

# Conflicts and management styles in the Sri Lankan commercial building sector

Chathuri Gunarathna and Rebecca Jing Yang

*School of Property, Construction and Project Management, RMIT University, Melbourne, Australia, and*

Nirodha Fernando

*Department of Architecture and Built Environment, Northumbria University, Newcastle Upon Tyne, UK*

## Abstract

**Purpose** – The purpose of this paper is to understand the prevailing conflict management styles in Sri Lankan commercial building industry from the main stakeholders' perspective. The dual concern theory is applied to this study as a theory foundation.

**Design/methodology/approach** – The Sri Lankan commercial building industry is currently experiencing a construction boom after 30 years of civil war. Creating a dispute free environment through well conflict management is one of the main ways to keep the continuous demand and development of construction. However, the Sri Lankan construction sector is arranged in such a way that they directly approach the dispute resolution rather than avoiding the dispute initially through proper conflict management. Four cases are selected for this study with the intention of conducting meetings with three main stakeholders of each case who represented client, consultants and contractors, respectively.

**Findings** – The research findings reveal that compromising is the most common conflict management style used by the industry. Forcing style obtained the second place in the ranking whereas obliging and avoiding received third and fourth places.

**Originality/value** – This study is conducted to provide a full picture of conflicts faced by the Sri Lankan commercial building industry and their proper management so that the future projects will use this information to diminish the destructive effects of conflict situations and provide a real value for money.

**Keywords** Management, Case study, Construction

**Paper type** Research paper

## 1. Introduction

The construction industry inherits several unique characteristics such as complexity, high human diversity and lengthy process of construction due to which the conflicts will occur (Jaffar *et al.*, 2011). However, having conflicts will not always barricade the project success (Ohbuchi and Suzuki, 2003). Conflicts can generate constructive outcomes as well as destructive outcomes (Tjosvold, 2006). Constructive conflicts often make path to creative thinking and innovation (Gorse, 2003). On the other hand, destructive conflicts will reduce the trust and respect over each other; resulting numerous adverse effects on the performance and productivity (Femi, 2014). As per the *Oxford Dictionary* (2017), the management is defined as “the process of dealing with or controlling things or people.” Thus, conflict management can be defined as the process of dealing with or controlling conflicts in such a way that they will not cause any negative effect on the project success. It is obvious that through a proper management, the constructive conflicts can be utilized to enhance the productivity of the project while eliminating the destructive conflicts (Tjosvold, 2006).

According to Femi (2014), conflicts in construction can be defined as a disagreement between two parties over a common action. When these disagreements go beyond the control of project management and possibility of amicable settlement, they become disputes which require a legal application for their resolution (Adnan *et al.*, 2011; Yusof *et al.*, 2011).



Therefore, it can be concluded that unmanaged conflicts are destructive and create harmful effects to the project success by escalating themselves into disputes which require expensive and time consuming resolution process (Adnan *et al.*, 2011). Hence conflict management should be given a prior consideration in the construction sector (Huan and Yazdanifard, 2012). The previous studies indicate that when compared to other industries, the amount of unmanaged conflicts escalating to disputes are tremendously high in the construction sector (Yiu and Cheung, 2006; Yusof *et al.*, 2011). The findings of Chen *et al.* (2014) revealed that the firm focus on the constructive aspects of the conflicts and the mutual trust establishment are the keys to reduce the conflicts. Latiffi *et al.* (2013) introduced Building Information Modeling as one of the main techniques of eliminating the sources of conflicts. Zhang *et al.* (2015) revealed that there is a positive relationship between the emotional intelligence of the people and conflict management; thus, it can be utilized to minimize the conflict situations. Meyer *et al.* (2012) mentioned that conflicts can be well managed and utilized constructively by adhering to a predefined strategy. Lu *et al.* (2017) introduced a novel concept of dispute negotiations and the role of the justice over the so called negotiations.

Sri Lankan commercial building industry is currently experiencing a construction boom after 30 years of civil war (Seneviratne *et al.*, 2015). The industry obtained a massive demand and development in the past few years due to the increment of new investments, tourism, infrastructure development and industrial development (The Report, Sri Lanka, 2016). With the so called development, the rate of occurring conflict situations in the construction field is considerably increased (Heenkenda and Chandanie, 2012). Conflicts and disputes in construction projects will barricade the timely completion, lose productivity and prevent gaining value for money (Yiu and Cheung, 2006). Thus, creating a dispute free environment through proper conflict management is one of the main ways to keep the continuous success and development of construction (Fenn *et al.*, 1997; Popovic and Hocenski, 2009). However, the Sri Lankan construction sector is arranged in such a way that they directly approach the dispute resolution rather than avoiding the dispute initially through proper conflict management (Thalgodapitiya, 2010). Currently, the Institute for Construction Training and Development of Sri Lanka encourages the construction parties to adhere to alternative dispute resolution methods (Abeynayake and Weddikkara, 2012). Since dispute resolution is very expensive, time consuming and harmful to the professional relationship (Abeynayake and Weddikkara, 2007), conflict management draws more attentions now to save money and time in the later project stage (Heenkenda and Chandanie, 2012).

The aim of this research is to understand the prevailing conflict management styles in Sri Lankan commercial building industry from the main stakeholders' perspective. Four construction projects are selected which are handled by the largest and the most reputed construction companies, consultancy firms and client organizations in Sri Lankan commercial building industry. These companies obtain a diverse professional involvement and acquire a great demand in the construction sector. Further, they provide high quality output and maintain good professional relationships inside their companies as well as outside. Furthermore, these companies considered to be the highest profit gaining entities in the industry. Therefore, by conducting an in-depth analysis on how they proceed with conflict situations, the study intends to understand the current effective conflict management practices in the country. The findings of the study can be used by the medium and small-scale construction entities which struggle in different conflict situations as they are not capable of affording expensive and time consuming dispute resolution process. The research outcomes will assist the medium and small scale construction stakeholders by filling the knowledge gap currently existing in the industry and providing a systematic and comprehensive knowledge on the effective conflict management. Ultimately, the study will contribute to adopt a dispute free environment in the Sri Lankan commercial

building industry. Further, the research findings can be used to plan proper conflict management strategies prior to construction. This paper initially provides a literature review on the existing knowledge of conflict management practices and theory. Four case projects are investigated and compared to understand the ways of solving conflicts followed by discussions on the future improvement.

## 2. Conflict types and their sources

A number of researchers introduced different categorizations of conflicts. Among them, the most discussed categorization is task conflicts, relationship conflicts and process conflicts (Chou and Yeh, 2007; DeChurch *et al.*, 2007; Desivilya *et al.*, 2010; Huan and Yazdanifard, 2012; Jehn and Chatman, 2000; Senaratne and Udawatta, 2013; Simons and Peterson, 2000). Task conflicts occur due to the disagreements raised between people working in the same group regarding the content of the decisions they make (Simons and Peterson, 2000). The execution of work-related conflicts such as resource allocation, agreeing on rates, variation procedures and policies and judgment on quality can be identified as task conflicts (Dreu *et al.*, 2001). The task conflicts occur mainly due to people having different ideas, viewpoints and opinions (Huan and Yazdanifard, 2012). Relationship conflicts occur due to the disagreements of people who work together (Chou and Yeh, 2007). The main sources of relationship conflicts are tension, hostility and annoyance among the individuals inside the group (DeChurch *et al.*, 2007). Process conflicts occur due to the disagreements regarding the working strategies and delegation of duties and authority which are more related to the contractual documentation (Jehn and Chatman, 2000). The main sources of process conflicts are poor communication, avoiding rules and regulations, issues regarding working methods, issues regarding workload distribution and issues regarding scheduling (Senaratne and Udawatta, 2013).

Acharya *et al.* (2006) introduced another categorization consisting of five main conflict types considering the main stakeholders in a project. The conflict types are owner evoked conflicts, consultant evoked conflicts, contractor evoked conflicts, third parties evoked conflicts, and other project matter evoked conflicts. The name of the conflict type itself provides the explanation of the content. The main sources of aforementioned conflicts are confusing requirements of owner, excessive change orders, supremacy of owner/consultant, errors and omissions in design, non-payment to subcontractors, conflicts in documents, lack of communication, changes in site condition, public interruption and union strikes.

Friedman *et al.* (2000) introduced another categorization consisted of five main conflict types. They are interpersonal conflicts, role conflicts, intergroup conflicts, multi-party conflicts and international conflicts. Interpersonal conflicts occur due to the incompatible needs, approaches and goals of two individuals with regard to their personal relationship or/and professional relationship. The main sources for this conflict type are poor communication, personality issues and human nature. Role conflicts occur due to the differences in role definitions, line of authority and unclear boundaries of responsibilities. The main sources are poor communication, lack of information, documentation errors and delegation of power. Intergroup conflicts occur between the construction stakeholders; especially between work groups. The main sources are design errors, documentation errors, delays, non-payments, differences in attitudes and variations. Multi party conflicts occur between two or more parties to the project such as consultants with authorities, client with environmental organization and contractor with financial institute. The main sources are environmental hazards, land acquisition, improper garbage disposal and pollution. International conflicts occur when a construction project becomes a threat, annoyance or competition to another country. The main sources are competition for resources, hunger of power and threat to the economy.

According to the literature, most of the categorizations regarding the conflict types are put forward by considering the characteristics of conflicts (Acharya *et al.*, 2006; Chou and Yeh, 2007; DeChurch *et al.*, 2007; Desivilya *et al.*, 2010; Friedman *et al.*, 2000; Huan and Yazdanifard, 2012; Jehn and Chatman, 2000; Senaratne and Udawatta, 2013; Simons and Peterson, 2000). These categorizations provided a general view of conflicts rather than specifically identifying the conflicts related to a particular scenario. However, this study is interested in providing more specific view of conflicts based on the most common conflict situations that can be practically experienced in the Sri Lankan commercial building industry. Based on the literature, the study has recognized 15 individual conflict situations that can be commonly seen in the particular industry. All the 15 conflict situations are included in the categorizations provided in literature, sometimes in different names, sometimes as a sub category and in other times as a source of conflicts (references provided in Table III).

The 15 conflict situations are categorized into four main conflict types. They are payment issues, relationship conflicts, documentation-related conflicts and execution of work-related conflicts. This categorization is done by considering the nature and background of the conflict situations. It will clearly distinguish in which circumstances the conflict situations are occurred for the better understanding of the readers. It should be noted that most of these conflict situations are interconnected with each other and some of them may become a source of another conflict situation. If further elaborated, even a whole category can become a reason for another conflict situation. Nevertheless, by categorizing the aforementioned 15 conflict situations, the study attempts to emphasize the specific areas in which there is high tendency to have conflict situations. Even though the categorization is new to the prevailing literature, it seems to be in line with the categorization discussed by Jehn and Chatman (2000), Senaratne and Udawatta (2013) and Simons and Peterson (2000) which includes task conflicts, relationship conflicts and process conflicts. Further, the 15 situations are discussed in different literature under different categorizations yet the ultimate concept lies behind is almost the same. These situations are further elaborated in Table III with their respective references. However, it can be seen that the prevailing literature rarely discuss the conflict situations in the relationship conflicts as situational wise (Ex: consultant – contractor, between laborers, contractor – subcontractor and between specialized contractors) yet highly discuss about the relationship conflicts in general.

### 3. Conflict management theories

A number of conflict management theories are put forward considering the Managerial Grid of Blake and Mouton (DeChurch *et al.*, 2007). The two dimensions used by Blake and Mouton are slightly changed in the other theories yet the ultimate concept given with regard to conflict management is almost the same (Lee, 2008). Some of these other theories are Mary Parker Follett Model (1940), Hall's Win-Lose approach (1969), Thomas Kilmann Conflict Mode Instrument (1977) and Devito Model (1995) (Atteya, 2012; Giritli *et al.*, 2009; Lee, 2008; Ozkalp *et al.*, 2009; Vu and Carmichael, 2009; Zhang *et al.*, 2015). Mary Parker Follett Model (1940) suggested that the conflicts occur due to the differences in thoughts and ideas of individuals, thus these differences can be used to manage the conflicts (Giritli *et al.*, 2009). Accordingly, Follett introduced five conflict management styles, namely; evasion, suppression, domination, compromise and integration (Al-Sedairy, 1994). Hall believed that conflicts can be well managed by considering two dimensions; concern for personal goals and concern for relationships (Vu and Carmichael, 2009). Accordingly, he introduced approaches based on winning and losing (Atteya, 2012). Thomas Kilmann Conflict Mode Instrument (1977) suggested that conflicts can be well managed by considering assertiveness and cooperativeness and introduced five conflict management styles, namely; competing, collaborating, avoiding, compromising and accommodating (Trippe and Baumol, 2015). Devito Model (1995) argued that the conflicts can be effectively managed

through five stages; identifying the conflict, examining the possible solutions, testing the solution, evaluating the solution and accepting or rejecting the solution (Giritli *et al.*, 2009).

It is recognized that Follett Model did not consider about obliging as a conflict management style (Al-Sedairy, 1994) whereas Thomas Kilmann Model is more interested in competing style rather than dominating style (Trippe and Baumel, 2015). However, it is obvious that there should be flexible means of conflict management such as obliging (Verma, 1998). Moreover, competing will create more conflicts rather than managing them. The Hall's Win-Lose Approach and Devito Model provide a common approach to conflict management rather than behavioral approach. Since the management of conflicts highly depending on the behavior of the parties, it is better to use a behavioral approach rather than a common approach (Giritli *et al.*, 2009; Vu and Carmichael, 2009). On the other hand, dual concern theory follows a behavioral approach and consider the actions of both conflicting parties (Zhang *et al.*, 2015). Further, this theory is highly accepted among the conflict management researches due to its inherited qualities such as ease of use, clear interpretation and effective predicting capability when compared to other theories (Vu and Carmichael, 2009). Since the dual concern theory consists of all possible rigid and flexible ways of conflict management and provides the full picture of conflict management, this study will apply it in the case studies to understand the Sri Lankan practices.

#### 4. Dual concern theory

Dual concern theory is introduced by Pruitt and Rubin (1986) (Chou and Yeh, 2007; Dreu *et al.*, 2001; Gorse, 2003) based on the Managerial Grid introduced by Blake and Mouton (DeChurch *et al.*, 2007). According to the dual concern theory, the way two parties willingly behave or forced to behave in a conflict situation can be used to manage the conflicts (Lee, 2008). The theory suggested that based on the high or low concern given to achieve self-desires and the desires of the other party, the conflicts can be properly managed (Desivilya *et al.*, 2010). There are five conflict management styles, namely; integrating (problem solving), obliging, dominating (forcing), avoiding and compromising (Chou and Yeh, 2007). The dual concern model is clearly demonstrated by Rahim (2002) as shown in Figure 1.

##### 4.1 Integrating style (problem solving style)

According to Chou and Yeh (2007), the two dimensions considered in this style are high concern for self and high concern for the other party. The conflict is considered as a problem in this style which required an answer, thus both parties took considerable attempts to find the solution or better alternatives while improving their creativity and skills (Chou and Yeh, 2007; Verma, 1998).

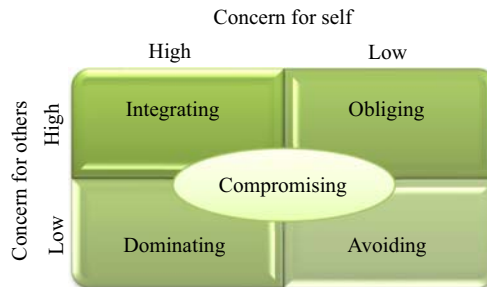


Figure 1.  
Dual concern model

Source: Rahim (2002, p. 217)

#### 4.2 Obliging style

The two dimensions considered in this style are low concern for self and high concern for other party (Chou and Yeh, 2007). According to Verma (1998), this conflict management style directed the parties to highlight the agreements rather than disagreements thus provided a short term solution.

#### 4.3 Dominating style (forcing style)

According to the description given by Chou and Yeh (2007), the two dimensions considered in this style are high concern for self and low concern for the other party. This style is normally used by the party who had more power and authority over the other party; demanding the other party to accept their interests (Giritli *et al.*, 2009).

#### 4.4 Avoiding style

According to Chou and Yeh (2007), the two dimensions used for conflict management are low concern for self and the other party. Cheung and Chuah (1999) and Akiner (2014) identified this style as denying or ignoring the disagreement between the parties that is actually occurred or yet to come. Gunarathna and Fernando (2014) explained that this conflict management style can be used for conflicts which are not related to the construction project yet occurred inside the construction environment.

#### 4.5 Compromising style

In this style, the two dimensions considered for conflict management are moderate concern for self and others at the same time by providing a mutually acceptable decision (Tsai and Chi, 2009). Both parties to the conflict would gain some degree of satisfaction by using this style and the degree of satisfaction they gained would be enough to manage the conflict and avoid its escalation (Cheung and Chuah, 1999).

Different countries manage conflicts by using different techniques. In North America, the traditional conflict management styles are compromising, forcing, persuading and problem solving (Appelbaum *et al.*, 1998). The construction industry of Hong Kong traditionally used compromising and withdrawal for conflict management yet currently prefers confrontation as the main conflict management style (Cheung and Chuah, 1999). Malaysian construction industry preferred integrating, compromising and to some degree of obliging as the conflict management styles as they are correlated to each other (Lee, 2008). The Project Managers of Nigerian construction industry often used highly improved communication procedure, interpersonal trust and collective responsibility to reduce conflict situations (Ogunbayo, 2013). Japan business industries used a three-way strategy for conflict resolution; collaborative strategies which suggested the concern for group performance, confrontational strategies which suggested the concern for group order and avoidance strategy which suggested the concern for self-interests (Ohbuchi and Suzuki, 2003).

The managers in Turkey generally use integrating and compromising style for conflict management (Ozkalp *et al.*, 2009). Further to authors, obliging and forcing is used depending on the level of hierarchy, which was highly accepted in Turkey. Both Australian and Vietnamese construction stakeholders often used collaborating conflict management style in the international construction projects they worked together to reduce cultural conflicts (Vu and Carmichael, 2009). However, the authors revealed that the Australians, in their local construction industry preferred confrontation and dominating styles whereas the Vietnamese, inside their country preferred obliging and avoiding styles. Saudi Arabian construction industry used compromising, problem solving and smoothing conflict management styles (Al-Sedairy, 1994) due to the multi-cultural involvement in the industry.

The Sri Lankan construction stakeholders usually use negotiation as the basic conflict management style (Abeynayake and Weddikkara, 2012). This style is introduced as the compromising style in the dual concern theory. However, the term “compromising” is not used in the industry. According to Thalagodapitiya (2010), the conflict management is considered as a part of construction risk management in the Sri Lankan commercial building sector. Further to authors, they are highly depending on the dispute resolution than the conflict management.

## 5. Research methods and process

Naoum (2007) and Ellis and Levy (2009) emphasized that the most appropriate method for conducting an in-depth analysis of a person, a group of persons, an organization or a particular project is case studies. Accordingly, it is recognized that conducting case studies for data collection would be more appropriate for this study due to the requirement of carrying out an in-depth analysis. According to Yin (2009), the best method of data collection for researches which require a proper understanding of a prevailing situation is conducting a multiple case study. Hence, four cases are selected from the Sri Lankan commercial building industry among which, two are private projects and the other two are the public projects. They are the largest and highly recognized construction companies, consultancy firms and client organizations involved in Sri Lankan commercial building sector. Their recognition in the field is summarized in Table I. An in-depth analysis is conducted in order to understand how these companies are solving the conflicts while maintaining their reputation, demand and integrity. The collected knowledge from these companies will be beneficial for the medium scale and small scale construction stakeholders to understand how they should proceed in conflict situations in a highly professional manner. A systematic and comprehensive knowledge will be invaluable to such stakeholders since they cannot afford the expensive and time consuming dispute resolution procedure.

These specific four cases are selected since they cover all the aspects to be considered; in diverse range, such as magnitude, complexity, professional involvement, government involvement, project scope and other secondary factors, in order to understand the conflict management practices in Sri Lanka. Further, the characteristics of these four cases enable to provide a full picture of the current commercial building sector of the country and they obtain almost all conflict situations that can be encountered in such construction. Furthermore, they are fully capable of showing the state-of-art of conflict management practices. All four projects are successfully completed and fully handed over to the clients during the time of the study. Table II shows the project profile. Case study 1 is an eight storied multipurpose building with luxurious facilities. The building consisted of apartments, shopping complex, offices and a cafeteria. Case study 2 is a 14 storied hospital building with super luxurious facilities. Case study 3 is a 14 storied office complex with semi luxurious facilities for a ministry of the Sri Lankan Government. Case study 4 is an administrative building for a government university of Sri Lanka. All four cases exceeded their initial contract price and the estimated duration due to various conflict situations. The stakeholders involved in these projects are from large-medium scale companies.

The case studies are initially observed by examining the relevant documentation supplied by the authorities. Subsequently, three individuals from each case who represented the three main stakeholders of the project (client, consultant and contractor) are identified for interviews. Semi structured interviews are conducted in site offices and approximately last for 1 hour. The main reason for selecting the above stakeholders is that they all position at the management level to solve the project issues and have sufficient knowledge on the project from the design stage to the handover.

The questions are asked regarding the role of the particular stakeholder, their general view of conflicts in construction sector, specific conflict types occurred in the project, sources of those conflicts, the effects of those conflicts, how they managed the conflicts with

Case	Stakeholder entity	Company profile
1	Client company	A highly experienced and well recognized conglomerate in Sri Lanka. Owns number of high rise buildings. Multidisciplinary involvement can be seen
	Consultancy firm	A firm of chartered quantity surveyors, providing diversified quantity surveying services, project management services and dispute resolution services within Sri Lanka and overseas
	Construction company	An award-winning construction company which undertake large-scale contracts of huge value and complexity. Acquire international standards and recognition. The company uses modern technologies and techniques to provide a high-quality output and on time delivery
2	Client company	A well-recognized hospital chain in Sri Lanka. Owns several super luxury hospitals and private medical centers. Considered as one of the best medical services providers in Sri Lanka. Consecutive award winning company for high quality service
	Consultancy firm	One of the leading quantity surveying consultancy firms in Sri Lanka. Undertake both local and international projects. Several highly reputed quantity surveyors who did a great service to the quantity surveying academia are owning the firm
	Construction company	A well reputed construction company with high multidisciplinary involvement. Recognized as one of the best service providers with high quality products. Internationally recognized. Undertake almost all the types of construction by using modern technology and qualified labor
3	Client company	One of the ministries in Sri Lanka. Multidisciplinary involvement can be seen. Owns several high-rise office complexes due to the number of departments and numerous workers. Acquire a high reputation in providing a friendly service
	Consultancy firm	The main semi-government construction and consultancy firm in Sri Lanka. Multidisciplinary involvement can be seen. All construction-related professionals are available. Undertake both consultancy and construction activities. An award-winning firm for many high-quality services
	Construction company	One of the leading construction companies in Sri Lanka with long term experience. Obtains a good reputation for providing high quality output and maintenance. Undertake most of the government projects in Sri Lanka. Multidisciplinary involvement can be seen. A leading training provider in Sri Lanka
4	Client company	One of the government universities of Sri Lanka. Obtains a good reputation for high quality education and training. Provides considerable facilities to students and maintain good professional relationships
	Consultancy firm	The main government consultancy and construction company in Sri Lanka. Multidisciplinary involvement can be seen. All construction-related professionals are available. Well recognized for providing a high-quality service and best training
	Construction company	A medium scale construction company which obtains a rapid development. Well reputed for providing a high-quality service and hard working. Maintains good professional relationships with government and private entities

**Table I.**  
Profile of the  
stakeholder entities

regard to dual concern theory and the final outcome they achieved. The collected data through the meetings are then subjected to a content analysis. The main purpose of the content analysis is to quantify the qualitative data under the pre-determined categories in a systematic manner. The analysis is conducted as a cross-case analysis to compare and contrast the similarities and differences of the four cases. Cross-case analysis enabled to generalize the findings to meet the research aim and objectives. The findings are then summarized by using cognitive mapping, visualizing the connections, observations and concepts with regard to the research topic. Accordingly, the conclusion is made and the recommendations are put forward.

## 6. Conflict types and sources

The study identified 15 common conflict situations in the Sri Lankan commercial building industry. They are categorized into four main conflict types. The categorization is further elaborated in Table III with the common sources for having particular conflict situations.



Description	Case 1	Case 2	Case 3	Case 4
Type	Multi purposive building	Hospital building	Office complex building	Administrative building
Employer	Private	Private	Government	Government
Condition	Completed	Completed	Completed	Completed
Category	Luxury	Super luxury	Semi luxury	Normal
Duration	Estimated: 18 months Actual: 30 months	Estimated: 20 months Actual: 26 months	Estimated: 24 months Actual: 40 months	Estimated: 15 months Actual: 18 months
Contract price	Accepted: US\$1.6 million Actual: US\$2.27 million	Accepted: US\$8.95 million Actual: US\$12.69 million	Accepted: US\$15.61 million Actual: US\$20.58 million	Accepted: US\$0.55 million Actual: US\$0.76 million
Number of stories	8	14	14	5
Parties interviewed		Client's representative: CL Consultant's representative: CN Contractor's representative: CR		
Labels for interviewees	CL01 CN01 CR01	CL02 CN02 CR02	CL03 CN03 CR03	CL04 CN04 CR04
Interviewees' designation of the project	CL01 – Representative of the client's company who appointed as the team leader of the project CL02 – Head of the consultant team CL03 – Head of the contractor's team			
Interviewees' areas of expertise	CL01: Civil engineering CN01: Quantity surveying CR01: Project management	CL02: Architecture CN02: Project management CR02: Quantity surveying	CL03: Construction management CN03: Civil engineering CR03: Project management	CL04: Civil engineering CN04: Quantity surveying CR04: Mechanical engineering
Interviewees' experience	CL01: 15 years CN01: 16 years CR01: 14 years	CL02: 23 years CN02: 38 years CR02: 13 years	CL03: 20 years CN03: 15 years CR03: 21 years	CL04: 26 years CN04: 8 years CR04: 53 years
Interviewees' company scale	CL01: Large scale CN01: Medium scale CR01: Large scale	CL02: Large scale CN02: Large scale CR02: Large scale	CL03: Large scale CN03: Large scale CR03: Large scale	CL04: Medium scale CN04: Large scale CR04: Medium scale

**Table II.**  
Case profile

### 6.1 Payment issues

The most common conflict situations that can be seen are delayed payments and non-payment. Payment issues are usually caused by the clients and the contractors. According to the meetings conducted with the main stakeholders, it is found that the most common conflict situation out of the two aforementioned payment issues is delayed payments from client to the contractor. CR02 stated that "Our payments are delayed most of the time and the client did not even pay us in few months. This created our cash flow negative and put us into a critical situation. Actually, he also had some problems with his cash flow." The contractor's representatives of other three cases agreed with the fact that delayed payments are a massive headache they had to face during the time of construction.

Non-payment is the other common conflict situation with regard to payment issues. This can be equally seen between the contractors and subcontractors and contractors and laborers. CN01 stated that "The contractor did not pay the subcontractors properly. Therefore, subcontractors stopped continuing the works. Furthermore, the subcontractors did not like to work with the main contractor due to the payment issues and they wanted the

Conflict type	Conflict situation	Sources
Payment issues	Delayed payment (Acharya <i>et al.</i> , 2006)	Financial issues of the client Delays in government procedure Financial issues of the contractor Late submission of interim payment applications
	Non-payment (Acharya <i>et al.</i> , 2006; Fisher, 2000; Verma, 1998)	Selection of an underpriced bid Financial issues of the contractor Claims submit after completion of the project
Relationship conflicts (Dreu and Vianen, 2001; Jehn and Chatman, 2000; Senaratne and Udawatta, 2013; Simons and Peterson, 2000)	Consultant – contractor (Chen <i>et al.</i> , 2014)	Payment issues Unprofessional behavior Poor communication Design changes Contradictory record keeping Disagreements between parties Difficulties in coordination Differences in attitudes Late submissions of documents Less experience
	Between laborers (Acharya <i>et al.</i> , 2006)	Personal matters Unethical behavior Bad temper Authority issues
	Contractor – subcontractors	Payment issues Difficulties in coordination Unprofessional behavior Poor communication Competition Bad history
	Between specialized contractors	Unprofessional behavior Bad history Competition Material and equipment handling
Documentation-related conflicts	Design errors (Acharya <i>et al.</i> , 2006; Ng and Skitmore, 2000)	Poor documentation Supremacy of professionals Poor communication Impracticable design
	Documentation errors (Acharya <i>et al.</i> , 2006; Jaffar <i>et al.</i> , 2011)	High workload of the parties Supremacy of professionals Poor communication Negligence Delays caused by parties Convenience of one party
	Late submission of documents (Acharya <i>et al.</i> , 2006; Verma, 1998)	High workload of the parties Internal and external problems of the parties Disagreements
	Contradictions between documents (Acharya <i>et al.</i> , 2006; Jaffar <i>et al.</i> , 2011)	Disagreements by parties High workload of the parties Poor communication Negligence Poor documentation
	Designs are not finalized (Acharya <i>et al.</i> , 2006; Ng and Skitmore, 2000)	Impracticable design Personal delays

(continued)

**Table III.**  
Conflicts and  
their sources

Conflict type	Conflict situation	Sources
Execution of work-related conflict	Variations (Acharya <i>et al.</i> , 2006)	Poor communication Constant changes by the client and the consultants Design errors Impracticable design Requirements of parties Delayed instructions Disagreements by parties Contradictory record keeping Incorrect record keeping
	Issues regarding agreeing on rates (Acharya <i>et al.</i> , 2006; Dreu and Vianen, 2001)	Less experience Disagreements by parties
	Issues regarding resources (Cheung and Chuah, 1999; Dreu and Vianen, 2001)	Unavailability of resources Poor coordination Poor Communication
	Quality issues (Acharya <i>et al.</i> , 2006; Ng and Skitmore, 2000)	Late submission of samples Negligence Delayed instructions

Table III.

client to pay them directly [...] In order to keep the labour in the project, the contractor only paid half of the wages and this created a situation where the contractor was unable to do the payments to the labourers properly due to the accumulative liable amounts.” This statement revealed that non-payment extremely disturbed the timely completion of the project occurring unnecessary wastage of time and relationships issues. In addition, all stakeholders agreed that non-payment will be a generator of other issues such as labor shortage, poor quality in construction and labor idling. Friedman *et al.* (2000) identified non-payment as an intergroup conflict where two groups in one unit obtain incompatibilities. However, according to Verma (1998), non-payment can either often be an administrative conflict or rarely an interpersonal conflict depending on the situation.

### 6.2 Relationship conflicts

The interviewees indicated that the commercial building industry often faced four relationship conflict situations. They are consultant – contractor conflicts, conflicts between laborers, contractor – subcontractor conflicts and conflicts between specialized contractors. Findings suggested that human diversity is a common fact yet difficult to control by making everyone focus on one target. It is a known fact that people with different attitudes, agendas, social status, educational background and characteristics will often generate conflicts. Accordingly, the Sri Lankan commercial building industry has to face the same problem due to the involvement of many parties. This is in line with the findings of Chou and Yeh (2007), DeChurch *et al.* (2007), Desivilya *et al.* (2010), Huan and Yazdanifard (2012), Jehn and Chatman (2000), Senaratne and Udawatta (2013) and Simons and Peterson (2000) as they identified relationship conflicts as disagreements between people who work to achieve one target. However, the previous literature of the aforementioned authors indicated that relationship conflicts are often personal and rarely related to the task yet this study found that the relationship conflicts often occur due to task-related matters. Nonetheless, relationship conflicts affect the project performance even though they are personal or task related (Wild, 2002).

The most frequent conflict situation is conflicts between the consultant and contractor. CL04 mentioned that “The consultant and the contractor are not very close. The problem is

not with the management of the consultant and contractor. They work friendly. However, the problem is with the subordinate level. The subordinate crew of the consultant's side and the contractor's side have lot of mismatching ideas which often lead them to disagreements." This statement revealed that most of the consultant – contractor conflicts are occurred in the intermediate or the operational level of the organizational hierarchy. This is in line with the findings of Chen *et al.* (2014) as they indentified that conflicts can be often occurred between these two parties due to the task-related issues, process-related issues and the status of the prevailing relationship between the client and the contractor.

The second most common relationship conflict is between laborers. This is more critical due to the tendency of having severe arguments, quarrels and even destruction of the property. According to CR03, number of conflicts is taken place between the laborers and in few occasions, the contractor had to intervene to solve them. Further to CR03, the works had to be temporarily stopped in such occasions since other laborers are automatically become the spectators of such quarrels and severe arguments and sometimes taken part in the tempered situation. CN01 confirmed this fact by revealing that his project had similar experiences, yet not as much as in Case 3. Similarly, DeChurch *et al.* (2007) explained that the critical relationship conflicts will inversely affect the work performance. Further, Huan and Yazdanifard (2012) mentioned that conflicts between employees certainly affect the commitment of employees and cause absenteeism.

Conflicts between the contractor and subcontractors are often occurred due to payment issues and resource handling. This is in line with the findings of Acharya *et al.* (2006) and Verma (1998) as the authors pointed out late or poor administrative procedure and resource allocation issues would critically affect the parties who continue the onsite functions. As revealed by CN01, the subcontractors of the project stopped working due to the conflicts with the contractor and refused to deal with him. Instead, they requested the client to correspond directly with them. This is not the general procedure of the project yet the client had to agree with their demand in order to continue the project. CR01 revealed that contractor – subcontractor relationship is the weakest when compared to other professional relationships in the project. CL03 mentioned that it is hard to find good professional relationships between contractors and subcontractors in the Sri Lankan commercial building industry due to the high competitive nature yet most of them are highly professional and focus on the project rather than fulfilling their own agendas when it came to working together.

The final conflict situation under the relationship conflicts is between specialized contractors. This cannot be often seen due to the less usage of the particular procurement arrangement. However, if the project procurement arrangement consists of more than one specialized contractor, this conflict situation is common. According to CL03, it is very hard to coordinate the specialized contractors with regard to resource handling. The specialized contractor who did the architectural and structural construction had to facilitate the other contractors yet he had to face difficulties in providing facilities simultaneously to several parties. As a result, there are conflicts between them, especially during the finishing stage. Majority of the stakeholders who attended the meetings agreed with the fact that the conflicts between specialized contractors are not just situational yet more personal due to the historical incidents. They also pointed out that the ethical behavior of these contractors are not up to a professional level when compared to other stakeholders, thus lead to conflicts more often. According to Rahim (2002), this kind of interpersonal conflicts will barricade the successful completion of project since the parties will give more attention to reduce the threat coming from the other party and try to increase their power over the project.

### 6.3 Documentation-related conflicts

According to the meetings conducted, there are five common conflict situations under documentation-related conflicts. They are design errors, documentation errors, late submission

of documents, contradictions between documents and non-finalized design. Both Jehn and Chatman (2000) and Simons and Peterson (2000) identified the documentation-related conflicts as a sub category of process conflicts. Senaratne and Udawatta (2013) named documentation-related conflicts as conflicts related to administrative procedure.

The most frequent conflict situation is design errors. CN01 stated that "There are many design errors which created lot of difficulties such as increasing budget, getting approvals, etc. On the other hand, many changes had to be done to the initial design due to the issues in the initial design." This statement revealed that lot of time and energy are wasted to correct the design errors and it is a frustrating procedure. The end result of such procedure is to leave the actual construction on site on hold creating room for more and more conflicts. According to CN02, the more the design is complex, the more the design errors. During the discussions with the stakeholders, it is revealed that all four cases had design errors. Most of the conflicts arising with design errors are dealt with variations which created unnecessary wastage of time, money and energy. Similar findings are put forward by Ng and Skitmore (2000) by revealing that the design errors and incompatibility in designs will definitely create more conflicts in the future when real construction occurred and negatively affect time and quality standards.

The second most common conflict situation in relation to documentation is documentation errors. However, Jaffar *et al.* (2011) identified that the errors, omissions and defects in documents as a major source of conflict. CL02 mentioned that "Actually, there is no proper condition in the contract regarding the price escalation of imported material and what currency should be used to calculate the price escalations of duty free materials [...] It is a serious issue occurred due to documentation errors." CR02 added more information by mentioning that "Furthermore, we needed lot more steel than it is mentioned in the Bills of Quantities (BOQ). So we had to buy local steel as well. In this case, we faced the problem of how to take the duty free facility because it is given for USD prices only." This is happened due to the under measured steel quantity in the BOQ. Both stakeholders confirmed that the main reason for the increment of initial contract amount is the under measured items in the BOQ which is a huge documentation error. The other stakeholders who attended the meetings further contributed to the topic by revealing that most documentation errors are not just reasonable human errors yet the acts of negligence.

The third documentation-related conflict is late submission of documents. CN04 stated that "The contractor did not submit the documents on time and as we required. We argued several times about this. However, the client had no problem with the way of the contractor's submissions of monthly statement so that he said it to be submitted once two months. I still do not agree with this method because it creates a huge workload for the client in one month and there will be no much work in the second month. Actually, it's an imbalance." Further to CN02, late submission of documents often created arguments and frustrations harming the professional relationship of both parties. CR01 mentioned that due to the late submission of documents, construction on site often got delayed and the workload of the receiving party always got high due to the limited time they had to finish the particular items. Both Acharya *et al.* (2006) and Verma (1998) identified this conflict situation in a broad manner by introducing it as a delay and as a goal oriented conflict, respectively.

Contradictions between documents are another conflict situation which can be commonly seen in the Sri Lankan commercial building industry. According to Jaffar *et al.* (2011), the contradictions of documents often led the professionals into conflicts. CL03 mentioned that "In this project, there is a conflict regarding the BOQ item for screed concrete. In the BOQ, only the screed concrete is priced yet in the drawing, there are some other layers additional to the screed concrete. In addition, the screed thickness given in the drawing is different to the thickness mentioned in the BOQ. The contractor argued about this and there are some discussions related to the matter. This conflict occurred due to the

contradiction between BOQ and drawings.” It is a known fact that normally there is a condition regarding the priority of documents in the conditions of contract. Yet the problem is with the price since the other layers which are on the drawings are not priced in the BOQ. CN03 agreed that it is a responsibility of the consultant team due to the high workload within a limited time.

Another general conflict situation that can be commonly seen in the Sri Lankan commercial building industry is non-finalized designs. CR03 mentioned that “By the time we started the construction, some items of the project such as mechanical, electrical and Plumbing (MEP) works, ceiling layouts, etc are not finalized. Furthermore, those parts are not finalized even though we completed a major part of the structural work. Therefore, when they are finalized, we had to change several completed items. This led to a big conflict. In addition, this wasted a lot of time and money.” This is a critical issue which led the parties to several arguments and disagreements. It is also a huge waste of money, time and energy by destroying the concept of value for money. These findings are similar to Ng and Skitmore (2000) as they argued the conflicts related to design often occurred due to the incorrect selection of the design team and incompatibilities of their work.

#### 6.4 Execution of works-related conflicts

According to the stakeholders who attended the meetings, there are four common conflict situations with regard to execution of work-related conflicts. They are variations, issues regarding agreeing on rates, issues regarding resources and quality issues. However, the researches of Huan and Yazdanifard (2012), Jehn and Chatman (2000), Senaratne and Udawatta (2013) and Simons and Peterson (2000) identified this conflict type as task conflicts.

The most common execution of work-related conflict is variations. Acharya *et al.* (2006) categorized variations as a consultant evoked conflict which occurred due to confusing requirement of the owner and unclear project scope established by the owner. However, the above stated two sources of variations are categorized into owner evoked conflicts. Variations are common to all four cases and all the stakeholders who attended the meetings confirmed that variations are common to all projects they are previously engaged with. CR03 mentioned that “Both client and architect did several major changes to the initial design so that there are lot of variations; nearly 150 variations at the end of the project. This took so much additional time and money and created lot of conflicts regarding the design, cost and quality.” Further to CR03, the workload carried by them is enormous when compared to a similar project thus the effective contribution of the employees are considerably low. According to CN02, it is hard for them to meet the deadlines due to the high amount of variations and a number of discussions had to be made to manage the conflict situations arising from the variations.

The second most common conflict situation with regard to the execution of works-related issues is issues regarding agreeing on rates. This is not commonly addressed by the previous literature yet considered as a task conflict which makes the path to relationship conflicts (Simons and Peterson, 2000). CN04 stated that “Basically, we had huge and long term conflict of agreeing on rates. As the consultant, we always tried to save and utilize the client’s money. So if the rates are not reasonable, we had to disagree with them. So we had several occasions in which we had to thoroughly argue about the matters arising from rates. However, this conflict created some delays to the project and destroyed the good relationship we had with the Contractor.” It is further revealed that due to the issues regarding agreeing on rates, all subsequent works are delayed and the lengthy discussions regarding the matter often ended up with heated arguments, leaving the problem as it is.

Another execution of works-related conflict is issues regarding the resources. The findings of Acharya *et al.* (2006), Cheung and Chuah (1999) and Senaratne and Udawatta (2013) identified this conflict situation as a source of conflicts. However, this study

identified the issues in resource handling as a conflict situation; not as a source of conflict since it obtains its own sources. According to CR01, it is hard for them to find skilled labor and keep them in the project in the long run. Whenever there is any other conflict such as delayed payments, non-payment, late submission of documents or any relationship conflict which hold the work for a while, the laborers went looking for other jobs. Therefore, labor handling is a big problem in this project. CL03 mentioned that they have faced difficulties in providing facilities to the specialized contractors simultaneously. CR03 agreed with CL03 by revealing how hard it is to provide scaffoldings, formwork and the like concurrently to several contractors.

Quality issues are one of the most critical execution of works-related issues since it directly affected the client's expectations. CR01 mentioned that "Quality of labour is low. For example it is very difficult to find good masons and carpenters, and also their wages are too high." Due to the low quality in workmanship, the end product would not gain the value for money. Moreover, the finish would not be according to the standards. Ultimately, the building would not be finished according to the client's requirements. Similarly, CN03 mentioned that they often had to check the quality of the materials supplied by the suppliers to the project due to frequent identification of low quality materials. Moreover, several constructed items of the building required rework due to the usage of low quality materials. Similarly, Ng and Skitmore (2000) stated that the current construction industry require high quality product while allocating less time and money for design and construction and this will often lead the project to conflicts related to quality standards.

## 7. Conflict management

The findings revealed that every project has its own conflict management procedure with different magnitudes. The stakeholders who took part in meetings revealed that conflict management is crucial for the successful completion of the project and to avoid expensive and time consuming dispute resolution procedure. Further to them, conflict management is not eliminating the conflict yet dealing with it in such a way that it will not generate harmful effects. This is in line with the findings of Popovic and Hocenski (2009) since they introduced the principle of conflict management as handling the conflict in such a way that it will not generate harmful effects. Similarly, Jaffar *et al.* (2011) stated that it is more effective and practical to manage the conflicts rather than trying to resolve it by wasting time, money and energy since conflicts are inevitable due to the complexity, lengthy time of construction and multi-disciplinary involvement.

According to the stakeholders who attended the meetings, conflict management is a large spectrum of the stages of avoiding the possibilities of having conflicts, preparation for potential conflicts by considering the past experiences, early identification of conflicts, utilize the constructive part of the conflicts, conflict management by using management styles, dispute avoidance and maintaining records for future use. Similarly Verma (1998) introduced three stage conflict management strategy: getting ready for the conflict by expecting of conflict and planning to face the conflict; experiencing the conflict by recognizing its real nature; and managing the conflict as per the plan with necessary changes. However, Verma (1998) did not give a consideration for the aftermath of the conflict management. Out of the five conflict management styles in dual concern theory, four styles are using in the Sri Lankan commercial building industry. They are compromising, authority, obliging and avoiding. Problem solving style can be rarely seen yet the probability of using it is considerably low due to the fact that providing high consideration for both self and others simultaneously is not practicable in the competitive commercial building industry. This is partially in line to the findings of Vu and Carmichael (2009) as they argued most of the Eastern countries, due to their cultural values and desire of group harmony, tend to use avoiding and obliging styles.

### 7.1 *Compromising*

Compromising is the most common conflict management style used in the Sri Lankan commercial building industry. CN01 mentioned that “The most common method we used is negotiation. We always talk with both client and the contractor about the conflict situations and how we should manage them. Similarly, we talked with subcontractors as well. Lot of conflicts are managed through proper negotiation. It never provided the opportunity to have everything we need but it always gave an acceptable solution for both parties.” This statement revealed that even though the parties could not achieve their full intentions, they are able to manage the conflict situation by gaining the maximum satisfaction according to the situation. Further to him, negotiation is the most effective conflict management style since it enabled them to avoid unnecessary cost and time increments and protect the good professional relationships. According to CR01, good professional relationships are the path to more future projects, thus certain sacrifices had to be made for the sake of future success. During the discussions with the stakeholders, it is revealed that all four cases used negotiation as their main conflict management style. This is in line with the findings of Appelbaum *et al.* (1998) in relation to North America, Lee (2008) in relation to Malaysia, Ozkalp *et al.* (2009) in relation to Turkey and Al-Sedairy (1994) in relation to Saudi Arabia as they all prefer negotiation as their key conflict management style.

### 7.2 *Forcing*

The second most common conflict management style with regard to the Dual Concern Theory is forcing which is commonly known as authority in the building industry. CN01 mentioned that “Of course we had to use our authority to come to the conclusion that we pay directly to the subcontractors. Furthermore, we had to use our authority to manage the conflicts occur due to delayed submissions of monthly statements and some design changes.” According to him, using authority should be done carefully in the right occasion. Nevertheless, it is a famous technique to manage the conflict since all stakeholders respect the organizational hierarchy as well as line of authority. CR03 further explained the effectiveness of this technique by stating “As an Engineer, I know the rules of engineering and if a client or a consultant says something that opposes the rules of Engineering which could also effect on strength or finishes of the building, I cannot negotiate or accept what they say. For instance, if perimeter of walls is 9 inch, then it should be nothing less than that. If we cannot go for the plasterboard walls or the dry walls due to the weather and the surroundings, we must not use them. Basically, in some areas we are very confident of what we should and should not do. In these situations, I have to make them accept my decision because I know the technology well.” This statement revealed that in some occasions, using authority is crucial in order to avoid structural failures. Further to CR03, having a certain authority for every construction professional is itself a conflict management technique which should be used in the correct situation. According to the opinion of Appelbaum *et al.* (1998), forcing style is a better style to be used in conflict management either individually or with other conflict styles. Similarly, Vu and Carmichael (2009) suggested that most of the Western countries tend to use dominating style as they are more individualistic in professional matters. However, this is an opposing idea with regard to this study since Sri Lankan building industry use forcing style more often than obliging or avoiding which are generally preferred by the Eastern countries.

### 7.3 *Obliging*

The third conflict management style used in the Sri Lankan commercial building industry is obliging. This is opposite of using authority. CN04 stated that “The contractor did not submit the documents on time and as we required. We argued several times about this. However, the client has no problem with the way of the contractor’s submissions of monthly

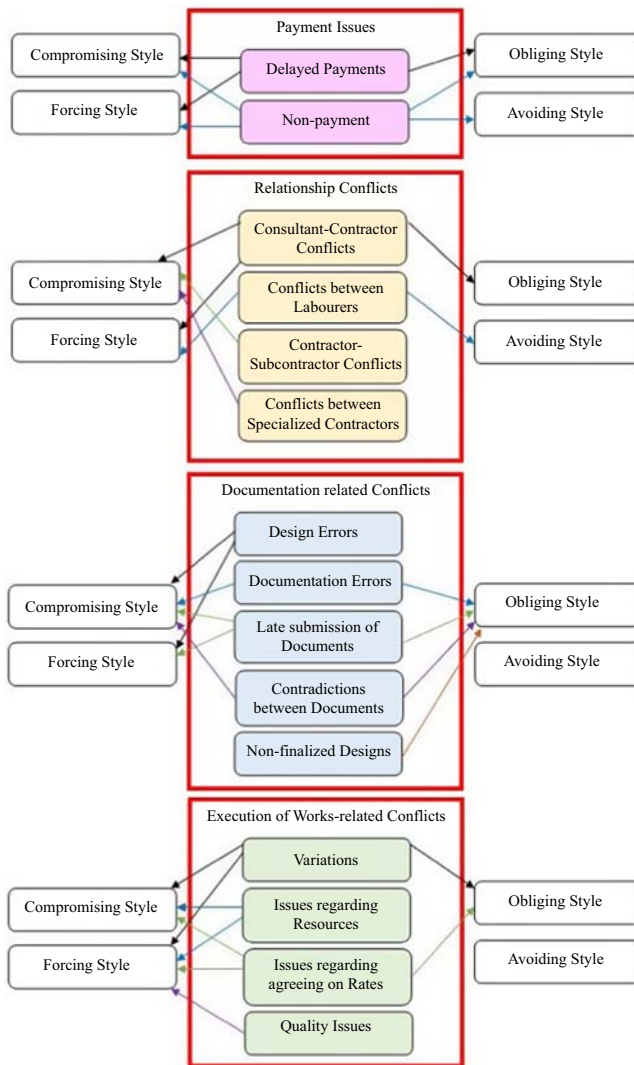


statement so that he said it to be submitted once two months. I still do not agree with this method because it creates a huge workload for the client in one month and there will be no much work in the second month. Actually, it's an imbalance. However, as the consultant, we had to agree with the client." This statement revealed that obliging style created a win for one party while other party obtained a total loss. However, the losing party had to accept it due to the authority carried by the third party (Client in this scenario). Nevertheless, the winning party did not achieve their win due to their own authority yet due to the authority of the third party had over both conflicting parties. Therefore, obliging can be seen in two different ways; if one party has more power than the other party, the latter party had to use obliging style, and if a third party has more power than the conflicting parties, both parties have to use obliging style. CN01 mentioned that "The contractor at most of the times agreed with our decisions. When we decided to pay the subcontractors directly, the contractor agreed with that. He is always supportive to the consultant's decisions when he thought that the consultant's decision is more reasonable." This statement revealed that obliging is not always a loss. It can be a way of accepting the right thing to do even though it is not beneficial to one party. Further to CN01, obliging is a professional way to manage the conflict if one party is more reasonable and factually strong than the other party. The stakeholders agreed to the fact that obliging is not merely a win-lose approach yet it provided advantageous results such as reducing the professional responsibility of the losing party. This is opposite to the findings of Zhang *et al.* (2015) as the authors argued that even though Eastern countries preferred obliging in the past, the current preference has changed, ranking obliging as one before the last due to the competition, rapid development and globalization. Malaysian construction sector prefer obliging as a combined conflict management technique with either compromising or integrating (Lee, 2008).

#### 7.4 Avoiding

The final conflict management style used by the Sri Lankan commercial building industry is avoiding. CR02 explained this by using his experience; mentioning that "The client did not pay us around USD 0.75 Million. His argument is that he will not pay for the claims issued after the completion of project. Nevertheless, we ignored that because we wanted to have a good professional relationship with the employer." In this incident, the contractor's party did not consider about the financial loss they gained. Instead, they consider about maintaining the good professional relationship with the intention of having all future projects of the client. When consider about the client, even though he did not have to pay the additional costs, he became liable to the contractor, creating an ethical liability to favor the contractor in all future tendering procedure. In addition, the client lost his power over the contractor. CN01 stated that "However, we avoided the labourer's conflicts because they are not relevant to us." Avoiding style can be used for the conflicts which are not directly relevant to the construction. However, in this situation, the labor conflicts wasted a considerable time. Nevertheless, the relevant parties refused to involving in them due to the fact that if they involve, the conflicts might become severe with labor strikes and harming the property. Using avoiding style enabled the project to keep both conflicting parties on site since no managerial level professionals took any side. The findings of the study partially agreed with Friedman *et al.* (2000) since they argued avoiding is suitable for conflicts which cannot be managed due to lack of knowledge regarding the conflict. However, this study identified that avoiding style can be used for the aforementioned conflicts as well as for the conflicts which occur in project yet not relevant to the project. Moreover, the study agreed with the findings of the Ohbuchi and Suzuki (2003) in relation to Japan and Zhang *et al.* (2015) in relation to China as they rarely use avoidance currently, changing their preference toward compromising and integrating.

During the meetings, the stakeholders pointed out the conflict management styles used for the conflict situations they have faced. They are shown in Figure 2.



**Figure 2.**  
Common conflict  
management styles  
used to solve  
conflict situations

## 8. Discussion

The study focused on whether the magnitude of the project and its complexity has any impact on having conflicts. Accordingly, the magnitude of the project has a direct relationship with the tendency of having conflicts. The main reasons for such relationship can be identified as lengthy process of construction, involvement of more parties, high workload, enormous documentation, high human diversity and limited resources. This is in line with the findings of Jaffar *et al.* (2011) and Alzahrani and Emsley (2012) as they emphasized the conflicts are increasing in an alarming rate due to the construction of high rise buildings with lot of facilities, new technology and advanced services.

However, a connection between the complexity of the project and the tendency of having conflicts cannot be derived according to the available information due to the disturbance

occurred by Case 3. It obtained the highest number of conflicts even though it is less complex than Case 1 and Case 2. The study then observed the reason for the disturbance and found that the procurement arrangement of Case 3 is different to other three cases. In Case 3, the involvement of professional parties is way higher than the other three cases. The project had nine specialized contractors who directly involved with the client and four subcontractors who dealt with the specialized contractor for architectural and structural works. Therefore, it can be pointed out that the one main reason for having more conflicts is high multi-disciplinary involvement. This is in line with the findings of Yousefi *et al.* (2010) as they indicated that multi party involvement in construction often complicate the project and generate conflicts due to the lack of coordination among the parties, poor communication and high work load. Further to this study, having a vast documentation process which involved more parties led the project toward more conflicts. Theoretically, Case 3 had to face the problems eight times multiplied when compared to the other three cases; especially the relationship conflicts. Therefore, the number of conflicts of Case 3 is a special condition. If consider about the other three cases, a pattern can be identified with regard to complexity and having conflicts; they obtained a direct relationship. This is in line with the findings of Jaffar *et al.* (2011) and Yousefi *et al.* (2010) as both studies specifically mentioned about the direct relationship between the conflicts and complexity of projects.

Even though the magnitude and complexity had a direct relationship with the tendency of having conflicts, the severity of conflicts did not have a relationship with the project. During the meetings, the stakeholders are questioned about the severity of the conflict situations they experienced. Accordingly, Case 1 is having severe conflicts than the other three cases even though it is not big as Case 2 and Case 3. The main reason for having severe conflicts is the personal respond of the parties and how the situation is initially handled. This is in line with the findings of Tjosvold (2006) and Giritli *et al.* (2009) as they argued conflicts did not rise themselves or escalate themselves yet they are created and developed by the wrong behavior of people.

According to Tjosvold (2006), it is obvious that humans are behind the creation of conflicts as well as the management of them. This theory is common to the Sri Lankan commercial building industry as well due to the involvement of many people with different backgrounds, attitudes, characteristics, education and skills. However, every stakeholder in a project carries a professional responsibility to complete the project by doing his part without giving priority to their personal goals and personal matters. Nevertheless, a question should be raised whether the professionalism of stakeholders create any impact on the tendency of having conflicts.

During the meetings with stakeholders, it is identified that most of the relationship conflicts during construction are occurred between the operational level stakeholders who continuously dealt with each other. According to the data analysis, Case 2, Case 3 and Case 4 had number of relationship conflicts between consultant's staff and contractor's staff. The major reasons for this situation are identified as less experience and lack of interpersonal skills. As pointed out by the stakeholders in meetings, if there is no enough experience, it is hard to survive in the construction world since it is all about handling people in such a way that they would willingly agree for everything even though it is not their main intension. Further, less experienced stakeholders often handle the situations according to books, yet in this kind of an industry; "work by the book" concept could create more harm than good. Furthermore, having good interpersonal skills would assist the stakeholders to deal with other people. Hence, it can be said that the level of experience of stakeholders obtain an inverse relationship with conflicts. Even though past literature did not directly talk about the particular matter, Huan and Yazdanifard (2012) argued that the relationship between supervisors and subordinates often decided the amount of conflicts occurred between them.

The study further focused on whether the organization culture has any impact on the tendency of having conflicts. It is found that the contracting companies maintain a result oriented organization culture whereas the consultancy companies maintain a process oriented organization culture in most of the Sri Lankan commercial building sector. These findings are in line with the findings of Rameezdeen and Gunarathna (2003) as they identify the consultancy companies as goal oriented and well organized on the process while identifying the contracting companies as competitive and well encouraged for output maximization. According to the analysis, it is visible that contracting companies tend to have a diverse range of conflicts than the consultancy companies (example Case 1 and Case 2). Therefore, it can be said that the tendency of having conflicts is high in a result oriented organization culture. This is mainly due to the eager to gain profit. However, it can be also seen that the contracting companies are more interested in proper conflict management and willing to compromise and make sacrifices whereas the consultancy companies hesitate to go above the rule.

### 9. Conclusion and recommendations

Conflicts are natural and inevitable in the Sri Lankan commercial building industry. According to the findings of this study, there are 15 conflict situations that can be commonly seen in the Sri Lankan commercial building sector which can be categorized into four main conflict types, namely; payment issues, relationship conflicts, documentation-related conflicts and execution of works-related conflicts. The study focused on the sources of these conflict situations and found out that some of the most common sources of the aforementioned 15 conflict situations are financial issues of the parties, selection of underpriced bids, unprofessional behavior, poor communication, poor coordination, bad history, poor documentation, supremacy of professionals, high work load, disagreement of parties, design errors, less experience, unavailability of resources and negligence.

According to the findings, the most commonly used conflict management style in Sri Lankan commercial building sector is compromising style which enabled both parties to gain some degree of satisfaction. It is surprising to see that forcing style received the second place irrespective of the value given to the collectivism qualities in Sri Lanka. It is highly argued and well accepted that most of the conflict situations can easily managed by using forcing styles. Obliging style received the third place in the ranking of common conflict management styles. According to the stakeholders in the Sri Lankan building industry, obliging style is a way of protecting good professional relationships which can be a good investment for future. However, obliging style is not famous as compromising and forcing. The least common conflict management style is avoiding. The findings revealed that avoiding style is used whenever the conflict is not relevant to the project or when the parties are not equipped with information to manage the conflict. It is shocking to see that Sri Lankan commercial building sector rarely use problem solving style for conflict management even though it is the most effective conflict management style with long term solutions and creative thinking. However, it should be noted that these findings only indicate the commonness of using the styles yet not the perfect conflict management style to a particular conflict. Further, the study does not introduce the best conflict management style which satisfy both parties. It only provides information about the common conflict management styles used for a particular conflict situation. Selecting the perfect conflict management style as per the situation is completely in the hand of the parties by using their knowledge, experience and historical data. However, when they decide which conflict management style should be used, the parties can rely on these findings (what is the most commonly used management style to a particular conflict) as these have demonstrated positive outcomes.

It is identified that tendency of having conflicts in the construction projects has a direct relationship with the magnitude of project and the complexity of the projects. However, there is no relationship between the severity of conflicts and the magnitude and the complexity of projects. The severity of conflict will be decided by the human behavior. Further to findings, the experience of the stakeholders has an inverse relationship with the tendency of having conflicts.

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### Corresponding author

Rebecca Jing Yang can be contacted at: [rebecca.yang@rmit.edu.au](mailto:rebecca.yang@rmit.edu.au)

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