tactics stated by Ross (2005) that first attend unimportant one to reach final outcome, aggressively pursues set terms to get the reaction from other side either agree or to walk away, bad guy/good guy play that is the good guy blame the bad guy who act with anger face with raised voice and show fairness and reasonability. The other one is requesting last minute concession by acting to resolve instantly.

#### 2.6.6 Cultural carriers of the negotiators



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Culture reflects the values and thinking patterns, feelings, emotions, and behavior of identifiable groups.

Culture is a complex in which there are knowledge, belief, art, moral norms, customs, and skills that are required from the human in the society concerned (Johnson, 1962). Values and norms which are part in culture, can affect the negotiation either stronger or weaker (Christopher et al., 2005).

The cross cultural barriers are another aspect influencing the negotiation outcome. Salacuse (1993) evidenced that the culture of the party in negotiation has significant impact on the negotiated outcome. In the above study there are ten traits were considered to find out the cultural impact on negotiation outcome amongst twelve nationalities India, Japan, China, Germany, Brazil, Britain, America, Israel, Spain, Nigeria, Argentina and Mexico.

The first trait is negotiating goal in terms of contract or relationship. One from particular culture in a negotiation may interest to form Contract whereas one from other culture will give utmost important to establish relationship for long term businesses. Pye (1982) found in his study that many Asian countries including China and Japan consider forming relationship as their first goal. The study of Salacuse (1993) revealed that 74% of Spanish shown their interest to form Contract however only 33% of the Indians responded for the contract as their goal and the majority for the goal of making relationship. Therefore it is very important to understand the goal of your counterpart as it is waste of time to attempt to make a contract deal first with a person from the culture of preference to building the relationship first.

Due to the different culture and personality, the attitude of the negotiator generally belongs to two basic categories that are one party can gain and the other one is the both can gain. Therefore the second trait taken under the study was the negotiating attitude towards reaching win-win solution or win-lose solution. The survey outcome shown only 33% of Spanish expressed their attitudes toward win-win solution whereas 100% of Japanese considered the search as problem solving solution maker which revealed substantial difference of attitudes among the Cultures.



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The personal style was also considered to assess the cultural impact by many researchers. The personal style means way of talk, dress code, extent of interaction, usage of title etc. the personal style vary from formal to informal Hall and Hall (1990) stated that German Negotiators are very formal than American Negotiators. In the study of Salacuse (1993), it is stated that two third of respondents revealed informal personal style who usually commence with friendly approach and inquiring their family well beings using the first name of the counterpart.

Generally the communication also varies within the culture in the form of directly or indirectly. Person in some culture respond to the question straightforwardly and precisely and some belongs to another culture respond indirectly by gesture, facial expression and other body language. It is found from the study of Hall and Hall (1990) that American and German are shown the direct communication and in the

mean time it was found that French and Japanese communicate informally and indirectly.

Culture sensitivity to time was another factor considered amongst the various cultures by the researchers. The time sensibility can be evaluated in two different perceptions one is punctuality to the negotiation and the other one is time spared to the negotiation Gofstede (1989) stated that Germans are very punctual but hesitates to spend more time for negotiation process.

Emotionalism is one of the key aspects in the success of a negotiation. Fisher and Ury (1993) in their book titled “Getting to Yes” suggested that “separate people from problem” it mean that negotiator should focus on the problem on the merit base than arguing angrily or without patiently. Ability to express their emotion in the right time is an art in the negotiation process and also used as a tactic to win their side. The study conducted by Liwickie et al (1993), it was established that a greater variation observed in the various cultural groups under study. Americans and Spanish highly express their emotions in the negotiation table. The personnel of Asian countries including Japanese tend toward emotional control and hide their true feelings in the negotiation table. Amongst the European cultures it was found that respondents from German and United Kingdom shown similar trend like Asians but to a lesser extent though individual personality plays a vital role within the respective Culture.

### **2.6.7 Gender of the negotiator**

In the modern business world, participation of women are everywhere in every field. Economy of Sri Lanka and some other county is driven by women. Through the construction industry dominated by the men in the managerial capacity and as well as in the capacity of the work force, attempts are being made for equal opportunity to women participation without any discrimination to the gender in every industry.

According to Maccoby and Jacklin (1974), Men are said to be dominant and women are passive thus men can control the negotiation face. It is supported by Tannen (1996) stating that men are talk and interrupt more frequently than women when they interact. Further men talk and concentrate with direct language on subject matter

whereas women are not. This male dominant character interpreted as men could bring success outcome in any negotiation take place between men and women (Lovin & Robinson, 1994).

Barron et al (1988) also stated that men and women are behave differently when interact. Few studies have found in the literature of the influence of the biological character of the women in negotiation outcome. Scientific evidence demonstrated that women's ability to understand the nonverbal language is very higher than men (DePaulo & Friedman, 1998). However according to the study of Rosenthal and DePaulo, (1979a), it was contradictorily concluded that understanding accurately the nonverbal language by women is possible only when the opponent shows truthful behavior but the men are more skilled to judge the opponent nonverbal communications when the deception and lying are made by the counterpart. Hall (1987) stated that men are typically considered as more composed whereas women are recognized as expressive in the negotiation table.

According to Salacuse (1993), study of ten ways of Culture that affect negotiation style, he concluded that gender differences in cross cultural negotiation had no any significant impact on the outcome of the negotiation.



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This is an inconsistency statement to the study conducted before by the Rosenthal and DePaulo (1979), Hall (1987), DePaulo and Friedman (1998)

Therefore further in-depth study is required to validate the impact by Gender in negotiation outcome however it is pertinent to say that gender mix in the negotiation team may be a small step towards a successful negotiation.

### **2.6.8 Engineer's well rooted position**

According to governing condition of contract, the engineer usually has to play dual roles as client representative to look after interest of the client as well as professional expert in determining rights and obligation of the party where ambiguity persist in the contract documents. It will lead the Engineer in a conflicting position in the dispute negotiation as the Engineer some time under influence of the Employer and his

determination and decisions sometime biased. It will usually influenced the outcome of the negotiation as the employer often quote it as independent determination of the engineer to defend his side (Ren et al, 2011).

## **2.7 Summary**

Based on the literature review, it is summarized that any negotiation will be successful only if they negotiate with honest intention to reach a mutual gain focus on the merit of the problem ignoring personal ego. Some of the factors that influence the successful outcome of the negotiations are well preparation prior to negotiation, negotiation models, strategies and tactics adopted, selection of negotiator with necessary skills and intelligent, gender, the cross cultural barriers and the professional behavior apart from the substance of negotiation. The next chapter presents the general and specific research process adopted to this study.



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## CHAPTER THREE: RESEARCH METHODOLOGY

### 3.1 Introduction

This chapter explains the research process adopted for this study. Key elements of the research process are described under seven main sections: research approaches, theoretical frame, hypotheses generation, population frame, sample size, data collection methods, analysis techniques has been followed in this investigation.

Firstly, the chapter begins by giving an overview of the research methodology and its importance to understanding. The next sections outlines research approaches and strategies used in general and the most suitable approach and strategy for this study respectively. The chapter then discusses data collection and analysis techniques which were used in the current study. The last section of the chapter explains the measures used to claim the validity and reliability of the research findings. Finally a summary is given indicating the key issues discussed in the chapter.

### 3.2 Research Process



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In any research, the steps as shown in the Figure 1 are used to find answers scientifically.

### 3.3 Theoretical Framework of the Research

A theoretical frame work is a conceptual model of how one theorizes or makes logical sense of the relationships among the several factors that have been identified as important to the problem. It is a logically developed, described and elaborated network of associations among the variables deemed relevant to the problem situation and identified through such processes as interviews, observations and literature survey. The theoretical framework is the foundation on which the entire research is generally based (Sekaran, 2016).

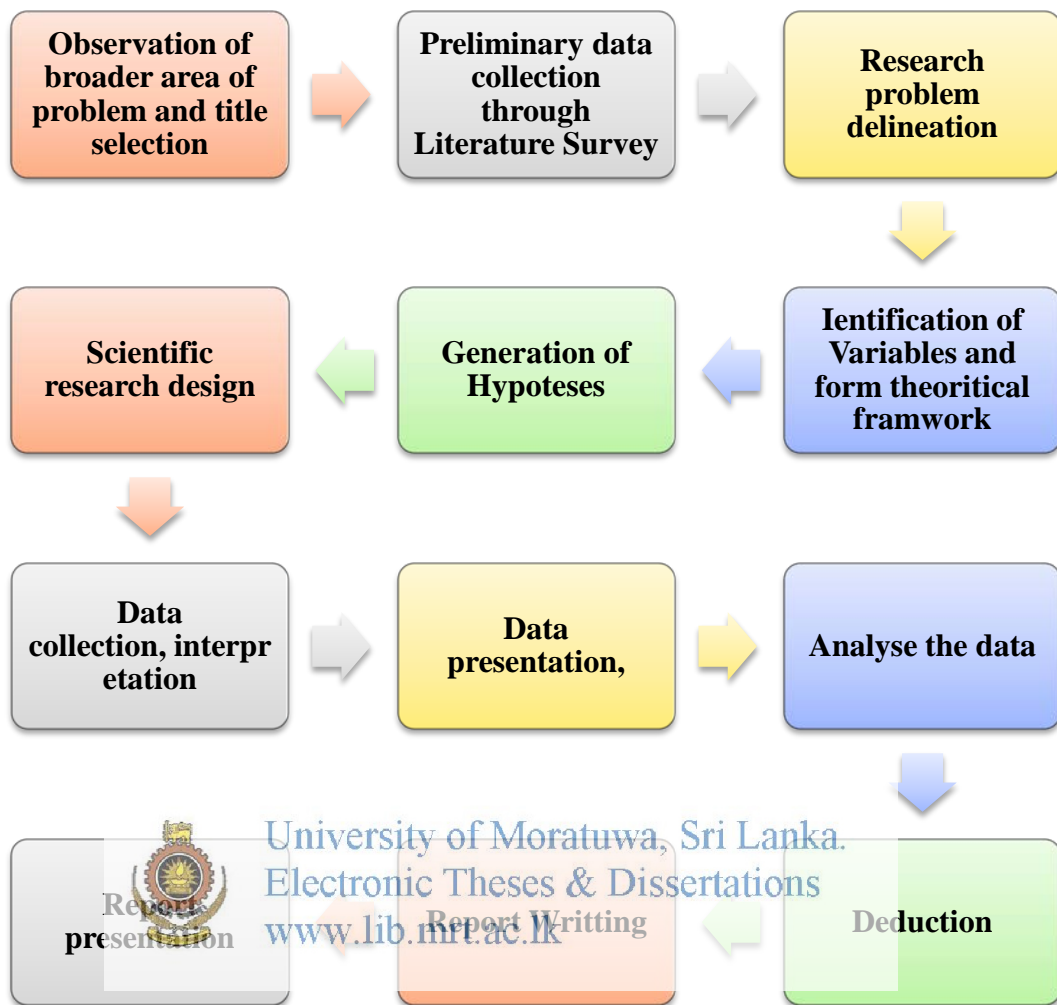


Figure 1: Overview of research process of Research Methodology (Source: Sekaran, 2006)

### 3.5 Population Frame

Population refers to the entire things of interest that the researcher wishes to investigate. The population frame is listing of the all elements in the population (Sekaran, 2006).

The population of this research will be all infrastructure projects undertaken and completed from January 2011 to December 2015 by the national and international contractors who operate in Sri Lanka.

### 3.6 Sample Size Selection

#### 3.6.1 Sample

Sample is the subset of population. The research sometimes involves thousand and hundreds of element and it is practically impossible to collect data from every element considering the limitation of time, cost and human resources. By studying the sample, the researcher should be able to draw a conclusion that could be generalized for the entire population (Sekaran, 2006).

#### 3.6.2 Sampling and Sampling Design

Sampling is the process of seeking representation of a population for investigation and study (Wood and Haber, 1998). Sampling design is selection of appropriate sampling techniques such as simple random sampling, stratified random sampling, cluster sampling, area sampling & double sampling under the probability sampling design and convenience sampling, Judgment sampling & Quota sampling under non-probability sampling design. If the representativeness of sample is critical for the study then probability sampling design can be chosen otherwise the researcher can choose non-probability sampling design (Sekaran, 2006).

Under the probability sampling design, a researcher can choose either simple random sampling or systematic sampling or cluster sampling if the purpose of the study mainly is for generalization. If the purpose of the study is for assessing deferential parameter in subgroup of population and all subgroup have equal number of elements then one can choose proportionate stratified random sampling or otherwise disproportionate stratified random sampling should be chosen where unequal number of elements in the subgroup. The area sampling is more appropriate if the main purpose of the study is for collecting information from the localized area or confined to particular locality. Choose double sampling to gather information from the subset of the sample (Fellow et al., 1997).

A researcher would choose the convenience sampling under the category of non-probability sampling design when the purpose of the study is to obtain very quick

information, even if unrealistic, to feel for the variables of interest. The judgment sampling could be used where the information can be provided by few experts whereas the quota sampling is used where need responses from special interest minority group.

In this research, it is intended to select simple random sampling procedure as all elements in the population are considered and each element has an equal chance of being chosen as the subject and it is having advantage of high generalization of findings. Further the population is considerably small.

### 3.6.3 Determination of Simple Sample Size

The determination of sample size is depending on the confident level (how certain researcher is that his estimates will really hold true for the population) and confident interval or margin of error (how close researcher estimate the population parameters based on the sample statistics).

In this study samples are selected from the population frame with the 95% confident level and 5% confident interval. The sample size is determined using the Sample Size Calculator. The sample size (30) sample were selected.

### 3.7 Data Collection

There are two types of data collection techniques: qualitative and quantitative used in research studies (Williams, 2007). These techniques include questionnaires, interviews (individuals/groups/focus groups), observations of targeted events, and document analysis or other textual and graphical data analysis, etc. This study employed a document analysis as the primary data collection technique. Document analysis is a tool used where the research study focuses on contemporary or historical events (Saunders et al., 2007). This is a cost-effective data collection technique (Denscombe, 1998).

Total of 30 projects where disputes between parties were referred to negotiation was considered. The contractual documents, correspondences between contract parties (client, head contractor, and subcontractor) were collected and from which project

information such as scope, contract value, contract duration, type of client, type of engineer, funding agency, procurement method, monetary value in negotiation, negotiation period, outcomes of negotiations, governing condition of contract, construction professional who involved in negotiation were extracted. The findings of document analyses were used to strengthen the research questions and to answer one of the research objectives partially.

### **3.8 Data Analysis**

The Data analysis generally was carried out in two ways, either by qualitative or quantitative techniques. In this research only quantitative data analyzing techniques has been adopted by the researcher. Fink (2009) described that the quantitative data analysis often involves the use of descriptive statistics and inferential statistics. Tan (2002) defines descriptive statistics as measures used to describe or summarize data, while inferential statistics are used to make inference about a population using a representative sample drawn from it. As mentioned previously the research adopted a quantitative approach where quantitative data were collected from documents of construction payment-dispute cases referred to negotiation and analyzed using frequencies and graphs.



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### **3.9 Summary**

In this chapter, research approaches, hypotheses generation, specific method of data collection and data analyses techniques and the measures for data validation for finding of this study has been elaborated in details. The next chapter gives the results of the gathered and processed data.

## CHAPTER FOUR: DATA COLLECTION AND ANALYSIS

### 4.1 Introduction

Collection of data is a long process in a research and the researchers spend lot of money, their time and effort for this purpose. In this chapter, the collected raw data from the respondents through case study, interview and questionnaire document analyses is presented in the summarized version in various forms such as tables, various graphical forms to easily understand at a glance view.

Further, the collected data through various methodologies as stipulated above are analyzed quantitatively as appropriate in order to arrive at conclusion of the research from the findings.

### 4.2 Profile of the cases analyzed

Altogether thirty (30) cases were identified randomly subject to availability of time and access to project information. All these cases are from negotiations involved in public and private sector projects, where negotiations were involved between client and main contractor, main contractor and subcontractor. Table-01 provides the profile information of the cases were analyzed.



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**Table-01: Profile of the sample cases**

Case No	Time of occurrence	Sub-Sector	Description of the Project	Parties in Negotiation	Engineer (Consultant)	Professionals involved in Negotiation	Standard form of contract used	Origin of Contractor
CIN/15-01	2015	Irrigation	2km canal lining and Structures	Contractor vs Employee	Employer	Engineers, Quantity Surveyors	Client own version	Local
CIN/15-02	2015	Harbour	Pavement works to quay wall	Contractor vs Subcontractor	Independent organization	Engineers, Quantity Surveyors	SBD/01	Foreign
CIN/15-03	2015	Road	Widening 23km for six lanes	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	SBD/02	Local
CIN/15-04	2015	Irrigation	Renovation of 3.5km Earth Dam & structure	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	Client Own version	Local
CIN/15-05	2015	Irrigation	Reconstruction of 200m long spillway	Contractor vs Employer	Independent organization	Engineers, Quantity Surveyors	FIDIC 2010 (Harmonized version)	Local
CIN/15-06	2015	Irrigation	Construction of 3 Nos Anicuts and 5km canal embankment	Contractor vs Insurance Company	Employer	Engineers, Quantity Surveyors, Lawyer	FIDIC 2010 (Harmonized version)	Local
CIN/14-01	2014	Road	1.5km 4 lane	Contractor vs Employer		Engineers, Quantity Surveyors	SBD/02	Local
CIN/14-02	2014	Piling	62 numbers of bored piles	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	SBD/02	Local
CIN/14-03	2014	Road	23km widening to 6 lanes from 2	Contractor vs Employer		Engineers, Quantity Surveyors	SBD/02	Local
CIN/13-01	2015	Building	12 storied Apartment	Contractor vs Employer	Employer	Architect, Engineers, Quantity Surveyors	SBD/02	Local
CIN/13-02	2013	Water	175km distribution networks	Contractor vs Employer		Engineers, Quantity Surveyors	SBD/02	Local
CIN/12-01	2012	Mini hydro power	3.5Mw hydro power generation	Subcontractor vs Contractor	Independent organization	Engineers, Quantity Surveyors	SBD/01	Local
CIN/12-02	2012	Harbour	Renovation of 150m Quay wall	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	SBD/02	Local
CIN/12-03	2012	Water	2km HDPE underwater lagoon crossings	Subcontractor vs Contractor	Independent organization	Engineers, Quantity Surveyors	FIDIC 1999 (Red Book)	Local
CIN/12-04	2012	Road	81km widening to 2 lanes traffic	Contractor vs Employer	Semi government body	Engineers, Quantity Surveyors, Accountant.	FIDIC 1999 (Red Book)	Foreign
CIN/12-05	2012	Water	10km DI transmission	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	FIDIC 1999 (Red)	Local
CIN/12-06	2012	Road	67km widening to 2 lanes traffic	Contractor vs Employer	Semi government body	Engineers, Quantity Surveyors	FIDIC 1999 (Red)	Foreign
CIN/12-07	2012	Road	34km widening to 2 lane traffic	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	SBD/02	Local
CIN/12-08	2012	Road	38km widening to 2 lanes traffic	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	SBD/02	Local
CIN/11-01	2011	Road	10km widening to 2 lanes traffic	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	FIDIC 2006 (Harmonized version)	Local
CIN/11-02	2011	Road	81km widening to 2 lane traffic	Contractor vs Employer	Semi government body	Engineers, Quantity Surveyors	FIDIC 1999 (Red Book)	Foreign
CIN/11-03	2011	Road	81km widening to 2 lane traffic	Contractor vs Employer	Semi government body	Engineers, Quantity Surveyors	FIDIC 1999 (Red Book)	Foreign
CIN/11-04	2011	Road	53km widening to 2 lane traffic	Contractor vs Employer	Semi government body	Engineers, Quantity Surveyors	FIDIC 1999 (Red Book)	Foreign
CIN/11-05	2011	Road	53km widening to 2 lane traffic	Contractor vs Employer	Semi government body	Engineers, Quantity Surveyors	FIDIC 1999 (Red Book)	Foreign
CIN/11-06	2011	Road	2km town improvement	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	SBD/2	Local
CIN/11-07	2011	Road	2km town improvement	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	SBD/2	Local
CIN/11-08	2011	Road	5km pavement upgrading	Contractor vs Employer	Employer	Engineers, Quantity Surveyors	SBD/1	Local
CIN/11-09	2011	Road	4km pavement upgrading	Subcontractor vs Contractor	Employer	Engineers, Quantity Surveyors	SBD/1	Local
CIN/11-10	2011	Road	4km pavement upgrading	Subcontractor vs Contractor	Employer	Engineers, Quantity Surveyors	SBD/1	Local
CIN/11-11	2011	Road	4km pavement upgrading	Subcontractor vs Contractor	Employer	Engineers, Quantity Surveyors	SBD/1	Local

### 4.3 Analysis of cases resolved through Negotiation

This section presents the analysis performed on the collected data in terms of project characteristics, causes for dispute negotiation, the monetary value involved in negotiation, the professional background of negotiators, time consumed for negotiation, gender effect on negotiation and finally the outcome of the negotiation in a summarized form.

#### 4.3.1 Project characteristics

##### (a) Type of Client

The analyses of cases focused on the type of the client engaged in the construction. In general, the client can be categorized in public, private and public-private partnership. The Figure-2 shows the type of clients from the sample cases. As indicated in the Figure-2, except two, all twenty eight cases belong to public sector projects which represent 93% of the sample. Only two projects belong to private sector. However, none of the cases belong to the public-private partnership client in the sample. According to the results, it seems government is the major client in the civil engineering construction industry.

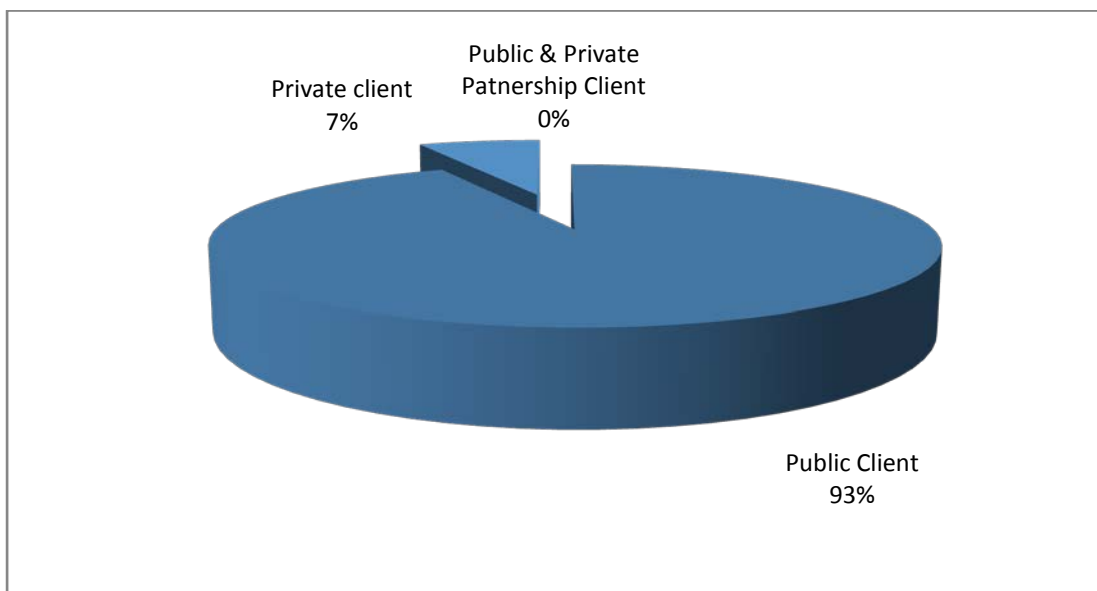


Figure 2: Types of clients within the sample



### (b) Type of the Engineer (Consultant)

The Engineer is generally appointed by the Client in order to administer the contract on behalf of the Client. The appointment can be from his in-house resources or outsourcing from private or semi government organization. The type of the Engineer was also focused in the cases analyzed. The Table # 2 presents the representation of administrators of the contract from employer, independent consultancy organization and semi government organization.

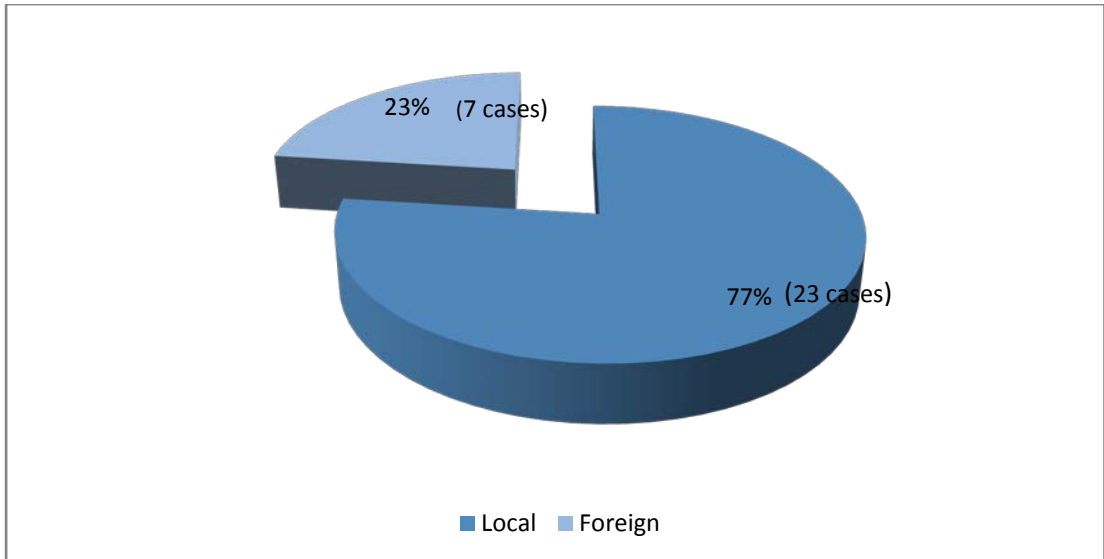
**Table-02: Classification of the type of Engineer (Consultant)**

Type of the Engineer	Sample cases	
	Frequency	Percentage (%)
Independent organization	4	13
Semi government body	5	17
In-house resources of client	21	70
<b>Total</b>	<b>30</b>	<b>100</b>

As shown in the Table-02, 70% of the projects were administered by the in-house teams of the employer and 17% of the projects were administered by the semi government body and only 13% was managed by the independent consultancy firms.

### (c) Origin of the Contractor

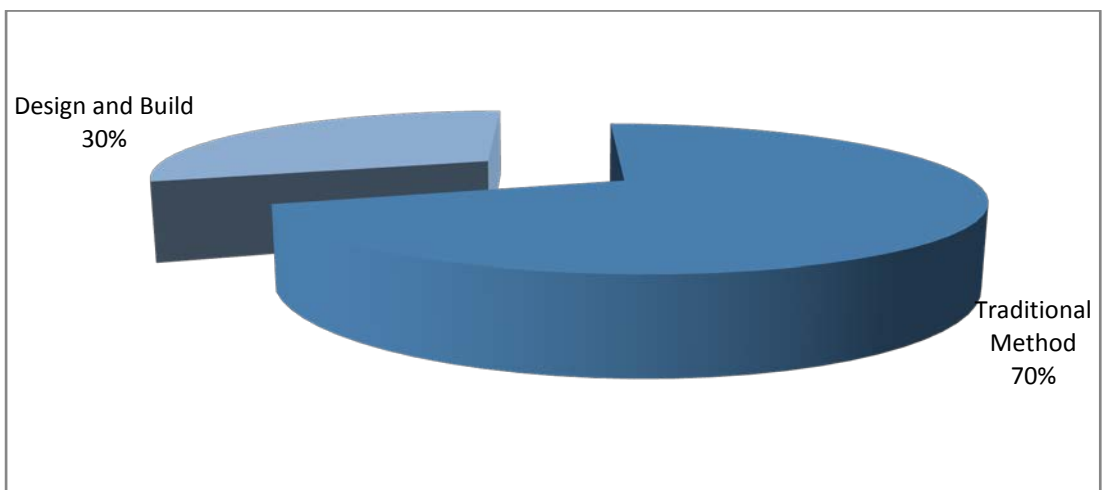
As a characteristic of the project, the origin of the contractor was focused in the cases analyzed. There are local and foreign contractors operate in the Sri Lankan construction field. Their representation to the sample is given in the Figure 3. It shows that majority (77%) of the cases from the projects of local contractors and only 23% of the cases from the projects of foreign contractors.



**Figure 3: Origin of the contractor**

**(d) Procurement methods used**

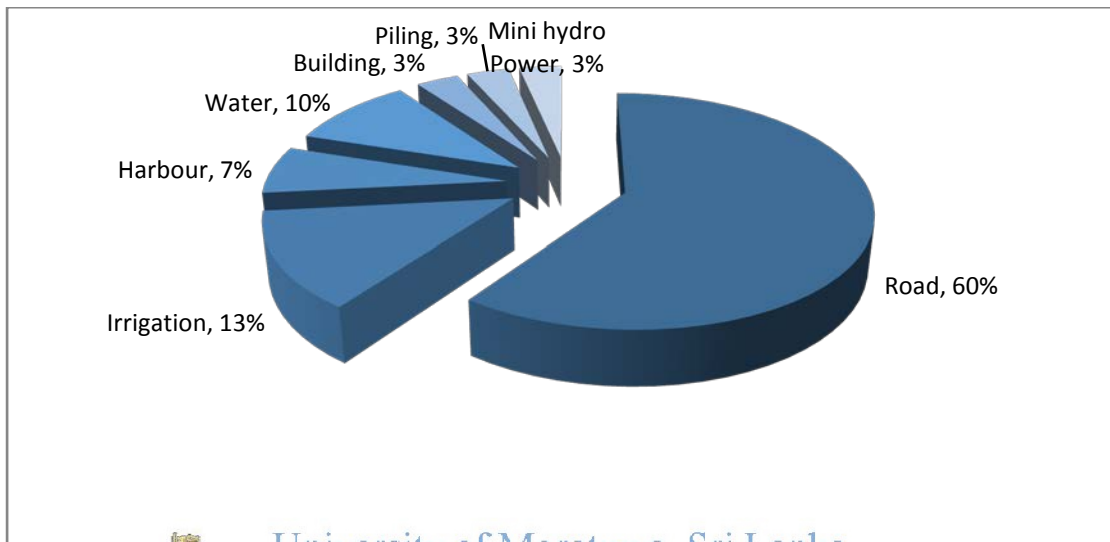
Focus was given in the analyses of cases for procurement methods too. The Figure-04 shows the all cases are from either Traditional Contract or Design and Build contract. Nine (09) cases (out of 30) emerged from the contract that was procured through 'design and build' procurement method whereas rest of the 21 cases observed from the projects that were delivered through traditional (admeasurements) procurement method. The sample does not possess any other procurement methods such as build-operate-transfer (BOT), build-own-operate-transfer (BOOT).



**Figure 4: Representation of Procurement method within the sample**

### (e) Type of projects

The types of the project were focused as a project characteristic in analyses of cases. The cases were generated by various types of Project such as road, building, irrigation water supply, piling, harbour and hydro power projects. Figure 5 depicts the distribution of subsector within the sample cases.



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Figure 5: Sub-sector distribution

It is observed from Figure 4 that the majority (60%) of the cases received from the road sector. The secondly the irrigation sector take part with 13% share whereas 10% contribution received from the water sector. However, only 3% found from each building, piling and mini hydro power sector from the sample cases.

### (f) Contract value

The contract value as another characteristic was focused in the analyses of the cases. Construction Industry Development Authority (CIDA) defines the contract value up to LKR 10 million (Mn.) as small works, between LKR 10 and 150 million as procurement of works and above LKR 150 million as major works. For the purpose of this study, the following categorization is considered.

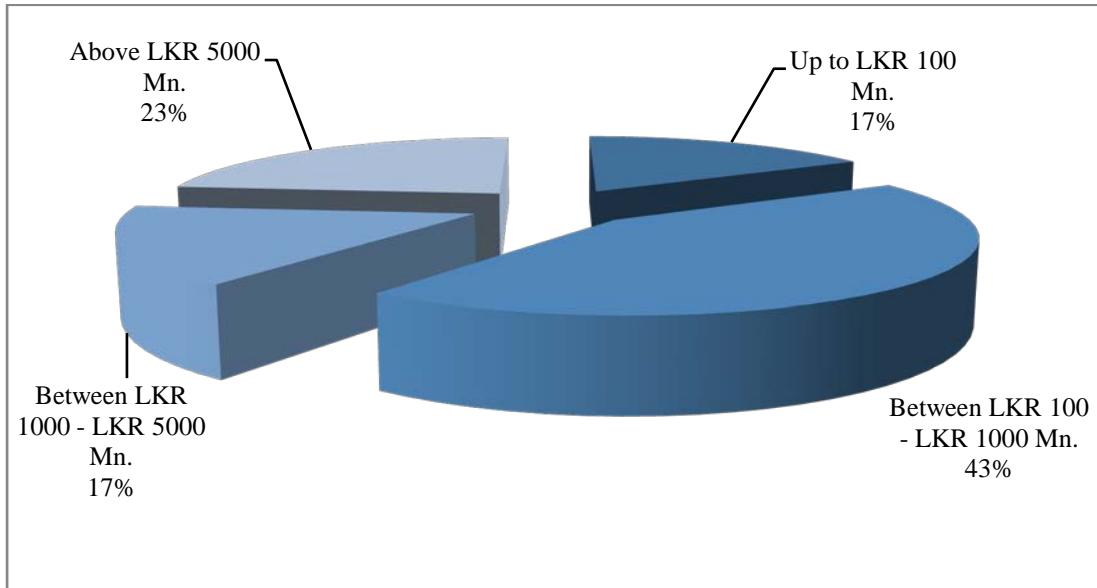
Small scale contract - up to 100 million

Medium scale contract - between 100 to 1000 million

Large scale contract - between 1000 to 5000 million

Extra Large scale contract - above 5000 million

The figure-6 depicts the cases represents from respective scales of the contract value



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As shown in the Figure 6, the majority of the cases fall within the medium scale contracts which represent 43% of the cases. However, minority of 17% represents from each small scale and large scale contracts. The cases from the extra-large contract show 23% contribution.

#### (g) Duration of the contract

Due consideration was given in the analyses of cases for the duration of the contract as projects duration varies contract to contract. The Table-03 gives the distribution of sample cases in terms of the contract durations. It is observed from the Table-03 that no case have the contract duration neither up to one year nor over four years. The majority of the cases (47%) from the project with 3-4 years of contract duration whereas the contract period of the project of 2-3 years shows least (13%) cases however 40% of cases received from the construction duration of 1-2 years.

**Table-03: Duration of contract of the sample**

Contract Duration	Sample cases	
	Frequency	Percentage (%)
Between 1-2 year	12	40
Between 2-3 year	4	13
Between 3- 4 year	14	47
<b>Total</b>	<b>30</b>	<b>100</b>

**(h) Governing Condition of Contract**

The governing Condition of Contract was also focused in the analyses of the cases. The Table-04 indicates the distribution of sample cases based on the types of the condition of contract. Generally the SBD series and own version of the client are used for the contracts procured with local funds. The FIDIC series of Condition of Contracts were used in the international competitive bids and foreign funded contracts. From the Table-03, it can be seen that the majority (56%) of the Condition of Contract from the SBD series than FIDIC series (38%). In the meantime, only 6% of the cases were within the condition of contract from client's own version. Neither JCT form of contract nor NEC form of contract governed the project of the sample cases.

**Table-04: Governing Condition of Contract**

Condition of Contract	Sample cases	
	Frequency	Percentage (%)
SBD/01	6	20
SBD/02	11	36
FIDIC 1999 (Red book)	8	29
FIDIC 2006 (Harmonized version)	1	3
FIDIC 2010 (Harmonized version)	2	6
Own version of client	2	6
<b>Total</b>	<b>30</b>	<b>100</b>

### (i) Funding sources of projects

Funding is blood for any construction contract and funding agencies play vital role in the industry in determining terms of the contract. Therefore it was also taken into consideration in the analyses of the sample cases as focal point. The Table-05 shows distribution of various finding agency that funded for projects of the sample cases. As noted in the Table-05, the Treasury funded projects are the majority with 44% cases. Secondly EXIM bank (China) consist 20% of cases where as 13% of cases are from ADB funded projects. Cases from local banks shares 10% of the cases while minimum cases (3%) received from IDA & JICA funded projects. However, the cases from private funded project represent only 7%.

**Table-05: Funding sources of projects**

Funding sources	Sample cases	
	Frequency	Percentage (%)
International Developing Agency	1	3
Asian Development Bank	4	13
Local Bank	3	10
Treasury Fund	13	44
Export Import Bank of China	6	20
JICA fund	1	3
Private fund	2	7
<b>Total</b>	<b>30</b>	<b>100</b>

### 4.3.2 Causes for dispute negotiation

The analyses of cases focused causes for dispute negotiation separately. Generally, denial of the claims (contractual, global and ex-gratia) paves way to dispute negotiation in the construction industry. The causes for dispute negotiation under this study are given in the Table 6. As observed in the Table 6, the majority (33%) of the cases are denial of cost claims. 14% of the cases are due to conflicting specification. Denial of variation claim is found 10% whereas cases received (17%) for denial of

progress and final payment. Apart from the above, cases for violation of contract represents 20%. Balance 6% equally shared by insurance claim and retention claim.

**Table 6: Causes of disputes**

<b>Case No</b>	<b>Causes for dispute negotiation</b>	<b>Nature of the Dispute</b>
CIN/15-01	Entitlement of Contractor (C) for idle payment was rejected by Employer/ Developer (D)	Cost claim
CIN/15-02	Finance charge for delayed payment was not honored by D	Violation of contract condition
CIN/15-03	Discrepancy between contract data and BOQ on the markup for provisional sum	Conflicting specification
CIN/15-04	Prolongation cost of C due to delays by government authorities was denied by D	Cost claim
CIN/15-05	Prolongation cost of C due to design delays by Engineer (E) was refused by D	Cost claim
CIN/15-06	Compensation for property damage of third party was rejected by Insurance (I)	Insurance claim
CIN/14-01	E withheld certificate of 2 <sup>nd</sup> half retention beyond reasonable period (over two years)	Retention claim
CIN/14-02	Remobilization cost of C due to delay to issue variation order was refused by D	Cost claim
CIN/14-03	E withheld taking over certificate until settlement of third party damages by C	Violation of contract condition
CIN/13-01	Idle cost of C due delays in material supply by client	Cost claim
CIN/13-02	Variation for thrust block construction as discrepancy in description between BOQ and pricing preamble	Conflicting specification
CIN/12-01	Reduction of unit rate by D for quantity increases in the absence of such provision was challenged by C	Violation of contract condition

CIN/12-02	Change of method of underwater construction from in-situ to precast was not treated as variation since C proposed it	Variation claim
CIN/12-03	D delayed payment of subcontractor (SC) on 'back to back' basis as D yet to receive	Violation of contract condition
CIN/12-04	D rejected the payment of custom charges as material purchased locally was challenged by C	Progress payment
CIN/12-05	D turned down the cost claim of C for removal of tax on bitumen by change in legislation	Cost claim
CIN/12-06	Denied payment for geotextile on boulder filling was challenged by C	Conflicting specification
CIN/12-07	C disagreed with determined variation rate of asphalt layer thickness of 40mm from 50mm by a proportionate calculation	Variation claim
CIN/12-08	D ordered variations during the defect notification period without overhead cost	Cost claim
CIN/11-01	Usage of material from commercial supply was banned by E was challenged by C	Cost claim
CIN/11-02	Payment for backfill with sand instead of borrow soil under the instruction of E was rejected by D and challenged by C	Progress payment
CIN/11-03	Request of rate variation to asphalt concrete using granite aggregate instead limestone was challenged by D	Variation claim
CIN/11-04	Cost of additional haulage to cater the increased demand by over 500 of random rubble times was declined by D	Cost claim
CIN/11-05	Denied payment for geotextile on boulder filling was challenged by C	Conflicting specification
CIN/11-06	D refused to pay financial charges for delayed progress payments	Violation of contract condition
CIN/11-07	Unrecoverable overhead cost of C due to scope reduction was denied	Cost claim





CIN/11-08	Notified arithmetic error in final payment was unattended and closed accounts by D	Final payment
CIN/11-09	Final bill payment of SC was unsettled by D	Final payment
CIN/11-10	Financing charge for delayed payment of SC was rejected by C	Violation of contract condition
CIN/11-11	Back to back contract between C and SC. Rate reduction due to quantity increase of aggregate base course by a variation similarly applied to SC who challenged it	Final Payment

#### 4.3.3 Monetary value involved in negotiation

Monitory value involved in negotiation was also focused in the analyses of cases. It is tabulated in the Table 7 in descending order among the category of nature of disputes. The monitory values vary from LKR 0.9 Mn to LKR 88 Mn in the cost claim. Similarly it varies from LKR 2.4 Mn to LKR 72 Mn for the conflicting specification. The monitory values of the variation claim vary from LKR 7 Mn to LKR 145 Mn whereas the values for violation of contract conditions vary between LKR 2.7 Mn to LKR 174 Mn. The value of claim under progress payment and final payment vary from LKR 7 Mn to 120 Mn and LKR 3.4 Mn to 5.6 Mn respectively.



**Table 07: Magnitude of the monetary value involved in negotiation**

Case No	Nature of the Dispute	Monitory value in negotiation LKR (Mn)	% value on contract sum
CIN/11-01	Cost claim	88	10
CIN/11-04	Cost claim	86	1
CIN/12-05	Cost claim	24	10
CIN/11-07	Cost claim	14	4
CIN/12-08	Cost claim	13	Less than 1
CIN/14-02	Cost claim	5	1
CIN/15-05	Cost claim	4.2	1
CIN/13-01	Cost claim	3.75	1
CIN/15-04	Cost claim	3	1
CIN/15-01	Cost claim	0.9	3
CIN/12-06	Conflicting specification	72	1
CIN/11-05	Conflicting specification	45	Less than 1
CIN/13-02	Conflicting specification	4	1
CIN/15-03	Conflicting specification	1.4	2
CIN/11-08	Final payment	5.6	4
CIN/11-11	Final payment	4	3
CIN/11-09	Final payment	3.4	3
CIN/15-06	Insurance claim	3.9	4
CIN/12-04	Progress payment	120	1
CIN/11-02	Progress payment	7	Less than 1
CIN/14-01	Retention claim	4.5	1
CIN/11-03	Variation claim	145	1
CIN/12-07	Variation claim	44	1
CIN/12-02	Variation claim	7	2
CIN/14-03	Violation of contract condition	174	3
CIN/12-01	Violation of contract condition	12	10
CIN/11-06	Violation of contract condition	9.5	3
CIN/12-03	Violation of contract condition	6	7
CIN/15-02	Violation of contract condition	2.7	6

#### 4.3.4 Construction professionals involved in negotiation

The analyses of cases did not ignore the involvement of construction professional in negotiation. Figure 6 shows the professional involvement in negotiation. The majority involvement is engineering and quantity surveying professionals who share of 92% more or less equally. The involvement of Accountant, Architect and Lawyer are very minimal (each 1%). The balance 5% only shared by other category who may belongs to other professional or personnel without any educational or professional backgrounds.

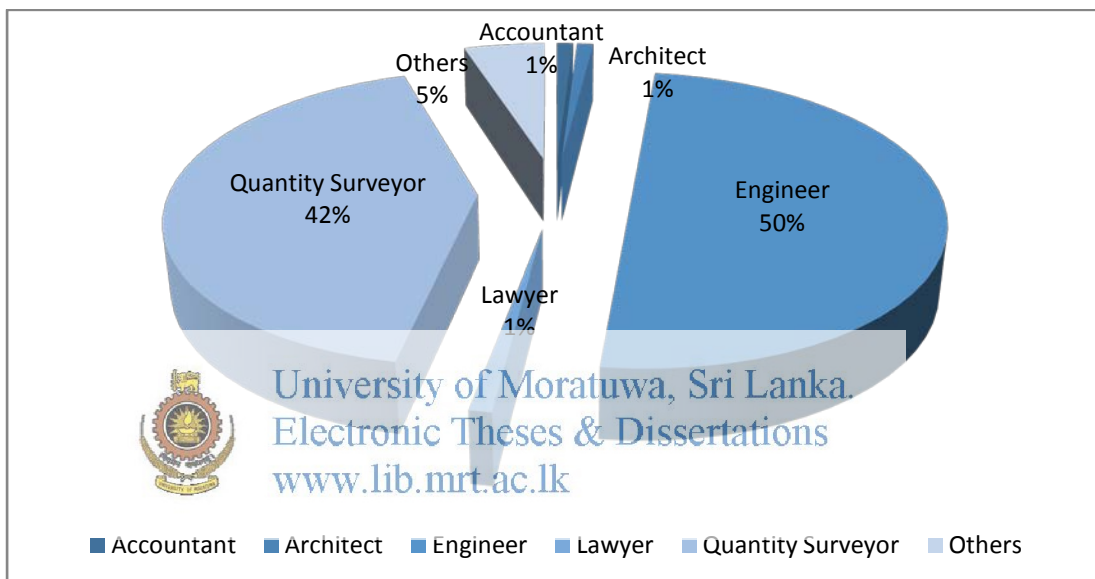


Figure 7: Professional involvement

#### 4.3.5 Time taken for negotiation

Time taken for negotiation was another aspect taken in the analyses of cases. A breakdown showing the time taken for negotiation is depicted in the Table 8 where it ranges from minimum of six months to maximum of five years. The majority (40%) of the cases has taken up to five years and only 10% of the cases reached conclusion within six months. Conclusion reached within 1 year for the 17% of the cases whereas 10% of the cases reached conclusion within 1-2 years. 2-3 years was taken for concluding 20% of the cases. Only 3% of the cases took 3-4 years for negotiation.

Accordingly it is questioned the fundamental assumption of settlement of dispute within shorter time through negotiation.

**Table 8: Time taken for negotiation outcome**

Time taken for negotiation	Sample Cases	
	Frequency	Percentage (%)
Up to 6 months	3	10
Up to 1 year	5	17
Up to 2 year	3	10
Up to 3 year	6	20
Up to 4 year	1	3
Up to 5 year	12	40
<b>Total</b>	<b>30</b>	<b>100</b>

#### 4.3.6 Gender involvement in negotiation

The gender involvement in dispute negotiations has also been analyzed and it is shown in the Table 9. Accordingly, 99% of the negotiators are found as male and 1% of the negotiators as found as female however no participation of transgenderist is exist. Therefore, the male domination can be seen in the dispute negotiation.

**Table 9: Gender involvement in negotiation**

Gender	Representation	
	Frequency	Percentage (%)
Male	191	99
Female	2	1
<b>Total</b>	<b>193</b>	<b>100</b>

#### 4.3.7 Negotiation outcome

The Table-10 presents the negotiation outcomes in view of “successful”, “partially successful” and “unsuccessful”. The definition of the above terminology is given below.

Successful - claimant interest is fulfilled

Partially successful- claimant interest is compromised with other party

Unsuccessful – Claimant received nothing

From the Table-10 it can be seen that the majority (67%) of the cases (20 cases out of 30) was unsuccessful. Partially successful result was received for 10% of the cases. However, only 7% of cases show successful negotiation outcome. It is also questioned the basic assumption that negotiation is a preferred dispute resolution technique.

**Table-10: Details of negotiation outcomes**

Case No	Nature of dispute	Negotiation outcome	Reasons for the outcome
CIN/15-01	Cost claim	Unsuccessful	Unprofessional practice
CIN/15-02	Violation of condition	Unsuccessful	Unprofessional practice
CIN/15-03	Conflicting specification	Successful	Impartial and unbiased decision of engineer
CIN/15-04	Cost claim	Unsuccessful	Unprofessional practice
CIN/15-05	Cost claim	Unsuccessful	Unprofessional practice
CIN/15-06	Insurance claim	Unsuccessful	Norm of insurance companies
CIN/14-01	Retention claim	Unsuccessful	Unprofessional practice
CIN/14-02	Cost claim	Successful	Impartial and unbiased decision of employer
CIN/14-03	Violation of condition	Successful	Impartial and unbiased decision of employer
CIN/13-01	Cost claim	Unsuccessful	Unprofessional practice
CIN/13-02	Conflicting specification	Successful	Impartial and unbiased decision of employer
CIN/12-01	Violation of contract	Unsuccessful	Unprofessional practice (revenge)
CIN/12-02	Variation claim	Successful	Impartial and unbiased decision

			of employer
CIN/12-03	Violation of condition	Unsuccessful	Unprofessional practice
CIN/12-04	Progress payment	Unsuccessful	Client interference and biased determination
CIN/12-05	Cost claim	Unsuccessful	Unprofessional practice
CIN/12-06	Conflicting specification	Unsuccessful	Unprofessional practice
CIN/12-07	Variation claim	Successful	Impartial and unbiased decision of employer
CIN/12-08	Cost claim	Partially successful	Compromise
CIN/11-01	Cost claim	Unsuccessful	Unprofessional practice
CIN/11-02	Progress payment	Unsuccessful	Unprofessional practice
CIN/11-03	Variation claim	Successful	Impartial and unbiased decision of employer
CIN/11-04	Cost claim	Partially successful	Compromise
CIN/11-05	Conflicting specification	Partially successful	Compromise
CIN/11-06	Violation of condition	Unsuccessful	Unprofessional practice
CIN/11-07	Cost claim	Unsuccessful	Unprofessional practice
CIN/11-08	Final payment	Unsuccessful	Unprofessional practice (revenge)
CIN/11-09	Final payment	Unsuccessful	Unprofessional practice (revenge)
CIN/11-10	Violation of condition	Unsuccessful	Unprofessional practice
CIN/11-11	Final Payment	successful	Impartial unbiased

Further, if summarized by reasons, 53% of the cases suffered from unprofessional practice of the construction professionals of the in-house team of the employer. 10% of the cases suffered due to unprofessional practice of the main contractor in order to take revenge against the subcontractor. Because of the norm of the insurance company 3% of cases suffered with unsuccessful result. Only 10% of the cases were

able to take a win-win outcome compromising interest of both parties. The impartial and unbiased behavior of the professional gave only 23% of the successful outcome. The summary is given in the Table-11.

**Table-11: Summary of negotiation outcome against reasons**

Reasons for negotiation outcome	Negotiation outcome							
	Successful		Partially Success		Unsuccessful		Total	
	F	%	F	%	F	%	F	%
Unethical/unprofessional practice of engineer (in-house)					16	54	16	54
Unethical/unprofessional practice of contractor					3	10	3	10
Norm of insurance company					1	3	1	3
Impartial and unbiased decisions	7	23					7	23
Compromised settlement			3	10			3	10
<b>Total</b>	<b>7</b>	<b>23</b>	<b>3</b>	<b>10</b>	<b>20</b>	<b>67</b>	<b>30</b>	<b>100</b>



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#### 4.4 Analysis of relationship between negotiation outcome

This sections presents the discussion of the analyses in dispute negotiation carried out in the forgoing sections in terms of type of client chosen procurement methods, governing condition of contracts, types of projects, contract value, contract value and durations, type of projects, gender and professional background of the negotiators, monetary value involved in negotiation and the length of the negotiation period.

##### 4.4.1 Project characteristics and negotiation outcomes

###### (a) Type of the client and negotiation outcomes

The projects was represented by collected cases belongs to either public or private sector. The negotiation outcomes from the minority (7%) private sector shows completely negative results and the negotiators were unable to draw a successful outcome. However all successful outcomes (33%) was obtained from the public sector

client who represents 93% of the sample of the study. The comparison is shown in the Table 12.

**Table 12: Relationship between types of client negotiation outcome**

Type of Client	Negotiation Outcome			Total
	Successful	Partially successful	unsuccessful	
Public	7 (25%)	3 (11%)	18 (64%)	28 (93%)
Private	0 (0%)	0 (0%)	2 (100%)	2 (7%)
<b>Total</b>	<b>7 (25%)</b>	<b>3 (11%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

Since the contractor and the client from private sector, both parties attempted to maximize their benefits than exploring mutually beneficial solutions. It is a general tendency of private sector to show greediness when any negotiation involves monetary values because of their budgetary limits. On the other hand, the negotiators represented the public sector clients are just an administrators of the public funds under bureaucratic systems and they were able to manage their budgetary deficits by getting additional funding allocations through a cabinet paper approved by the parliament. Therefore it seems that the type of client, one of the project characteristics can have significant relations to the negotiation outcome.

**(b) Type of the engineer and negotiation outcome**

In the cases under study, independent engineers (13%), engineer from Semi government (17%) and rest (70%) from the Employer administered the contracts. Table 13 presents the outcome of the negotiation with respect to the types of engineer. It is revealed that the rate of successful of negotiation very high (100%) when the engineer is an independent body.



**Table 13: Relationship between type of engineer and negotiation outcome**

Type of Engineer	Negotiation Outcome			Total
	Successful	Partially successful	unsuccessful	
Independent organization	3 (75%)	1 (25%)	0 (0%)	<b>4 (13%)</b>
Semi government body	2 (40%)	2 (40%)	1 (20%)	<b>5 (17%)</b>
In-house team of Client	2 (10%)	0 (0%)	19 (90%)	<b>21 (70%)</b>
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

However only 10% rate successful negotiation observed when both client and engineer from same organization. Under the semi government body also the contractor received favorable outcome of 80% which included partially successful outcome. This demonstrates that an engineer from employer face difficulties in play dual role in partially successful negotiation. This is because the employer which influenced the negotiated outcome as unfavourable.



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### (c) Origin of the contractor and negotiation outcome

The negotiation outcome against the origin of the contractor tabulated in the Table 14 where the local contractor represents 77% while international contractors represent 23% of the sample.

**Table 14: Relationship between origin of the contractor and negotiation outcome**

Origin of contractor	Negotiation Outcome			Total
	Successful	Partially successful	unsuccessful	
Local	5 (22%)	1 (4%)	17 (74%)	<b>23 (77%)</b>
Foreign	2 (29%)	2 (29%)	3 (42%)	<b>7 (23%)</b>
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

However, the majority (57%) of favourable outcome was harvested by foreign contractors and only 26% of the favourable outcome for locals within the respective representation. It can be interpreted as that the international contractors possess either domination power or very good negotiation skills to turnout the negotiation process in their favour.

**(d) Procurement methods and negotiation outcome**

The Table 15 presents the negotiation outcome against the procurement method of the contracts among the sample cases. It shows the contracts were equally procured through traditional method (50%) and design and build method (50%) however the outcomes for the contractor was derived through both procurement methods shows considerable variations between the design and build (20%) and traditional methods (13%) in overall.

**Table 15: Relationship between procurement method and negotiation outcome**

Procurement method	Negotiation Outcome			Total
	Successful	Partially successful	Unsuccessful	
Traditional	4 (27%)	0 (0%)	11 (73%)	15 (50%)
Design & build	3 (20%)	3 (20%)	9 (60%)	15 (50%)
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

**(e) Type of project and negotiation outcome**

The relationship between negotiation outcome and the project types is depicted in the Table 16. Except piling all other subsector (types of project) shows less 50% success rate. Harbor shows 50% success rate. Therefore, meaningful relations could not be seen in the negotiation outcome by the subsectors

**Table 16: Relationship between type of projects and negotiation outcome**

Type of projects	Negotiation Outcome			Total
	Successful	Partially successful	Unsuccessful	
Road	3	3	12	<b>18 (60%)</b>
Irrigation	1	0	3	<b>4 (14%)</b>
Harbour	1	0	1	<b>2 (7%)</b>
Water	1	0	2	<b>3 (10%)</b>
Building	0	0	1	<b>1 (3%)</b>
Piling	1	0	0	<b>1 (3%)</b>
Mini hydro	0	0	1	<b>1 (3%)</b>
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

**(f) Contract value and negotiation outcome**

The large and extra-large scale contracts presents more favorable outcome to the contractor in the Table 17. 44% favourable outcome was achieved in the extra-large category whereas almost 100% favourable outcome was received from the large category. The failure rate was very high in the small and medium scale contracts. There can be two reasons for this. One reason is that the monetary value involved in negotiations is insignificant percentage for large and extra-large category and can be accommodated within the contingency amount of the contract.

**Table 17: Relationship between contract value and negotiation outcome**

Contract value	Negotiation Outcome			Total
	Successful	Partially successful	Unsuccessful	
Small scale	1 (25%)	0 (0%)	3 (75%)	<b>4 (13%)</b>
Medium scale	1 (8%)	0 (0%)	12 (92%)	<b>13 (44%)</b>
Large scale	3 (75%)	1 (25%)	0 (0%)	<b>4 (13%)</b>
Extra-large scale	2 (22%)	2 (22%)	5 (56%)	<b>9 (30%)</b>
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

The second one is involvement of international contractors in the large and extra-large contracts as they are very powerful than local contractors.

The success rate within the small scale contracts was only 25% whereas it was 8% within the medium scale contract. On the other hand large scale contracts shown 100% success rate with the consideration of partially successful cases. In the meantime, the extra-large contracts provided successful and partially successful outcome of 44%.

**(g) Contract duration and negotiation outcome**

Influence by the contract duration in the negotiation outcomes is illustrated in the Table 18. The findings illustrate no relations between the negotiation outcomes and contract durations. The contract duration varies from 1 to 4 years and shows no any linear relationship however it shows that the middle group represents 2-3 year period of contract duration possess majority of successful outcome than other two groups in the lower duration (1-2 years) and upper duration (3-4 years). When the duration of the contract is high, the knowledge disappearance will some time occur as professional jump from one organization to other organization for better opportunities which is one of the reasons for decline trend success rate after peak. Time taken for building up relationship & trust could be a reason for lower rate of success than the next group of the duration (1-2 years).



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**Table 18: Relationship between contract duration and negotiation outcome**


Contract duration (year)	Negotiation Outcome			Total
	Successful	Partially successful	Unsuccessful	
Between 1-2	3 (16%)	0 (0%)	16 (84%)	19 (63%)
Between 2-3	3 (38%)	3 (38%)	2 (24%)	8 (27%)
Between 3-4	1 (33%)	0 (0%)	2 (37%)	3 (10%)
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

In the light of the above, it can be stated that some of the project characteristics such as type of client, procurement method, contract value, type of the engineer, origin of the contractor (local or international) are able to alter the negotiation outcome and the rest of the characteristic did not show such ability to alter the negotiation outcome.

**(h) Standard forms of contract and negotiation outcome**

The SBDs and own version of the client are used generally for the treasury funded or local bank funded project whereas FIDIC version are used for foreign funded projects. if grouped into two categories as SBD forms and FIDIC forms, the SBD forms shows only 5% of the success rates whereas FIDIC forms shows 82% of successful outcome. Therefore the projects use FIDIC version more Preferable than the use of SBDs.

**Table 19: Relationship between standard forms of contract and negotiation outcome**

Standard form of contract	Negotiation Outcome			Total
	Successful	Partially	Unsuccessful	
SBD/1 	0 (0%)	0 (0%)	6 (100%)	<b>6 (20%)</b>
SBD/2	1 (9%)	0 (0%)	10 (91%)	<b>11 (37%)</b>
FIDIC1999 (Red)	5 (63%)	3 (37%)	0 (0%)	<b>8 (27%)</b>
FIDIC2006 (Harmonized)	0 (0%)	0 (0%)	1 (100%)	<b>1 (3%)</b>
FIDIC2010 (Harmonized)	1 (50%)	0 (0%)	1 (50%)	<b>2 (7%)</b>
Own version of Client	0 (0%)	0 (0%)	2 (100%)	<b>2 (7%)</b>
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

### (i) Relationship between funding agency and negotiation outcome

Construction industry in Sri Lanka is funded by many funding agencies in the form of loan or grant. Negotiation outcome with respect to the funding agencies are given in the Table 21. In which the cases from treasury funded, private funded and International development agency (IDA) funded projects shows 100% failure whereas export import (EXIM) bank of China shows majority (83%) of successful outcome while Asian Development Bank (ADB) was in the second rank with 50% success rate. The Local Bank funded projects shows only 33% success rate.

**Table 20: Relationship between funding agency and negotiation outcome**

Funding Sources	Negotiation Outcome			Total
	Successful	Partially successful	Unsuccessful	
IDA	0 (0%)	0 (0%)	1 (100%)	1 (3%)
ADB	2 (50%)	1 (25%)	1 (25%)	4 (17%)
LB	1 (33%)	0 (0%)	2 (67%)	3 (10%)
TB	0 (0%)	0 (0%)	13 (100%)	13 (43%)
EXIM China	4 (66%)	1 (17%)	1 (17%)	6 (20%)
PF	0 (0)	0 (0%)	2 (100%)	2 (7%)
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

### 4.4.2 Cause of disputes and negotiation outcome

The fate of negotiation outcome with respect to the causes of dispute is presented in the Table 21. The majority of successful outcome was received from the variation category (67%). The next highest (50%) favorable outcome for contractor was derived from conflicting specification. The cost claim and violation of conditions was in the third and fourth place with 20% and 17% respectively.

**Table 21: Relationship between causes of disputes and negotiation outcome**

Causes of disputes	Negotiation Outcome			Total
	Successful	Partially successful	Unsuccessful	
Cost claim	1 (10%)	2 (20%)	7 (70%)	10 (33%)
Violation of condition	1 (17%)	0 (0%)	5 (83%)	6 (20%)
Conflict specification	2 (50%)	1 (25%)	1 (25%)	4 (13%)
Insurance claim	0 (0%)	0 (0%)	1 (100%)	1 (3%)
Retention claim	0 (0%)	0 (0%)	1 (100%)	1 (3%)
Variation claim	2 (67%)	0 (0%)	1 (33%)	3 (10%)
Progress payment	0 (0%)	0 (0%)	2 (100%)	2 (7%)
Final payment	1	0	2	3 (10%)
<b>Total</b>	<b>7</b>	<b>3</b>	<b>20</b>	<b>30 (100%)</b>

It is observed that the attempt of negotiation of insurance claim, and progress payments were utter fail with no successful outcome. Successful results (33%) were achieved for final payments.

Insurance companies generally attempt to reject any claim in the first instant and shown similar attitude in the negotiation too unless otherwise threat to take legal actions against them. However the all failure cases were found within the contractual frame or claimant's rights under the contract. For example, issuing a taking over certificate upon completion of a section has no relation with the compensation by the contractor to property damage of third parties. Similarly the unattended arithmetic correction was a professional negligence in the final payment as it could have been done easily before close out the accounts.

#### 4.4.3 Monetary value and negotiation outcome

Table 22: Relationship between monetary value involved and negotiation outcome

Monitory value (Mn)	Negotiation Outcome			Total
	Successful	Partially successful	Unsuccessful	
150-200	1 (100%)	0 (0%)	0 (0%)	1 (3%)
100-150	1 (50%)	0 (0%)	1 (50%)	2 (7%)
50-100	1 (33%)	1 (33%)	1 (34%)	3 (10%)
10-50	3 (60%)	1 (20%)	1 (20%)	5 (17%)
1-10	1 (6%)	1 (6%)	16 (88%)	18 (60%)
Up to 1	0 (0%)	0 (0%)	1 (100%)	1 (3%)
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

The analysis of the relationship between the monetary value of the negotiation and the outcome is presented in the Table 22. The monetary value of less than LKR 10 million shows higher unsuccessful rate (89%). The middle layers that cover the monetary value between LKR50 and LKR100 shows unsuccessful outcome of 25% however top layer between LKR100 and LKR200 shows rate of 33% as unsuccessful. Therefore the magnitude of the monetary value seem immaterial for the outcome and it is contrary to the general perception that small monetary value can be easily win through negotiation.

#### 4.4.4 Construction professional and negotiation outcome

It is shown in the Table 24 the professional background of the negotiators influenced the outcome to a success. The engineers and quantity surveyors were able bring the successful outcome than the other professionals such as accountant, architect or lawyer who participated in three different cases and who achieved 0% successful outcome in which the engineers and quantity surveyors were also participant as



negotiators. Therefore, any influence in negotiation outcomes by construction professional is not established in this study.

**Table 23: Relationship between construction professional and negotiation outcome**

Construction professional	Negotiation Outcome			Total
	Successful	Partially successful	Unsuccessful	
Accountant/Engineer/Quantity Surveyor (QS)	0 (0%)	0 (0%)	1 (100%)	1 (3%)
Engineer/QS	7 (26%)	3 (11%)	17 (63%)	27 (87%)
Architect/Engineer/QS	0 (0%)	0 (0%)	1 (100%)	1 (3%)
Engineer/ Lawyer/QS	0 (0%)	0 (0%)	1 (100%)	2 (7%)
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

#### 4.4.5 Time taken for negotiation and negotiation outcome

The trend of the outcome of the negotiation against negotiation period is shown in the Table 25. It revealed that aging of negotiation reduces rate of successful outcome and increases the unsuccessful outcome.



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**Table 24: Time taken for negotiation and negotiation outcome**

Time taken for negotiation	Negotiation outcome			Total
	Successful	Partially successful	Unsuccessful	
Up to 6 months	2 (67%)	0 (0%)	1 (33%)	3 (10%)
Up to 1 year	2 (40%)	0 (0%)	3 (60%)	5 (17%)
Up to 2 year	1 (33%)	1 (33%)	1 (34%)	3 (10%)
Up to 3 year	1 (17%)	1 (17%)	4 (66%)	6 (20%)
Up to 4 year	1 (100%)	0 (0%)	0 (0%)	1 (3%)
Up to 5 year	0 (0%)	1 (8%)	11 (92%)	12 (40%)
<b>Total</b>	<b>7 (23%)</b>	<b>3 (10%)</b>	<b>20 (67%)</b>	<b>30 (100%)</b>

#### 4.4.6 Gender involvement and negotiation outcome

The Table 26 presents the gender influence to the negotiation outcome. All successful outcome and partially successful cases (33%) was derived from the team comprising male only. The gender mix never makes any positive effects towards the successful outcome. No data was available to discuss about the ability of drive successful outcome by the team of female.

**Table 25: Gender involvement and negotiation outcome**

Gender	Negotiation Outcome			Total
	Successful	Partially successful	Unsuccessful	
Male only	7	3	18	<b>28</b>
Male and female	0	0	2	<b>2</b>
<b>Total</b>	<b>7</b>	<b>3</b>	<b>20</b>	<b>30</b>



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#### 4.5 Summary

This chapter has basically focused to present the collected data in appropriate summarized forms and to analysis the data to find causes to outcome in negotiations in the construction industry. The data collected through cases has been analyzed by qualitatively. From the analysis, it is found that some of the project characteristics have influenced the negotiation outcome. Those are type of the client, type of the Engineer, origin of the contractor, procurement method and the contract value. Other characteristics namely period duration, subsector of the project, condition of contracts are not found as influential to any negotiation outcome. On the other hand, causes of disputes, monitory value involved in negotiation and the time taken for negotiation are capable of altering negotiation outcome. The next chapter presents the research conclusion and recommendation based on the findings from the analysis and the discussion.

## **CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

The previous chapter presents the analysis of the data gathered from the industry. This chapter is the last chapter of this research and contains three sections. In the first section, the achievement of aim and objectives by this research is reviewed and draws a conclusion from the finding of this study. The second section presents set of recommendations focusing the remedial measure to counter failure rate of negotiation outcomes based on the synthesized findings and the chapter ends with a concluding summary in the third section.

### **5.2 Conclusions and Recommendations**

The primary focus of this research was designed to identify the means for improving effective use of negotiation and for mitigate the unsuccessful negotiation outcome in the Sri Lankan construction industry. In view of this there were four main objectives were established as given in the chapter one. The research approach consisting only document analyses were employed. Firstly literature was reviewed to have a better understanding of the negotiation process and the outcomes in the international dimensions. The next stage of research involved administering document analyses within the contractors who possess ICTAD gradation of C1 in the civil engineering construction in the Sri Lankan construction industry where contractual documents and the correspondence exchanged between the parties with respect to the claims and dispute negotiations were collected and studied. Data were gathered to identify negotiation process and outcome in the context of Sri Lankan construction industry. Thereafter the data analyzed using quantitative data analyses techniques. In the next stage the synthesized findings were compared with the findings from the literature review and recommendation has been made.

In the literature review, it is found that extensive preparations for negotiation and post negotiation analyses, selection of problem solving approach, better communication skills (verbal and none verbal), ability of separate people from the problems (emotional control), expertise in the subject matter of negotiation, establishment of

friendship and rapport with the other parties in negotiation gender mix in negotiation team are the key causes for successful outcome in a negotiation. On the other hand, the different culture of the negotiation parties, professional background of the negotiators, positional bargaining, intimidates the other parties, entrenched position of engineer and adversarial approach are caused unsuccessful outcome.

The first objective was to find out the causes for negotiation success and unsuccessful in the Sri Lankan Construction Industry. The finding has been given in the chapter Four (section 4.3.7). Accordingly, unethical behavior and unprofessional practice of the employer and engineer caused unsuccessful outcome extensively in negotiation. This behavior can be seen in the adversarial approach stipulated in the literature. It was mainly when appoint engineer for the contract from the in-house resources of the employer where 54% of the cases were suffered with unsuccessful outcome. On the other hand, when the parties exercise their power and authority in an impartial and unbiased manner, the successful outcome of the negotiation were achieved. It was achieved when the engineer from the independent organization or semi government organization



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The second objective was to investigate the relationship between project characteristics, professionals involved in negotiation, negotiation period monetary value involved in negotiation, gender involvement and negotiation outcome. The finding has been given in the chapter Four (Section 4.4.). Under the project characteristic, type of client, type of the engineer, origin of the contractor, contract value, contract period, governing condition of contract and funding agency were discussed to find any relationship with the negotiation outcome. Finding has been given in the chapter four (section 4.4.1). Findings reveals that type of the client, type of the Engineer, origin of the contractor, procurement method, funding agencies, form of contract and the contract value shows relationship with negotiation outcome. However, the contract period and subsection (type of project) has shown no relations with the negotiation outcome.

Therefore this research concludes that the successful outcome can be derived from some of the project characteristic: public client than private, involvement independent

engineer than in-house team of the employer, design and build procurement method than traditional method, EXIM bank of China than treasury and usage of FIDIC than SBDs.

Relationship between the professional background of the negotiators and the negotiation outcome were found in the literature review however no such relationship has been established in these research findings in the section 4.4.4 of chapter four. Similarly, effectiveness of gender mix in the negotiation team to bring the successful outcome as found in the literature review has not been established from the research findings of this study which has given in the chapter four (section 4.4.6).

Research findings for relationship between time taken for negotiation and negotiation outcome has been in the section 4.4.5 in the chapter four where the findings conclude that the successful outcome can be obtained by negotiation if the negotiation period is within the period up to maximum one year.

Relationship between the monetary value involvement and the negotiation outcome from the research finding has been depicted in the section 4.4.3 of the chapter four where it shows the higher success rate for the higher monetary value involved in negotiation which is contrary to the natural behavioral pattern of the human. Therefore this research concludes that relationship could not be established by this study.

Third and the final objective of the research were to identify the means of improving effective use of negotiation in the Sri Lankan Construction industry. The findings of the research in this regard have been shown in the chapter four. The research recommends the followings.

1. encourage to engage the contract administrator from independent or semi government organization in the construction industry.
2. limit the negotiation period up to maximum of one years for favorable outcome.
3. improve the ethical behavior and professional conduct of the construction professional through the professional bodies in Sri Lanka

### 5.3 Limitations

- Only 30 samples were taken into account of the analyses out of 37 because of the incompleteness of the data and reluctant of the respondents to disclose confidential nature of their data.
- Biased representation of the sample as a result of the data method of data collections through known contacts to the researcher in the industry.
- The data collection approach limited to only document analyses due to time constrains

### 5.4 Recommended further study

- Research should be conducted in the perspective of the engineer and employer respectively.
- Study should be extended to all the category of the contractor in Sri Lankan construction industry.
- Research should be covered all areas in the construction industry without limiting to civil engineering construction.



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## REFERENCES


- Axtell, R. E. (1991). *Gestures: do's and taboos of body language around the world*. New York: John Wiley & Sons.
- Baron, R. A. (1989). Personality and organizational conflict: Effects of Type A behavior and self-monitoring. *Organizational Behavior and Human Decision Processes*, 44, pp. 281-296.
- Benoiel, M. (2009). *Master Negotiators: Intelligent and Competency*.
- Binnendijk, H. (1987). *National negotiating styles*. Washington: U.S. Department of State.
- Brown, H. (1993). *ADR Principles and Practice*. London: Sweet and Maxwell
- DePaulo, B., & Friedman, H. (1998). *Non-verbal communication*. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.). *The Handbook of Social Psychology (4th ed.)*. New-York: McGraw-Hill.
- Dolan, J. P. (2010). Six steps for negotiation preparation. Retrieved from <http://ezinearticles.com/?Six-Steps-For-Negotiation-Preparation&id=413338>
- Donaldson, M. (1996). *Negotiations for Dummies*. New York, NY: Hungry Minds, Inc.
- Ertel, D. (2000). Turning negotiation into a corporate capability. *In Harvard Business Review on Negotiation and Conflict Resolution*, pp. 101-127. Boston: Harvard Business School Press.
- Fellow, R. & Liu, A. (1997). *Research Methods for Construction*. Oxford: Blackwell Science
- Fink, A. (2009). *How to conduct survey: a set-by-step guide (4 ed.)*: Sage Publication Inc.

- Fisher, R. & Ury, W. (1981). *Getting to Yes: Negotiating Agreement Without Giving In*. New York, USA: Penguin Books.
- Fisher, R., & Davis, W. (1987). Six basic interpersonal skills for a negotiator's repertoire. *Negotiation Journal*, vol. 4., pp: 117-122.
- Fisher, R., Ury, W. & Patton, B. (1991). *Getting to Yes: Negotiating agreement without giving*. (2nd ed.). New York: Penguin Group.
- Forsyth, P. (2009). *Negotiation Skills for Rookies*. Singapore, SGP: Marshall Cavendish.
- Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. Basic Books.
- Guauri, P. & Usunier, J. C. (2003). *International Business Negotiation*. (2nd ed.). UK: Elsevier Ltd.
- Gulliver, P. H. (1979). *Disputes and Negotiations: A cross-cultural perspective*. San Diego: Academic Press.
- Hall, E.T. and Hall, M.R. (1990). *Understanding cultural differences*. Yarmouth, Maine: Intercultural Press.
- Hall, J. (1984). *Nonverbal sex differences: Communication accuracy and expressive style*. Baltimore: John Hopkins University Press.
- Hall, J. (1987). On explaining gender differences: The case of nonverbal communication. In P. Shaver and C. Hendrick (Eds.), *Sex and gender: Review of personality and social psychology* (vol. 7, pp. 177-200). Newbury Park: Sage.
- Hammond, J. S. (1979). Characteristics of an effective negotiator. Harvard Business School Note #179-029.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Newbury Park, California: Sage.



- Johnson, H. M. (1962). *Sociology: a systematic introduction*. London: Routledge and Kegan Paul.
- Karrass, C. (1968). *A study of the relationship of negotiator skill and power as determinants of negotiation outcome*. Doctoral Dissertation, University of Southern California.
- Karrass, C. (1974). *Give and Take*. New York: Harper Collins.
- Kennedy, G. (2004) . *Essential Negotiation*. USA: Bloomberg Press.
- Kitzner, H. M. (1991). *Let's make a deal*. pp 42-43
- Kramer, H. (2001). *Game, Set, Match: Winning the Negotiation Game, A Step-by-Step to Getting what you want from any negotiation*. New York, NY: ALM Publishing.
- Lewicki, R., & Robinson, R. (1998). Ethical and unethical bargaining tactics: An empirical study. *Journal of Business Ethics*, 17, pp. 665-682.
- Lewicki, R., Litterer, J.A., Minton, J.W., & Saunders D.M., (1993). *Negotiation — Readings, exercises and cases*. (2nd ed.). Burr Ridge: Richard D. Irwin, Inc.
- Lewicki, R.J., Barry, B., Saunders, D.M. & John, M.W. (2003). *Negotiation*. (4th ed). McGraw-Hill/Irwin.
- Lewicki, R.J., Saunders, D. M., & Minton, J. W. (2000a). *Negotiation* (3rd Ed.). Singapore: McGraw-Hill International Editions.
- Lewicki, R.J., Saunders, D. M., & Minton, J. W. (2000b). *Negotiation: Readings, exercises and cases* (3rd Ed.). Singapore: McGraw-Hill International Editions.
- Lovin, L. S. & Robinson, D. T. (1992). *Gender and Conversational Dynamics in Gender, Interaction and Inequality*. New York: Pringer Verlag
- Lyons, C. (2007). *I Win, You Win*. GBR: A & C Black

- Maccoby, Emmons, E. & Carol Nagy Jacklin, C. N. (1974). *The Psychology of Sex Differences*.
- Maddux, R. (1988). *Successful Negotiation: Effective “Win-Win” Strategies and Tactics*. Los Altos, CA: Crisp Publications, Inc.
- Meadow, M. (1984). Towards another view of legal negotiation: The Structure of problem solving. *Legal Review*. pp. 829-30.
- Nierenberg, G. (1976). *The Complete Negotiator*. New York: Nierenberg & Zeif Publishers.
- Olekalns, M., Smith, P., & Walsh, T. (1996). The process of negotiation: Strategy and timing as predictors of outcomes. *Organizational Behavior and Human Decision Processes*, 68, pp: 68-77.
- Oliver, D. (2010). *Creating Success: How to Negotiate Effectively*. (3rd ed.). London, GBR: Kogan Page Ltd.
- Pruitt, D.G. (1981). *Negotiation*. New York: Free Press.
- Putnam, L, & Poole, M. (1987). *Conflict and negotiation*. In F. Jablin, L. Putnam, K. Roberts, & L. Porter (Eds.), *Handbook of organizational communication: An interdisciplinary perspective* (pp: 549-599). Newbury Park: Sage.
- Pye, L. (1982). *Chinese negotiating style*. Cambridge, Mass.: Oelgeschlager, Gunn, & Hain.
- Ren, Z., Shen, G. Q., Xue, X. L. & Hu, W. F. (2010). Lessons learned from principled negotiation in international construction projects. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*. Vol. 3(3).
- Robbins, P.S. (2005). *Organizational Behaviour*. (11th ed). India: Prentice Hall.

- Rosenthal, R., & DePaulo, B. (1979a). Sex differences in accommodation in nonverbal communication. In R. Rosenthal (Ed.), *Skill in nonverbal communication: Individual differences* (pp. 68-103). Cambridge: Oelgeschlager, Gunn, and Hain.
- Rosenthal, R., & DePaulo, B. (1979b). Sex differences in eavesdropping on nonverbal cues. *Journal of Personality and Social Psychology*, 37 (2), 273-285.
- Ross, G. H. (2005). *Trump Style Negotiation*. New Jersey: Wiley & Sons, Inc.
- Rubin, J. & Brown, B. (1975). *The Social Psychology of Bargaining and Negotiation*. New York: Academic Press.
- Salacuse, J. W. (1998). *Ten Ways that Culture Affects Negotiation Style: Negotiation Journal*. NY: Plnum Publishing Corporation
- Shell, G. (1999). *Bargaining for advantage: Negotiation strategies for reasonable people*. London: Penguin.
- Tan, W. (2002). *Practical Research Methods*. Singapore: Pearson Education Asia Pte Ltd.
-  [www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)  
 Electronic Theses & Dissertations
- Tannen, D. (1990). *You Just Don't Understand*. New York: William Morrow.
- Tannen, D. (1994). *Talking From 9 to 5*. New York: William Morrow.
- Thompson, L. (2001). *The Mind and Heart of the Negotiator* (2nd Ed.). Upper Saddle Rive: Prentice-Hall.
- Thompson, L. (2001). *The Heart and Mind of the Negotiator*. (2nd ed.). Prentice Hall Business Publishing.
- Thompson, L. (2008). *The truth about negotiations*. USA: Pearson Education, Inc.
- Tutzauer, F. (1992). The communication of offers in dyadic bargaining. In L. Putnam & M. Roloff (Eds.), *Communication and negotiation* (pp: 67-82). Newbury Park: Sage.

Walton, R. E., &McKersie, R. B. (1965). A behavioral theory of labor negotiations:  
An analysis of a social interaction system. New York: McGraw-Hill.



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