

**AN INVESTIGATION INTO THE CONFLICT
HANDLING STYLES AT PRE-CONTRACT STAGE OF
BUILDING CONSTRUCTION PROJECTS IN
SRI LANKA**

Galbokke Hevage Samanthi Piyanwada De Silva

(179157X)

Master of Science in Construction Law and Dispute Resolution

Department of Building Economics

University of Moratuwa

Sri Lanka

July 2021

**AN INVESTIGATION INTO THE CONFLICT
HANDLING STYLES AT PRE-CONTRACT STAGE OF
BUILDING CONSTRUCTION PROJECTS IN
SRI LANKA**

Galbokke Hevage Samanthi Piyanwada De Silva

(179157X)

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

Department of Building Economics

University of Moratuwa

Sri Lanka

July 2021

Declaration

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

Also, I hereby grant to University of Moratuwa the non-exclusive right to reproduce and distribute my thesis, in whole or in part in print, electronic or other medium. I retain the right to use this content in whole or part in future works such as articles or books.

.....

G.H.S.P. De Silva

.....

Date

The above candidate has carried out research for master's Dissertation under my supervision.

.....

Prof. (Mrs) Yasangika Sandanayake

.....

Date

Dissertation Supervisor

Abstract

Sri Lankan construction projects suffer from frequent conflicts between the design team professionals during the pre-contract stage of the projects as it claims a high diversity of multidisciplinary involvement. These different conflicts result in both positive and negative influence on the project. To handle these different types of conflicts, professionals use different styles during the pre-contract stage of building construction projects in Sri Lanka. Hence, the aim of this study was set to investigate the conflict-handling styles that can be used to minimize the conflicts during the pre-contract stage of building construction projects in Sri Lanka.

Study on the existence of different types of conflicts and their handling styles were derived through a quantitative approach using a questionnaire survey designed incorporating Rahim's Organisational Conflict Inventory-II (ROCI-II) distributed among 42 number of professionals (Engineers, Project Managers, Architects, Quantity Surveyors, Cost Managers and Adjudicators) engaged in Sri Lankan building construction projects during the pre-contract stage. Collected data were coded and analysed incorporating descriptive statistics with mean, standard deviation, frequency, and percentage counts through Likert Scale analysis. The scope of the study was limited to the pre-contract stage of building construction projects.

According to research findings, it was revealed that task conflicts occur very often and process conflicts occur often during pre-contract stage. Further, relationship conflicts and status conflicts found to be rare during the pre-contract stage between the design team professionals. The findings also indicated that to handle these four types of conflicts with their supervisors, peers and subordinates, the majority of professionals use the integrating style and obliging style, and they use competing, avoiding and compromising styles as final options to handle conflicts with their supervisors, peers and subordinates, respectively.

The study finally revealed the different styles that the professional use to handle different types of conflicts with their supervisors, peers and subordinates during the pre-contract stage of building construction projects in Sri Lanka. The study would be helpful for the industry practitioners engaged in the pre-contract stage of building construction projects to identify their personnel style of handling conflicts and the outcome of using each style for different conflict types with their supervisors, peers and subordinates.

Keywords: Conflict-handling Styles; Conflicts with Peers; Conflicts with Subordinates; Conflicts with Supervisor, Construction Industry; Pre-contract Stage, Types of Conflicts.

Dedication

To the person who wanted to see, who I am today, Late Mr. D.C. De Silva!

Acknowledgement

I would like to express my sincere appreciation to my supervisor Prof. (Mrs.) Yasangika Sandanayake for the guidance, assistance, criticism, and suggestions on this study.

Secondly, I would like to pay my gratitude to the Head of the Department of Building Economics, and all other staff members of Department of Building Economics for their immense assistance and advice provided during the research period and throughout my academic career. Furthermore, I pay my heartiest gratitude to all non-academic staff members of the Department of Building Economics for the valuable help given.

Special thanks go to all the industry practitioners who gave me immense support and corporation to complete a successful data collection by sharing their valuable knowledge and experiences with me.

Heartiest thanks to my batch mates of the post graduate programme and to those who have contributed assistance and advise in the study either directly or indirectly, yet their names not cited here, they deserve my greatest gratitude.

To SLIIT, for facilitating me and encouraging me to achieve my goals and finally, yet importantly, I would like to thank my family members who have given a lot of encouragement and motivation to complete this study successfully.

Table of Contents

Declaration	i
Abstract	ii
Dedication	iii
Acknowledgement	iv
Table of Contents	v
List of Tables	viii
List of Figures	x
List of Abbreviations	xii
List of Appendices	xiii
1.0 INTRODUCTION TO THE RESEARCH	1
1.1 Background	1
1.2 Problem Statement	4
1.3 Research Aim and Objectives	6
1.4 Research Methodology	6
1.5 Scope and Limitation	7
1.6 Chapter Breakdown.....	8
1.7 Chapter Summary	9
2.0 LITERATURE REVIEW	10
2.1 Introduction to the Chapter	10
2.2 The Concept of Conflict.....	10
2.3 Classification of Conflicts.....	11
2.2.2 Relationship based conflicts.....	14
2.3.3 Process-based conflicts	14
2.3.4 Status based conflicts	15
2.4 Conflicts in Construction Industry	16
2.5 Causes of Conflicts in Construction Projects.....	17
2.6 Effects of conflicts and their impacts on pre-contract stage of building construction projects	19
2.6.1 Positive effects of conflicts	21
2.6.2 Negative effects of conflicts.....	22
2.7 Managing Conflict through Conflict-handling Styles.....	23
2.8 Instruments established to study the individual behavioural patterns against conflict-handling styles	27
2.9 Impact of Different Conflict-handling Styles on Resolving Construction Conflicts	29
2.9.1 Impact of adopting integrating style.....	29

2.9.2 Impact of adopting the dominating style.....	30
2.9.3 Impact of adopting the compromising style.....	31
2.9.4 Impact of adopting the obliging style.....	32
2.9.5 Impact of adopting avoiding style.....	32
2.10 Chapter Summary	33
3.0 RESEARCH METHODOLOGY.....	32
3.1 Introduction.....	32
3.2 Research Process.....	32
3.3 Background Study.....	33
3.4 Establish the Research Problem.....	33
3.5 Literature Review.....	33
3.6 Research Design.....	34
3.7 Research Approach and Technique.....	35
3.7.1 Data collection instrument	35
3.7.2 Research Sample and Participants.....	36
3.7.3 Data collection and analysis process.....	36
3.8 Write-up	37
3.9 Chapter Summary	38
4.0 RESEARCH FINDINGS AND DISCUSSION.....	39
4.1 Introduction.....	39
4.2 Data collection	39
4.3 Background Information of the Respondents	40
4.3.1 Classification of respondents by profession and the years of experience in the construction industry	40
4.3.2 Classification of respondents by profession and the years of experience in the pre-contract stage in construction industry	41
4.3.3 The setup of the organization	42
4.3.4 Experience of having conflicts and resolving with Supervisor/Peers and Subordinates	42
4.4 Handling Disagreements or Conflicts with Supervisors, Peers and Subordinates.....	43
4.5 Frequency of the occurrence of types of conflicts during the pre-contract stage of building construction projects.....	64
4.6 Conflict-handling Styles Used to Resolve the Different Types of Conflicts with Supervisor	65
4.6.1 Task Conflicts	65
4.6.2 Relationship conflicts.....	66

4.6.3 Process conflicts	67
4.6.4 Status conflicts with the supervisor.....	67
4.7 Conflict-handling styles used to resolve the types of conflicts with Peers...	68
4.7.1 Task conflict.....	68
4.7.2 Relationship conflicts	69
4.7.3 Process conflicts	70
4.7.4 Status conflicts with peers.....	71
4.8 Conflict-handling Styles Used to Resolve the Types of Conflicts with Subordinates.....	72
4.8.1 Task conflict.....	72
4.8.2 Relationship conflicts	73
4.8.3 Process conflicts	73
4.8.4 Status conflicts	74
4.7 Discussion on Findings	76
4.7.1 Reliability of Collected data (Cronbach’s alpha).....	76
4.7.2 Overview of conflicts in pre-contract stage of building construction projects in Sri Lanka	76
4.7.3 Overview of usage of conflict-handling styles to handle different types of conflicts during the pre-contract stage of building construction projects in Sri Lanka. 78	
4.7.4 Relationship between conflict-handling styles and types of conflicts with Supervisor/Peers/Subordinates.....	78
4.8 Chapter Summary	80
5.0 CONCLUSIONS AND RECOMMENDATIONS	82
5.1 Introduction.....	82
5.2 Conclusions.....	82
5.3 Recommendation	85
5.4 Further Research Area	85
REFERENCES.....	87
APPENDICES	98

List of Tables

Table 1. 1: Dissertation Chapter Breakdown	8
Table 2. 1: Classifications of conflicts	12
Table 2. 2 : A Summary of Conflict-handling Styles	27
Table 4.1: Questionnaire Distribution and Response Rate	40
Table 4.2: Classification of respondents against the years of experience in construction industry.....	40
Table 4.3: Experience of having conflicts and resolving with supervisor/peers/ subordinates	42
Table 4.4: Average agreement for phrase 1	44
Table 4.5: Average agreement for phrase 2	44
Table 4.6: Average agreement for phrase 3	45
Table 4. 7 : Average agreement for phrase 4	46
Table 4.8 : Average agreement for phrase 5	46
Table 4.9 : Average agreement for phrase 6	47
Table 4.10 : Average agreement for phrase 7	48
Table 4.11 : Average agreement for phrase 8	48
Table 4.12 : Average agreement for phrase 9	49
Table 4.13 : Average agreement for phrase 10	50
Table 4.14: Average agreement for phrase 11	50
Table 4.15: Average agreement for phrase12	51
Table 4.16 : Average agreement for phrase13	52
Table 4.17 : Average agreement for phrase14	52
Table 4.18: Average agreement for phrase15	53
Table 4.19 : Average agreement for phrase16	54
Table 4.20 : Average agreement for phrase 17	54
Table 4.21 : Average agreement for phrase18	55
Table 4.22 : Average agreement for phrase 19	56
Table 4.23 : Average agreement for phrase20	56
Table 4.24 : Average agreement for phrase 21	57
Table 4.25 : Average agreement for phrase22	58
Table 4.26 : Average agreement for phrase23	58
Table 4.27 : Average agreement for phrase24	59
Table 4.28 : Average agreement for phrase25	60
Table 4.29: Average agreement for phrase 26	61
Table 4.30 : Average agreement for phrase 27	61
Table 4.31 : Average agreement for phrase28	62
Table 4.32: Average agreement for usage of ROCI-II phrases against conflict-handling styles.....	63

Table 4.33: Average of occurrence of different types of conflicts during pre-contract stage of Sri Lankan building projects	64
Table 4.34: Frequency of conflict-handling styles used to handle task conflicts	65
Table 4.35: Frequency of conflict-handling styles used to handle relationship conflicts	66
Table 4.36: Frequency of styles used to handle process conflicts	67
Table 4.37: Frequency of conflict-handling styles used to handle status conflicts....	68
Table 4.38: Frequency of conflict-handling styles used to handle relationship conflicts	69
Table 4.39: Frequency of conflict-handling styles used to handle relationship conflicts	70
Table 4.40 : Frequency of conflict-handling styles used to handle process conflicts	71
Table 4.41: Frequency of conflict-handling styles used to handle status conflicts....	71
Table 4.42: Frequency of conflict-handling styles used to handle task conflicts	72
Table 4.43: Frequency of conflict-handling styles used to handle relationship conflicts	73
Table 4. 44: Frequency of conflict-handling styles used to handle process conflicts	74
Table 4. 45: Frequency of styles used to handle process conflicts	75
Table 4.46: Usage of conflict-handling styles to handle different types of conflicts	75
Table 4.47: Frequency of usage of conflict-handling styles to handle different conflict types during the pre-contract stage of building construction projects in Sri Lanka...	80

List of Figures

Figure 3.1: Research Process	32
Figure 4.1: Classification of respondents against the years of experience in pre-contract stage	41
Figure 4.2: The setup of the organization	42
Figure 4.3: Findings for Phrase 1	43
Figure 4.4: Findings for Phrase 2	44
Figure 4.5: Findings for Phrase 3	45
Figure 4.6: Findings for Phrase 4	45
Figure 4.7: Findings for Phrase 5	46
Figure 4.8: Findings for Phrase 6	47
Figure 4.9: Findings for Phrase 7	47
Figure 4.10: Findings for Phrase 8	48
Figure 4.11: Findings for Phrase 9	49
Figure 4.12: Findings for Phrase 10	49
Figure 4.13: Findings for Phrase 11	50
Figure 4.14: Findings for Phrase 12	51
Figure 4.15: Findings for Phrase 13	51
Figure 4.16: Findings for Phrase 14	52
Figure 4.17: Findings for Phrase 15	53
Figure 4.18: Findings for Phrase 16	53
Figure 4.19: Findings for Phrase 17	54
Figure 4.20: Findings for Phrase 18	55
Figure 4.21: Findings for Phrase 19	55
Figure 4.22: Findings for Phrase 20	56
Figure 4.23: Findings for Phrase 21	57
Figure 4.24: Findings for Phrase 22	57
Figure 4.25: Findings for Phrase 23	58
Figure 4.26: Findings for Phrase 24	59
Figure 4.27: Findings for Phrase 25	60
Figure 4.28: Findings for Phrase 26	60
Figure 4.29: Findings for Phrase 27	61
Figure 4.30: Findings for Phrase 28	62
Figure 4.31: The occurrence of types of conflicts during the pre-contract stage of Sri Lankan building projects	64
Figure 4.32: Resolving Task Conflicts with supervisor	65
Figure 4.33: Resolving Relationship conflicts with supervisor	66
Figure 4.34: Resolving Process conflicts with supervisor	67
Figure 4.35: Resolving status conflicts with supervisor	68

Figure 4.36: Resolving Task conflict with peers	69
Figure 4.37: Resolving Relationship conflicts with peers	70
Figure 4.38: Resolving Process conflicts with peers	70
Figure 4.39: Resolving Status conflicts with peers.....	71
Figure 4.40: Resolving Task conflict with subordinates.....	72
Figure 4.41: Resolving Relationship conflicts with subordinates.....	73
Figure 4. 42: Resolving Process conflicts with subordinates.....	74
Figure 4.43: Resolving Status conflicts with subordinates	75

List of Abbreviations

AV	–	avoiding
CO	–	compromising
DO	–	dominating
IN	–	integrating
n	–	No. of respondents
OB	–	obliging
ROCI-II	–	Rahim's Organizational Conflict Inventory – II
SD	–	Standard Deviation
w.a.	–	weighted average

List of Appendices

Appendix 1: Rahim's Organizational Conflict Inventory -II.....	98
Appendix 2: Sample Questionnaire	102
Appendix 3: Behaviour of the majority of respondents in handling conflicts with their supervisors/peers/subordinates.....	109
Appendix 4: Internal Consistency of Form A, B & C of ROCI-II.....	110
Appendix 5: Summary of Average frequency of using conflict-handling styles by Professionals during pre-contract stage.	116
Appendix 6: Mean, Standard Deviation of conflict handling styles use to handle conflict types with supervisor, peers and subordinates during pre-contract stage...	117

CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION TO THE RESEARCH

1.1 Background

A conflict is a fundamental behaviour of human beings that has established and organized in diverse forms through an extensive period (Slabbert, 2004). It has become inevitable in the human lifestyle and has been developed as an element of social interaction where nobody can get escaped (Rahim, 1985). Hence, the term conflict can be defined as “the collaboration of interdependent people who maintain their positions at the opposite ends of a particular goal, aim and values by considering the other party as their opponent that interfere in achieving their objectives” (Alper, Tjosvold, & Law, 2000, p.626). The world has branded conflicts as negative and a harmful event whilst disregarding that it is a natural and universal phenomenon (Boonsathorn, 2007).

According to Jehn (2005), consciously or unconsciously, the individuals are subjected to conflicts in different ways creating either a positive or negative impact (Jehn, 2005). In an organizational context, different personnel with different values and situations may create tension through conflicts when they get interacted with each other (Silverthorne, 2005). Since the association of individuals, groups and organizational objectives are linked together, it may affect the performance of the organization significantly (Drolet & Morris, 2000).

Conflicts impact the routines of production and reduce the productivity as well as the satisfaction of the employees. However, it also contributes to the progress of the productivity and the organizational culture, as it enhances the quality of decision making, performance and the creativity of the products (Jehn, 2005). On the other hand, unaddressed conflicts, damage the working environment by lowering the moral, job satisfaction and increasing the tension between individuals (Hastings et. al, 2018). Hence, in the organizational context, recognizing the conflicts, acknowledging them, managing, and handling them in a proper manner bring benefits to the organization as well as the personals involved (Silverthorne, 2005).

Considering the unique nature of construction projects, conflicts appear as a common problem (Zhu et. al, 2020). In terms of a construction project, conflict is a mutual interaction of project stakeholders with different viewpoints on the project objectives (Wu et. al, 2017). It leaves project stakeholders with no way to avoid conflicts but to merge with conflicts and manage the projects. Hence conflict management has become a key aspect of construction project management (Zhang & Huo, 2015). There are many dynamics to construction conflicts. Identifying these dynamics and defining the relationships among them at an early stage may assist the project stakeholders to identify the roots of conflicts and take decisions to lessen the impact on the success of the project (Charkhakan & Heravi, 2019). Thus, the pre-contract stage is the most crucial stage of a construction project, where the fundamental and most important decisions are made. The success of the construction project greatly depends on the multidisciplinary professionals engaged in the pre-contract stage (Senaratne et. al, 2013). Every individual in a multidisciplinary team may experience clashes with other team members as they carry different viewpoints, goals, values, and interests. Therefore, it results in conflicts and creates tension among design team members during the pre-contract stage (Shawa et. al, 2018), which will eventually affect the end result of the construction project.

The three main sources of construction conflicts relate to people, process and product (Cheung & Yiu, 2006). Williamson (1979) believes that these conflicts have arisen due to behavioural issues, technical issues and contractual issues of the individuals, due to their uncertainty and low profile of experience (Williamson, 1979).

Mismanagement of conflicts could mislead the construction workforce and cause loss of opportunities (Brown, 1983). Therefore, it is vital to recognize the nature of construction conflicts that risen and the applicable methods to resolve them. However, it should not understate the importance of conflicts in construction projects (Brown, 1983). Engage in discussions about conflicts at their early stages may benefit the construction project in resolving them at an initial phase. It may assist the team to avoid uncomfortable and stressful disagreements (Gardiner & Simmons, 1992). Level of construction conflicts may get escalated as time passes since there is no exception

in the construction field when compared with the other industries. Thus, adopting a profound management style and handling the conflicts professionally is very much important to a construction project, since its success depends mostly on the hassle-free environment.

However, when reacting to such a situation, the management has to concentrate thoroughly on the conflict management styles that find the best solution (Ogunbayo, 2013). By using the best solution, the management could thrive the set goals and the objectives as planned at different stages of the construction project. In achieving the goals of the project, adopting time-tested concepts may improve the quality and the effectiveness of conflict resolution styles (Gorse, 2003). Many theoretical models have been introduced by researchers for dealing with interpersonal conflicts in history (Rahim & Magner, 1995). Most of the models established in conflict management have the basis that in fulfilling their duties in every performance of the people having at least some sort of concern on their selves as well as the products (Gorse, 2003).

Under certain conditions, resolving construction conflicts could be successful when they are based on the common relationships shared among parties and from the gained experience from the past projects (Cheung, Suen, & Lam, 2002). Ignorance of conflicts could lead to problems with serious impacts on the project as well as on the relationships that have maintained throughout the years (Augsburger, 1992). Hence, it affects the project progress significantly. Reaching for a solution at the right time could bring down the parties to their fullest satisfaction on the project without affecting the progress.

Among the methods of resolving conflicts, the successive way is to manage them proactively focusing on an early settlement as much as possible (Cheung, Suen, & Lam, 2002). Therefore, addressing the conflicts at the time it occurs, is vital to reduce conflicts within construction projects (Stipanowich, 1997).

1.2 Problem Statement

Managing conflicts effectively would assist in creating and maintaining positive relational outcomes (Kim, Yamaguchi, Kim, & Miyahara, 2015). In a study conducted to explore the consequence of inter-organisational conflicts on Chinese construction projects, it has proven that conflicts add value to construction projects with moderated conflict management strategies (Wu, Zhao, & Zuo, 2017). The way these conflicts being handled may impact positively or negatively on the success of the project (Tabassi et. al, 2019). Therefore, each conflict should be handled differently adopting a suitable conflict-handling style that maximizes the positive impact while evading the negative impacts on the success of the project. Comparing with other sectors, the construction industry has become a fertile ground for conflicts due to its adversarial nature. However, only a few research have been conducted on investigating the construction conflicts and on the conflict-handling styles identifying their impact on different aspects both in global and local construction contexts. In terms of the local context, conflicts and management styles in Sri Lankan commercial building sector (Gunarathna, Yang, & Fernando, 2018), Intragroup conflicts in the pre-contract stage of construction projects (Senaratne, Udawatta, & Gunasekara, 2013) can be highlighted. Considering the global construction context, impacts of conflicts on project performance in Chinese construction industry (Zhang & Huo, 2015), influence of conflict management styles on relationship quality, impact of conflicts on cross-functional project team innovation (Gou et. al 2019), impacts of conflicts on project team motivation in Nigerian construction industry (Ogunbayo, 2013), impacts of conflicts on construction project added values in Chinese construction industry (Guangdong, Zhao Jian, & Zuo, 2017), engineering construction industry in Britain (Gall, 2012), impacts of conflicts on project constrains (Irfaan et. al, 2019), conflict management styles in Thai American multinational companies (Boonsathorn, 2007), sources of conflict in South African construction industry (Balogun & Ansary, 2017), conflicting factors of South Korean construction projects (Acharya, Lee, & Im, 2006) can be identified.

In finalizing the design and other requirements of the project, the pre-contract stage requires the alliance of many different professionals. With the need of stakeholders to work in a team of individuals with different attitudes, customs and educational levels, construction projects become vulnerable to different types of conflicts. These conflicts are diverse in their characters. Considering the pre-contract stage of Sri Lankan construction projects, conflicts have become a common experience to all the stakeholders (Senaratne, Udawatta, & Gunasekara, 2013). Previous researchers conducted on Sri Lankan construction industry have identified three distinct types of intragroup conflicts as task conflict, process conflict and relationship conflict. There are few previous studies that focus on these three types of conflicts in a construction context.

Though several time-tested conflict management styles had been introduced and practiced over a period to overcome such situations, their practicality, applicability, and suitability in each project vary in the local context as they may cause consequences that affect the progress of the projects. Out of the research conducted on investigating construction conflicts, a gap is observed in examining the conflict handling styles that address different types of conflicts during the pre-contract stage of Sri Lankan building construction projects. Thus, a need exists for investigating the conflict-handling styles that can be used to minimize different types of conflicts in the pre-contract stage of building construction projects in Sri Lanka.

1.3 Research Aim and Objectives

This research aims to investigate the conflict-handling styles that can be used to minimize the conflicts during the pre-contract stage of building construction projects in Sri Lanka. Therefore, the objectives of this study are to:

- a) Review different types of conflicts and conflict-handling styles that can be used in the pre-contract stage of the construction industry.
- b) Investigate different types of conflicts that occur during the pre-contract stage of building construction projects in Sri Lanka.
- c) Examine the different conflict-handling styles that can be used to handle conflicts during the pre-contract stage of building construction projects in Sri Lanka
- d) Investigate the usage of conflict-handling styles to handle different conflict types during the pre-contract stage of building construction projects in Sri Lanka.

1.4 Research Methodology

At the beginning of this study, types of conflicts, causes of construction conflicts and conflict management styles were reviewed through a comprehensive literature survey. The research approach followed in this study was the quantitative approach. Collection of data was achieved through a quantitative method, i.e., questionnaire survey. Questions were designed to investigate the different conflict management styles available and their usage of application on different types of conflicts on handling construction conflicts during the pre-contract stage in building construction projects. In designing the questionnaire, Rahim's Organizational Conflict Inventory-II, a pre-defined questionnaire was incorporated to study the individual preference of conflict-handling styles. Further, the questionnaire was incorporated with questions to examine the frequency of occurrence of conflict types and usage of different conflict handling styles to handle different types of conflicts during pre-contract stage of building construction projects in Sri Lanka.

The questionnaire was distributed among the professionals (Project Managers, Engineers, Architects, and Quantity Surveyors) engaged in the pre-contract stage of selected ongoing construction projects and requested to respond based on a five-point Likert scale. The collected data were analyzed using statistical tools to find the usage of conflict handling styles for each type of conflict in the pre-contract stage of building construction projects in Sri Lanka.

1.5 Scope and Limitation

The scope of the study was limited to the pre-contract stage of building construction projects. The questionnaire was distributed among the design team consultants of construction projects. Only the professionals engaged in the pre-contract stage of building construction projects in Sri Lanka were invited to fill the questionnaire. Since the study examined the behaviour in dealing with conflicts with their supervisors, peers and subordinates, the professionals who possess experience with supervisors, peers, and subordinates not only in the setup of their organizations that they are currently employed but also their past experience of building construction projects were considered in this study.

1.6 Chapter Breakdown

Table 1.1 presents the chapter breakdown of this dissertation.

Table 1. 1: Dissertation Chapter Breakdown

Chapter	Section	Content
Chapter 1	Introduction to the Research	Provides an overview of the research concerning research problem, aim, objectives, research methodology and limitations. Furthermore, it gives a basic idea of the structure of the dissertation.
Chapter 2	Literature Review	This chapter explains the conflict management styles, types of conflicts and their causes and impacts of conflicts management styles on handling the construction conflicts referring literature.
Chapter 3	Research Methodology	This chapter discusses the research methodology used in investigating the research topic with research approach, research methods, data collection methods and data analysis methods.
Chapter 4	Research Findings and Discussion	This chapter contains the research findings of the questionnaire survey analysis and discussion of the findings.
Chapter 5	Conclusions and Recommendations	This chapter consists of the conclusions of research findings and proposes recommendations for industry practitioners and areas for further research.

1.7 Chapter Summary

The construction conflicts should not be disregarded or diminished. However, the conflicts should be managed to improve the effectiveness of the individuals, groups and organizations. Managing the conflicts at these levels may assist the organizational members to deal with the conflicts. When considering the construction industry, conflicts among the construction personals are unavoidable. Since construction requires the alliance of many disciplines to focus on a common goal and common objectives there may not be a single construction project which is free from conflicts. As a solution, professionals use different techniques to handle these conflicts with their supervisors, peers and subordinates and result constructive or destructive outcomes in terms of the project and individuals. Hence, this research will serve in finding usage of conflict handling styles that can be used to minimise different types of conflicts during the pre-contract stage of building construction projects in Sri Lanka.

CHAPTER 2

LITERATURE REVIEW

2.0 LITERATURE REVIEW

2.1 Introduction to the Chapter

Chapter 2 provides a comprehensive review of literature related to conflicts, conflict types, and conflict-handling styles and their existence in the construction industry. Further, this chapter reviews the evolution of the classifications of conflict types and conflict-handling styles introduced by different researchers throughout an extensive period. The chapter further discusses the negative and positive impacts of conflicts and their impact on the pre-contract stage of building construction projects and how they are been addressed by the construction professionals.

2.2 The Concept of Conflict

Conflict is an inseparable concept of every individual's life and impossible to avoid among human beings (Hussein, Al-Mamary, & Hassan, 2017). During the last several decades, many researchers have tried to define the term "conflict" using different parameters and variables. However, these efforts have made it difficult to establish an effective and exact definition for the conflict (Slabbert, 2004) resulting in a continuation of several perceptions and philosophies of the term "conflict". The conventional view of the conflict is based on the attitudes of group behaviour, which has identified as dysfunctional and believed to be avoided at any cost by the parties to the conflict. However, the modern approach to conflict has initiated deep discussions and guidelines on human relations, believing that it is a natural phenomenon, inevitable and at the same time, to be managed with due care.

From many precise perceptions established and developed so far, the newest model considers conflict as a concept that deals with the functionality of the person or the organization which contributes to its growth. It also considers as an obstruction or an impartiality of group or individual performance (Alper, Tjosvold, & Law, 2000).

2.3 Classification of Conflicts

Based on the interests, technical proficiency, environment and precedence of stakeholders, conflicts may vary in terms of its framework, political and statutory influence, economic, cultural and social background (Irfan, 2019). Considering their outcomes and processes, several researchers have introduced different classifications of conflicts. According to Gardinor and Simmons (1992), conflict could be natural and functional, and at the same time, it could be constructive or unnatural (Gardiner & Simmons, 1992). Further to the authors, it could also be dysfunctional, destructive and unproductive. Not only among individuals but conflicts can also be seen in groups having common goals (De Dreu, 2007). According to Axley (1996), conflicts among individuals and groups can classify into four types, interpersonal conflicts, intrapersonal conflicts, intra-group conflicts and intergroup conflicts (Axley, 1996). Adding more, Thakore (2013), has introduced the fifth type as inter-organizational conflicts.

Conflicts have also been classified as collaborative and competitive (De Dreu., 2007). Improving De Dreu's perception, Guangdong, ZhaoJian, and Zuo (2017), have refined two types of conflicts based on the uniformity of the teams' objectives and goals as (a) collaborative conflicts with common goals, and (b) competitive conflicts with objective contradiction (Guangdong, ZhaoJian , & Zuo, 2017). Amazon and Sapienza (1997) have classified conflicts as cognitive and affective. A cognitive conflict could arise due to different judgments and perspectives, based on tasks, carried out where affective conflict deals with the emotional side and could arise due to the incompatibilities and disputes of the individuals (Amason & Sapienza, 1997). Another classification for conflicts is functional and dysfunctional (Gorse, 2003). Functional conflicts create from challenges, disagreements and arguments that relate to tasks, roles, processes, and functions (Gorse, 2003). As conflicts originate from a number of sources such as tasks, values, goals, etc. literature of conflict have introduced different classifications of conflicts based on the sources, organizational levels, and groups to name a few. One of the classifications of construction conflicts, which have achieved intense attention among the researchers, is task conflicts, relationship conflicts,

process conflicts and status conflicts (Jehn & Mannix, 1997; Bendersky & Hays, 2012; Senarathna and Udawatta, 2013; Gunarathna, Yang, & Fernando, 2018).

According to Jehn and Mannix (2001), task conflict is the awareness of different ideas, views and opinions and disagreements about group tasks. Relationship conflict is the awareness of incompatibles and disagreements about interpersonal issues between members of the team, such as tension between the parties, exasperation of each other (Jehn & Mannix, 1997). The third type is process conflicts, which is the consciousness of disagreements among the group members about how the task accomplishments may advance (Jehn, 1997). More recently, Bendersky and Hays (2012) introduced the fourth type as the status conflict, the conflict due to their positions in groups' social hierarchy (Bendersky & Hays, 2012).

In summary, the classification of conflicts in terms of their outcome and processes are presented in Table 2.1.

Table 2. 1: Classifications of conflicts

Type	Variants	References
Classification 1	Collaborative conflicts	Guangdong, ZhaoJian, & Zuo (2017); De Dreu (2007)
	Competitive conflicts	
Classification 2	Interpersonal	Madalina (2016); Thakore (2013); Jehn & Mannix (2001); Amason & Sapienza, (1997); Axley (1996); Donohue & Kolt (1992)
	Intrapersonal	
	Intra- group	
	Inter- group conflicts	
Classification 3	Cognitive conflicts	Amason & Sapienza (1997)
	Affective conflicts	
Classification 4	Functional	Gorse (2003); Loosemore (1996)
	Dysfunctional conflict	
Classification 5	Task based	Zhang & Zhang (2012); Jehn, Greer, & Rupert, (2008); Rahim (2002); Simons & Peterson, (2000); Amason & Sapienza, (1997); Jehn (1997); Amazon (1996); Jehn (1995); West & Anderson (1996); Jehn & Mannix (1997); Cahn & Abigail (2007); Jehn (2005); Bendersky & Hays (2012)
	Relationship based	
	Process based	
	Status based conflicts	

According to the above table, the most commonly cited classification types, i.e., task-based, relationship-based, process-based and status-based conflicts are further explained in the following subsections.

2.3.1 Task-based conflict

A disagreement on a taken decision, due to diverse viewpoints, thoughts and individual perceptions among the group members or individuals is a task conflict (Rahim, 2002; Suifan, Alhyari, & Sweis, 2019). Based on the disagreements that create with the different perceptions and views on the way the task is being performed, the task conflict is categorized as cognitive or substantive conflicts. Distribution of resources, guidelines or procedures and different interpretations of the facts could be identified as causes of task conflicts (Zhang & Zhang, 2012). In a group, task conflicts can enhance teamwork and boost the art of thinking of its members with multiple viewpoints on the same problem and enhance the overall group performance (Suifan, Alhyari, & Sweis, 2019) with innovative opportunities found during the process (Jehn, 1995).

Task conflicts also encourage wise decision-making and strategic planning (Amason, 1996) and they are beneficial to improve the quality of decision-making as it facilitates the exchange of information among the group members whilst enhancing the effectiveness of the group (Zhang & Zhang, 2012; Kiernan, Ledwith, & Lynch, 2020). Task conflicts positively relate to the innovation and the eminence of the ideas (West & Anderson, 1996; Kiernan, Ledwith, & Lynch, 2020) and increase the constructive debate (Jehn, Greer, & Rupert, 2008).

Despite these positive outcomes, few negative results could hinder teamwork performance. According to Jehn (1995), task conflict can make a serious impact on team member satisfaction. Since the task conflicts are not directly related to affective reactions as predicted, as it could also increase the strength of the conflict which could slow down or shut the functionality of the team (Jehn , 1995).

2.2.2 Relationship based conflicts

Relationship conflicts are branded as a sequential type of conflict, which repeats very often with the interaction of conflicting parties (Jehn, 1995). Unlike task-based conflicts, relationship conflicts cannot resolve in a single attempt and most of the time, as occurs mostly due to disagreements on imperceptible matters or irrelevant resources (Zhang & Zhang, 2012). It can also be called emotional, affective or interpersonal conflicts, which creates tension and dis-likes due to incompatibility from one person to another (Jehn, 1995; Hong et al., 2017). It can also be related to the disagreements created or born by the incompatibilities of individuals on emotional tension (Suifan, Alhyari, & Sweis, 2019) and antagonism relating to their personalities, attitudes, prestige, power, respect, honesty (Zhang & Zhang, 2012).

It decreases and distracts the thinking and analyzing the ability to assess new information (Jehn, 1995). The individuals who get into such conflicts may feel destructive, doubtful, annoyed, or angry (Rahim, 2002). Hence, relationship conflict is thought to hinder the performance (Shawa, Lello, & Ntiyakunze, 2018) as it gives rise to distraction, negative emotions and destructive behaviour (Rahim, 2002). From the perspective of personal enmities and incompatibilities, relationship conflicts can be identified as the shadow of task conflicts. It also brings a negative effect to the decision-making process, group satisfaction and group commitment (Suifan, Alhyari, & Sweis, 2019). Unlike the other types of conflicts, relationship conflicts are more difficult to handle and to resolve as they link with very critical and serious issues (Amason & Sapienza, 1997). Therefore, it makes some of the issues irresolvable, harms the decision quality, and affects the commitment to the group (Roloff, Miller, & Malis, 2007).

2.3.3 Process-based conflicts

Process conflicts comprise complex interpersonal dynamics and they are unique in nature (Suifan et. a., 2019). Process conflicts identify as a negative outcome when it interrelates with group activities (Jehn, Greer, & Rupert, 2008). It contains

incompatible opinions on the way how the work should be done (Suifan, Alhyari, & Sweis, 2019).

Although there are many studies that confirm the statement of Jehn and his team (2008), few types of research have been proven that there could be slightly positive impacts on group outcomes based on the prevailing condition of the particular process conflict and the phases of the project team (Bao, 2014). Further, process conflicts may lead the group to experience low satisfaction (Suifan, Alhyari, & Sweis, 2019). It also results in members quitting the group or delays the group outcome by leading to inefficiency. It is also responsible for slowing down the productivity of the group. According to Gunarathna and team (2018) the key causes of process conflicts in the arena of construction projects are poor communication, poor adherence to rules and regulations, disagreements on methods of work, workload distribution and issues on scheduling the work. the team further highlights that these causes are mainly related to contractual documentation (Gunarathna, Yang, & Fernando, 2018).

Process conflicts inculcate negative emotions and negative attitudes towards the group as it creates arguments on delegation of work and assignment of roles among the group members (Jehn, 1997). With such results, the process conflict could end up becoming relationship conflicts (Bao, 2014). Further, Jehn (2005) highlights the similarity of relationship conflicts and process conflicts in resulting distraction of the resources of the members of the team or else distracting the attention of the task that they have been engaged by diminishing the capabilities among the group (Shawa, Lello, & Ntiyakunze, 2018) as a whole or the team spirit and commitment towards the group (Jehn, 2005).

2.3.4 Status based conflicts

Status conflicts are the attempts taken to secure or to promote an individual's own relative status (Bendersky & Hays, 2012). According to Gould (2003), the main reason for interpersonal conflicts is the disagreement of the amount of dominance exercised by individuals in social relations (Gould, 2003). Bendersky and Hays (2012) highlight, that in a group, individuals with high status make a greater influence. They have access

to information and resources which ultimately result high performance and positive appraisals than individuals who claim low status in group (Bendersky & Hays, 2012). In an organisational context, the hierarchical difference may assist the individuals of high level to have powerful and competitive negotiations suppressing those who claim low status in expressing their opinion and withhold sharing important information (Bao, 2014). There are four unique features, which differentiate status conflicts from other types. The first feature is, status conflicts are not encouraged by the quality of the interpersonal relationships, but it has an influence on the interest to achieve a higher status or to defend his or her own status position. It relates to status as a social resource rather than rationale. The second feature is that they are zero-sum. When the superior wins, the other party loses. On the other hand, it is lowering the other person's rank in the hierarchy. It is achieved by denigrating others or exaggerating oneself. The fourth feature is, it is teamwork or an alliance of actors on the same hierarchies (Bendersky & Hays, 2012).

Further, status conflicts are solely about one's "place" or the social position in the group, immaterial to the issues related to tasks, personnel values, or management procedures, that encourage further competitive behaviours (Bendersky & Hays, 2012).

2.4 Conflicts in Construction Industry

In a group, common goals among the members depending on one another may tend to create conflicts. By taking it into account, De Dreu (2007) has highlighted that most of the conflicts in the construction arena are collaborative conflicts and related to the behavioural pattern of the members within the organization.

The construction industry by its nature inherited a complex and competitive environment enriched with different views, different abilities, and different levels of knowledge of its participants with various disciplines (Mitropoulos & Howell, 2001). The engagement of different stakeholders with different agendas and expectations brings more conflict situations during the whole process and among themselves in a construction project (Irfaan et. al, 2019; Zhu et. al, 2020). Conflicts show divergent features in different phases of the project life cycle (Wu, et. al, 2017). The link between

the conflicts and the construction is very well bonded, inevitable and it can be expected in every project (Mitropoulos & Howell,2001). Hence, it is unavoidable and to be very much anticipated throughout the entire project (Gorse, 2003). Thus, improper management of conflicts could result in exceptional damage to the progress of the project and could also make a huge impact on the relationships developed between the contractual parties (Harmon,2003).

Conflicts occur throughout the process of a construction project (Gardiner & Simmons, 1992). Poor briefing and coordination, lack of experience to address different situations, struggling to arrive to an agreement , failure to act according to the situation and seek opinion of others , errors and omissions in designs , unable to address all the specifications in design (Maiti & Choi, 2018), failing to meet design requirements in construction (Udawatte & Senarathne, 2013), failure to obtain approvals of decisions formally (Karthieyan & Manikandan,2017), struggle in interpreting drawings to clients, less quality work, failure to comply with project duration and budget (Ofori, 2013; Ogunbayo, 2013), problems in the functionality of building, politics (Karthieyan & Manikandan, 2017), conflicts due to dishonesty, different levels of change control, by-passing the line of contact (Cheung, Yiu, & Yeung, 2006), different prominence on project, failure to manage different platforms of professional groups and the application and misapplication of standard documents and contracts are the key reasons for construction conflicts (Karthieyan & Manikandan, 2017).

2.5 Causes of Conflicts in Construction Projects

Thakore (2013) claims that there can be seven causes of conflicts that could be occurred in an organizational context. They are, maintaining different cultural values of team members, different attitudes which will end up with different goals for the members in a group, having different needs among team members which have not been met, team members have different needs that are not met which might end up being frustrated whilst worsening the conflict, various expectations of team members, limited resources and integrating different personalities (Thakore, 2013). He further highlights that some of the researchers have also considered the pressure and confusion

could drive the team members to conflicts by creating a stressful environment within the group and its' team members (Thakore, 2013).

In Korean construction projects, varying site conditions, obstructions of locals, disagreements in change order evaluation, design errors, workload and ambiguity in specifications are the main six factors that drive the project towards conflicts (Irfan et. al, 2019). According to Kezsbom (1992), different interpretation on priority and goals of team members, personality, communication, politics, a procedure in administration, resource allocations, planning and scheduling, leadership, unclear roles and responsibilities, costs, reward schemes, technical views and also unresolved conflicts are the general causes of conflicts in an organizational context (Kezsbom, 1992).

On the other hand, in construction projects, conflicts can be created due to the magnitude and length of the project, the complexity of the project, the comprehensiveness of contract documents, amendments done to conditions, lack of communication, lack of resources, financial constraints, design inadequacy, labour issues and force majeure events conflicts (Arditi & Thaveeporn, 2010). Hence, the construction industry is overwhelmed with the increasing adversarial atmosphere between the contractor and the client, which fails in creating a cooperative environment (Arditi & Thaveeporn, 2010).

Jaffar, Tharim, and Shuib (2010), in their study on factors of conflicts in the construction industry, draw attention to several common sources of conflicts identified by Kumaraswamy and Yogeswaran (1997) in relation to contractual matters such as variation, claims of extension of time, procedures of payments, standards of the technical specification, the readiness of information, management and administration, impractical expectations and determination of clients (Kumaraswamy and Yogeswaran,1997). Additionally, inserting special conditions to the contract, amendments to the original specifications and construction plans and the contradiction of information, which is also full of errors that may also create and develop construction disputes (Brown & Marriott, 1993). According to Harmon (2003), the primary cause for the destructive conflicts is the scarce resources such as time, finance, labour, material, or machinery and tools. Smith (1992) believes that this endemic

problem generates by the barriers in communication among the stakeholders (Smith, 1992).

Due to the unpredictable nature of the construction, it keeps on changing. Hence there could be barriers that could imbalance the relationships created (Langford, Kennedy, & Sommerville, 1992). Cheung and Yiu (2007) trust human behavioural pattern also could be a key factor that drives the construction team towards conflicts. Lack of negotiation skills and experience, a pile of issues on the table in a single trial, the backwardness of parties to go ahead with negotiations, the need for keeping the hold and control the proceedings, lack of interest in settling the dispute, unrealistic expectations, lack of leadership within the team, lack of trust between parties and also on the mediator could be identified as factors that could be classified under human behaviour (Cheung & Yiu, 2007). Considering nature and broader view, Williamson (1979), identifies three major causes of conflicts based on uncertainty and low experience which could be listed as behavioural issues, technical issues, and contractual issues (Williamson, 1979) .

2.6 Effects of conflicts and their impacts on pre-contract stage of building construction projects

Due to the rapid development of complex projects all over the world, the construction industry experiences a variety of inter-organizational conflicts (Tabassi, Abdullah, & Bryde, 2019). According to Lu, Zhou and Leung (2011), most of the research carried out identifying the impacts of conflicts handling styles, have only adopted the conventional theory by emphasizing only the negative impacts such as reduction of productivity and job dissatisfaction. However, recently the researchers have started to realize that there could also be positive effects on the parties to the conflict thinking out of the conventional frame (Lu, Zhou, Leung, 2011).

The influence of these conflicts on its team members may affect the construction project constructively as well as destructively (Tabassi et. al, 2019), depending on the way it is handled (Johari et. al, 2013). There are key factors on which it depends to be constructive or destructive. Management styles of front-runners, nature of conflict, the

insights of members of the team of conflict (Tabassi et. al, 2019). According to Safapour and team (2019), conflicts affect significantly to the project schedule performance in engineering, procurement, and construction phases. Further, they highlight that the conflicts between the designer entities substantially affect the performance schedule (Safapour, Kermanshachi, Nipa, & Kamalirad, 2019). During the project implementation phase, throughout the process of resource exchanging, knowledge sharing, and information communication, project participants experience various conflicts due to the complexity and multidisciplinary involvement (Wu, Zhao, & Zuo, 2017). Construction conflicts also increase project cost, undetermined team spirit and especially problems on the continuation of business relationships when it lacks the management of disputes (Cheung, Suen, & Lam, 2002).

Shin (2005) highlights those conflicts may also generate due to stakeholders involved in pre-contract activities. Lack of communication, distrust and misinterpretation of the contract, uncertainty of their roles and responsibilities and imbalance risk allocation in the contract document may lead to conflicts during the pre-contract stage. Among these causes, failure to understand their roles and responsibility in the design contract is a common issue between consultants. Delayed information, the awkward approach of the request of additional information, errors due to uncoordinated specifications and drawings, incompleteness of specifications and drawings are the other causes of conflicts (Shin, 2005). Further to the identified causes, Shawa and his team (2018) highlight set of factors that leads to task, relationship and process conflicts among design team members as follows.

Task conflicts: delay in preparation of drawings., failure to respond promptly., inadequate information for preparation of BOQ, delay in the approval of drawings, different meanings in specifications, design-related problems, insight of disagreement between members concerning the contents of their decision. **Relationship conflicts:** Conflict due to difference in personalities, Distrust, Personal tastes, Disagreement about values, Friction, dislike, annoyance and irritation among members. **Process conflicts:** Poor time management, disagreement about the assignment of duties,

changes of design without informing other members of the team (Shawa, Lello, & Ntiyakunze, 2018).

He further argues difference in goals and priorities, expression of differences in ideas and opinion, ambiguities in contract document/ terms of engagements, fault or omission in the contract document, and change of conditions/delayed payment of fees by the lead consultant to sub-consultants and Misinterpretation of the contract/ terms of engagements, unclear objectives of the team and Individual objectives which are in conflicts with objectives of the team (Shawa et. al, 2018) appear as the other factors that lead to conflicts among the design team.

Liu and Liu (2008) stated that the nature of the outcome of the conflict depends on the type of conflict as well as the style it is handled (Liu and Liu, 2008). However, Jehn and Bendersky (2003), clearly stated that managing the conflicts effectively could also turn the conflict into a positive outcome. Yet the degree of obtaining a positive effect of the adopted conflict management style may differ with the level of the conflict (Bendersky & Corinne, 2003).

2.6.1 Positive effects of conflicts

Positively, conflicts could help to bring up and address the problems. Even though many individuals and organizations consider conflicts as a disagreeable and destructive practice, the modern world has now realized that it can also bring the necessary corporate change and growth in the organization (Johari, Morni, Bohari, & Sahari, 2013). According to Hetepo and his team (2010), conflict could also improve the corporation among the employees and inspire their organizational innovativeness whilst improving the quality of the decision of resolving the conflicts (Hotepo, Asokere, Abdul-Azeez, & Ajemunigbohun, 2010).

If the conflicts resolve amicably, it can strengthen the relationships that one has with the other construction professionals (Loosemore, 1996). In construction, conflicts created from challenges, disagreements and influences relating to tasks, roles, processes, and functions are beneficial to the construction project as well as its success. As it involves detailed discussions about the issues, it helps to reveal problems,

decrease risks, mix ideas with others, come up with a choice of answers to those conflicts, and assess the alternative options to overcome them. It also develops the understanding of the problem and improves the solutions (Gorse, 2003).

2.6.2 Negative effects of conflicts

If a conflict is not managed properly in the organizational context as well as between the individuals, it may harm and reduce productivity (Irfan et. al, 2019). On the other hand, it would lower the morale of the individuals not only the parties to the conflict but also the individuals around them (Johari et. al, 2013). Further, construction conflicts diminish value for money of the project (Gunarathna, Yang, & Fernando, 2018).

A single conflict would create more causes to continue the conflict and create inappropriate behaviours. According to Friedman et. al (2000), it is declared that a conflict can be categorized as a negative phenomenon, the level of the conflict affects the level of the stress absorbed by the individual employees as they have different natures which will gear to create different social environments for themselves (Friendman, Tidd, & Tsai, 2000). The other destructive effects of conflicts are various obstructions to smooth working due to conflicts, weakening or diminishing the output. It also obstructs the decision-making process and forms opposing relationships within the workgroup. Hence, the overall outcome of negative effects of conflicts would be to reduce the commitment of the employees to the set organizational goals and the efficiency of such an organization (Kirchoff and Adams, 1982).

If a construction conflict is not addressed positively, it may cause many difficulties to the project manager and the other professionals in achieving the project goals (Awakul & Ogunlana, 2002). Further, failure in identifying the potential conflicts and failure in adopting the best constructive approaches may severely affect the time, cost, quality, and scope of the project. Conflicts escalate whenever the parties contact each other and end up with one-way communication. It creates groups within the stakeholders and delays the project by creating the path for another pile of problems (Stevens,

2002). The uniqueness and the complex nature of the construction projects make the contractual parties hold different interpretations of the construction project.

Balogun and Ansary (2017) highlight that maintaining different perspectives on the construction process by the parties bring the construction project to a point where it becomes a miracle to make the construction project free from conflicts (Balogun & Ansary, 2017). Moreover, conflicts damage the relationships between the project stakeholders. It results in delays in project, claims and disputes, which may eventually delay the completion. It also damages the interest of stakeholders with big investments and reduces the profit margins (Awakul & Ogunlana, 2002). Hence the ability to manage conflicts properly is one of the factors that decide the success of a construction project (Karthieyan & Manikandan, 2017).

2.7 Managing Conflict through Conflict-handling Styles

The choice of management style dictates the outcome of a conflict (Wang, Wu, Gu, & Hu, 2021). The art of managing conflicts consists of different techniques and ideas designed to lessen the negative effects and improve the positive effects for parties involved with it (Rahim & Magner, 1995). In the effort of finding the best way to manage conflicts, many researchers have introduced different techniques to control conflicts. Referring to the study on “Interpersonal conflict resolution” by Filley A.C. in 1975, Labovitz (1980) highlighted that considering the end result, all these techniques could be brought down under three general categories as win-lose, lose-lose and win-win methods (Labovitz, 1980).

Nevertheless, being realistic, it is impossible to find a single method of handling conflicts as individuals have their predominant style by their nature. Hence, synthesizing the research conducted by different researchers on conflict-handling styles generates several ways that could handle different situations of a conflict effectively by examining its nature, the expected outcome and the impacts (Johari, Morni, Bohari, & Sahari, 2013).

Corporation and Competition Model by Deutsch (1949): In the exploration of social conflicts, Deutsch (1949) introduced a two-style conflict-handling concept. These two styles can be identified as “Competition”, an effort taken to seek or endeavour what others are endeavouring to achieve at the same time and “Cooperation”, the act of working together to one end. Competition could be defined as the behaviour, which is oriented towards a goal and where the other competitor’s goal is secondary and rivalries the behaviour of a human being towards another human being who is worsening, has set as the primary goal. Cooperation can be identified as sharing the goal and it is the relationship that bonds the cooperating individuals together (Deutsch, 1949).

Knudson, Sommers and Golding Theory (1980): Knudson, Sommers and Golding (1980) have recommended another two-way model of conflict-handling in the spectrum of “avoiding” and “engaging”. However, this model has not achieved the spotlight in the theory of conflicts (Rahim, 1985).

Mary Follet Theory (1940): Follet (1940), introduced three main ways of handling conflict. They are “domination” (where one party wins over the other party), “compromise” (each party to the conflict may give up to a certain extent to maintain the relationships by proceeding with the activity which was interrupted by the conflict) and “integration” (both the parties may bring their differences to an open forum to evaluate and get a fair decision) (Follet, 2019).

Putnam and Wilson Theory (1982): Based on organizational communication, Putnam and Wilson (1982) introduced three instruments of relational conflict-handling as “non-confrontation” (avoiding disagreements and restrain from arguments by indirectly approaching conflict), “solution-orientation” (compromise a move towards the opposition whilst searching for innovation) and “control” (arguing with others determining positions and using nonverbal behaviour emphasizing demand) (Rahim, 1985).

Blake and Mouton Managerial Grid (1964): The Blake and Mouton Managerial Grid (1964) could be identified as one of the comprehensive and conceptual frameworks in managing conflicts. It introduces five classifications of interpersonal conflict-handling styles. It is about the different approaches of managing the organization depending on the high and low concern of the product and the people. This spectrum introduces five milestones of handling conflicts, and they can be listed as “withdrawing”, “soothing”, “forcing”, “problem-solving” and “compromising” (Blake and Mouton, 1964).

Thomas and Kilmann Two-dimensional Model (1976): Thomas and Kilmann (1976) introduced two dimensions to the model based on the desire to satisfy the own concerns of the parties to the conflict and also the desire of satisfying the other’s concerns. Two dimensions were “Assertiveness”: the response to the conflict based on the attempt of getting what required and “Cooperativeness”: based on the willingness in helping others to get what they required. Simply it is a model that has been designed with five modes on the degree of an attempt to satisfy own concerns against the degree of an attempt to satisfy another’s concerns. The five modes can be listed as “collaborating”, “compromising”, “competing”, “accommodating”, and “avoiding” (Womack, 1988).

Rahim Model (1985): Referring to the conceptualization theory of both Blake and Mouton (1964) and Thomas and Kilmann (1976), Rahim (1985) differentiated the conflict-handling styles using two-dimensional theory focusing the concern on our self against the concern on others. On one end of the spectrum, it explains the extreme where an individual makes an effort to get his/her concern satisfied and on the opposite end, it explains the extreme where an individual takes an effort to satisfy others’ concerns. The whole spectrum introduced five conflict-handling styles as “integrating”, “obliging”, “dominating”, “avoiding”, and “compromising” (Rahim, 1985)

Pruitt and Rubin Model (1986): Primarily referring to Blake and Mouton (1964, 1979) and other five-way methods of handling the conflicts, Pruitt and Rubin (1986) introduced five strategic options. They are:

- Contending - taking an effort to succeed by pursuing their own goals regardless of other goals,
- Problem-solving - the effort of acquiring own goals and also other's goals by an integrated solution or by compromising,
- Yielding - compromising an individual's own ambitions as a form of concession,
- Inaction - withdraw for the time being as a temporary solution, and
- Withdrawal - Get rid of the conflict permanently.

Under the strategy, Pruitt and Rubin (1986) classified the first three strategies as “coping strategies” as they are a reliable and clear effort of settling the dispute. Since the last two strategies of “Inaction” and “withdrawal” are completely different from the cooperative environment, they cannot be considered as coping strategies since it creates abandonment of the whole process of resolution.

Table 2.2 summarizes the conflict-handling styles introduced by leading researchers in the field. Further discussion on these styles is given below.

Table 2. 2 : A Summary of Conflict-handling Styles

Name/Reference of the Conflict-handling Style	Detailed Styles
Corporation and Competition Model by Deutsch (1949)	1. Corporation 2. Competition
Knudson, Sommers and Golding's Theory (1980)	1. Avoiding 2. Engaging
Mary Follet Theory (1940)	1. Domination 2. Compromise 3. Integration
Putnam and Wilson Theory (1982)	1. Non-confrontation 2. Solution-orientation 3. Control
Blake and Mouton Managerial Grid (1964)	1. Withdrawing 2. Soothing 3. Forcing 4. Problem-solving 5. Compromising
Thomas and Kilmann Two-dimensional Model (1976)	1. Collaborating 2. Compromising 3. Competing 4. Accommodating 5. Avoiding
Rahim Model (1985)	1. Integrating 2. Obliging 3. Dominating 4. Avoiding 5. Compromising
Pruitt and Rubin Model (1986)	1. Contending 2. Problem-solving 3. Yielding 4. Inaction 5. Withdrawal

2.8 Instruments established to study the individual behavioural patterns against conflict-handling styles

Analysis of conflict-handling styles of team members may provide more evidence about the suitability or efficiency of each style in terms of a specific situation (Rahim, 1985). To identify the behaviour of individuals and groups, several researchers have introduced conflict-handling instruments. Hall's Conflict management survey (Hall, 1969), Thomas and Kilmann's MODE: Management of Difference Exercise (Thomas and Kilmann, 1974), Putnam and Wilson's Organizational Communication Conflict Instrument (Putnam and Wilson, 1982), Ross and DeWine's Conflict Management

Message Style Instrument (Ross & DeWine, 1982), Rahim's Organizational Conflict Inventory (ROCI) (Rahim, 1983) and Kraybill's Kraybill Conflict Style Inventory hold significant places in conflict management.

Among these instruments, an instrument designed to measure the five conflict-handling styles introduced by Blake and Mouton (1964), Rahim's Organizational Conflict Inventory-II (ROCI-II) is one of the famous instruments. It distinguishes by individual tendency, maintaining a balance between the number of organizational conflicts and its effectiveness in managing conflicts. It offers a diagnostic method of conflict-handling style individuals would prefer in organizational activities and provides recommendations for intervening in organizational conflicts (Rahim, 1985).

The Rahim's Organizational Conflict Inventory-II measures the behaviour of five independent conflict-handling styles on interpersonal conflicts introduced by using 28 statements against a five-point Likert scale. The statements are categorized according to each conflict-handling style. In examining each individual's conflict-handling style, these 28 statements have assigned to the five styles introduced by Rahim. These five styles, "Integrating", "Obliging", "Dominating", "Avoiding" and "compromising" are assigned in the questionnaire with seven statements, six statements, five statements, six statements and four statements respectively (28 statements altogether). Rahim's survey instrument consists of three forms. Form A measures how the members of the organization handle the conflicts with their *supervisor* (professionals at the managerial level), Form B measures how the members in the organization handle the conflicts with their *Subordinates* (junior professionals assigned under the professionals) and Form C measures how the members in the organization handle the conflicts with their *Peers* (professionals at the same level).

The ROCI -II is one of the commonly used instruments to investigate conflict styles (Rahim & Magner, 1995). The standard questionnaire reveals the unique conflict-handling style that an individual would tend to use effortlessly in dealing with the conflicts on an organizational level. The nature of the organizational context is very much similar to the nature of the construction industry as each construction project operates as a temporary multi-organization. The established questionnaire is very

much reliable as it could gather trustworthy sources of data. Hence, this study used ROCI-II as the instrument for data collection.

2.9 Impact of Different Conflict-handling Styles on Resolving Construction Conflicts

It is a known truth that due to the complex nature and uncertainty of the construction industry, conflicts between contractors and employers cannot be avoided. Considering dispute resolution in the construction industry, conflict management styles recognise as a significant factor, which determines the quality of the relationship between the employer and contractor (Harmon, 2003). Failure to manage and control such conflicts may weaken the quality of their relationship whilst leading to further escalation of such (Lu & Wang, 2017).

Due to the complex nature, multidisciplinary involvement and lengthy duration of construction, conflicts have become inevitable in every construction project. Therefore, trying to resolve them would waste time, money and the energy of the parties to the conflict. Hence the best way of handling conflicts is to manage them effectively (Jaffar, Tharim, & Shuib, 2010; Zhu, Wang, Yu, & Yang, 2020). However, in the arena of construction, conflicts are branded as a destructive cause as it is not been managed to get positive effects (Senaratne, Udawatta, & Gunasekara, 2013). For effective management of construction conflicts, adopting conflict-handling styles and deal with the conflict would be the ideal solution. However, adopting an unsuitable style would bring negative consequences to the project as well as to the project team (Ogunbayo, 2013).

The following sub-sections explain conflict-handling styles and their impacts on resolving construction conflicts.

2.9.1 Impact of adopting integrating style

Integrating (IN) is one of the most successful conflict management styles as it inspires the openness, transparency and straightforwardness that can be seen between the parties to the conflict (Khanaki & Hassanzade, 2010). Integration makes the group

members deal with problems in a cooperative way (Hussein, Al-Mamary, & Hassan, 2017). Integrating enriches a win-win situation by assuring the parties to the conflict, meeting with each other and collaborating to find a solution and to make the parties move forward. It also helps to exchange views and find alternatives to the required solutions to get over the conflict (Ogunbayo, 2013).

Adopting the integrating style for construction conflicts could enhance clear and straight communication between the construction parties and it is a transparent method of exchanging ideas and solving the conflict with less impact on the parties (Ogunbayo, 2013). Since integrating honours not only oneself but also others it evidences the freedom to express the different views of the conflict, brainstorming and comprehensive evaluation and analysis of the conflicts to reach a solution. It brings satisfaction for all the parties to the conflict at the end of the day as it creates a win-win situation (Cheung, 1999). Cheung and Chuah (1999) highlight that by the integration style the work and all the members in the team are respected by each other and it is defined as a problem-solving option, which leads to negotiation (Cheung & Chuah, 1999). Adopting integrating style to resolve the conflicts can do less harm to the progress of the construction work (Khanaki and Hassanzadeh, 2010) and it may allow studying different circumstances, carefully and comprehensively as it fuels the caring of the relationships, mutual understanding and goodwill between the construction personnel (Leeds, 1992).

2.9.2 Impact of adopting the dominating style

Dominating style (DO) results in a win-lose situation that encourages the parties of the conflict to win at the cost of the other party (Cheung et. al, 1999). Employing the dominating style may minimize the blessings of solving the conflict. Since the style relies solely on the use of the position, authority, hostility, verbal dominance and insistence; it is identified as a direct but uncooperative style (Lee, 2008). According to Ogunbayo (2013), adopting the dominating style and resolving the conflict would result in the loser having hard feelings and react in another way. When it becomes common in project management, it may also impact the team effort negatively (Ogunbayo, 2013).

In the construction industry, it is also known as “authority”. It is a famous tool to manage conflicts in construction projects as all the stakeholders respect the hierarchy of the organization and the line of authority (Ogunbayo, 2013). Gunarathna and team (2018), highlights that on certain occasions, forcing is essential to avoid structural failures (Gunarathna, Yang, & Fernando, 2018). However, it also brings down the morale of the team, motivation to work and it will weaken the project performance. Further, on some occasions, parties to the conflict may weaken the project manager and dishonour the instructions given by him (Rahim, 2002).

2.9.3 Impact of adopting the compromising style

Compromising (CO) could be identified as a gain-pain approach where the parties must bargain to solve a pending problem which ultimately satisfies both parties with a clear resolution (Lee, 2008). Compromising improves the mutual understanding among team members resulting in strengthening commitment among teams (Hussein, Al-Mamary, & Hassan, 2017).

However, compromising brings satisfaction to the parties to the conflict to a certain extend. Hence, it is the best model to use where both parties need to win when the time is not enough to dig into the matter (Rahim, 2002). It also helps to maintain the relationships by losing something to gain something. On the other hand, it is identified as a method that solves the problem partially, as it always pressurizes the weaker party to absorb the burden (Ogunbayo, 2013).

According to Gunarathna and team (2018), in Sri Lankan commercial building sector, Compromising is the most adopted conflict handling style. It would never provide an opportunity to have everything that a party to a conflict wishes to have but an acceptable solution and a win-win solution for all the parties of a construction conflict (Gunarathna, Yang, & Fernando, 2018). It is the most cost-effective style as it avoids unnecessary cost and time increments without damaging the professional relationships between the parties to the conflict. Maintaining a good relationship would also benefit to have more projects in future. Hence, the parties may have to scarifice themselves today for a prosperous future and success to come.

2.9.4 Impact of adopting the obliging style

Obliging (OB) style relates with low concern for self and high concern for others (Hussein, Al-Mamary, & Hassan, 2017). Adopting this style would strengthen the relationship of the parties to the conflict after resolving the dispute. However, parties may not give real importance or devalue their goals to maintain the relationship, but it would produce a long-lasting solution (Ogunbayo, 2013). The result of this style would be a win-win situation where both parties get satisfied.

In the construction context, on many occasions, obliging brings a huge workload to the client. Therefore, it creates an imbalance in the work phase. It also brings victory to one party and loss to the other party. However, according to Gunarathna and team (2018), obliging is beneficial on certain occasions as obliging the correct procedure to follow is not a loss at all. On certain occasions, it brings benefits to the losing party by reducing their professional responsibility (Gunarathna, Yang, & Fernando, 2018).

2.9.5 Impact of adopting avoiding style

Avoiding (AV) is the situation where the parties to a conflict, disregard it whenever a conflict occurs. Further Ogunbayo (2013), states that adopting this style would work for a situation where the parties to the conflict do not see the value of the original goal or the relationship against the issue. Avoiding the issue temporarily would resurface it in future as it links with back-down, buck-passing or side-stepping situations and will become comparatively a big problem in future (Ogunbayo, 2013).

In the Sri Lankan context, to maintain a good professional relationship with the other party, especially with the employer the construction industry professionals use this style even disregarding the financial loss they gain from the conflict. On the other side, it is considered as an investment for future projects with the same employer as it creates an unspoken ethical liability towards the contractor to consider him in future projects. According to Gunarathna and team (2018), it is an occasion where the client loses his powers over the contractor (Gunarathna, Yang, & Fernando, 2018). However, considering labour-related conflicts, adopting the avoiding style may bring severe

impact on the progress of the project as it wastes considerable time and may lead to labour strikes and damage to the property. Adopting this style may keep conflicting parties on site as there is a lack of presence of the managerial level professionals in the picture. However, this technique brings peace for conflicts with insufficient information and for conflicts which yet not relevant to the project (Gunarathna, Yang, & Fernando, 2018).

2.10 Chapter Summary

This chapter provides the prevailing knowledge of construction conflicts and their handling styles. According to the literature findings, conflict is a natural and unavoidable phenomenon in every construction project. In building construction, there is a wide range of conflicts. in terms of their outcomes and processes, many scholars have introduced different classifications of conflicts based on workgroups and teams and to address these conflicts, different conflict-handling styles considering the nature of their consequences. These conflicts between the professionals engaged in pre-contract stage of building construction projects, have a significant influence on the performance of the project. Therefore, identifying different types of conflicts and their handling styles is very vital for the accomplishment of project goals.

During the last decade, the Sri Lankan construction industry gained an enormous demand and development with foreign and local investments, infrastructure, and industrial development. Accordingly, the complexity and the innovation has drawn building construction projects into more conflicts especially during pre-contract stage of building projects. Therefore, identification of these conflicts between the professionals and their handling styles in the pre-contract stage of building projects would be beneficial for a successful completion of building construction projects. However, it was found that there is a lack of research, conducted to study the conflict types, conflict-handling styles in pre-contract stage and the relationship between the type and the handling style in Sri Lankan building projects. Hence this chapter provides a background study of literature to facilitate the imperial investigation of research aim.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 RESEARCH METHODOLOGY

3.1 Introduction

Chapter 3 discusses the methodology designed to achieve the aim and objectives of this research. Further, it explains the research process, research approach, techniques employed to collect data and to analyse them to produce the research findings.

3.2 Research Process

This research process started with a background study to establish the research problem, aim and objectives. The research then moved to a literature review to acquire the prevailing knowledge and deep understanding of the impacts of conflict-handling styles in construction dispute resolution in the pre-contract stage. Subsequently, the empirical investigation was carried out to address the research question. The research process developed to facilitate the investigation is shown in Figure 3.1.



Figure 3.1 : Research Process

3.3 Background Study

The background study was carried out to review the theoretical facts on the types of conflicts and conflict-handling styles used in the pre-contract stage of building construction projects and to identify the research gap through journal articles, books, conference proceedings, reports, and official websites to name a few.

3.4 Establish the Research Problem

It is important to clearly identify the issues or problems that lead to a need for the study (Creswell, 2014). In a research, identification of the problem is an essential element that conveys the issues and context of the study (McGaghie, Bordage, & Shea, 2001). Even though there are several researches carried out in the international context on the conflict-handling styles and on different types of conflicts in the construction industry, there is a lack of research study carried out to reveal the usage of conflict-handling styles that can be used to handle different types of conflicts during the pre-contract stage of building construction projects in Sri Lanka. Therefore, this research serves to recognise of the usage of conflict-handling styles (integrating, obliging, dominating, avoiding, and compromising) that can be used to minimise different type of conflicts (task, relationship, process, and status) during the pre-contract stage of building construction projects in Sri Lanka.

3.5 Literature Review

To proceed with this research, a comprehensive literature survey was carried out to identify the phenomenon behind the conflict, the concept of conflict and different classifications of conflicts and conflict-handling styles introduced by different researchers. Further, the study was continued to examine the impacts of such conflicts under different categories based on their outcomes. The study was further extended to review the effects of conflict-handling styles on construction conflict-handling in the global context. The above literature was reviewed using journal articles, books, conference proceedings, reports, and official websites to name a few.

3.6 Research Design

Research designing is a critical activity and an art of planning the methods to be adopted in collecting the data and the techniques that to be used for the analysis in advance (Kothari, 1985). According to Saunders (2007), there are three key assumptions that distinguish the philosophies of research. **Ontology**: assumptions about the reality, **Epistemology**: assumptions about knowledge (Burrell and Morgan 1976) and **Axiology**: the role of values and ethics (Saunders, Lewis, Thornhill, & Bristow, 2019). Ontology has two broad categories. They are **Subjectivism**: knowledge by observations and by actions and **Objectivism**: the existing or predetermined knowledge (Burrell and Morgan,1976). The two extreme ends of epistemology are **positivism**: relates to the philosophical stance of the natural scientist and entails working with an observable social reality to produce law-like generalizations and **Interpretivism**: critical realism, developed as a critique of positivism but from a subjectivist perspective (Burrell and Morgan 1976). The two approaches of Axiology are Value free: research knowledge is not considered in the study and Value laden: researches knowledge and experience is considered in the study (Saunders, Lewis, Thornhill, & Bristow, 2019).

This research aims to investigate the conflict-handling styles that can be used to minimise the conflicts during the pre-contract stage of building construction projects in Sri Lanka. The types of conflicts and their preferred conflict-handling styles to handle conflicts in the pre-contract stage of building construction projects was investigated employing the professionals engaged in pre-contract stage of building construction projects. Hence, in terms of epistemology of this study, **Interpretivism** is used and in terms of ontology, the study contains **subjectivism** as the preferred conflict handling styles in dealing with pre-contract stage conflicts depend on the nature and the personnel preference of each professional. Since the research, knowledge is not considered to the study, and it is purely based on each individual's preference in handling the conflicts in the pre-contract stage of building construction projects **value-free approach** is employed in terms of Axiology.

3.7 Research Approach and Technique

With the knowledge extracted by the comprehensive literature survey on conflicts and conflict-handling styles, this research approach was continued further through a quantitative method to examine the immunity of the different types of conflicts in the construction industry against different conflict-handling styles established by Rahim (1985).

As the research techniques of this study, a quantitative approach was chosen and through a questionnaire survey, the data was collected. The study was conducted to identify the relationship between conflict types and their handling styles in the pre-contract stage of construction. Since the concept of conflict is a global phenomenon and it depends on individual preferences, a questionnaire was developed to identify the personnel preference of conflict-handling styles for each type of conflict.

3.7.1 Data collection instrument

The participants of this study were professionals who are engaging in the pre-contract stage of building construction projects in Sri Lanka. The questionnaire developed and distributed using survey monkey and all the instructions were given in writing. For assessing the conflict-handling style use for each type of conflict in the pre-contract stage, in the questionnaire, a five-point Likert scale was introduced where 1 = "strongly disagree" and 5 = "strongly agree".

The Rahim's Organizational Conflict Inventory-II (ROCI II) was used to gather quantitative data to achieve research objectives. The questionnaire incorporated Rahim's Organizational Inventory-II (ROCI-II), a time tested, pre-defined questionnaire consists of Forms A, B and C: how professionals handle conflicts with their Supervisor (A), Subordinates (B) and peers (C), respectively. Each form consists of a 28-item instrument measuring five independent factors representing a specific style of handling interpersonal conflict: integrating, avoiding, dominating, obliging, and compromising. Being professionals in an organizational setup, in this questionnaire, all 3 forms, i.e., Form A - with Supervisors, Form B - with Subordinates and Form C - with peers were incorporated. Ratings were made on a five-point Likert

scale (from not at all to very characteristic) and a mean score was computed for each factor, a higher value meaning a greater use of a given conflict resolution style.

3.7.2 Research Sample and Participants

The targeted group is the professionals engaged in the pre-contract stage of building construction projects. Each professional had to fill three forms of the ROCI II for supervisory level, peers and subordinates and elaborate how they deal with conflicts with each group.

Form A: handling conflicts with professionals at the managerial level (supervisors)

Form B: handling conflicts with junior professionals assigned under the professionals (subordinates)

Form C: handling conflicts with professionals at the same level (peers)

3.7.3 Data collection and analysis process

An online questionnaire survey was used as the data collection tool in this study. The selected professional organizations and professionals were computer literate persons and were contacted by emails. The questions were closed questions that were not complex where answers were able to convey via the internet. The survey was conducted using Survey monkey, which is one of the techniques that facilitate creating professional online surveys.

A cover letter containing the purpose and the extent of particular research was incorporated in the questionnaire for the participants to have an idea about the investigation that they were engaged in. The online questionnaire was published nearly 2 weeks and the data collection was carried out during that particular period. Thereafter, the data was downloaded and analysed to proceed further with the research topic.

To identify the usage of conflict handling styles that can be used to minimise different types of conflicts with supervisors, peers, and subordinates during the pre-contract stage of building construction projects in Sri Lanka, 5-point Likert's scale analysis was

used as the analysis technique. To find the usage of each conflict handling style to handle four types of conflicts (task, relationship, process and status) with supervisor, peers and subordinates, the collected data were analysed using following Likert scale incorporating below assumptions.

Likert Scale analysis

Likert scale is a technique of measurement of attitudes, description of concepts, values and substantive research basic instrument use to measure, construct and describe the societal and psychological phenomenon (Warmbrod, 2014).

	Value	Range		Value	Range
Strongly disagree	1	1.00 – 1.80	Never	1	1.00 – 1.80
disagree	2	1.81 – 2.60	Very rare	2	1.81 – 2.60
Moderate	3	2.61 – 3.40	Rare	3	2.61 – 3.40
Agree	4	3.41 – 4.20	Often	4	3.41 – 4.20
Strongly Agree	5	4.21 – 5.00	Very often	5	4.21 – 5.00

Assumptions made

- a. The distance between ‘strongly agree’ and ‘agree’ is the same as that between ‘agree’ and ‘moderate’.
- b. A consequence of the above would be that the distance between ‘agree’ and ‘strongly disagree’ is five times greater than that between ‘dis-agree’ and ‘strongly dis-agree’.

The internal consistency of collected data was analysed using Cronbach’s Alpha. Further, the collected data were analysed through Likert Scale incorporating mean, standard deviation (SD), frequency, and percentage counts to study the usage of conflict-handling styles to handle different types of conflicts with supervisor, peers and subordinates.

3.8 Write-up

The first three chapters (Introduction, Literature Synthesis and Research Methodology) were developed and accordingly the data was collected and analysed to

arrive at a conclusion. Finally, the dissertation was developed to present the data gathered from literature and empirical investigation.

3.9 Chapter Summary

The chapter discusses the methodology adopted to achieve the aim and objectives of this research. Under the nature of this research and research topic, the study was continued with the quantitative approach with a questionnaire survey using pre-developed ROCI-II guideline. A predefined questionnaire on conflict-handling styles was incorporated in the questionnaire to study the behaviour of respondents in dealing with conflicts in the pre-contract stage of building construction projects in Sri Lanka. A Likert scale was used along with a weighted average on data to analyse and conclude the research findings.

CHAPTER 4

***RESEARCH FINDINGS AND
DISCUSSION***

4.0 RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter discusses the data collection, analysis, and findings of the research. The data was collected through a questionnaire and carefully analysed with tables, percentages, and graphs to ensure the transparency and clearness of the data. This Chapter contains the analysis of the data collected by the questionnaire survey conducted among the professionals engage during the pre-contract stage of building construction projects in Sri Lanka.

The Aim of this study is to determine the conflict-handling styles that can be used minimise the different types of conflicts in the pre-contract stage of building construction projects in Sri Lanka. In addition, the conflicts handling styles that the professionals may use in the pre-contract stage to resolve the conflicts with their supervisor, subordinates and peers were examined using Rahim's Organizational Conflict Inventory-II (ROCI-II) Forms A, B and C, respectively.

The questionnaire comprised of two sections (Sections A and B) with a total of 11 questions that have developed to ensure the objectivity of the data (Refer Appendix 2). Section A has designed to obtain the demographical data including the general information of professionals such as the designation, experience in the construction industry and pre-contract stage, the experience in resolving conflicts during the pre-contract stage with their supervisors, subordinates and peers. Section B has designed to incorporate Rahim's Organizational conflict inventory – II with supervisors, subordinates, and peers (Forms A, B and C), to identify the occurrence of types of conflicts during the pre-contract stage. Further, the frequency of application of each conflict-handling style with different types of conflicts was examined.

4.2 Data collection

In total, 70 sets of questionnaires were distributed among the professionals such as Engineers, Project Managers, Architects and Quantity Surveyors. Out of the distributed questionnaires, a total of 67 questionnaires were received. However, out of

67 responses received, 25 questionnaires were found incomplete and only 42 questionnaires were used in this study. It represents 62.68% of the expected population. The total number of questionnaires, which have distributed, and the completeness is analysed in Table 4.1.

Table 4.1: Questionnaire Distribution and Response Rate

No. of Questionnaires distributed	No. of Responses received	No. of complete responses	Percentage of response	Percentage of complete response
70	67	42	95.7%	62.68%

The data collected is analysed and illustrated using diagrams, charts and tables in the below sections.

4.3 Background Information of the Respondents

This section presents the research findings of background data. The Respondents' designation, experience in the industry, experience in the pre-contract stage, experience on conflicts during the pre-contract stage and experience on conflicts with their supervisors, subordinates and peers were investigated and the findings are summarized below.

4.3.1 Classification of respondents by profession and the years of experience in the construction industry

From the collected data, the professionals are categorized against their experience in the construction industry in Table 4.2.

Table 4.2: Classification of respondents against the years of experience in construction industry

	Engineer	Architect	Quantity Surveyor	Project Manager	Cost-Manager	Adjudicator
< 5 Years	3					
5 - 10 Years	3	2	12		1	
11 - 15 years	3		5			
16 – 20 years	1		4	1		
> 20 Years	1		4		1	1

The results indicate that the majority of professionals (42.85%) are with 5-10 years of experience in the construction industry. The majority of the responded (59.25%) the questionnaire are Quantity Surveying professionals. Further, the data represents 28.56% of senior professionals with more than 15 years of experience in the construction field.

4.3.2 Classification of respondents by profession and the years of experience in the pre-contract stage in construction industry

From the collected data, the experience of professionals in pre-contract stage of the construction industry is graphically illustrated in Figure 4.1.

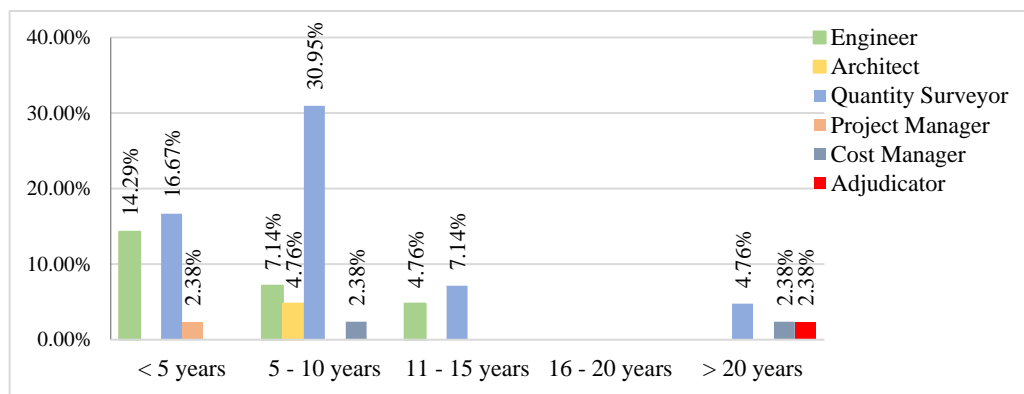


Figure 4.1: Classification of respondents against the years of experience in pre-contract stage

The results indicate that the majority of professionals (45.23%) are with 5-10 years of experience in the pre-contract stage. However, it represents 0% of respondents with 16-20 years of experience in the pre-contract stage. Further 9.52% of the population claims more than 20 years of experience in the pre-contract stage.

4.3.3 The setup of the organization

From the collected data, the organisational setup of the professionals in the pre-contract stage of the construction industry is graphically illustrated in Figure 4.2.

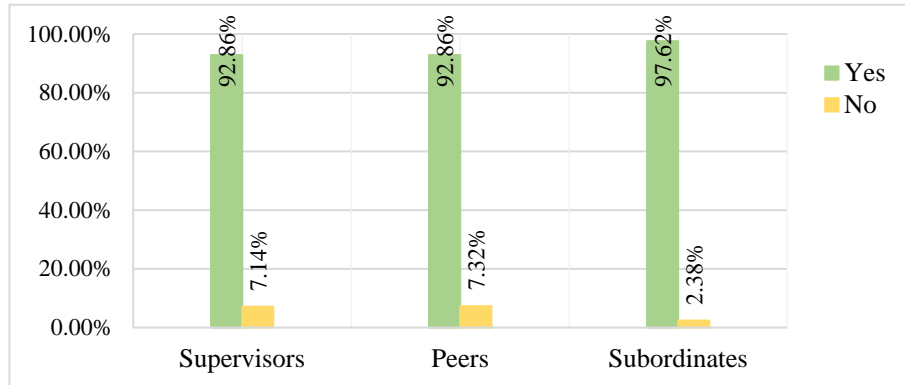


Figure 4.2: The setup of the organization

According to the respondents, the majority of them have supervisors, peers and subordinates (92.86%, 92.86% and 97.62%, respectively) in their working environments.

In this research the total number of 42 of professionals, who claimed complete responses were considered to proceed with this research.

4.3.4 Experience of having conflicts and resolving with Supervisor/Peers and Subordinates

From the collected data, the professionals are categorized against their experience on conflict resolving with their supervisor, peers and subordinates in Table 4.3.

Table 4.3: Experience of having conflicts and resolving with supervisor/peers/subordinates

	Experience of having conflicts	Experience in resolving conflicts
With Supervisors	80.95%	90.48%
With Peers	78.57%	90.48%
With Subordinates	88.10%	95.24%

According to Table 4.3, the majority of professionals claim the experience of having conflicts and also have experience in resolving them with their supervisors, peers and subordinates during the pre-contract stage of building construction projects in Sri Lanka. However, a small percentage of respondents confirm that they do not have experience of having conflicts with their supervisors (21.43%), peers (19.05%) and subordinates (11.90%), respectively. In terms of the experience of resolving conflicts, less than 5% of respondents lack experience in resolving conflicts with supervisors, peers and subordinates.

4.4 Handling Disagreements or Conflicts with Supervisors, Peers and Subordinates

In this research, Rahim’s Organization Inventory-II, Forms A, B, and C was used to investigate the approach that the professionals use to handle their disagreements or conflicts with their supervisor, peers and subordinates respectively. The inventory includes 28 phrases that examine how professionals handle disagreements and conflicts. A scoring key with five independent dimensions has made available along with the questionnaire to study their score and determine their general conflict-handling style. The below sections explain the analysis of data collected for 28 phrases given in ROCI-II.

Phrase 1: “I try to investigate an issue with my supervisor/peers/subordinates to find a solution acceptable to us”

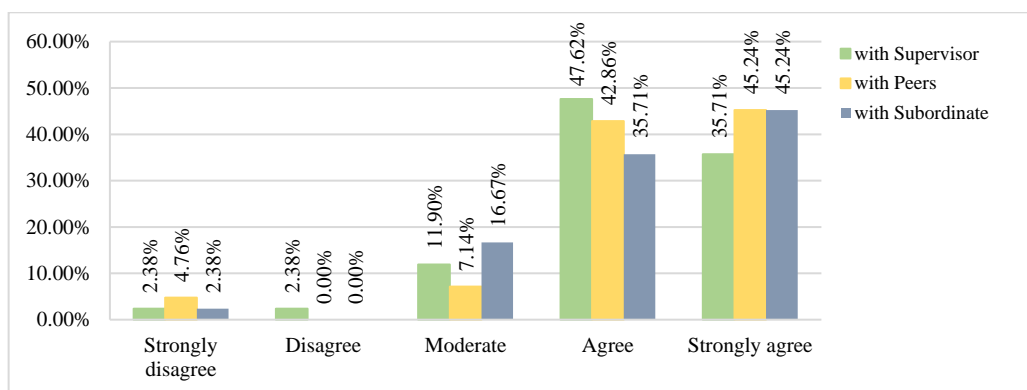


Figure 4.3: Findings for Phrase 1

Table 4.4: Average agreement for phrase 1

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to investigate an issue to find a solution acceptable to us	4.12	4.22	4.21

According to the scoring key of ROCI-II, the phrase represents the integrating style. The results illustrated in Figure 4.3 indicate that the majority of professionals agree that they investigate issues with their supervisors to find a solution acceptable to both the parties. However, in terms of their peers and subordinates, professionals strongly agree that they attempt to investigate and find solutions with their peers and subordinates respectively to arrive to a solution acceptable to both the parties.

Phrase 2: “I generally try to satisfy the needs of the supervisor/peers/ subordinates”

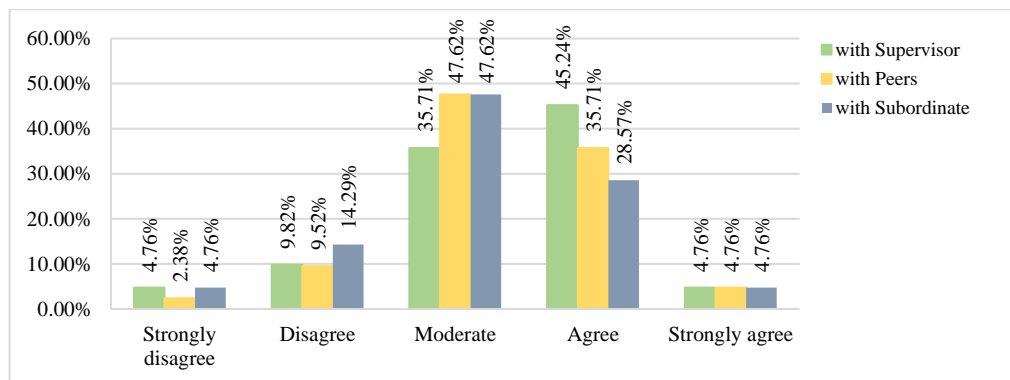


Figure 4.4: Findings for Phrase 2

Table 4.5: Average agreement for phrase 2

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I generally try to satisfy the needs of my supervisor/peers/subordinates	3.36	3.3	3.14

According to ROCI-II, the phrase represents the Obliging style. The majority of professionals agree that they try to satisfy the needs of their supervisor by Obliging supervisor’s needs but in terms of their peers and subordinates, they maintain a moderate view on satisfying the needs of their peers and subordinates.

Phrase 3: “I try to avoid being “put on the spot” and try to keep my conflict with my supervisor/peers/subordinates to myself”

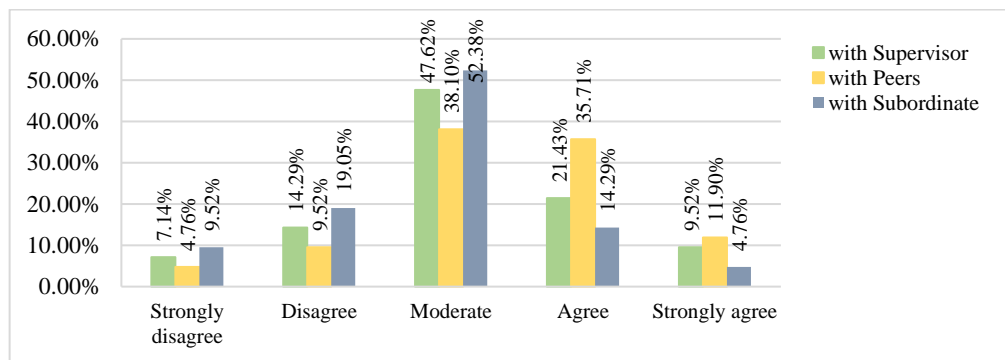


Figure 4.5: Findings for Phrase 3

Table 4.6: Average agreement for phrase 3

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I attempt to avoid being "put on the spot" and try to keep my conflict with my supervisor/peers/subordinates to myself	3.12	3.39	2.86

According to ROCI-II, the phrase represents the avoiding style. According to the respondents, the majority of professionals maintain a moderate view on “attempting not being on the spot” and keep conflicts with their supervisors, peers and subordinates respectively.

Phrase 4: I try to integrate my ideas with those of my supervisor/peers/subordinates to come up with a decision jointly

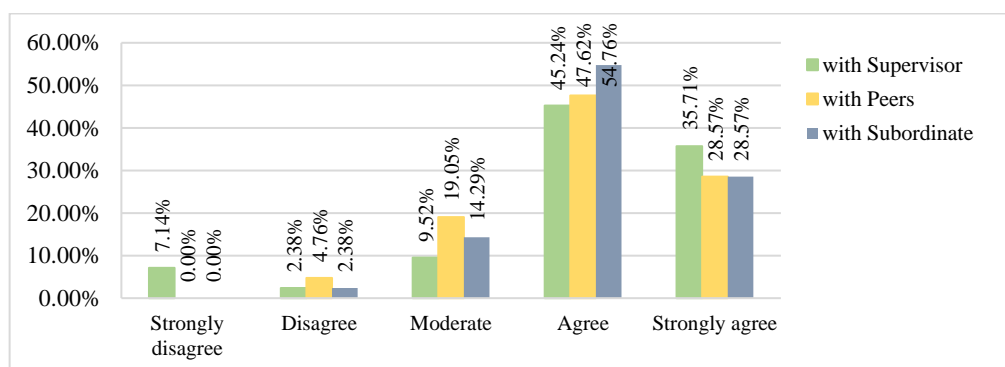


Figure 4.6: Findings for Phrase 4

Table 4. 7 : Average agreement for phrase 4

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to integrate my ideas with those of my supervisor/peers/subordinates	4	4	4.1

According to the respondents, the majority of professionals agree that they prefer to integrate ideas and work with their supervisors, peers and subordinates to arrive at a solution. This phrase represents the integrating style according to the ROCI-II.

Phrase 5: “I try to work with my supervisor/peers/subordinates to find solution to a problem that satisfies our expectations”

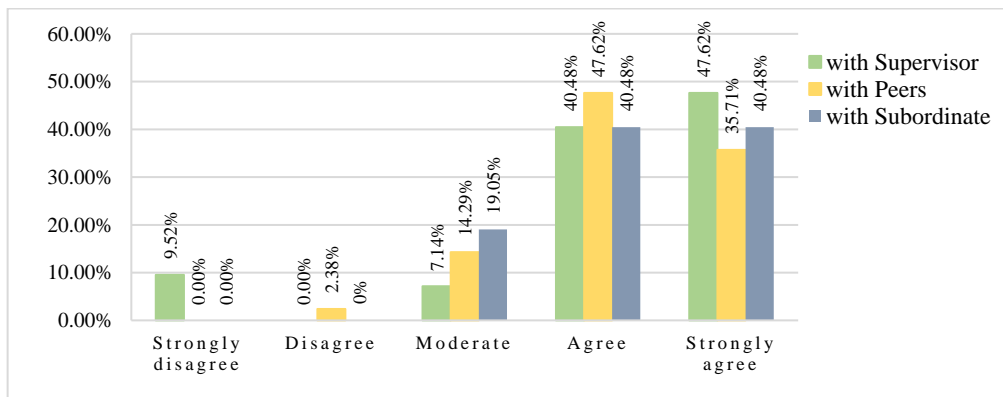


Figure 4.7: Findings for Phrase 5

Table 4.8 : Average agreement for phrase 5

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to work with my supervisor/peers/subordinates to find a solution to a problem that satisfies our expectations	4.26	4.17	4.21

According to the ROCI-II, the phrase represents the integrating style. According to professionals, the majority strongly agrees that they try to work with their supervisor and subordinates to find a solution to a problem that satisfy their expectations”, whilst they agree with the statement when it considers with peers.

Phrase 6: I usually avoid open discussion of my differences with my supervisor/peers/ subordinates”

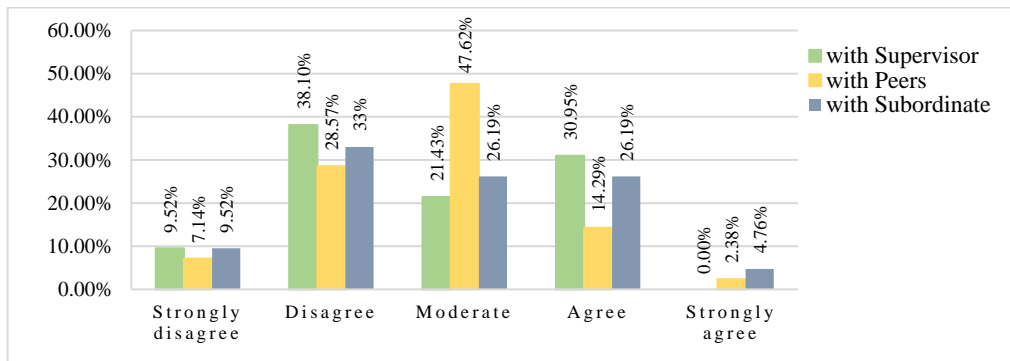


Figure 4.8: Findings for Phrase 6

Table 4.9 : Average agreement for phrase 6

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I usually avoid open discussion of my differences with my supervisor/peers/ subordinates	2.74	2.76	2.83

Considering the ROCI-II, the phrase represents the behaviour of “Avoiding style” by the professionals when dealing with disagreements. According to the respondents, the majority of professionals maintain a moderate view on avoiding open discussions of their differences with supervisors, peers and subordinates.

Phrase 7: “I try to find a middle course to resolve an impasse”

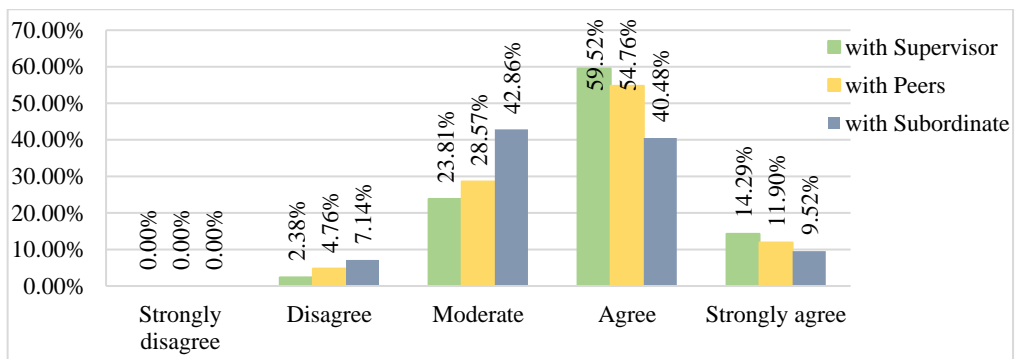


Figure 4.9: Findings for Phrase 7

Table 4.10 : Average agreement for phrase 7

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to find a middle course to resolve an impasse	3.86	3.73	3.52

According to ROCI-II, this phrase represents the compromising style. The majority of the respondents agree that them being trying to find a middle course to resolve conflicts with supervisors, peers and subordinates.

Phrase 8: “I use my influence to get my ideas accepted”

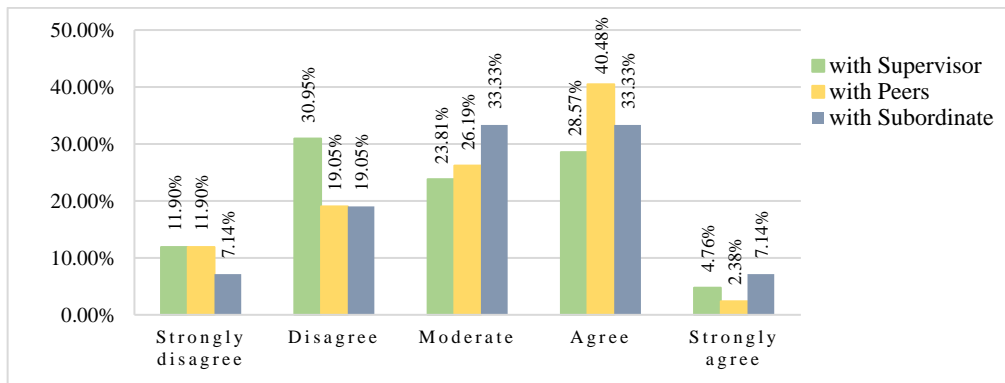


Figure 4.10: Findings for Phrase 8

Table 4.11 : Average agreement for phrase 8

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I use my influence to get my ideas accepted	2.83	3.0	3.14

According to the results, the majority of respondents maintain a moderate view on using their influence to get their ideas accepted when they trying to resolve conflict with their supervisors, peers, and subordinates. According to ROCI-II, the phrase represents the dominating style.

Phrase 9: “I use my authority to make a decision in my favour”

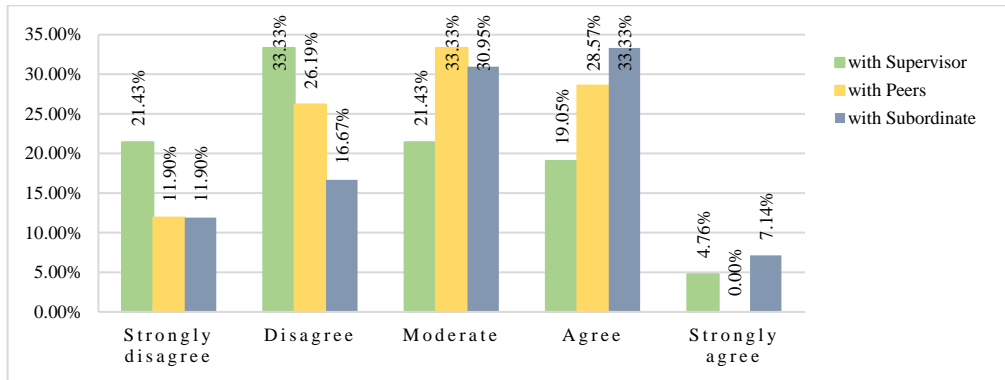


Figure 4.11: Findings for Phrase 9

Table 4.12 : Average agreement for phrase 9

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I use my authority to make a decision in my favor	2.52	2.78	3.07

According to the results, the professionals moderately use their authority to make a decision in their favour when handling disagreement or conflict with their supervisors, peers and subordinates. According to ROCI-II, the phrase represents the dominating style.

Phrase 10: “I usually accommodate the wishes of my supervisor/peers/ subordinates”

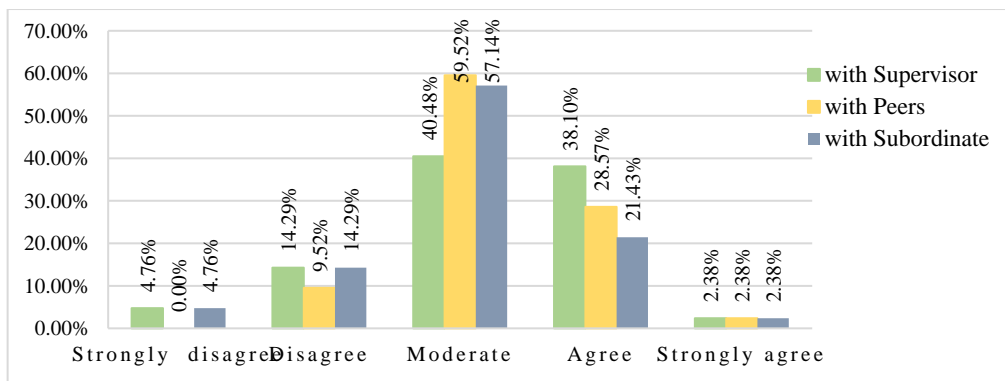


Figure 4.12: Findings for Phrase 10

Table 4.13 : Average agreement for phrase 10

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I usually accommodate the wishes of my supervisor/peers/subordinates	3.19	3.24	3.02

According to the respondents, the majority maintain a moderate view on Obliging to the wishes of their supervisor, peers and subordinates respectively. According to ROCI-II, the phrase represents the Obliging style.

Phrase 11: “I give in to the wishes of my supervisor/peers/subordinates”

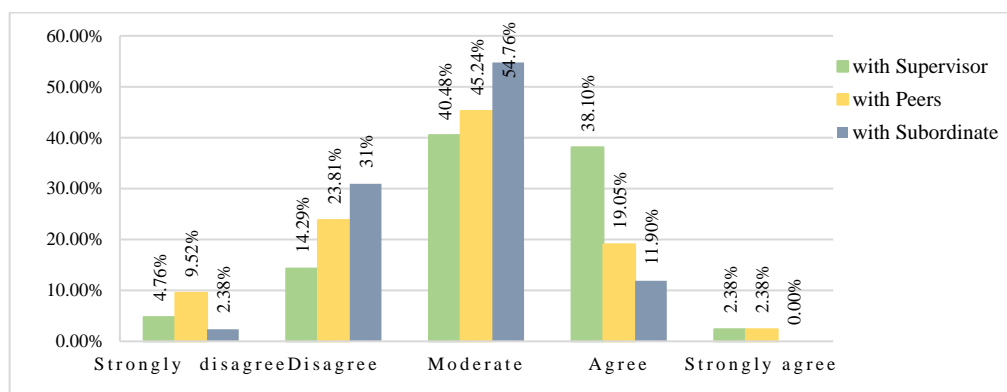


Figure 4.13: Findings for Phrase 11

Table 4.14: Average agreement for phrase 11

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I give in to the wishes of my supervisor/peers/subordinates	2.95	2.8	2.76

According to the ROCI-II, this phrase represents the Obliging style, the majority of professionals maintain a moderate view on obliging the wishes of their supervisor, peers and subordinates.

Phrase 12: “I exchange accurate information with the other party my Supervisor/Peers/Subordinates to solve a problem together”

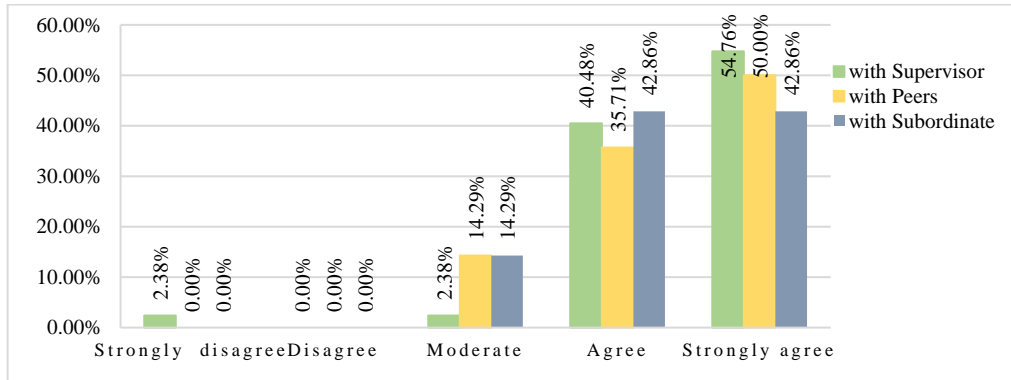


Figure 4.14: Findings for Phrase 12

Table 4.15: Average agreement for phrase 12

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I exchange accurate information with my supervisor/peers/ subordinates to solve a problem together	4.45	4.34	4.29

The data indicate, majority of respondents strongly agree with the statement that they exchange accurate information with their supervisors, peers, and subordinates respectively to solve a problem together. According to ROCI-II, the phrase represents the integrating style.

Phrase 13: “I usually allow concessions to my supervisor/peers/subordinates”

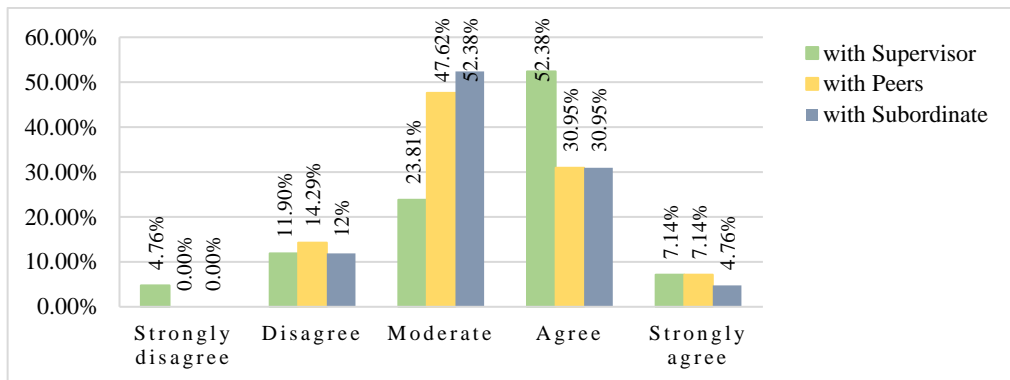


Figure 4.15: Findings for Phrase 13

Table 4.16 : Average agreement for phrase13

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I usually allow concessions to my supervisor/peers/subordinates	3.45	3.32	3.29

According to ROCI-II, the phrase represents Obliging style. The data has clearly indicated that the professionals agree on allowing concessions to their supervisor and agree on allowing concessions to their peers and subordinates respectively.

Phrase 14: “I usually propose a middle ground for breaking deadlocks”

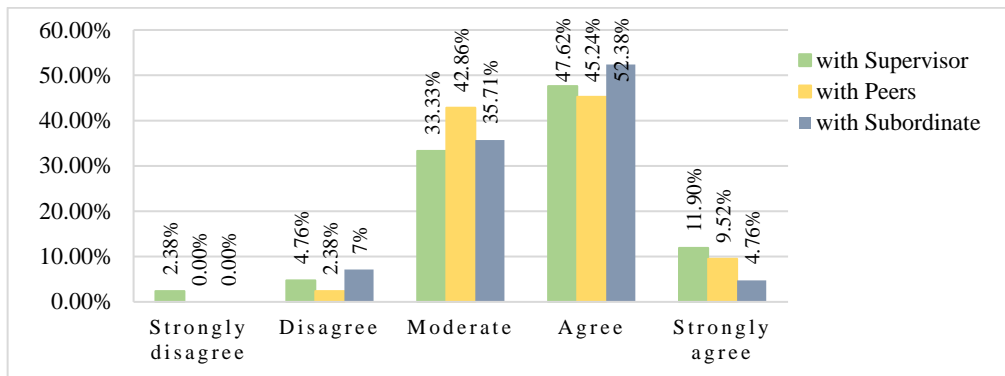


Figure 4.16: Findings for Phrase 14

Table 4.17 : Average agreement for phrase14

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I usually propose a middle ground for breaking deadlocks	3.62	3.61	3.55

According to ROCI-II, the phrase represents the compromising style. The data clearly indicate that, majority of the respondents agree that they propose a middle ground for breaking deadlocks by compromising themselves when they try to handle disagreements with their supervisor, peers, and subordinates, respectively.

Phrase 15: “I negotiate with my supervisor/peers/subordinates so that a compromise can be reached”

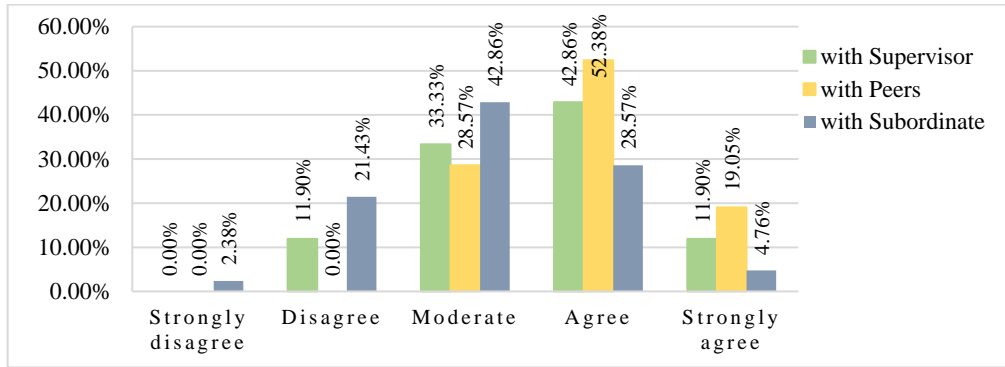


Figure 4.17: Findings for Phrase 15

Table 4.18: Average agreement for phrase15

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I negotiate with my supervisor/peers/subordinates so that a compromise can be reached	3.55	3.9	3.12

According to ROCI-II, the phrase represents the compromising style. The majority of respondents strongly agree in negotiating with their supervisors and peers so that a compromise can be made when handling their disagreement or conflicts. In terms of subordinates. The majority agree that they negotiate with subordinates.

Phrase 16: “I try to stay away from disagreement with my supervisor/peers/subordinates”

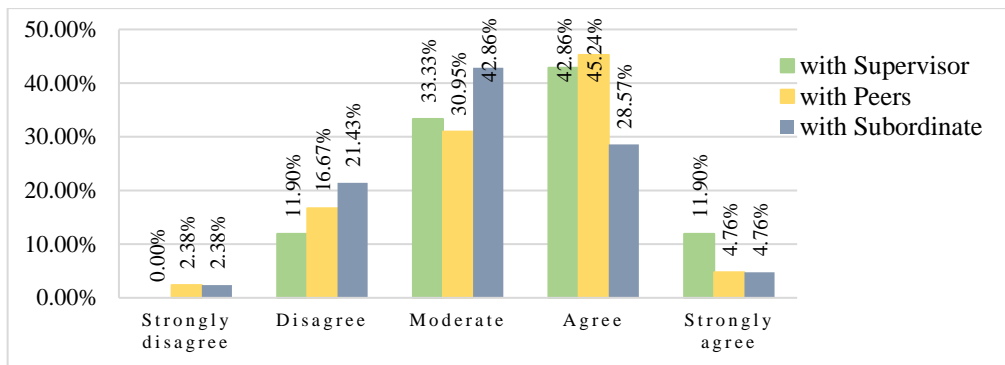


Figure 4.18: Findings for Phrase 16

Table 4.19 : Average agreement for phrase16

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to stay away from dis-agreement with my supervisor/peers/subordinates	3.55	3.32	3.26

According to ROCI-II, the phrase represents avoiding style. The majority of respondents strongly agree that they try to stay away from disagreements with their supervisors and peers. In terms of subordinates, majority maintain a moderate view in negotiating with subordinates.

Phrase 17: “I avoid an encounter with my supervisor/peers/subordinates”

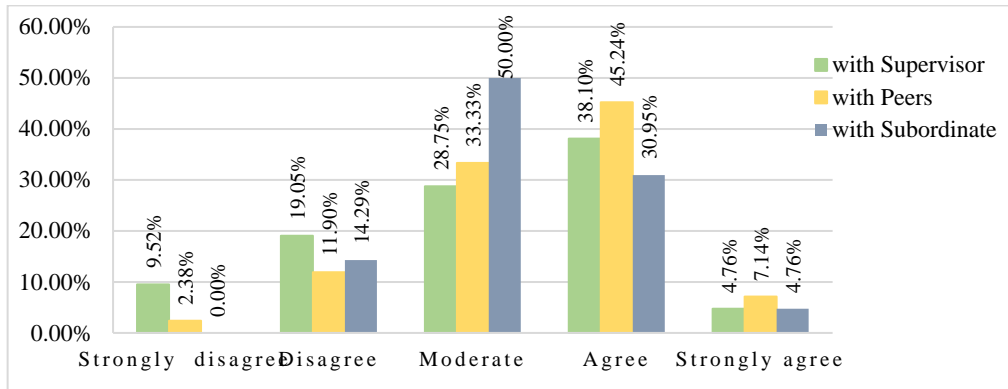


Figure 4.19: Findings for Phrase 17

Table 4.20 : Average agreement for phrase 17

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I avoid an encounter with my supervisor/peers/subordinates	3.10	3.41	3.40

According to the respondents and above illustrations of Figure 4.19 and Table 4.20, the majority of respondents maintain a moderate view in avoiding encounters with supervisor. However, when considering the peers and subordinates. the majority of professionals agree that they avoid encounters with their peers and subordinates.

Phrase 18: “I use my expertise to make a decision in my favour”

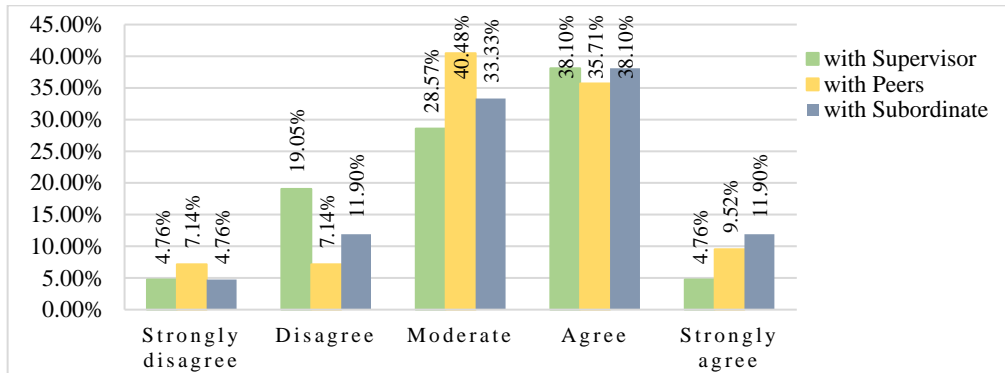


Figure 4.20: Findings for Phrase 18

Table 4.21 : Average agreement for phrase18

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I use my expertise to make a decision in my favor	3.21	3.34	2.83

According to the results and above illustrations of Figure 4.20 and Table 4.21, the majority of respondents agree that they use their expertise to decide in favour of themselves when they try to handle disagreements with their supervisors, peers. However, when handling conflicts with subordinates’ professionals maintain a moderate level of practice of dominating style according to ROCI-II.

Phrase 19: “I often go along with the suggestions of my supervisor/ peers/ subordinates”

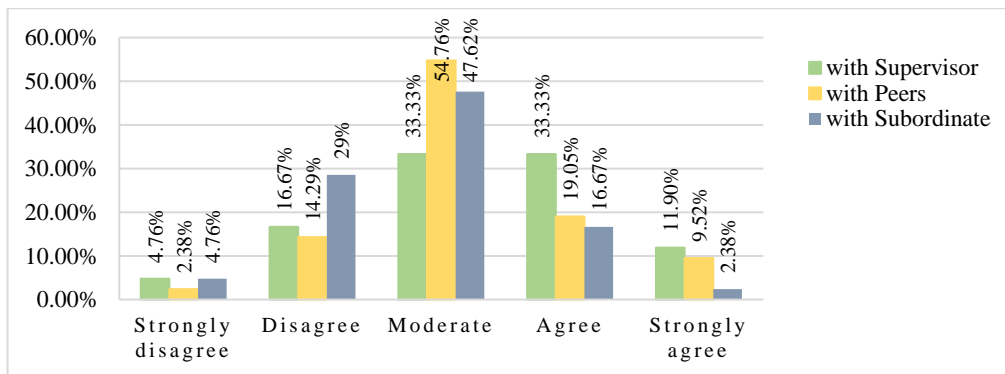


Figure 4.21: Findings for Phrase 19

Table 4.22 : Average agreement for phrase 19

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I often go along with the suggestions of my supervisor/peers/ subordinates	3.31	3.20	3.29

According to the respondents, and above illustrations of Figure 4.21 and Table 4.22, the majority of professionals maintain a moderate view on going along with their supervisors’, peers’ and subordinates’ suggestions by practicing Obliging style.

Phrase 20: “I use “give and take” so that a compromise can be made”

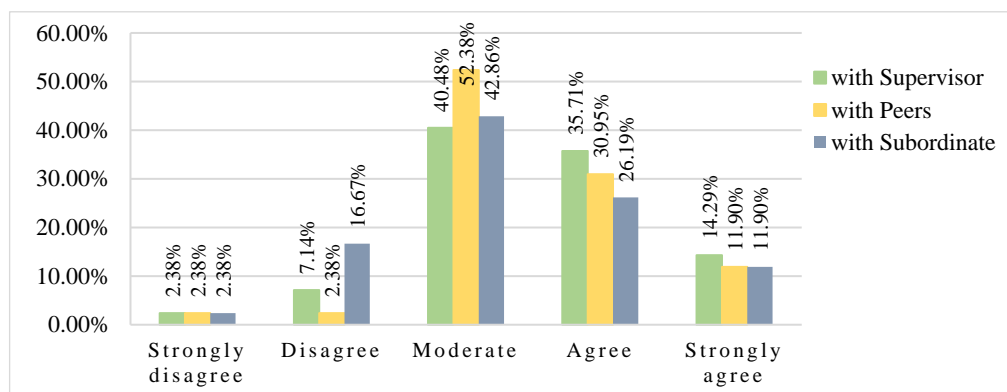


Figure 4.22: Findings for Phrase 20

Table 4.23 : Average agreement for phrase20

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I use "give and take" so that a compromise can be made	3.52	3.49	3.45

The results and above illustrations of Figure 4.22 and Table 4.23, indicate that the majority of respondents agree on using the “give and take” method so that a compromise can be made when they try to resolve conflicts with their supervisor, peers and subordinates respectively. According to ROCI-II, the phrase represents compromising style.

Phrase 21: “I am generally firm pursuing my side of the issue”

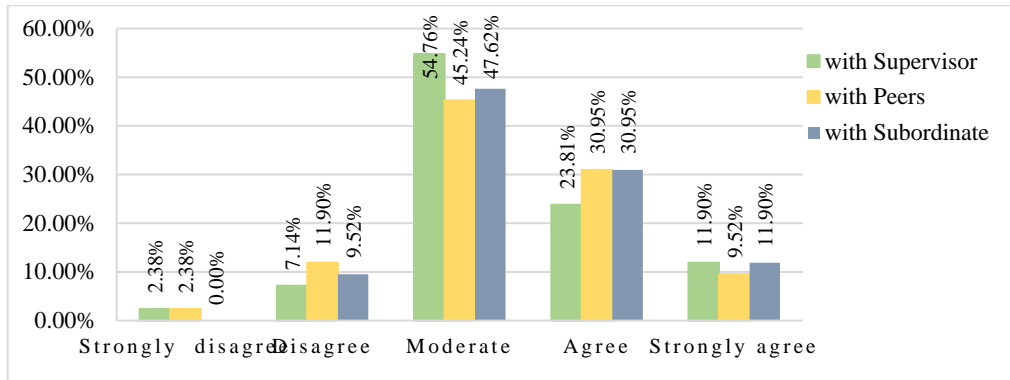


Figure 4.23: Findings for Phrase 21

Table 4.24 : Average agreement for phrase 21

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I am generally firm in pursuing my side of the issue	3.36	3.34	4.05

According to the results, and above illustrations of Figure 4.23 and Table 4.24, the majority of respondents maintain a moderate view on being firm in pursuing their side of the issue in resolving a conflict with their supervisor, peers. Considering the subordinates, the majority of respondents agree that them being firm highlighting the dominating style according to ROCI-II.

Phrase 22: “I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way”

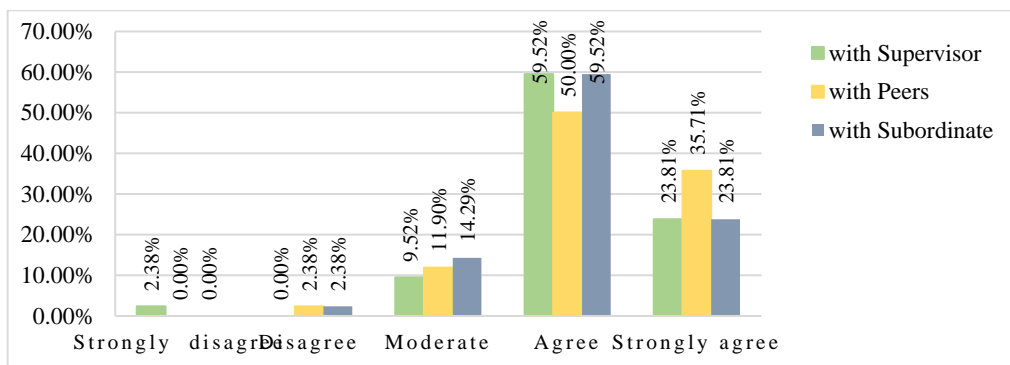


Figure 4.24: Findings for Phrase 22

Table 4.25 : Average agreement for phrase22

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way	4.14	4.20	3.98

According to the results and above illustrations of Figure 4.24 and Table 4.25, the majority of respondents *agree* that they bring their all concerns out in the open to resolve the conflicts they have with their supervisors, peers and with their subordinates in best possible way. According to ROCI-II, the phrase represents integrating style.

Phrase 23: "I collaborate with my supervisors/peers/subordinates to come up with the decision acceptable to us"

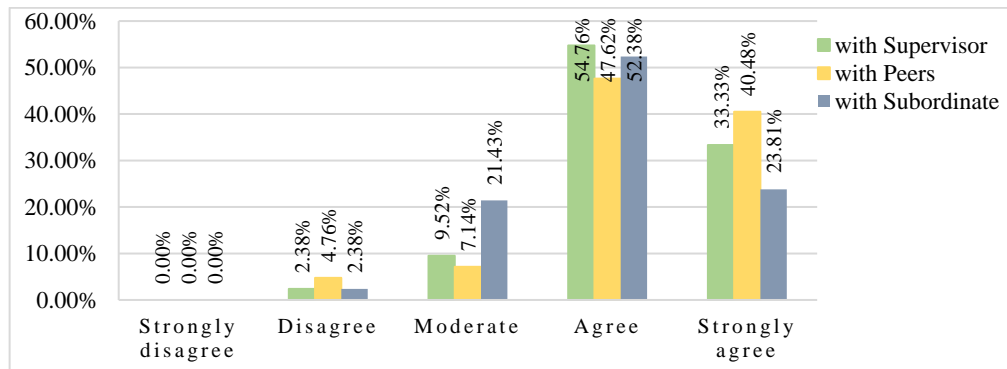


Figure 4.25: Findings for Phrase 23

Table 4.26 : Average agreement for phrase23

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I collaborate with my supervisor/peers/ subordinates to come up with decisions acceptable to us	4.19	4.24	3.14

According to the data and above illustrations of Figure 4.25 and Table 4.26, it clearly indicates that the majority of respondents maintain a moderate view on integrating with their supervisor, subordinates to come up with the decision acceptable to both parties. When considering the peers, the majority of professionals agree that they

collaborate with their peers to come to a decision acceptable to both the parties. According to ROCI-II, the phrase represents the integrating style.

Phrase 24: “I try to satisfy the expectations of my supervisor/peers/subordinates”

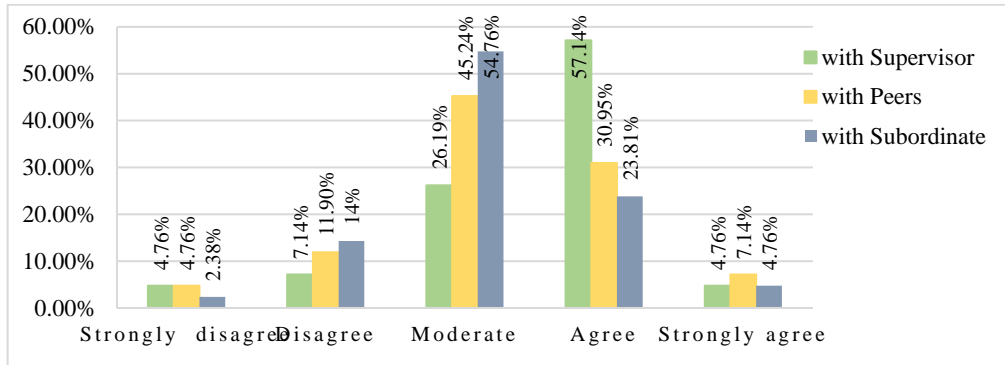


Figure 4.26: Findings for Phrase 24

Table 4.27 : Average agreement for phrase24

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to satisfy the expectations of my supervisor/peers/subordinates	3.5	3.24	3.12

According to the data and above illustrations of Figure 4.26 and Table 4.27, a majority of respondents agree that they try to satisfy their supervisor’s expectations practicing the obliging style when handling disagreements with their supervisors. However, considering the peers and subordinates it clearly shows that the majority maintain a moderate view. According to ROCI-II, the phrase represents obliging style.

Phrase 25: “I sometimes use my power to win a competitive situation”

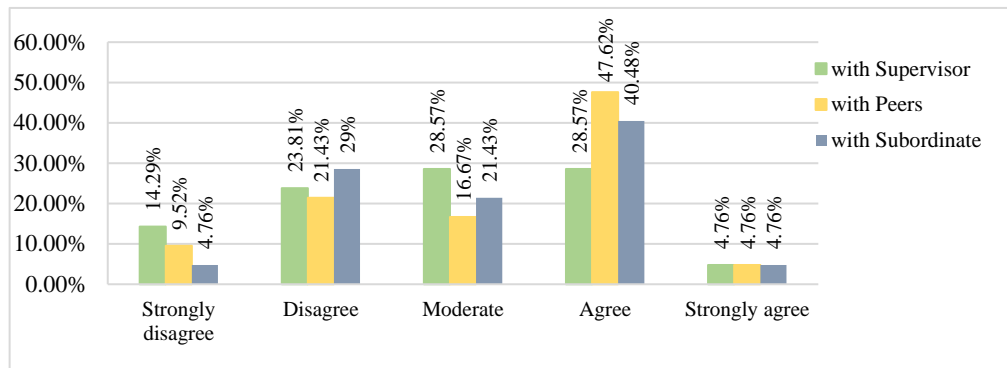


Figure 4.27: Findings for Phrase 25

Table 4.28 : Average agreement for phrase25

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I sometimes use my power to win a competitive situation	2.86	3.15	2.69

According to ROCI-II, the phrase represents the dominating style. Referring to the above illustrations of Figure 4.27 and Table 4.28, The majority of respondents maintains a moderate view in using their power to win a competitive situation with their supervisors, peers and subordinates use dominating style when handling disagreements with their supervisors, peers and subordinates.

Phrase 26: “I try to keep my disagreement with my supervisor/peers/subordinates to myself in order to avoid hard feelings”

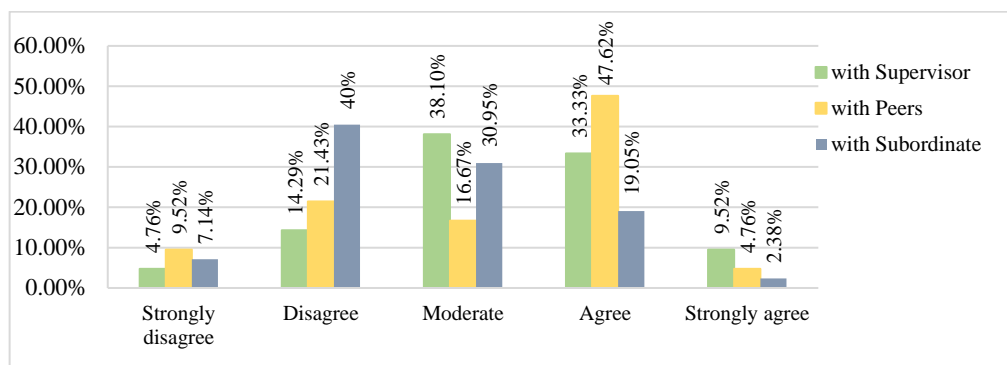


Figure 4.28: Findings for Phrase 26

Table 4.29: Average agreement for phrase 26

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to keep my disagreement with my supervisor to myself to avoid hard feelings	3.29	3.02	3.31

According to the results, and above illustrations of Figure 4.28 and Table 4.29, the majority of respondents maintain a moderate view in trying to keep their disagreements with their supervisor and peers and subordinates to themselves to avoid hard feelings. According to ROCI-II, the phrase represents avoiding style.

Phrase 27: “I try to avoid unpleasant exchanges with my supervisor/peers/ subordinates”

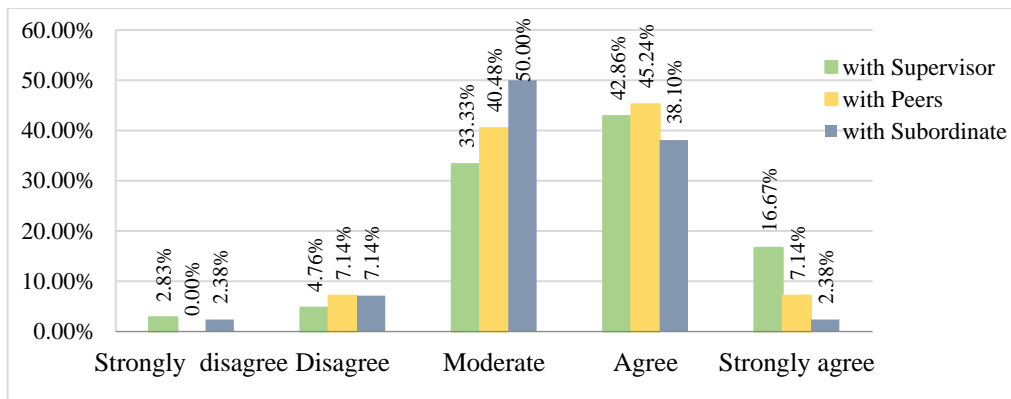


Figure 4.29: Findings for Phrase 27

Table 4.30 : Average agreement for phrase 27

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to avoid unpleasant exchanges with my supervisor	3.67	3.51	4.29

According to the respondents and above illustrations of Figure 4.29 and Table 4.30, the majority agree that they try to avoid unpleasant exchanges with their supervisors and peers when handling their disagreement or conflicts. However, when handling disagreements or conflicts with subordinates the majority of professionals strongly agree with the statement. According to ROCI-II, it has proven that the professionals use an avoiding style.

Phrase 28: I try to work with my supervisor/ peers/ subordinates for a proper understanding of a problem”

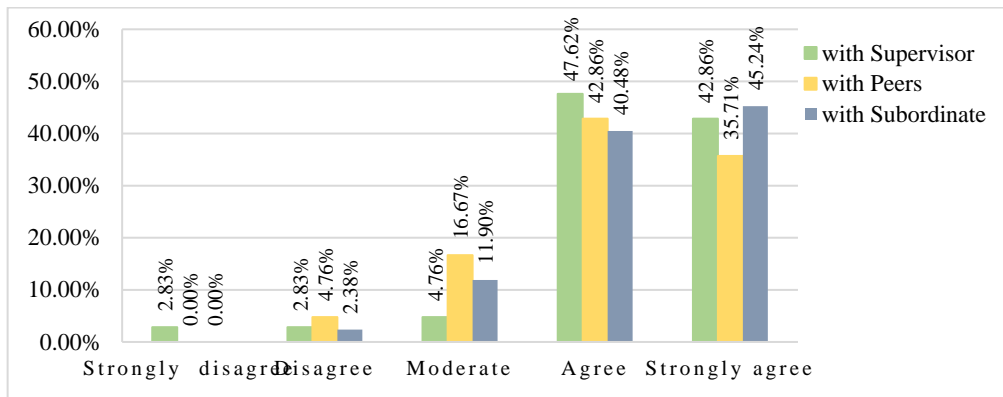


Figure 4.30: Findings for Phrase 28

Table 4.31 : Average agreement for phrase28

Phrase	Supervisor (w.a.)	Peers (w.a.)	Subordinate (w.a.)
I try to work with my supervisor for a proper understanding of a problem	4.26	4.10	4.29

According to the respondents and above illustrations of Figure 4.30 and Table 4.31, most professionals strongly agree that they try to work with their supervisors and subordinates for a proper understanding of a problem. However, considering the peers, the majority of the professionals agree that they work with their peers for a better understanding of a problem. According to ROCI-II, the phrase represents the integrating style.

The observations of the behaviour of professionals handling conflicts with their supervisor, peers and subordinates in pre-contract stage of building construction projects in Sri Lanka using Rahim’s Organizational Conflict Inventory Forms A, B and C (Question 7, 8, and 9 of Questionnaire) is summarized in below table 4.4 for further discussion and the summary of behaviour of majority of professionals is summarised in Appendix 3.

Table 4.32: Average agreement for usage of ROCI-II phrases against conflict-handling styles

Style	Phrase	with Supervisor		with Peers		with Subordinates		
		Mean	SD	Mean	SD	Mean	SD	
Integrating Style	1	I try to investigate an issue with my other party to find a solution acceptable to us	4.12	0.43	4.02	0.30	4.21	0.43
	5	I try to work with my other party to find solution to a problem that satisfies our expectations	4.00	0.37	3.90	0.39	4.10	0.46
	12	I exchange accurate information with my other party to solve a problem together	4.26	0.41	4.07	0.40	4.21	0.46
	22	I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way	4.45	0.46	4.24	0.41	4.29	0.47
	23	I collaborate with my other party to come up with decisions acceptable to us	4.14	0.47	4.10	0.40	4.05	0.47
	28	I try to work with my other party for a proper understanding of a problem	4.19	0.47	4.14	0.39	3.98	0.46
Obliging	2	I generally try to satisfy the needs of my other party	4.26	0.44	4.00	0.38	4.29	0.46
	11	I give in to the wishes of my other party	3.36	0.41	3.14	0.34	3.14	0.40
	13	I usually allow concessions to my other party	3.19	0.40	3.17	0.42	3.02	0.42
	19	I often go along with the suggestions of my other party	2.95	0.38	2.74	0.33	2.76	0.45
	24	I try to satisfy the expectations of my other party	3.45	0.39	3.24	0.38	3.29	0.45
Dominating	8	I use my influence to get my ideas accepted	3.31	0.36	3.12	0.36	2.83	0.40
	9	I use my authority to make a decision in my favor	3.50	0.41	3.17	0.35	3.14	0.43
	18	I use my expertise to make a decision in my favor	2.83	0.30	2.93	0.28	3.14	0.35
	21	I am generally firm in pursuing my side of the issue	2.52	0.25	2.71	0.30	3.07	0.31
	25	I sometimes use my power to win a competitive situation	3.21	0.34	3.26	0.33	3.40	0.37
Avoiding	3	I attempt to avoid being "put on the spot" and try to keep my conflict with my other party to myself	3.36	0.41	3.26	0.36	3.45	0.43
	6	I usually avoid open discussion of my differences with my other party	2.86	0.29	3.07	0.28	3.12	0.35
	16	I try to stay away from disagreement with my other party	3.12	0.36	3.31	0.33	2.86	0.37
	17	I avoid an encounter with my other party	2.74	0.34	2.69	0.35	2.83	0.32
	26	I try to keep my disagreement with other party to myself in order to avoid hard feelings	3.55	0.42	3.24	0.36	3.12	0.40
	27	I try to avoid unpleasant exchanges with my other party	3.00	0.24	3.33	0.37	3.26	0.44
Compromising	4	I try to integrate my ideas with those of my other party to come up with a decision jointly	3.29	0.37	2.95	0.33	2.69	0.36
	7	I try to find a middle course to resolve an impasse	3.67	0.42	3.43	0.40	3.31	0.45
	10	I usually accommodate the wishes of my other party	3.86	0.47	3.64	0.41	3.52	0.45
	14	I usually propose a middle ground for breaking deadlocks	3.62	0.43	3.52	0.41	3.55	0.46
	15	I negotiate with my supervisor so that a compromise can be reached	3.55	0.42	3.81	0.41	3.12	0.40
	20	I use "give and take" so that a compromise can be made	3.52	0.41	3.40	0.38	3.29	0.38

4.5 Frequency of the occurrence of types of conflicts during the pre-contract stage of building construction projects

From the collected data, the four types of conflicts are categorised against their frequency of occurrence during the pre-contract stage of a construction project to identify the significance of each conflict type in the pre-contract stage and is graphically illustrated in figure 4.31 and Table 4.33.

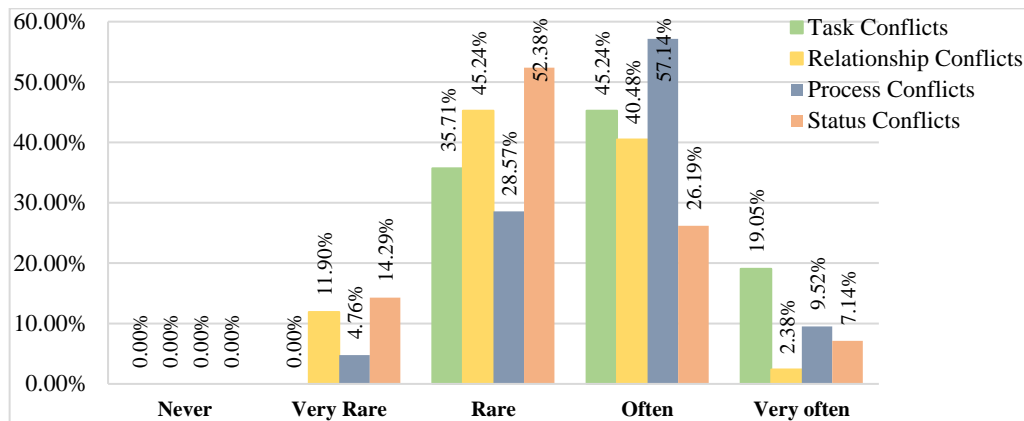


Figure 4.31: The occurrence of types of conflicts during the pre-contract stage of Sri Lankan building projects

Table 4.33: Average of occurrence of different types of conflicts during pre-contract stage of Sri Lankan building projects

Type of Conflict	Average of occurrence during pre-contract stage (w.a.)
Task Conflicts	3.83
relationship Conflicts	3.33
Process Conflicts	3.71
Status Conflicts	3.26

According to the respondents, **task conflicts** are the most common type of conflicts, which occur, very often in the pre-contract stage. The second common type of conflict is **process conflicts**, which occur often. However, according to the respondents, the **status conflicts** and **relationship conflicts**, rarely occur during pre-contract stage of the building construction projects in Sri Lanka.

4.6 Conflict-handling Styles Used to Resolve the Different Types of Conflicts with Supervisor

From the collected data, the four types of conflicts (task, relationship, process and status conflicts) are examined against their frequency of application to resolve the conflicts with the supervisor during the pre-contract stage of building construction projects in Sri Lanka.

4.6.1 Task Conflicts

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle task conflicts with the supervisor and are graphically illustrated in Figure 4.32 and Table 4.34.

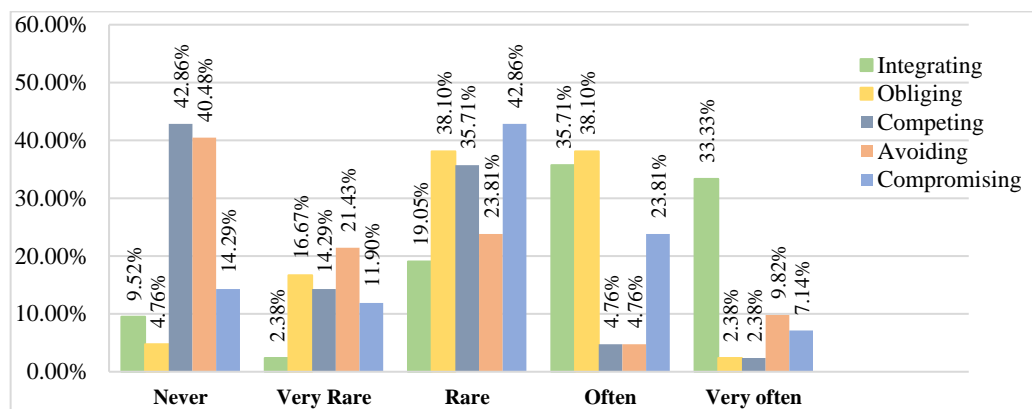


Figure 4.32: Resolving Task Conflicts with supervisor

Table 4.34: Frequency of conflict-handling styles used to handle task conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Task Conflicts with Supervisor (w.a.)	3.81	3.17	2.10	2.21	2.98

According to the data, it has observed that to resolve task conflicts with the supervisor, the majority of professionals indicated that they have often use the integrating style. However, the results indicate that they use the obliging style and compromising style rarely to handle task conflicts. Further, the professionals use avoiding style and dominating style very rarely to handle conflicts with their supervisors.

4.6.2 Relationship conflicts

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle Relationship conflicts with the supervisor and is graphically illustrated in Figure 4.33 and Table 4.35.

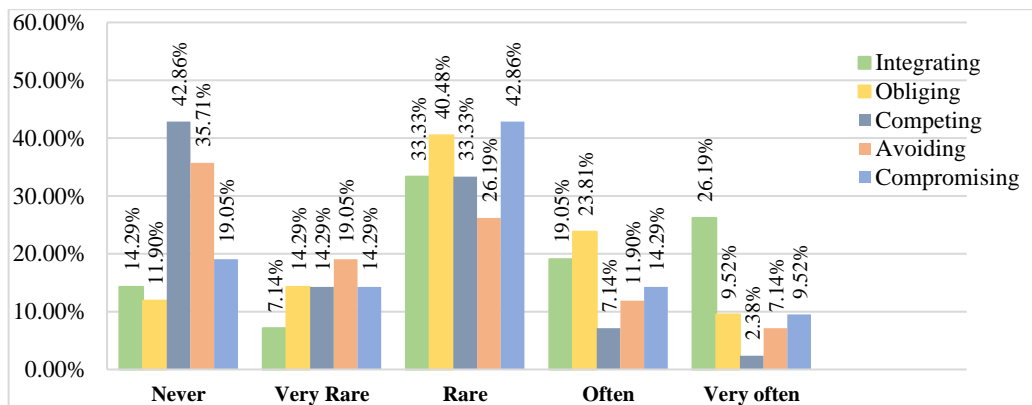


Figure 4.33: Resolving Relationship conflicts with supervisor

Table 4.35: Frequency of conflict-handling styles used to handle relationship conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Relationship Conflicts with Supervisor (w.a.)	3.36	3.05	2.12	2.36	2.81

According to data, it has observed that the professionals use integrating style often to handle relationship conflicts with supervisors. However, the results indicate that they use Obliging and compromising styles rarely. Further, the results show, the professionals use avoiding and dominating styles very rarely to handle relationship conflicts with their supervisor.

4.6.3 Process conflicts

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle process conflicts with the supervisor and are graphically illustrated in Figure 4.34 and Table 4.36.

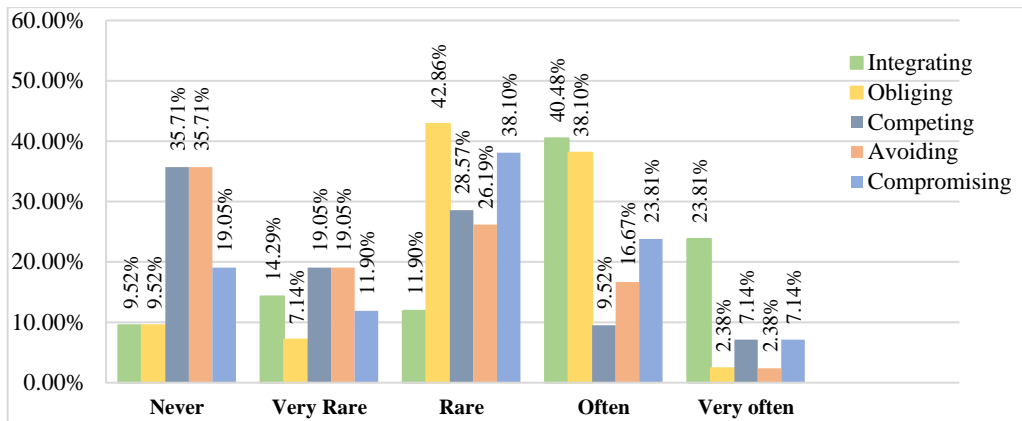


Figure 4.34: Resolving Process conflicts with supervisor

Table 4.36: Frequency of styles used to handle process conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Process Conflicts with Supervisor (w.a.)	3.55	3.17	2.33	2.31	2.88

According to data, it has observed that in resolving process conflicts with supervisors, professionals use often use integrating style to handle process conflicts with their supervisor. However, professionals also rarely use Obliging style and compromising style. Further, according to results, the professionals very rarely use dominating and avoiding styles.

4.6.4 Status conflicts with the supervisor

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle Status conflicts with the supervisor and is graphically illustrated in Figure 4.35 and Table 4.37.

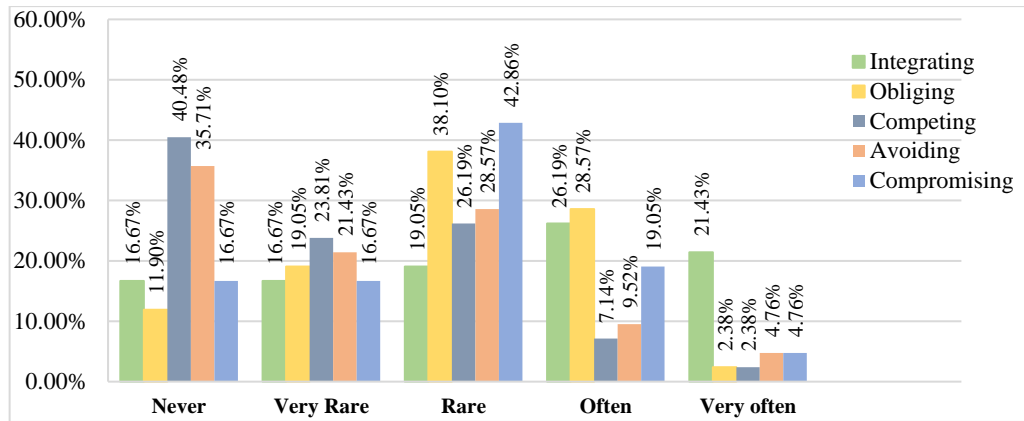


Figure 4.35: Resolving status conflicts with supervisor

Table 4.37: Frequency of conflict-handling styles used to handle status conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Status Conflicts with Supervisor (w.a.)	3.19	2.90	2.07	2.26	2.79

in resolving status conflicts with their supervisors, majority of professionals use Integrating style, obliging style, and compromising style rarely. However, the results indicate that, the professionals very rarely use avoiding style, dominating style to resolve status conflicts with their supervisors.

4.7 Conflict-handling styles used to resolve the types of conflicts with Peers.

From the collected data, the four types of conflicts (task, relationship, process and status conflicts) are examined against their frequency of application to resolve the conflicts with peers during the pre-contract stage of building construction projects in Sri Lanka.

4.7.1 Task conflict

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle task conflicts with the peers and is graphically illustrated in Figure 4.36 and Table 4.38.

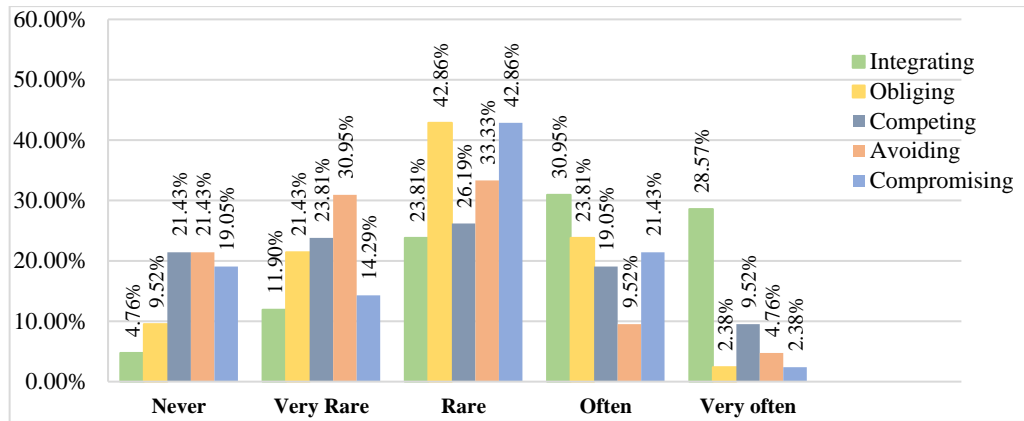


Figure 4.36: Resolving Task conflict with peers

Table 4.38: Frequency of conflict-handling styles used to handle relationship conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Task Conflicts with Peers (w.a.)	3.67	2.88	2.71	2.45	2.74

According to the data, it has observed that to resolve task conflicts with the peers, the professionals often use integrating style and rarely use Obliging style, compromising style and dominating style to handle task conflicts with their peers. However, the results indicate that they very rarely use avoiding style to handle task conflicts.

4.7.2 Relationship conflicts

From the collected data, the five conflict-handling-styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle Relationship conflicts with the peers and are graphically illustrated in Figure 4.37 and Table 4.39.

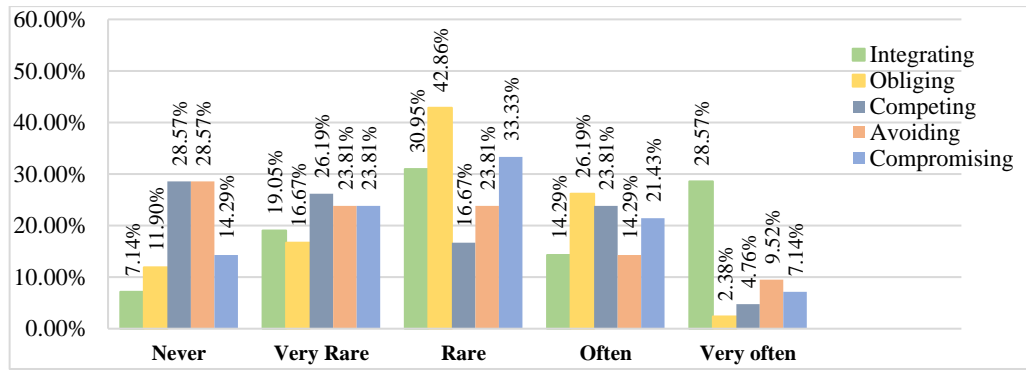


Figure 4.37: Resolving Relationship conflicts with peers

Table 4.39: Frequency of conflict-handling styles used to handle relationship conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Relationship Conflicts with Peers (w.a.)	3.38	2.90	2.50	2.52	2.83

According to data, the professionals’ rarely use Integrating style, obliging style and compromising style respectively to handle relationship conflicts with peers. However, the results indicate that they use avoiding style and dominating style very rarely.

4.7.3 Process conflicts

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle process conflicts with the peers and are graphically illustrated in Figure 4.38 and Table 4.40.

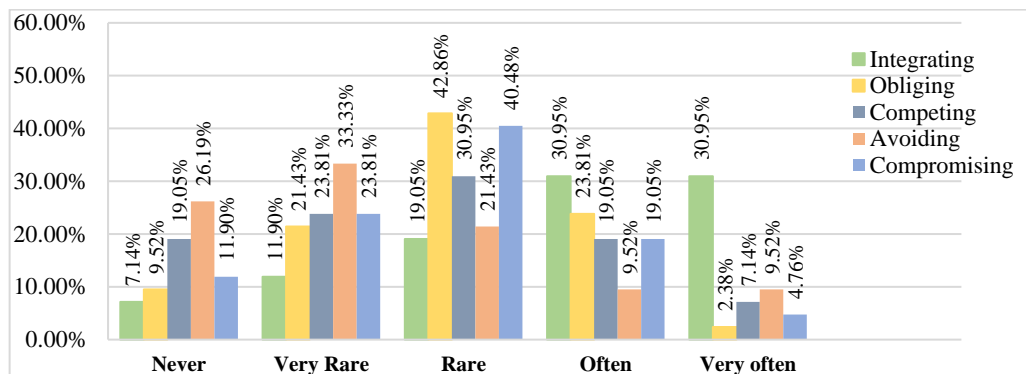


Figure 4.38: Resolving Process conflicts with peers

Table 4.40 : Frequency of conflict-handling styles used to handle process conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Process Conflicts with Peers (w.a.)	3.67	2.88	2.71	2.43	2.81

According to data, it has observed that in resolving process conflicts with peers, professionals often use the integrating style. However, the results indicate the professionals rarely use Obliging style and compromising style and dominating style respectively. Further professionals very rarely use avoiding style to handle process conflicts with their peers.

4.7.4 Status conflicts with peers

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle Status conflicts with the peers and is graphically illustrated in Figure 4.39 and Table 4.41.

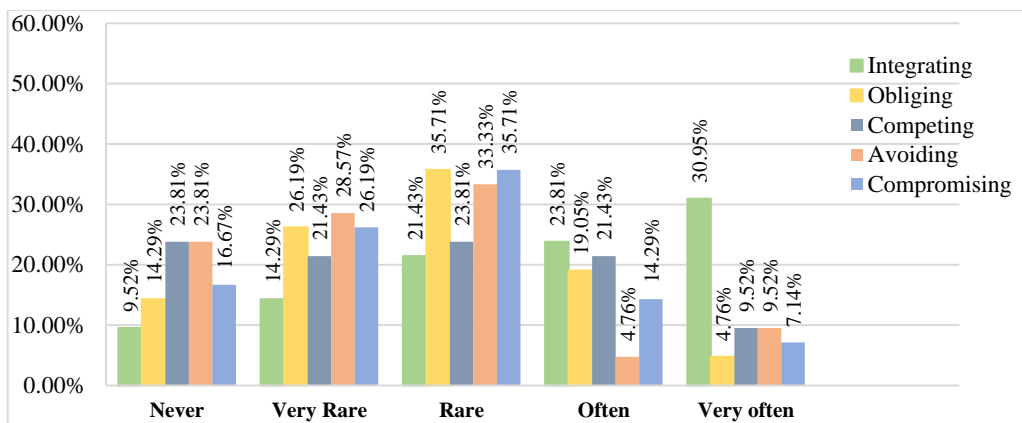


Figure 4.39: Resolving Status conflicts with peers

Table 4.41: Frequency of conflict-handling styles used to handle status conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Status Conflicts with Peers (w.a.)	3.52	2.74	2.71	2.48	2.69

According to, in resolving status conflicts with their peers, professionals often use integrating style. However, the results indicate, the professionals rarely use Obliging

style, dominating style, and compromising style to resolve status conflicts. Further professionals very rarely use avoiding style to handle process conflicts with their peers.

4.8 Conflict-handling Styles Used to Resolve the Types of Conflicts with Subordinates

From the collected data, the four types of conflicts (task, relationship, process and status conflicts) are examined against their frequency of application to resolve the conflicts with subordinates during the pre-contract stage of building construction projects in Sri Lanka.

4.8.1 Task conflict

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle task conflicts with the subordinates and are graphically illustrated in Figure 4.40 and Table 4.42.

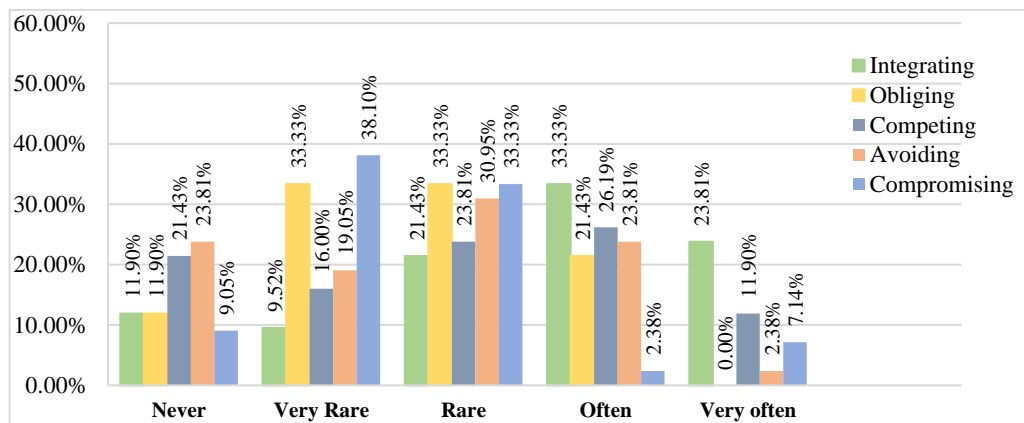


Figure 4.40: Resolving Task conflict with subordinates

Table 4.42: Frequency of conflict-handling styles used to handle task conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Task Conflicts with Subordinates (w.a.)	3.48	2.64	2.90	2.62	2.40

According to the data, to handle task conflicts with the subordinates, the professionals often use integrating style and rarely use dominating style, obliging style, and avoiding

style, respectively. However, the results indicate that they very rarely use compromising style to handle task conflicts with subordinates.

4.8.2 Relationship conflicts

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle Relationship conflicts with the subordinates and are graphically illustrated in Figure 4.41 and Table 4.43.

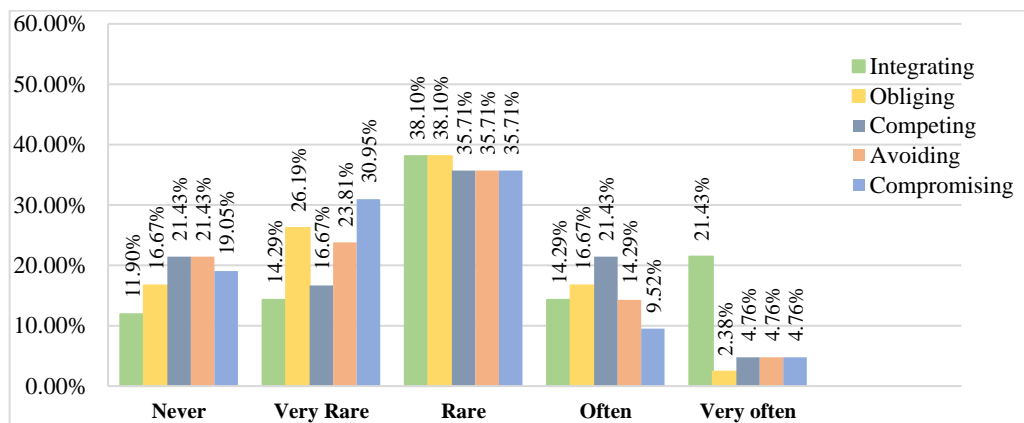


Figure 4.41: Resolving Relationship conflicts with subordinates

Table 4.43: Frequency of conflict-handling styles used to handle relationship conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Relationship Conflicts with Subordinates (w.a.)	3.19	2.62	2.71	2.57	2.50

According to data, professionals’ rarely use integrating style, dominating style and Obliging style to handle relationship conflicts with subordinates. However, the results indicate that they very rarely use avoiding style and compromising style respectively.

4.8.3 Process conflicts

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle

process conflicts with the subordinates and is graphically illustrated in figure 4.42 and Table 4.44.

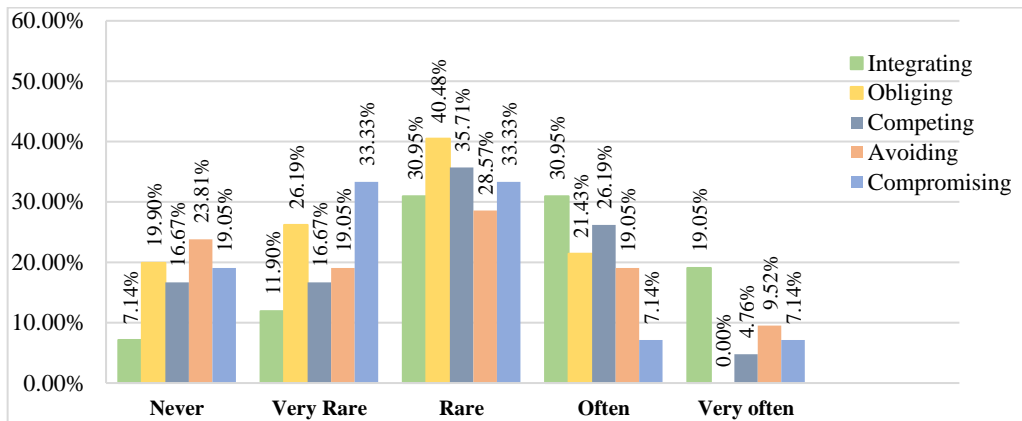


Figure 4. 42: Resolving Process conflicts with subordinates

Table 4. 44: Frequency of conflict-handling styles used to handle process conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Process Conflicts with Subordinates (w.a.)	3.43	2.71	2.86	2.71	2.50

According to data, it was observed that in resolving process conflicts with subordinates, professionals often use the integrating style. However, they rarely use dominating style, obliging style and avoiding style respectively to handle process conflicts with their subordinates. further, the results indicate professionals very rarely use compromising style to handle conflicts with subordinates is very rare.

4.8.4 Status conflicts

From the collected data, the five conflict-handling styles are categorised against their frequency of usage during the pre-contract stage of a construction project to handle Status conflicts with the supervisor and are graphically illustrated in figure 4.43 and Table 4.45.

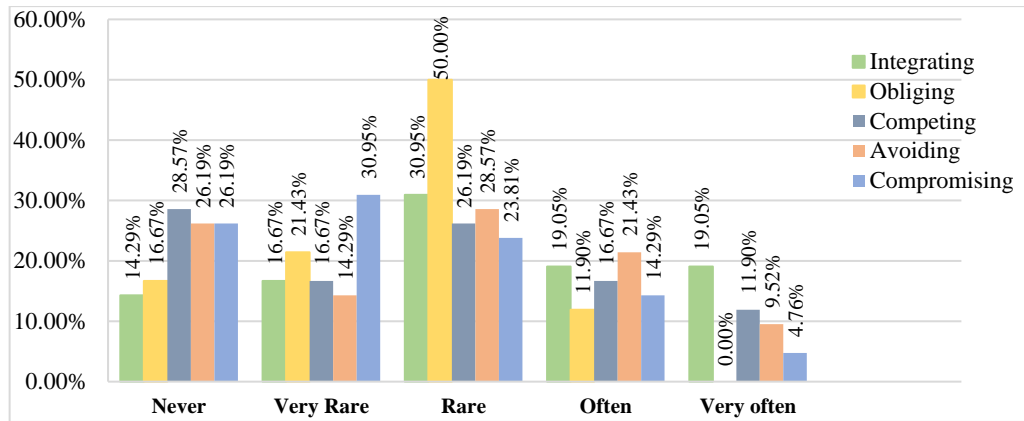


Figure 4.43: Resolving Status conflicts with subordinates

Table 4. 45: Frequency of styles used to handle process conflicts

	Integrating	Obliging	Dominating	Avoiding	Compromise
Status Conflicts with Subordinates (w.a.)	3.12	2.57	2.67	2.74	2.40

In resolving status conflicts with their subordinates, professionals rarely use integrating style, avoiding style and dominating style. However, the results indicate that the professionals very rarely use obliging style and compromising style to resolve status conflicts with their subordinates.

The observations on the relationship of conflict types and their handling styles during pre-contract stage are summarized in Table 4.5 for further discussion.

Table 4.46: Usage of conflict-handling styles to handle different types of conflicts

	Conflict type	Integrating	Obliging	Dominating	Avoiding	Compromising
With Supervisor	Task Conflicts	*		*		
	Relationship Conflicts	*		*		
	Process Conflicts	*		*		
	Status Conflicts	*		*		
With Peers	Task Conflicts	*			*	
	Relationship Conflicts	*		*		
	Process Conflicts	*			*	
	Status Conflicts	*			*	
With Subordinates	Task Conflicts	*				*
	Relationship Conflicts	*				*
	Process Conflicts	*				*
	Status Conflicts	*				*

Frequently used style * Seldom used style *

4.7 Discussion on Findings

The study is focused on types of conflicts, conflict-handling styles and the main aim of the study is to investigate the usage of conflict handling styles to handle different types of conflicts during the pre-contract stage of building construction projects in Sri Lanka. The following sections discuss the findings of this research revisiting the literature.

4.7.1 Reliability of Collected data (Cronbach's alpha)

According to the data collected, the agreeableness of subscales of three forms of ROCI-II, Form A, B and C (supervisors, subordinates, and peers) which consist of 28 items are $\alpha = 0.89$, $\alpha = 0.87$ and $\alpha = 0.90$, respectively (See Appendix 4). The values confirm the internal consistency of data in the established range of consistency.

Similarly, according to Hatfield (1988), the median of Cronbach's α coefficient of internal consistency carried out for 8 studies for Rahim's questionnaire ranges $\alpha = 0.5$ for obliging to $\alpha = 0.95$ to integrating (Hatfield, 1988).

4.7.2 Overview of conflicts in pre-contract stage of building construction projects in Sri Lanka

According to research findings, conflicts within the construction industry is "day to day life", a common situation and not only inescapable but also desirable. Further, it signifies construction professionals in different hierarchies' experience different types of conflicts with their supervisors, peers, and subordinates during the pre-contract stage of building construction projects in Sri Lanka. Reinforcing the research findings, literature indicated that conflicts are inevitable and inherit an unbreakable bond with construction projects (Mitropoulos & Howell, 2001).

According to the literature, in the effort of classifying conflicts, many researchers have introduced different classifications of conflicts based on the sources, causes, organizational levels, based on the groups, performance and their characteristics, which are applicable to the construction industry. Among these, as one of the classifications that classify the conflicts of pre-contract stage of building construction

projects, task conflicts, relationship conflicts, process conflicts and status conflicts attract the immense attention of the researchers and the industry practitioners (Jehn, 1997; Zhang & Zhang, 2012; Jehn et. al, 2008; Rahim, 2002; Simons & Peterson, 2000; Amason & Sapienza, 1997; Amazon, 1996; Jehn, 1995; West & Anderson, 1996; Jehn & Mannix, 1997; Cahn & Abigail, 2007; Jehn, 2005; Bendersky & Hays, 2012; Senaratne and Udawatta, 2013; Gunarathna, Yang, & Fernando, 2018).

Similarly, research findings indicated construction professionals in different hierarchies' experience conflicts with their supervisors, peers, and subordinates during the pre-contract stage of building construction projects in Sri Lanka.

The literature shows that employees deal with interpersonal conflicts with a frequency ranging from 25% to 50% of their time and a manager spends 30% to 40% of their time handling these conflicts (Zhang & Huo, 2015). According to the research findings, all four types of interpersonal conflicts (task, relationship, process and status) exist during the pre-contract stage of building construction projects in Sri Lanka.

Further, the research findings proved that among these four types of conflicts (task, relationship, process and status), **task conflicts** occur **very often** during the pre-contract stage of building construction projects in Sri Lanka. The literature proved that due to the complexity of tasks associated with design and innovation, the team members tend to oppose the beliefs, attitudes, and ideas of others and the most frequent conflict situation is design errors (Kiernan et. al, 2020). Further, Gunarathna and team (2017) reveal that incompatibility of the design and design errors in design may create more conflicts at the time of real construction (Gunarathna, Yang, & Fernando, 2018). Task conflicts are task-oriented (Wu, Zhao, Zuo, & Zillante, 2017). The extensive collection of situations and construction processes and the involvement of great diversity of stakeholders during a construction project, led the project to have more tasks conflict very frequently.

The research findings indicate that the next type of conflict that occurs **often** during the pre-contract stage is **process conflicts**. According to the literature, process conflicts emphasize the process differences throughout the fulfillment of the tasks (Wu, Zhao, Zuo, & Zillante, 2017).

However, according to the research findings, **status conflicts** and **relationship conflicts** rarely occur during pre-contract stage of building construction projects in Sri Lanka. Similarly, the literature indicated that the Sri Lankan construction industry faces relationship conflicts due to task-related matters (Gunarathna, Yang, & Fernando, 2018).

4.7.3 Overview of usage of conflict-handling styles to handle different types of conflicts during the pre-contract stage of building construction projects in Sri Lanka.

The research findings indicate that during the pre-contract stage of building construction projects in Sri Lanka, professional use all five conflict management styles in dual concern theory: integrating style, obliging style, avoiding style, compromising style and dominating style in different occasions when handling conflicts with their supervisors, peers and subordinates. Similarly, the literature indicates that all these five styles are being used to handle conflicts in the Sri Lankan construction industry (Gunarathna, Yang, & Fernando, 2018).

According to research findings, the mean scores included in each of five styles in Form A, B and C (Conflict handling with supervisor, subordinates, and peers) respectively are **integrating**: 4.20,4.16,4.07; **obliging**: 3.29,3.03,3.10; **dominating**: 2.96,3.24,3.05; **avoiding**: 3.23,3.01,3.16; and **compromising**: 3.64,3.37,3.60. Similarly, the norm introduced by Rahim (1983) confirms the mean scores of each of five styles are **integrating**: 4.18,4.26,4.24; **obliging**: 3.6,3.21,3.24; **dominating**: 3.27,2.94,3.16; **avoiding**: 2.89,2.78,2.72; and **compromising**: 3.51,3.31,3.59 (Rahim,1983, p.86).

4.7.4 Relationship between conflict-handling styles and types of conflicts with Supervisor/Peers/Subordinates

With Supervisor: According to the research findings, the conflict-handling style use to handle task, relationship, process, and status conflicts with a supervisor very often is integrating style and the professionals use dominating style very rarely during the pre-contract stage of building construction projects. The findings indicate that the

professionals very often use a common style (integrating), and they very rarely use dominating style to handle conflicts with their supervisor.

With Peers: The research findings show a similar pattern of handling conflicts with supervisor in the frequently used style (integrating) very often when handling conflicts with peers. However, when considering the very rarely used style to handle conflicts with a supervisor, professionals prefer avoiding style as the least option to handle conflicts (task, process and status) except for relationship conflicts. In handling relationship conflicts with peers, professionals use dominating style seldom during the pre-contract stage of building construction projects.

With Subordinates: The research findings show a similar pattern of handling conflicts with supervisor and peers in the very often used style (integrating) when handling conflicts with subordinates. However, the style use to handle conflicts (task, relationship, process and status) with their subordinates is a common style, compromising during the pre-contract stage of building construction projects.

Similarly, the literature indicated that integrative conflict management approaches cause a greater impact on the performance of the organization in construction projects (Maiti & Choi, 2021). Further, compromising, competing, and avoiding styles have less influence on fruitful outcomes in negotiations (Cheung, Yiu Yiu, & Yeung, 2006). The statement supports the behaviour shown by the professionals in handling conflicts with supervisor, peers, and subordinates during the pre-contract stage of building construction projects in Sri Lanka. Further, Lu and Wang (2017) highlighted that the agreeableness for conflict-handling styles claims an ascending scale of conflicts as follows: dominating, compromising, avoiding, obliging, and integrating (Lu & Wang, 2017).

The following table 4.47 presents the frequency of usage of conflict-handling styles to handle different types of conflicts with their supervisor, peers and subordinates by the majority of professionals during pre-contract stage of building construction projects in Sri Lanka.

Table 4.47: Frequency of usage of conflict-handling styles to handle different conflict types during the pre-contract stage of building construction projects in Sri Lanka

	Conflict Type	Integrating Style	Obliging Style	Avoiding Style	Compromising Style	Dominating Style
<i>With Supervisor</i>						
	Task Conflicts	Often	Rarely	Very rarely	Rarely	Very rarely
	Relationship Conflicts	Often	Rarely	Very rarely	Rarely	Very rarely
	Process Conflicts	Often	Rarely	Very rarely	Rarely	Very rarely
	Status conflicts	Rarely	Rarely	Very rarely	Rarely	Very rarely
<i>With Peers</i>						
	Task Conflicts	Often	Rarely	Very rarely	Rarely	Rarely
	Relationship Conflicts	Rarely	Rarely	Very rarely	Rarely	Very rarely
	Process Conflicts	Often	Rarely	Very rarely	Rarely	Rarely
	Status conflicts	Often	Rarely	Very rarely	Rarely	Rarely
<i>With Subordinates</i>						
	Task Conflicts	Often	Rarely	Very rarely	Rarely	Rarely
	Relationship Conflicts	Rarely	Rarely	Very rarely	Very rarely	Rarely
	Process Conflicts	Often	Rarely	Rarely	Very rarely	Rarely
	Status conflicts	Rarely	Very Rarely	Rarely	Very Rarely	Rarely

4.8 Chapter Summary

The chapter elaborates the data collection and findings of the data collected through the online questionnaire survey conducted focusing on the conflict-handling styles of construction industry professionals engaged in the pre-contract stage of building construction projects in Sri Lanka comparing the existing literature. This study conducted to examine the approaches that the professionals use to handle their disagreements or conflicts with their supervisors, peers and subordinates respectively. The research findings reinforce the global literature on the frequently used styles in handling conflicts with different hierarchy. However, among these styles, the style

used to handle the four types of conflicts (task, relationship, process and status) very often during the pre-contract stage of building construction projects in Sri Lanka is integrating style. The reason would be to have a win-win situation and benefit all the parties involved as it inspires openness, information sharing and proposing a solution that is accepted by all parties. Further, it proves the significance of team spirit that requires moving forward in every building construction project to meet the set project objectives.

CHAPTER 5

***CONCLUSIONS &
RECOMENDATIONS***

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of findings and conclusions referring to the objectives set initially in this research. Further, based on the research findings, the chapter provides recommendations and further research area.

5.2 Conclusions

This research conducted to study the conflict-handling styles that can be used to minimize the conflicts during the pre-contract stage of building construction projects in Sri Lanka. The types of conflicts and conflict-handling styles and their impacts were recognized through a literature survey and have been analyzed by the responses obtained from the experienced construction professionals engaged in the pre-contract stage of building construction projects in Sri Lanka.

The following paragraphs focus on the set objectives reached through the ranked responses, a conclusion based on the analysis of collected data and recommendations for the identified defies.

Objective 1: Review different types of conflicts and conflict-handling styles that can be used in the pre-contract stage in the construction industry.

Conflict is a common phenomenon among every individual and team, immaterial of the level it is been experienced. In temporary endeavours such as building construction projects are not an exception but a fertile ground for conflicts. Claiming a great diversity of multidisciplinary involvement, in the pre-contract stage of building construction projects in Sri Lanka, conflict is an everyday chorus but a wonder.

Throughout the period, numerous researchers have introduced different classifications of conflicts that acceptable to the construction industry as well. These classifications are based on the outcome of the conflict, its' framework, nature, causes etc. These classifications are, collaborative and competitive; Interpersonal, Intrapersonal, Intra-group, Inter-group, inter-organizational conflicts; cognitive and effective; functional

and dysfunctional; conflicts caused by owner, consultant, contractor, third parties, and other project matter conflicts to name a few. Among these classifications, the most discussed construction conflict classification is task, relationship, process, and status conflicts.

A conflict has two sides, one is destructive and results unhealthy outcomes, and the other side is constructive, with a problem-solving base. Handling these conflicts, many researchers have introduced different conflict management theories, for example, Mary Follet Theory (1940); Corporation and Competition Model by Deutsch (1949); Blake and Mouton Managerial Grid (1964); Hall's Win-Lose approach (1969); Thomas and Kilmann Two-dimensional Model (1976); Knudson, Sommers, and Golding's Theory (1980); Putnam and Wilson Theory (1982); Rahim Model (1985) and Pruitt and Rubin Model (1986) to name a few. Among these theories, most of the construction industry related studies adopt the dual concern model of Rahim (1980) to discuss conflicts during project life cycle. It comprises of five styles of conflict management: integrating, obliging, compromising, dominating, and avoiding.

Objective 2: Investigate different types of conflicts that occur during the pre-contract stage of building construction projects in Sri Lanka.

In the pre-contract stage of building construction projects in Sri Lanka, conflicts exist in all three interfaces of hierarchy. They are between professionals and their supervisors, between professionals and their peers and professionals and their subordinates.

Further to the interfaces (with supervisor, peers and subordinates), all the four types of conflicts (task, relationship, process and status conflicts) occur in different frequencies during the pre-contract stage of building construction projects in Sri Lanka. The most common type of conflicts that occur during the pre-contract stage is task conflicts and process conflicts. Among these two types, task conflicts occur very often whilst process conflicts appear often between the design team professionals during the pre-contract period in building construction projects. The other two types of conflicts,

relationship conflicts and status conflicts occur very rarely during the pre-contract stage.

Objective 3: Examine the different conflict-handling styles that can be used to handle conflicts during the pre-contract stage of building construction projects in Sri Lanka To handle task, relationship, process and status conflicts with supervisors, peers and subordinates, the professionals engaged in the pre-contract stage of building construction projects in Sri Lanka use all five conflict-handling styles in the dual concern theory introduced by Rahim (2002) in different frequencies of usage.

The five conflict management styles are : *integrating style*: valuing both their goals and relationships and attempting to arrive at a solution, *obliging style*: valuing relationships over goals and attempting to arrive at a solution, *avoiding style*: avoiding confrontation more than either their goals or relationships, *compromising style*: concerning both their goals and relationships moderately and try to arrive at a solution and *dominating style*: valuing their goals over relationships and trying to find a solution in different occasions when handling conflicts.

Objective 4: Investigate the usage of conflict-handling styles to handle different conflict types during the pre-contract stage of building construction projects in Sri Lanka.

Task, relationship, process and status conflicts with supervisor, peers and subordinates can be handled using all these five different styles (integrating, obliging, avoiding, compromising, and competing) during the pre-contract stage of building construction projects in Sri Lanka. Yet different styles would bring different outcomes. However, to handle these conflicts effectively, it is necessary to concentrate on three factors and they are “*what type of conflict*”, “*with whom to be used*” and “*which style to be used*” to have a fruitful outcome.

Considering the pre-contract stage of building construction projects in Sri Lanka, to handle all four types of conflicts with supervisors’ peers and subordinates, professionals prefer the integrating style where they keep faith on collaborating with the conflicting party, highly valuing both parties’ goals and relationships.

Professionals engaged in the pre-contract stage consider the conflicts as an opportunity to improve their relationships, reduce tension between them whilst satisfying all the parties to the conflict. However, the professionals hardly use the avoiding style and dominating style when handling conflicts with their supervisors, peers and subordinates except for handling process and status conflicts with subordinates. Further, when handling relationship conflicts with subordinates, they use avoiding style and compromising style very rarely. In terms of process conflicts, professionals, very rarely use compromising style when handling conflicts with their subordinates and whereas for status conflicts they hardly use obliging and compromising styles to handle conflicts with subordinates.

5.3 Recommendation

Based on the research findings, the following recommendations can be made.

- The analysis of conflict-handling styles against the types of conflicts and the focused group during the pre-contract stage may assist the professionals to find their personnel conflict handling style and to assess each conflict-handling style and use them on different occasions where they are appropriate.
- The effective way of handling task conflicts and process conflicts with the supervisor, peers and subordinates is to integrate with them and find a solution together with the supervisor or peers.

5.4 Further Research Area

It was found out that there are many research gaps yet to be filled related to this research area. Therefore, the following research areas are recommended for further research with appropriate modifications.

The research findings and conclusions arrived out of this research are moderately biased towards the behavior of Quantity Surveying professionals engaged during the pre-contract stage of building construction projects in Sri Lanka as the majority of professionals (59.25%) participated in the questionnaire was from the Quantity Surveying community. Therefore, this research can also be progressed for other design

team professionals as further research areas to identify the behaviour of different professionals of handling conflicts during pre-contract stage of building construction projects in Sri Lanka. As of other areas,

- Investigation of critical success factors of conflict-handling styles during the construction stage of building construction projects in Sri Lanka.
- Investigation of the impact of conflict-handling styles on the satisfaction of design team members during the design stage of building construction projects in Sri Lanka.
- The impact of different types of conflicts on the quality of building construction projects in Sri Lanka, can be identified.

REFERENCE

REFERENCES

- Acharya, N.K., Lee, Y.D. & Kim, J.K. Critical construction conflicting factors identification using analytical hierarchy process. *KSCE J Civ Eng* **10**, 165–174 (2006). <https://doi.org/10.1007/BF02824057>
- Alper, S., Tjosvold, D., & Law, K. (2000). Conflict management, efficacy, and performance in organizational teams. *Personnel Psychology*, *53*, 625–642.
- Amason, A. (1996). Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: resolving a paradox for top management teams. *Academy of Management Journal, Mississippi State University*, *39*(1), 123-148.
- Amason, A., & Sapienza, H. (1997). The Effects of Top Management Team size and interaction norms on cognitive and affective conflict. *Journal of Management*, *23*(4), 495-516.
- Arditi, D., & Thaveeporn, P. (2010). Predicting the Outcome of Construction Litigation Using an Integrated Artificial Intelligence Model. *Journal of Computing in Civil Engineering*, 73-80.
- Augsburger, D. (1992). *Conflict mediation across cultures: pathways and patterns*. Louisville, London: Westminister John Know Press.
- Awakul, P., & Ogunlana, S. (2002). The effect of attitudinal differences on interface conflict on large construction projects the case of the Pak Mun Dam project. *Environmental Impact Assessment Review*, *22*, 311 –335.
- Axley, S. (1996). *Communication at Work Management and the Communication - Intensive Organisation*. Westport: Quorum Books.
- Balogun, O., & Ansary, N. (2017). Sources of Conflicts in a Construction Projects: A perspective of South Africa Construction Industry. *Sixth International Conference on Advances in Civil, Structural and Environmental Engineering*.

- Bao, L. (2014). *How Four Types of Intragroup Conflicts Shape the Role of Group Diversity on Group Outcomes*. Cleveland : Department of Organizational Behavior, Weatherhead School of Management, Case Western Reserve University.
- Bendersky, C., & Hays, N. (2012). Status conflict in groups. *Organization Science*, 23(2), 323-340.
- Bendersky, J., & Corinne, K. (2003). Intragroup conflicts in organizations: A contingency perspective on conflict outcome relationship. *Research in organisational behavior*, 25, 187-242.
- Blake, R., & Mouton, J. (1964). *The managerial grid*. Houston TX : Gulf.
- Silverthorne, W. (2007). Understanding conflict management styles of Thais and Americans in multinational corporations in Thailand. *International Journal of Conflict Management*, 18(3), 196-221.
- Brown, D. (1983). *Managing conflict at organizational interfaces*. Massachusetts: Addison-Wesley.
- Brown, H., & Marriott, A. (1993). *ADR Principles and Practice*. London: Sweet & Maxwell.
- Burrell, G., & Morgan, G. (1979). *Sociological paradigms and organisational analysis: Elements of the sociology of corporate life*. London: Heinemann.
- Charkhakan, M., & Heravi, G. (2019). Evaluating the preventability of conflicts arising from change occurrence in construction projects. *Engineering, Construction and Architectural Management*, 26(8), 1777-1800. doi:10.1108/ECAM-09-2018-0361
- Cheung, S., & Yiu, T. (2006). Are Construction Disputes Inevitable? *IEEE Transactions on Engineering Management*, 53(3), 456-470.

- Cheung, C., & Chuah, K. (1999). Conflict management styles in Hong Kong industries. *International Journal of Project Management*, 17(3), 393-399.
- Cheung, S., & Yiu, K. (2007). A study of construction mediator tactics—Part I: Taxonomies of dispute sources, mediator tactics and mediation outcomes. *Building and Environment*, 751-762. doi:10.1016/j.buildenv.2005.09.004
- Cheung, S., Suen, H., & Lam, T. (2002). Fundamentals of Alternative Dispute Resolution Processes. *Journal of Construction Engineering and Management*, 409-417. doi:10.1061/~ASCE!0733-9364~2002!128:5~409!
- Cheung, S., Yiu Yiu, T., & Yeung, S. (2006). A Study of Styles and Outcomes in Construction dispute negotiation. *Journal of Construction Engineering and Management*, 132(8), 805-814.
- Creswell, J. (2014). *Research Design*. (4, Ed.) California 91320: SAGE Publications.
- De Dreu, C. (2007). Cooperative Outcome Interdependence, Task Reflexivity, and Team Effectiveness: A Motivated Information Processing Perspective. *Journal of Applied Psychology*, 92(3). doi:DOI: 10.1037/0021-9010.92.3.628
- Deutsch, M. (1949). A theory of Co-operation and Competition.
- Donohue, W., & Kolt, R. (1992). *Managing Interpersonal Conflict*. Newbury Park, CA, CA, Managing Interpersonal Conflict, Newbury Park, CA, Sage Publications.: Sage Publications.
- Drolet, A., & Morris, M. (2000). Rapport in Conflict Resolution: Accounting for How Face-to-Face Contact Fosters Mutual Cooperation in Mixed-Motive Conflicts. *Experimental Social Psychology*, 36, 26–50. Retrieved January 3, 2019, from <https://www.sciencedirect.com/science/article/pii/S0022103199913951>
- Follet, M. (2019, February 18). *Dispute Resolution*. Retrieved from www.angelfire.com: <http://www.angelfire.com/mo3/acotrel/labourman/conflict.htm>

- Friendman, R., Tidd, S., & Tsai, S. (2000). Goes Around Comes Around: The Impact of Personal Conflict Style on Work Conflict and Stress. *The International Journal of Conflict Management*, 11(1), 32-55.
- Gardiner, P., & Simmons, J. (1992). Analysis of conflict and change in construction projects. *Construction Management and Economics*, 10(6), 459-478. doi:10.1080/01446199200000046 Ogunbayo
- Gorse, C. (2003). Conflict and conflict management in construction. *Annual ARCOM Conference, 1*, 173-182.
- Guo, H., Zhang, L., Huo, X., & Xi, G. (2019). When and how cognitive conflict benefits cross-functional project team innovation: The importance of knowledge leadership. *International Journal of Conflict Management*, 30(4), 514-537. doi:10.1108/IJCMA-02-2019-0031
- Gould, R. (2003). *How Ambiguity About Social Rank Breeds Conflict*. Chicago: University of Chicago Press.
- Guangdong, W., ZhaoJian , X., & Zuo, Z. (2017). Effects of Inter-organizational Conflicts on Construction Project Added Value in China. *International Journal of Conflict Management*, 28(5), 695-723. doi: DOI: 10.1108/IJCMA-03-2017-0025
- Gunarathna, C., Yang, R., & Fernando, N. (2018). Conflict and management styles in the Sri Lankan commercial building sector. *Engineering, Construction and Architectural Management*, 25(2), 178-201.
- Hall, E. (1969). *The Hidden Dimension*. Garden City: NY: Anchor.
- Harmon, K. (2003). Conflicts between Owner and Contractors: Proposed Intervention Process. *Journal of Management in Engineering*, 121-125. doi:10.1061/~ASCE!0742-597X~2003!19:3~121!
- Hastings, T., Kavookjian, J., & Ekong, G. (2018, 09 19). *Associations among student conflict management style and attitudes toward empathy*. Retrieved from

www.elsevier.com/locate/cptl: <https://www.journals.elsevier.com/currents-in-pharmacy-teaching-and-learning>

- Hatfield, D. (1988). Assessing the Rahim Organizational Conflict Inventory-II (ROCI-II). *Management Communication Quarterly*, 1(350), 350-366. doi:10.1177/0893318988001003005
- Hotepo, M., Asokere, A., Abdul-Azeez, A., & Ajemunigbohun, S. (2010). Empirical Study of the Effect of Conflict on Organizational Performance in Nigeria. *Business and Economics Journal*, 2010: BEJ-15, 1-9.
- Hussein, A., Al-Mamary, Y., & Hassan, Y. (2017, July). The Relationship Between Conflict Management Styles and Organizational Commitment: A Case of Sana'a University. *American Journal of Science and Technology*, 4(4), 49-66.
- Irfaan, M., Thaheem, M., Gabriel, H., Malik, M., & Nasir, A. (2019). Effect of stakeholder's conflicts on project constraints: a tale of the construction industry. *Engineering, Construction and Architectural Management*, 30(4), 538-565. doi:doi.org/10.1108/IJCMA-04-2019-0074
- Jaffar, N., Tharim, M., & Shuib, M. (2010). Factors of Conflict in Construction Industry: A Literature. *The 2nd International Building Control Conference 2011* (pp. 193-202). Perak Malaysia: Elsevier Ltd.
- Jehn, K. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly*, 40(2), 256-282.
- Jehn, K. (1997). A Qualitative Analysis of Conflict Types and Dimensions in Organizational Groups. *Administrative Science Quarterly*, 42(3), 530-557. Retrieved March 29, 2020, from <https://www.jstor.org/stable/2393737>
- Jehn, K. (2005). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly*, 256-282.

- Jehn, K., & Mannix, E. (1997). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *Jehn, K. A., & Mannix, E. A. (1997). The Academy of Management Journal, 44, 238-251.*
- Jehn, K., Greer, L., & Rupert, J. (2008). Diversity, conflict, and their consequences. *Research Gate, 127-174. doi:10.1017/CBO9780511753725.007*
- Johari, A., Morni, A., Bohari, D., & Sahari, S. (2013). Conflicting Environment at Workplace:. *Social and Behavioral Sciences, 101, 554 – 563.*
- Karthiyan, R., & Manikandan, T. (2017). A STUDY ON CAUSES AND EFFECTS OF CONFLICTS IN INDIAN CONSTRUCTION PROJECTS. *International Research Journal of Engineering and Technology (IRJET), 4(3), 1153-1170.*
- Kezsbom, D. (1992). Re-opening Pandora's box: Sources of project conflict in the '90s. *Industrial Engineering, 24(5), 54-59.*
- Khanaki, H., & Hassanzade, N. (2010). Conflict Management Styles: The Iranian General Preference Compared to the Swedish. *International Journal of Innovation, Management and Technology, 419-426.*
- Kiernan, L., Ledwith, A., & Lynch, R. (2020). Design teams management of conflict in reaching consensus. *International Journal of Conflict Management, 31(2), 263-285.*
- Kim, E., Yamaguchi, A., Kim, M., & Miyahara, A. (2015). Effects of taking conflict personally on conflict management styles across cultures. *Elsevire, 143–149.*
- Kirchoff, N. & Adams, J.R. (1982). Conflict management for project managers. Drexel Hill: Project Management Institute. p. 45-50
- Kothari, C. (1985). *Research Methodology Methods an Techniques*. New Delhi: New Age International (P) Ltd.
- Kumaraswamy, M., & Yogeswaran, K. (1998). Significant sources of construction claims. *International Construction Law Review, 15(1), 144-160.*

- Labovitz, G. (1980). Managing Conflicts. *Business Horizons*, 23(3), 30-37. Retrieved from [https://doi.org/10.1016/0007-6813\(80\)90029-4](https://doi.org/10.1016/0007-6813(80)90029-4)
- Langford, D., Kennedy, P., & Sommerville, J. (1992). Contingency management of conflict: analysis of contract interfaces. *Construction Conflict Management and*, 63-70.
- Lee, K.L. (2008). An Examination between the Relationships of Conflict Management Styles and Employees' Satisfaction. *International Journal of Business and Management*, 3(9), 11-25.
- Leeds, C. (1992). The French Approach to Handling Conflicts and to Negotiating: Certain Notable Features. *International Construction Management Conference*, 152-162.
- Lu, W., & Wang, J. (2017). The influence of conflict management styles on relationship quality: The moderating effect of the level of task conflict. *International Journal of Project Management*, 35, 1483–1494.
- Madalina, O. (2016). Conflict Management, a new challenge. *3rd GLOBAL CONFERENCE on BUSINESS, ECONOMICS, MANAGEMENT and TOURISM*. 39, pp. 807 – 814. Rome, Italy: Procedia Economics and Finance. doi:10.1016/S2212-5671(16)30255-6
- Maiti, S., & Choi, J. (2018). Investigation and implementation of conflict management strategies to minimize conflicts in the construction industry. *International Journal of Construction Management*, 2331-2327. doi:DOI 0.1080/15623599.2018.1536964
- Maiti, S., & Choi, J. (2021). Investigation and implementation of conflict management strategies to minimize conflicts in the construction industry. *International Journal of Construction Management*, 21(4), 337–352. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/15623599.2018.1536964>

- McGaghie, W., Bordage, G., & Shea, J. (2001). Conceptual Framework, and Research Question. *Academic Medicine*, 76(9), 923-924.
- Mitropoulos, P., & Howell, G. (2001). Model for understanding, preventing and resolving project disputes. *Journal of Construction Engineering and Management*, 223-231.
- Ofori, J. (2013). Conflict in Construction. *Construction Management and Economics*, 31(5), 497–503. doi: DOI: 10.1080/01446193.2013.767465
- Ogunbayo, O. (2013). Project Managers' Conflict Management Styles and Its Impact on Project Team Motivation in Nigeria Construction Industry. *International Journal of Scientific & Engineering Research*, 4(7), 2248-2258.
- Rahim, A. (2000). Empirical studies of managing conflict. *The International Journal of Conflict Management*, 5-8.
- Rahim, M. (1985). A strategy for managing conflict in complex organizations. *Human Relation*, 38(1), 81-89.
- Rahim, M., & Magner, N. (1995). Confirmatory Factor Analysis of the Styles of Handling Interpersonal Conflict: First-Order Factor Model and Its Invariance Across Groups. *Journal of Applied Psychology*, 80(1), 122-132.
- Rahim, M. (2002). Toward a Theory of Managing Organizational Conflict. *The International Journal of Conflict Management*, 13(3), 206-235.
- Roloff, M., Miller, C., & Malis, R. (2007). Understanding Interpersonal Conflicts That Are Difficult to Resolve: A Review of Literature and Presentation of an Integrated Model. *Annals of the International Communication Association*, 31(1), 118-171. doi:10.1080/23808985.2007.11679066
- Safapour, E., Kermanshachi, S., Nipa, T., & Kamalirad, S. (2019). Investigation of Conflict Impacts on Engineering, Procurement, and Construction Schedule

Performance. *7th CSCE International Construction Specialty Conference*, (pp. 291/1-10). Laval.

Saunders, M., Lewis, P., Thornhill, A., & Bristow, A. (2019). Understanding research philosophy and approaches to theory development. In *Research Methods for Business Students* (8 ed., pp. 128-171). Pearson Education.

Senaratne, S., Udawatta, N., & Gunasekara, D. (2013). Intragroup Conflicts in the Pre Contract Stage of Construction Projects. *Australasian Universities Building Education Association. Conference* (pp. 1-10). Auckland, New Zealand: Australasian Universities Building Education Association.

Shawa , B., Lello, D., & Ntiyakunze, S. (2018). Analysis of Causes of Conflicts within the Design Teams in Building Projects in Tanzania. *International Journal of Engineering Trends and Technology (IJETT)*, 60(1), 1-20. doi:10.14445/22315381/IJETT-V60P201

Shin, Y. (2005). Conflict Resolution in vertual teams. *Organizational Dynamics*, 34(4), 331–345.

Simons, L., & Petersons, R. (2020, March 31). *Task Conflict and Relationship Conflict in Top Management Teams: The Pivotal Role of Intragroup Trust Teams: The Pivotal Role of Intragroup Tr*. Retrieved from Cornell University School of Hotel Administration Cornell University School of Hotel Administration The Scholarly Commons The Scholarly Commo: <https://scholarship.sha.cornell.edu/cgi/viewcontent.cgi?article=1723&context=articles>

Slabbert, A. (2004). Conflict management styles in traditional organisations. *The Social Science Journal* 41 , 83–92. doi:10.1016/j.soscij.2003.10.007

Smith, M. (1992). Facing up to confliction in construction. *Construction Conflict Management and Resolution: Proceedings of the First International Construction Management Conference The University of Manchester*, 26-33.

- Stevens, M.;. (2002). *Project Management Pathways*. London: The Association for Project Management Limited.
- Suifan, T., Alhyari, S., & Sweis, R. (2019). A moderated mediation model of Intragroup conflicts. *International Journal of Conflict Management*, 31(1), 91-114. Retrieved from <http://dx.doi.org/10.1108/IJCMA-05-2019-0084>
- Tabassi, A., Abdullah, A., & Bryde, D. (2019). Conflict Management, Team Coordination and Performance Within Multicultural Temporary Projects: Evidence From the Construction Industry. *Project Management Journal*, 50(1), 101-114.
- Thakore, D. (2013, March - April). Conflict and Conflict management. *IOSR Journal of Business and Management (IOSR-JBM)*, 8(6), 07-16.
- Udawatte, N., & Senarathne, S. (2013). Managing intragroup conflicts in construction project teams: case studies in Sri Lanka. *Architectural Engineering and Design Management*, 9(3), 158-175. Retrieved from <http://dx.doi.org/10.1080/17452007.2012.738041>
- Wang, T., Wu, J., Gu, J., & Hu, L. (2021). Impact of open innovation on organizational performance in different conflict management styles: based on resource dependence theory. *International Journal of Conflict Management*, 32(2), 199-222. doi:10.1108/IJCMA-09-2019-0165
- Warmbrod, J. (2014). Reporting and Interpreting Scores Derived from Likert-type Scales. *Journal of Agricultural Education*, 55(5), 30-47. doi:10.5032/jae.2014.05030
- West, M., & Anderson, R. (1996, December). Innovation in Top Management Teams. *Journal of Applied Psychology*, 81(6), 680 - 693. doi:10.1037/0021-9010.81.6.680

- Williamson, O. (1979). Transaction-Cost Economics: The Governance of Contractual Relations. *Journal of Law and Economics*, 22(2), 233-261. Retrieved from <http://www.jstor.org/stable/725118>
- Womack, D. (1988). Assessing the Thomas-Kilman conflict MODE survey. *Management Communication Quarterly*, 1(3), 321-349. Retrieved from <https://journals.sagepub.com/doi/abs/10.1177/0893318988001003004>
- Wu, G., Zhao, X., & Zuo, J. (2017). Effects of inter-organizational conflicts on construction project added value in China. *Engineering, Construction and Architectural Management*, 28(5), 695-723. doi:10.1108/IJCMA-03-2017-0025
- Wu, G., Zhao, X., Zuo, J., & Zillante, G. (2017). Effects of contractual flexibility on conflict and project success in megaprojects. *International Journal of Conflict Management*, 29(2), 253-278. doi:10.1108/IJCMA-06-2017-0051
- Zhang, L., & Huo, X. (2015). The impact of interpersonal conflict on construction project performance A moderated mediation study from China. *International Journal of Conflict Management*, 26(4), 479-498. doi:doi.org/10.1108/IJCMA-09-2014-0072
- Zhang, Q., & Zhang, J. (2012). Conflict Types, Resolution, and Relational Satisfaction: A U.S.-China Investigation. *Intercultural Communication Studies*, 21(3), 41-52.
- Zhu, F., Wang, L., Yu, M., & Yang, X. (2020). Quality of conflict management in construction project context : Conceptualization, scale development, and validation. *Engineering, Construction and Architectural Management*, 27(5), 1191-1211. doi:doi.org/10.1108/ECAM-09-2019-0497

APPENDICES

APPENDICES

Appendix 1: Rahim’s Organizational Conflict Inventory -II

Rahim Organizational Conflict Inventory–II, Form A

Strictly Confidential

Please check the appropriate box after each statement, to indicate *how you handle your disagreement or conflict with your supervisor*. Try to recall as many recent conflict situations as possible in ranking these statements.

	<i>Strongly Disagree</i>					<i>Strongly Agree</i>	
	1	2	3	4	5		
1. I try to investigate an issue with my supervisor to find a solution acceptable to us.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. I generally try to satisfy the needs of my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. I attempt to avoid being "put on the spot" and try to keep my conflict with my supervisor to myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4. I try to integrate my ideas with those of my supervisor to come up with a decision jointly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. I try to work with my supervisor to find solution to a problem that satisfies our expectations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6. I usually avoid open discussion of my differences with my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7. I try to find a middle course to resolve an impasse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8. I use my influence to get my ideas accepted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
9. I use my authority to make a decision in my favor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10. I usually accommodate the wishes of my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
11. I give in to the wishes of my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12. I exchange accurate information with my supervisor to solve a problem together.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
13. I usually allow concessions to my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
14. I usually propose a middle ground for breaking deadlocks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
15. I negotiate with my supervisor so that a compromise can be reached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
16. I try to stay away from disagreement with my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
17. I avoid an encounter with my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
18. I use my expertise to make a decision in my favor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
19. I often go along with the suggestions of my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
20. I use "give and take" so that a compromise can be made.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
21. I am generally firm in pursuing my side of the issue.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
22. I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
23. I collaborate with my supervisor to come up with decisions acceptable to us.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
24. I try to satisfy the expectations of my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
25. I sometimes use my power to win a competitive situation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
26. I try to keep my disagreement with my supervisor to myself in order to avoid hard feelings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
27. I try to avoid unpleasant exchanges with my supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
28. I try to work with my supervisor for a proper understanding of a problem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Rahim Organizational Conflict Inventory–II, Form B

Strictly Confidential

Please check the appropriate box after each statement, to indicate *how you handle your disagreement or conflict with your subordinates*. Try to recall as many recent conflict situations as possible in ranking these statements.

	<i>Strongly Disagree</i>		<i>Strongly Agree</i>		
	1	2	3	4	5
1. I try to investigate an issue with my subordinates to find a solution acceptable to us.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I generally try to satisfy the needs of my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I attempt to avoid being "put on the spot" and try to keep my conflict with my subordinates to myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I try to integrate my ideas with those of my subordinates to come up with a decision jointly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I try to work with my subordinates to find solution to a problem that satisfies our expectations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I usually avoid open discussion of my differences with my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I try to find a middle course to resolve an impasse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I use my influence to get my ideas accepted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I use my authority to make a decision in my favor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I usually accommodate the wishes of my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I give in to the wishes of my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I exchange accurate information with my subordinates to solve a problem together.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I usually allow concessions to my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I usually propose a middle ground for breaking deadlocks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I negotiate with my subordinates so that a compromise can be reached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I try to stay away from disagreement with my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I avoid an encounter with my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I use my expertise to make a decision in my favor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I often go along with the suggestions of my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I use "give and take" so that a compromise can be made.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I am generally firm in pursuing my side of the issue.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I collaborate with my subordinates to come up with decisions acceptable to us.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I try to satisfy the expectations of my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I sometimes use my power to win a competitive situation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. I try to keep my disagreement with my subordinates to myself in order to avoid hard feelings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. I try to avoid unpleasant exchanges with my subordinates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. I try to work with my subordinates for a proper understanding of a problem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rahim Organizational Conflict Inventory–II, Form C

Strictly Confidential

Please check the appropriate box after each statement, to indicate *how you handle your disagreement or conflict with your peers*. Try to recall as many recent conflict situations as possible in ranking these statements.

	<i>Strongly Disagree</i>	1	2	3	4	<i>Strongly Agree</i>
1. I try to investigate an issue with my peers to find a solution acceptable to us.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I generally try to satisfy the needs of my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I attempt to avoid being "put on the spot" and try to keep my conflict with my peers to myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I try to integrate my ideas with those of my peers to come up with a decision jointly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I try to work with my peers to find solution to a problem that satisfies our expectations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I usually avoid open discussion of my differences with my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I try to find a middle course to resolve an impasse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I use my influence to get my ideas accepted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I use my authority to make a decision in my favor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I usually accommodate the wishes of my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I give in to the wishes of my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I exchange accurate information with my peers to solve a problem together.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I usually allow concessions to my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I usually propose a middle ground for breaking deadlocks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I negotiate with my peers so that a compromise can be reached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I try to stay away from disagreement with my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I avoid an encounter with my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I use my expertise to make a decision in my favor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I often go along with the suggestions of my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I use "give and take" so that a compromise can be made.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I am generally firm in pursuing my side of the issue.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I collaborate with my peers to come up with decisions acceptable to us.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I try to satisfy the expectations of my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I sometimes use my power to win a competitive situation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. I try to keep my disagreement with my peers to myself in order to avoid hard feelings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. I try to avoid unpleasant exchanges with my peers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. I try to work with my peers for a proper understanding of a problem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scoring Key *

Rating Scale: Strongly Agree = 5
 Strongly Disagree = 1

1. Collaborating Style

(Average your responses to Items)

1	4	5	12	22	23	28

=

Total

Total/ # of responses =

Average Score

2. Accommodating Style

(Average your responses to Items)

2	10	11	13	19	24

=

Total

Total/ # of responses =

Average Score

3. Competing Style

(Average your responses to Items)

8	9	18	21	25

=

Total

Total/ # of responses =

Average Score

4. Avoiding style

(Average your responses to Items)

3	6	16	17	26	27

=

Total

Total/ # of responses =

Average Score

5. Compromising style

(Average your responses to Items)

7	14	15	20

=

Total

Total/ # of responses =

Average Score

*Adapted from RQCL-II Scoring Key

Appendix 2: Sample Questionnaire

Instructions to Respondents.

Please use the [X] in the given box to mark the most relevant answer as per your Experience and Knowledge in Sri Lankan Construction Industry.
This Questionnaire will take approximately 45 minutes.

Section A – Demographic Data

Please **write or tick** the most relevant answer in the blanks from 01 to 06 questions given below.

1. Your designation:
2. How much experience do you have in the sector of building construction industry?

Less than 5 years	<input type="checkbox"/>
6-10 years	<input type="checkbox"/>
11-15 years	<input type="checkbox"/>
16-20 years	<input type="checkbox"/>
Over 20 years	<input type="checkbox"/>

3. Out of your experience in the sector of building construction, how much experience you have in pre- contract stage:

Less than 5 years	<input type="checkbox"/>
6-10 years	<input type="checkbox"/>
11-15 years	<input type="checkbox"/>
16-20 years	<input type="checkbox"/>
Over 20 years	<input type="checkbox"/>

4. Do you have,

	Yes	No
Supervisors/ Managers who supervise your work	<input type="checkbox"/>	<input type="checkbox"/>
Peers working at your own level	<input type="checkbox"/>	<input type="checkbox"/>
Subordinates who work under your supervision	<input type="checkbox"/>	<input type="checkbox"/>

5. Do you have experience in conflicts during pre-contract stage?

	Yes	No
Supervisors/ Managers who supervise your work	<input type="checkbox"/>	<input type="checkbox"/>
Peers working at your own level	<input type="checkbox"/>	<input type="checkbox"/>
Subordinates who work under your supervision	<input type="checkbox"/>	<input type="checkbox"/>

6. Do you have experience in resolving conflicts during pre-contract stage?

	Yes	No
Supervisors/ Managers who supervise your work	<input type="checkbox"/>	<input type="checkbox"/>
Peers working at your own level	<input type="checkbox"/>	<input type="checkbox"/>
Subordinates who work under your supervision	<input type="checkbox"/>	<input type="checkbox"/>

Section B - Core Data

7. Indicate how you handle your disagreement or conflict with your **supervisor**. Try to recall as many recent conflict situations as possible in ranking these statements.

		<i>Strongly disagree</i>					<i>Strongly agree</i>	
		1	2	3	4	5		
1	I try to investigate an issue with my Supervisor to find a solution acceptable to us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2	I generally try to satisfy the needs of my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3	I attempt to avoid being "put on the spot" and try to keep my conflict with my Supervisor to myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4	I try to integrate my ideas with those of my Supervisor to come up with a decision jointly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5	I try to work with my Supervisor to find solution to a problem that satisfies our expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6	I usually avoid open discussion of my differences with my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7	I try to find a middle course to resolve an impasse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8	I use my influence to get my ideas accepted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
9	I use my authority to make a decision in my favor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10	I usually accommodate the wishes of my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
11	I give in to the wishes of my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12	I exchange accurate information with my Supervisor to solve a problem together	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
13	I usually allow concessions to my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
14	I usually propose a middle ground for breaking deadlocks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
15	I negotiate with my Supervisor so that a compromise can be reached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
16	I try to stay away from disagreement with my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
17	I avoid an encounter with my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
18	I use my expertise to make a decision in my favor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
19	I often go along with the suggestions of my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
20	I use "give and take" so that a compromise can be made	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
21	I am generally firm in pursuing my side of the issue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
22	I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
23	I collaborate with my Supervisor to come up with decisions acceptable to us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
24	I try to satisfy the expectations of my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
25	I sometimes use my power to win a competitive situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
26	I try to keep my disagreement with my Supervisor to myself in order to avoid hard feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
27	I try to avoid unpleasant exchanges with my Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
28	I try to work with my Supervisor for a proper understanding of a problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

8. Indicate how you handle your disagreement or conflict with your **Peers**. Try to recall as many recent conflict situations as possible in ranking these statements.

		<i>Strongly disagree</i>					<i>Strongly agree</i>	
		1	2	3	4	5		
1	I try to investigate an issue with my Peers to find a solution acceptable to us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2	I generally try to satisfy the needs of my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3	I attempt to avoid being "put on the spot" and try to keep my conflict with my Peers to myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4	I try to integrate my ideas with those of my Peers to come up with a decision jointly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5	I try to work with my Peers to find solution to a problem that satisfies our expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6	I usually avoid open discussion of my differences with my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7	I try to find a middle course to resolve an impasse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8	I use my influence to get my ideas accepted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
9	I use my authority to make a decision in my favor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10	I usually accommodate the wishes of my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
11	I give in to the wishes of my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12	I exchange accurate information with my Peers to solve a problem together	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
13	I usually allow concessions to my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
14	I usually propose a middle ground for breaking deadlocks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
15	I negotiate with my Peers so that a compromise can be reached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
16	I try to stay away from disagreement with my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
17	I avoid an encounter with my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
18	I use my expertise to make a decision in my favor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
19	I often go along with the suggestions of my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
20	I use "give and take" so that a compromise can be made	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
21	I am generally firm in pursuing my side of the issue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
22	I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
23	I collaborate with my Peers to come up with decisions acceptable to us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
24	I try to satisfy the expectations of my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
25	I sometimes use my power to win a competitive situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
26	I try to keep my disagreement with my Peers to myself in order to avoid hard feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
27	I try to avoid unpleasant exchanges with my Peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
28	I try to work with my Peers for a proper understanding of a problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

9. Indicate how you handle your disagreement or conflict with your **Subordinates**. Try to recall as many recent conflict situations as possible in ranking these statements.

		<i>Strongly disagree</i>			<i>Strongly agree</i>	
		1	2	3	4	5
1	I try to investigate an issue with my Subordinates to find a solution acceptable to us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	I generally try to satisfy the needs of my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	I attempt to avoid being "put on the spot" and try to keep my conflict with my Subordinates to myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	I try to integrate my ideas with those of my Subordinates to come up with a decision jointly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	I try to work with my Subordinates to find solution to a problem that satisfies our expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	I usually avoid open discussion of my differences with my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	I try to find a middle course to resolve an impasse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	I use my influence to get my ideas accepted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	I use my authority to make a decision in my favor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	I usually accommodate the wishes of my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	I give in to the wishes of my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	I exchange accurate information with my Subordinates to solve a problem together	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	I usually allow concessions to my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	I usually propose a middle ground for breaking deadlocks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	I negotiate with my Subordinates so that a compromise can be reached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	I try to stay away from disagreement with my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	I avoid an encounter with my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	I use my expertise to make a decision in my favor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	I often go along with the suggestions of my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	I use "give and take" so that a compromise can be made	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	I am generally firm in pursuing my side of the issue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	I collaborate with my Subordinates to come up with decisions acceptable to us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	I try to satisfy the expectations of my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	I sometimes use my power to win a competitive situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	I try to keep my disagreement with my Subordinates to myself in order to avoid hard feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	I try to avoid unpleasant exchanges with my Subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	I try to work with my Subordinates for a proper understanding of a problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. How often these types of conflicts occur during pre-contract stage of a construction project?

Never Very Rare Rare Often Very Often

Type		1	2	3	4	5
1	Task conflicts: Disagreements on a decision, due to different viewpoints, ideas, and individual opinion among the team members or Individuals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Relationship conflicts: Emotional, effective, or interpersonal or emotional conflicts which create tension and dis-likes due to incompatibility from one person to another.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Process conflicts: Refers to disagreement over the methods or procedures the group should use in order to complete its tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Status conflicts: disputes over people's relative status (i.e., respect) positions in their group's social hierarchy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Rate the conflict-handling styles that you use to resolve above identified conflict types using the scale given below? Put the value (1, 2, 3, 4, or 5) in the empty cells. A brief description on conflicts handling styles is given in Annexure 1.

<i>Never</i>	<i>Very Rare</i>	<i>Rare</i>	<i>Often</i>	<i>Very Often</i>
1	2	3	4	5

Example for filling the below table.

Type	<i>Integrating</i>	<i>Obliging</i>	<i>Competing</i>	<i>Avoiding</i>	<i>Compromising</i>
1 Task Conflicts	5 (Very often)	4 (Often)	3 (Rare)	1 (Never)	2 (Very Rare)


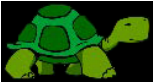



Pls fill only the number from the above scale.

		<i>Integrating</i>	<i>Obliging</i>	<i>Competing</i>	<i>Avoiding</i>	<i>Compromising</i>
With Supervisor						
1	Task Conflicts					
2	Relationship Conflicts					
3	Process Conflicts					
4	Status conflicts					
With Peers						
1	Task Conflicts					
2	Relationship Conflicts					
3	Process Conflicts					
4	Status conflicts					
With Subordinates						
1	Task Conflicts					
2	Relationship Conflicts					
3	Process Conflicts					
4	Status conflicts					

Thanking You!

Brief Descriptions of the Five Conflict Management Styles

When considering these five conflict-handling styles introduced by Rahim in 1985 is not better than one another as they have their own pros and cons depending on the situation that you are applying with. Depending on the situation each of these styles would be useful. The sole purpose of this assessment is to assist you in identifying the most common conflict-handling style that you are flexible with. Further this will assist you with pros and cons of your instinctive response to the conflicts you would encounter in future and also you will be able to analyze diplomatically the appropriateness of the other styles and try them wherever appropriate without sticking to your typical conflict-handling style.

 <p>Owl</p>	<p><u>Integrating</u> Owls claims high value on their goals and their relationships. They see a conflict as a situation which needs to be solved by reserving both parties' goals. They see conflicts as opportunities to strengthen up their relationships and lessen the tension between them.</p>
 <p>Turtle</p>	<p><u>Avoiding</u> Turtles tend to value avoiding confrontation more than either their goals or relationships. They often find it easier to withdraw from a conflict than to face it. This might even include completely giving up relationships or goals that are associated with the conflict.</p>
 <p>Shark</p>	<p><u>Dominating</u> Sharks typically value their goals over relationships, meaning that if forced to choose, they would seek to achieve their goals even at the cost of the relationship involved. Sharks are typically more concerned with accomplishing their goals than with being liked by others. They might try to force opponents to accept their solution to the conflict by overpowering them.</p>
 <p>Teddy Bear</p>	<p><u>Obliging</u> Teddy Bears typically value relationships over their own goals; if forced to choose, Teddy Bears will often sacrifice their goals in order to maintain relationships. Teddy Bears generally want to be liked by others and prefer to avoid conflict because they believe addressing it will damage relationships. Teddy Bears try to smooth over conflict to prevent damage to the relationship.</p>
 <p>Fox</p>	<p><u>Compromising</u> Foxes are moderately concerned with both their goals and their relationships with others. Foxes typically seek a compromise; they give up part of their goals and persuade the other person in a conflict to give up part of their goals. They seek a conflict solution in which both sides gain something; the middle ground between two extreme positions. They are willing to sacrifice part of their goals in order to find agreement for the common good.</p>

Adapted from: Conflict Management Styles Descriptions. Docstoc,
<http://img.docstoccdn.com/thumb/orig/47081621.pn>

Scoring Key ** For Rahim's Organizational Conflict Inventory

Rating Scale

Strongly Agree = 5

Strongly Disagree = 1

1. Integrating Style

(Average your responses to Items)

1	4	5	12	22	23	28

=

Total

Total no. of Responses

=

Average Score

2. Obliging Style

(Average your responses to Items)

2	10	11	13	19	24

=

Total

Total no. of Responses

=

Average Score

3. Dominating Style

(Average your responses to Items)

8	9	18	21	25

=

Total

Total no. of Responses

=

Average Score

4. Avoiding style

(Average your responses to Items)

3	6	16	17	26	27

=

Total

Total no. of Responses

=

Average Score

5. Compromising style

(Average your responses to Items)

7	14	15	20

=

Total

Total no. of Responses

=

Average Score

End of Questionnaire

Appendix 3: Behaviour of the majority of respondents in handling conflicts with their supervisors/peers/subordinates

Phrase no.	Phrase	Style	With Supervisor	With Peers	With Subordinates
1	I try to investigate an issue to find a solution acceptable to us	Integrating Style	Agree (4)	Agree (4)	Agree (4)
4	I try to integrate my ideas to come up with a decision jointly		Agree (4)	Agree (4)	Agree (4)
5	I try to work to find solution to a problem that satisfies our expectations		S. agree (5)	Agree (4)	Agree (4)
12	I exchange accurate information to solve a problem together		S. agree (5)	S. agree (5)	S. agree (5)
22	I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way		Agree (4)	Agree (4)	Agree (4)
23	I sometimes use my power to win a competitive situation		Moderate (3)	Agree (4)	Moderate (3)
28	I try to work with my Subordinates for a proper understanding of a problem		S. agree (5)	Agree (4)	S. agree (5)
2	I generally try to satisfy the needs of	Obliging	Agree (4)	Moderate (3)	Moderate (3)
10	I usually accommodate the wishes of other party.		Moderate (3)	Moderate (3)	Moderate (3)
11	I give in to the wishes of other party.		Moderate (3)	Moderate (3)	Moderate (3)
13	I usually allow concessions to other party.		S. agree (5)	S. agree (5)	S. agree (5)
19	I often go along with the suggestions of the other party.		Moderate (3)	Moderate (3)	Moderate (3)
24	I try to keep my disagreement with my Subordinates to myself in order to avoid hard feelings		Moderate (3)	Moderate (3)	Moderate (3)
8	I use my influence to get my ideas accepted	Dominating	Moderate (3)	Moderate (3)	Moderate (3)
9	I use my authority to make a decision in my favour		Moderate (3)	Moderate (3)	Moderate (3)
18	I use my expertise to make a decision in my favour		Agree (4)	Agree (4)	Agree (4)
21	I am generally firm in pursuing my side of the issue		Moderate (3)	Moderate (3)	Agree (4)
25	I collaborate with my Subordinates to come up with decisions acceptable to us		Moderate (3)	Moderate (3)	Moderate (3)
3	I attempt to avoid being "put on the spot" and try to keep my conflict to myself	Avoiding	Moderate (3)	Moderate (3)	Moderate (3)
6	I usually avoid open discussion of my differences		Moderate (3)	Moderate (3)	Moderate (3)
16	I try to stay away from disagreement.		S. agree (5)	S. agree (5)	Moderate (3)
17	I avoid an encounter with other party.		Moderate (3)	Agree (4)	Moderate (3)
26	I try to satisfy the expectations of my Subordinates		Moderate (3)	Moderate (3)	Moderate (3)
27	I try to avoid unpleasant exchanges with my Subordinates		Agree (4)	Agree (4)	Moderate (3)
7	I try to find a middle course to resolve an impasse	Compromising	Agree (4)	Agree (4)	Agree (4)
14	I usually propose a middle ground for breaking deadlocks		Agree (4)	Agree (4)	Agree (4)
15	I negotiate, so that a compromise can be reached		S. agree (5)	S. agree (5)	Agree (4)
20	I use "give and take" so that a compromise can be made		Moderate (3)	Moderate (3)	Moderate (3)

Appendix 4: Internal Consistency of Form A, B & C of ROCI-II

ROCI-II Form A																													
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	
1	3	4	3	4	3	2	3	2	1	3	3	5	4	4	3	3	2	1	5	3	3	5	4	4	1	3	3	4	88
2	5	3	3	5	5	4	4	2	2	2	1	5	4	4	4	4	3	2	3	4	4	4	5	4	4	4	4	4	102
3	3	4	3	1	1	1	4	2	2	3	3	5	4	3	4	4	3	2	5	4	3	4	4	4	2	4	5	5	92
4	5	2	5	5	5	2	5	3	2	1	2	5	5	5	5	5	5	2	4	5	5	5	5	3	3	3	5	5	112
5	4	3	3	4	4	2	4	2	2	2	2	4	2	4	4	4	3	2	2	4	2	4	4	2	2	2	4	4	85
6	5	4	5	5	1	3	2	2	3	1	5	3	4	4	5	5	5	4	5	3	4	4	4	1	4	4	4	5	100
7	4	4	3	4	4	2	4	2	2	2	3	4	4	3	4	4	3	2	4	3	3	4	4	3	2	3	4	4	92
8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3	3	82
9	5	1	1	5	5	1	5	1	1	1	1	5	1	5	5	5	1	5	1	5	5	5	5	1	1	1	1	5	84
10	4	3	4	3	4	2	4	1	1	4	4	4	2	4	4	4	4	3	4	4	3	4	4	4	2	4	4	4	96
11	4	4	4	1	5	3	4	3	2	3	3	5	4	3	3	3	3	2	4	4	3	4	4	4	4	3	4	5	98
12	5	5	3	5	5	3	5	5	5	5	5	5	5	3	3	3	1	4	5	3	5	5	5	5	5	5	3	5	121
13	4	3	3	4	4	2	3	3	3	4	4	5	4	3	3	3	2	3	2	3	3	5	4	5	4	5	5	4	100
14	4	1	1	4	3	1	3	1	1	3	2	5	2	3	3	3	3	3	3	3	5	3	5	5	1	1	2	3	79
15	2	3	2	4	4	2	3	1	1	3	2	5	3	3	3	3	2	1	1	1	1	3	4	3	1	1	2	4	68
16	3	3	3	4	4	3	5	4	4	3	3	4	3	3	3	3	4	3	2	3	3	3	4	3	3	3	3	4	93
17	4	3	1	4	5	2	4	1	1	2	2	5	1	4	4	4	2	3	3	3	4	4	4	4	4	2	4	4	88
18	4	3	2	4	5	3	4	2	1	3	2	5	3	4	2	2	2	2	2	4	2	5	4	3	3	2	2	4	84
19	3	2	2	3	4	2	2	2	2	2	2	4	2	2	2	2	3	3	2	2	3	4	3	2	2	2	4	4	72
20	4	2	3	4	4	2	4	3	2	3	3	4	4	3	4	4	2	3	4	3	3	3	3	3	3	3	3	3	89
21	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	113
22	4	3	3	4	4	2	5	2	2	3	3	5	3	4	4	4	3	2	3	3	3	4	5	4	2	3	3	4	94

23	4	3	2	5	5	2	3	3	2	4	4	5	4	4	5	5	3	3	2	4	3	4	5	4	3	4	3	4	102	
24	4	2	3	4	4	2	3	2	2	4	3	4	2	3	2	2	2	2	4	3	2	4	5	2	2	3	3	4	82	
25	4	4	4	4	5	4	4	4	5	4	4	4	5	4	4	4	4	5	5	5	5	5	4	4	4	5	5	5	123	
26	5	3	3	4	5	2	3	3	1	3	3	1	3	3	3	3	3	3	3	3	3	2	2	3	2	3	3	2	80	
27	4	4	4	5	5	2	4	3	3	3	3	5	4	4	4	4	4	3	3	2	3	4	5	3	2	4	3	5	102	
28	4	4	3	5	5	3	4	2	1	2	2	5	3	4	3	3	4	2	4	3	3	4	5	4	1	4	4	5	96	
29	5	4	3	5	5	4	5	4	3	4	4	5	4	5	5	5	3	4	3	4	4	5	5	4	4	3	3	5	117	
30	5	4	4	5	5	4	4	4	3	4	4	5	4	4	4	4	4	4	4	4	3	5	5	4	4	3	3	5	115	
31	5	4	5	5	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	114	
32	4	4	2	5	5	4	4	4	4	4	3	4	4	4	5	5	4	4	3	3	4	5	4	4	4	4	4	5	113	
33	5	5	3	5	5	4	4	4	3	4	4	5	4	5	4	4	4	4	3	4	4	4	5	4	3	3	4	5	115	
34	5	4	3	5	5	3	4	4	3	3	3	5	4	5	4	4	4	4	4	3	4	5	4	4	3	3	4	5	111	
35	5	4	3	4	4	4	4	4	4	3	2	4	3	4	3	3	4	4	3	3	4	4	5	4	3	4	5	5	106	
36	5	4	3	2	5	4	4	5	4	4	3	4	4	3	4	4	4	4	3	4	5	4	4	3	4	4	4	4	109	
37	5	4	4	4	5	4	4	4	4	4	4	5	4	4	4	4	4	4	3	4	3	4	4	4	3	3	5	5	113	
38	1	3	4	1	1	3	4	3	4	3	3	4	3	4	3	3	4	4	2	4	3	4	4	3	4	4	4	1	88	
39	4	3	2	3	4	4	4	2	2	4	3	4	4	2	2	2	4	5	4	2	3	4	3	4	4	4	4	4	94	
40	4	3	3	4	4	2	3	3	3	3	3	5	4	4	3	3	3	3	3	3	3	4	4	4	4	3	4	4	96	
41	4	4	4	4	4	3	4	2	2	4	3	4	4	3	2	2	2	4	4	3	3	4	4	4	3	2	3	4	93	
42	4	4	5	5	4	4	4	4	4	4	4	4	4	1	3	3	1	5	5	5	4	4	4	4	5	5	5	5	113	
	0.8	0.8	1	1.2	1.1	0.9	0.5	1.2	1.3	0.9	0.9	0.6	0.9	0.7	0.8	0.8	1.1	1.1	1.1	0.8	0.8	0.5	0.5	0.9	1.2	1	0.8	0.7	25.0	
																														VAR.P
																														184.19
																														Variance

$$\alpha = 0.896$$

ROCI-II Form B																														
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28		
1	3	2	3	3	3	4	3	2	1	3	3	4	3	4	3	3	3	2	3	2	3	4	3	3	2	3	3	4	82	
2	5	4	4	5	5	3	4	4	4	4	3	5	4	4	4	4	4	4	4	4	4	4	5	3	4	3	3	5	113	
3	5	3	1	4	4	1	4	1	1	3	3	4	4	4	4	4	4	1	3	4	4	5	4	3	2	2	3	4	89	
4	5	1	3	5	5	2	5	3	3	1	1	5	3	5	4	4	3	3	1	5	5	5	5	2	2	1	1	5	93	
5	4	2	3	4	3	2	4	2	2	2	2	4	2	4	4	4	4	2	3	4	2	4	3	2	2	2	4	4	84	
6	5	4	3	4	4	1	3	3	4	5	2	5	4	4	4	4	4	5	3	4	3	4	4	4	4	2	3	4	5	104
7	4	3	3	4	4	4	3	3	3	2	2	4	4	3	3	3	3	4	3	3	3	4	3	3	3	2	3	3	89	
8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	84	
9	5	5	1	5	5	1	5	3	3	3	3	5	5	5	3	3	5	3	5	5	3	5	5	3	3	1	3	5	106	
10	4	4	4	4	4	2	4	3	2	3	3	4	4	4	4	4	4	4	2	3	3	3	4	4	3	4	4	4	99	
11	4	4	4	4	5	5	4	4	4	4	4	5	4	4	4	4	3	3	3	4	3	4	5	4	4	4	4	5	113	
12	4	3	5	4	4	3	3	4	4	4	3	4	5	2	5	5	3	4	4	5	5	4	5	5	4	5	5	5	116	
13	3	4	4	4	4	3	3	4	3	3	3	4	4	3	3	3	3	3	3	3	3	4	4	5	3	3	4	4	97	
14	4	1	1	4	3	1	3	1	1	3	2	5	2	3	1	1	3	3	3	5	3	5	5	1	1	2	3	5	75	
15	1	2	2	3	3	2	2	1	1	1	2	3	3	3	2	2	4	1	1	1	2	3	3	3	1	1	3	5	61	
16	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	4	3	3	3	85	
17	4	3	4	4	5	2	4	2	4	3	2	5	4	4	3	3	2	2	3	4	4	5	4	3	2	4	4	4	97	
18	4	2	3	4	4	2	4	2	2	3	3	4	3	4	2	2	2	2	3	4	2	4	4	3	2	2	2	4	82	
19	4	2	2	3	4	3	2	2	2	3	2	4	2	2	2	2	4	4	3	2	3	4	4	3	2	2	3	4	79	
20	3	4	3	4	3	4	3	3	3	4	3	4	3	3	4	4	3	3	4	3	3	3	3	3	4	4	3	3	94	
21	5	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	112	
22	4	4	3	4	4	3	5	2	2	4	4	5	4	4	4	4	4	2	2	2	2	5	4	4	2	3	3	5	98	
23	4	3	3	4	4	2	4	3	3	3	4	4	3	3	2	2	3	3	3	3	3	4	4	3	3	3	2	5	90	
24	3	4	3	2	3	2	3	3	3	3	3	4	3	3	2	2	2	3	2	2	3	4	3	3	2	3	3	3	79	

25	3	3	3	3	4	4	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3	3	3	3	4	4	4	4	94	
26	5	3	3	4	5	2	3	3	1	3	3	3	3	3	3	3	3	3	3	3	2	2	3	2	3	3	2	82		
27	5	3	3	5	5	3	3	3	3	3	3	5	4	4	4	4	3	3	4	2	3	5	5	2	3	3	4	4	101	
28	5	3	2	5	5	2	3	3	3	3	3	5	4	4	4	4	3	3	2	4	4	5	5	4	4	3	4	5	104	
29	5	4	1	5	4	4	3	4	4	4	3	5	3	4	2	2	2	4	2	2	4	4	4	4	4	2	2	5	96	
30	5	4	2	5	5	4	4	4	4	3	3	5	3	4	2	2	3	4	3	3	4	5	4	3	4	2	3	5	102	
31	4	3	2	4	4	4	4	4	4	3	3	4	4	3	2	2	2	4	3	3	4	4	4	3	4	2	3	5	95	
32	5	3	2	5	5	2	3	4	4	3	3	5	3	4	2	2	3	4	2	3	4	5	5	3	4	2	4	5	99	
33	5	3	3	5	5	2	3	5	5	2	2	5	3	4	3	3	4	4	2	3	4	4	4	3	5	2	4	5	102	
34	5	3	3	4	5	3	3	5	5	3	3	5	3	3	3	3	4	4	2	3	4	4	4	3	4	2	4	5	102	
35	5	3	3	5	5	4	4	4	4	3	2	5	3	4	3	3	3	5	2	3	5	4	5	2	5	2	4	5	105	
36	5	3	3	5	5	4	4	4	4	2	2	4	3	3	3	3	3	5	2	3	5	4	4	2	4	2	3	5	99	
37	5	3	3	4	5	3	4	5	5	2	2	5	3	4	3	3	3	5	2	3	4	4	4	3	4	2	3	4	100	
38	4	3	3	4	4	3	4	4	3	3	3	4	2	4	3	3	3	4	3	4	3	4	4	3	3	3	3	4	95	
39	4	4	2	4	5	2	2	4	4	4	2	5	2	2	3	3	2	5	2	2	4	4	4	4	4	2	3	4	92	
40	5	4	3	4	4	4	3	4	4	4	3	4	3	3	3	3	4	4	3	3	3	4	4	4	4	4	4	4	103	
41	4	3	2	4	4	2	4	2	2	3	2	4	3	3	3	3	3	3	3	3	3	4	4	3	2	2	3	4	85	
42	5	5	5	5	5	5	5	2	2	2	4	4	4	4	5	5	5	4	4	5	5	4	4	4	3	4	4	4	117	
	0.8	0.8	0.9	0.5	0.5	1.1	0.6	1.1	1.3	0.6	0.5	0.5	0.5	0.5	0.8	0.8	0.6	1	0.7	0.9	0.7	0.5	0.5	0.6	1.1	0.9	0.5	0.6	20.30	
																														Variance

$$\alpha = 0.873$$

ROCI-II Form C																													
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	
1	3	3	3	4	4	4	3	2	2	3	3	4	3	3	4	2	2	1	3	3	3	4	4	3	2	3	3	3	84
2	5	4	4	5	5	3	4	2	1	4	3	5	4	4	5	3	4	3	4	4	4	5	5	4	4	4	4	5	111
3	5	3	1	4	4	1	4	1	1	3	3	4	4	4	4	4	1	3	4	4	5	4	3	2	2	3	4	4	89
4	5	4	5	5	5	2	5	3	2	2	1	5	5	5	5	2	2	3	1	5	3	5	5	1	1	1	3	5	96
5	4	2	3	4	2	2	4	2	2	2	2	4	2	3	4	3	4	2	3	4	3	4	4	2	2	2	4	4	83
6	5	4	5	5	5	1	3	2	2	3	1	5	3	4	5	4	5	5	5	4	3	4	4	3	1	4	5	5	105
7	4	3	3	4	4	3	3	3	3	3	3	4	3	3	4	3	3	4	4	3	4	4	4	3	3	2	4	4	95
8	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	82
9	1	5	5	5	5	1	5	1	1	4	1	5	4	5	5	1	1	1	3	5	5	5	5	3	3	1	3	5	94
10	4	4	4	4	4	2	4	3	2	4	4	4	4	4	4	3	4	3	4	4	4	4	4	4	3	3	4	4	103
11	4	4	4	3	3	3	4	4	3	3	3	3	4	4	4	4	4	3	4	4	3	4	4	4	4	3	4	5	103
12	5	4	1	2	3	4	5	4	4	3	4	4	3	4	4	3	4	5	5	5	2	5	4	4	5	3	2	5	106
13	4	4	5	4	4	3	4	4	3	4	4	5	5	3	4	4	3	3	3	3	3	4	5	5	4	3	4	3	107
14	4	1	1	4	3	1	3	1	1	3	2	5	2	3	3	3	3	3	3	5	3	5	5	1	1	2	3	5	79
15	1	3	3	3	4	2	2	1	1	3	1	3	3	3	3	3	3	1	2	3	1	4	2	3	1	1	4	2	66
16	4	3	3	3	4	3	3	3	3	3	2	3	2	3	3	3	3	4	3	3	3	3	3	3	4	3	3	4	87
17	4	3	4	2	4	2	4	1	2	2	3	4	3	4	4	4	4	3	4	3	4	5	4	2	2	2	4	4	91
18	4	2	2	4	4	3	4	2	2	2	2	4	3	4	4	2	2	2	3	4	2	4	4	3	2	2	2	4	82
19	2	2	3	4	2	2	2	2	3	2	4	2	2	3	2	3	3	2	2	2	4	4	2	2	2	3	4	4	74
20	4	4	3	3	4	3	3	3	3	3	3	4	3	3	3	4	3	3	3	4	3	3	3	3	4	3	4	3	92
21	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	113
22	4	4	4	3	3	2	4	2	2	4	4	5	4	5	5	3	3	2	3	3	2	3	5	5	2	3	3	4	96
23	4	3	3	4	5	3	3	4	3	4	4	5	4	3	4	3	3	4	2	4	4	5	5	3	4	3	3	4	103
24	4	2	3	3	4	3	3	3	3	3	3	4	3	3	4	2	2	3	4	3	2	4	4	2	2	3	4	3	86

25	3	3	4	4	3	3	3	3	4	4	4	3	3	3	3	4	4	4	3	3	3	3	4	4	4	4	3	3	96	
26	5	3	3	4	5	2	3	3	1	3	3	3	3	3	3	3	3	3	3	3	2	2	3	2	3	3	2	82		
27	5	3	3	5	5	3	4	3	3	3	3	5	4	4	5	4	3	3	5	1	3	5	5	4	3	4	2	5	105	
28	5	4	3	5	5	2	5	3	3	4	3	5	4	4	4	5	5	3	2	3	3	4	5	4	3	5	5	5	111	
29	5	3	3	5	5	4	4	4	4	3	3	5	3	4	3	2	3	4	3	3	4	4	5	4	4	3	3	5	105	
30	5	2	5	5	2	4	4	4	3	3	5	4	4	4	4	4	4	3	4	4	5	5	4	4	3	4	5	5	112	
31	4	3	2	4	4	2	4	4	4	4	3	5	4	4	4	4	4	4	3	4	4	5	4	4	4	4	4	4	107	
32	5	3	3	4	5	4	4	4	3	3	3	5	3	4	4	4	4	4	3	3	4	4	5	3	4	4	4	5	108	
33	5	4	4	5	4	4	4	4	4	3	3	5	4	4	4	4	4	4	3	3	5	4	5	3	4	4	4	4	112	
34	5	3	3	5	5	3	4	4	4	3	3	5	3	4	3	4	4	4	3	3	4	4	5	3	4	3	4	5	107	
35	5	3	3	4	5	3	4	4	4	3	3	4	3	3	3	4	4	4	2	3	3	5	5	3	4	3	3	4	101	
36	5	3	4	4	4	3	4	4	4	3	2	5	3	3	3	4	4	4	2	3	3	5	5	3	4	3	3	4	101	
37	5	3	4	4	4	3	4	4	4	3	2	4	3	4	4	4	4	4	3	3	5	5	4	2	4	3	3	4	103	
38	4	3	4	4	4	3	4	4	4	3	2	4	2	3	4	4	4	4	3	4	3	4	4	3	4	3	3	3	98	
39	5	4	4	5	5	3	4	3	3	4	2	5	2	3	5	4	4	5	4	4	4	5	4	4	3	4	4	5	111	
40	4	4	4	4	4	2	3	4	3	4	4	5	3	4	4	3	3	3	3	3	4	4	4	4	4	4	4	4	103	
41	4	3	4	4	4	3	4	2	2	3	2	4	4	3	4	2	2	3	3	3	3	4	4	3	2	2	3	4	88	VAR.P
42	5	5	5	5	5	5	5	5	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	137	168.09
	1	0.7	1.1	0.6	0.8	0.8	0.5	1.1	1	0.5	1	0.6	0.7	0.4	0.5	0.8	0.9	1.01	0.8	0.68	0.87	0.54	0.74	0.88	1.23	0.88	0.58	0.71	21.95	Variance

$$\alpha = 0.896$$

Appendix 5: Summary of Average frequency of using conflict-handling styles by Professionals during pre-contract stage.

	Type of Conflict and Conflicting party	Integrating	Obliging	Dominating	Avoiding	Compromise
With Supervisor	Task Conflicts (w.a.)	3.81	3.17	2.10	2.21	2.98
	Relationship Conflicts (w.a.)	3.36	3.05	2.12	2.36	2.81
	Process Conflicts (w.a.)	3.55	3.17	2.33	2.31	2.88
	Status Conflicts (w.a.)	3.19	2.90	2.07	2.26	2.79
With Peers	Task Conflicts (w.a.)	3.67	2.88	2.71	2.45	2.74
	Relationship Conflicts (w.a.)	3.38	2.90	2.50	2.52	2.83
	Process Conflicts (w.a.)	3.67	2.88	2.71	2.43	2.81
	Status Conflicts (w.a.)	3.52	2.74	2.71	2.48	2.69
With Subordinates	Task Conflicts (w.a.)	3.48	2.64	2.90	2.62	2.40
	Relationship Conflicts (w.a.)	3.19	2.62	2.71	2.57	2.50
	Process Conflicts (w.a.)	3.43	2.71	2.86	2.71	2.50
	Status Conflicts (w.a.)	3.12	2.57	2.67	2.74	2.40

Appendix 6: Mean, Standard Deviation of conflict handling styles use to handle conflict types with supervisor, peers and subordinates during pre-contract stage.

Conflicting Party	Type of Conflict	n	Integrating			Obliging			Dominating			Avoiding			Compromise		
			Mean	SD		Mean	SD		Mean	SD		Mean	SD		Mean	SD	
Supervisor	Task Conflicts	42	3.81	3.48	0.32	3.17	2.77	0.40	2.10	1.86	0.23	2.21	2.08	0.13	2.98	2.66	0.31
	Relationship Conflicts		3.36	3.11	0.25	3.05	2.73	0.31	2.12	1.90	0.22	2.36	2.19	0.16	2.81	2.54	0.26
	Process Conflicts		3.55	3.26	0.29	3.17	2.79	0.38	2.33	2.16	0.17	2.31	2.10	0.21	2.88	2.61	0.27
	Status Conflicts		3.19	2.98	0.21	2.90	2.56	0.34	2.07	1.84	0.23	2.26	2.06	0.20	2.79	2.48	0.31
Peers	Task Conflicts		3.67	3.33	0.34	2.88	2.52	0.36	2.71	2.50	0.22	2.45	2.17	0.28	2.74	2.43	0.31
	Relationship Conflicts		3.38	3.11	0.27	2.90	2.55	0.35	2.50	2.31	0.19	2.52	2.35	0.17	2.83	2.54	0.29
	Process Conflicts		3.67	3.36	0.31	2.88	2.52	0.36	2.71	2.46	0.26	2.43	2.24	0.19	2.81	2.48	0.33
	Status Conflicts		3.52	3.26	0.27	2.74	2.43	0.31	2.71	2.52	0.20	2.48	2.25	0.23	2.69	2.41	0.28
Subordinates	Task Conflicts		3.48	3.20	0.28	2.64	2.29	0.35	2.90	2.70	0.21	2.62	2.36	0.26	2.40	2.12	0.29
	Relationship Conflicts		3.19	2.93	0.26	2.62	2.30	0.32	2.71	2.45	0.26	2.57	2.30	0.27	2.50	2.20	0.30
	Process Conflicts		3.43	3.10	0.33	2.71	2.35	0.36	2.86	2.56	0.29	2.71	2.51	0.21	2.50	2.23	0.27
	Status Conflicts		3.12	2.88	0.24	2.57	2.20	0.37	2.67	2.51	0.16	2.74	2.54	0.19	2.40	2.17	0.23