

博士論文

**Analysis of the Influence of Contextual Factors on  
Contractual Conflicts in International Construction Projects:  
Case of Vietnam**

(国際建設プロジェクトにおける契約コンフリクトの文脈的要因分析：ベトナムを事例に)

by

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**THE UNIVERSITY OF TOKYO**

**Graduate School of Engineering**

**March 2015**

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A dissertation presented

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to

Department of Civil Engineering - Graduate School of Engineering

in partial fulfillment of the requirements for the degree of

**Doctor of Philosophy**

**THE UNIVERSITY OF TOKYO**

March 2015

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## ABSTRACT

International construction market is increasingly being dominated by developing countries. This may be explained by the fact that many developing countries are concurrently carrying out a number of large-scale construction projects in order to accelerate their economic growth. In addition, external sources of funds such as official development assistance (ODA) and foreign direct investments (FDI) have become increasingly available in recent years. For international competitive bid projects, one of standard conditions of contract prepared by Federation Internationale des Ingenieurs-Conseils, popularly known as FIDIC (International Federation of Consulting Engineers) is commonly used. In fact, major international development agencies mandate use of the MDB harmonized edition of FIDIC Red Book contract conditions for civil works implemented through their funds.

Despite having gained experiences of implementing international construction projects in recent decade or so, many developing countries are still regularly experiencing construction problems that manifest into schedule delays and cost overruns. Previous studies suggest that those problems are often human and management-related (contractual), instead of technical-related, and various contextual factors are identified as contributing causes. However, previous international construction problem and risk studies have mainly focused on identifying the causes and limited explanations are provided on how those problems are developed.

In addition, previous studies have mainly relied on analysis at individual level, such as utilizing questionnaire or interview surveys, to draw conclusions and make management recommendations. The fact that project level analysis has not been adequately performed appears to be the reason why recommendations in previous studies are either impractical or their effectiveness is not clearly justified. In order to overcome these limitations, the following research question is posed: how do various contextual factors contribute to the development of contractual conflict in international construction projects?

By choosing Vietnam as a case, the research objectives are: 1) to identify recurring contractual conflicts in international construction projects and their perceived causes, 2) to clarify the relationships among contextual factors of contractual conflict, and 3) to validate the proposed causality diagrams for contractual conflict in international construction projects by applying to real project cases.

For primary source of research data, in-depth interview of thirty two construction professionals who have participated in international construction projects in Vietnam are carried out. In addition, nine project cases are concurrently observed during the interview period. For qualitative analysis of the interview data, open coding and

axial coding procedures prescribed by Straussian version of grounded theory method are utilized. 123 concepts, 23 sub-categories, and six main categories are identified through the coding procedures. Seven recurring contractual conflicts in Vietnam are identified as: delay in site handover, price adjustment payment delay, inspection approval delay, interim payment delay, variation approval delay, excessive documentation required by project administrators, and permit/licenses approval delay by public authorities. Also, a wide range of contextual influences of on contractual conflict are mentioned by interview participants, which is consistent with similar studies conducted in the past.

Contextual factors of contractual conflict are extracted from the interview data and they are grouped under the following six categories: host country, public construction industry, construction profession, project managing organization, administrative individual, and contract utility. Literature review is performed to validate that the extracted contextual factors of contractual conflict are generalizable to international construction projects in other developing countries. Subsequently, causality diagrams for contractual conflict are proposed by clarifying causal relationships among the extracted contextual factors. Four contextual factors are identified as the roots of causal relationships, and they are: 1) inadequate contract clarifications performed among parties at precontract period, 2) low level of relational-approach utilized, 3) low level of political support on project, and 4) low level of international project management experience by employer organization.

As a validation process, the proposed causality diagrams for contractual conflict are applied to nine real international construction project cases. The causality diagrams effectively described the development process of either specific contractual conflict or conflict avoidance measures observed from all nine cases. Among four possible root causes of contractual conflict, addressing “inadequate contract clarifications performed at precontract period” was observed to provide management solutions that were not only effective but also promoted transparent practice. Addressing “low level of relational-approach utilized” as well as “low level of political support on project” were observed to be effective in motivating project administrators in terms of avoiding approval delays, but these approaches were also prone to lead to practices that lacked transparency. In addition, addressing “low level of international project management experience by employer organization” alone was found to be a relatively ineffective solution, agreeing with previous studies that systematic construction project management is still an under-developed practice in developing countries.

The finding of this research is an incremental step to further the understanding of how various contextual factors influence development of contractual conflict in international construction projects. 19 contextual factors of contractual conflict identified from this study were validated to be applicable to international construction projects in developing countries. Also, causality diagrams that clarified causal relationships of the 19 contextual factors were validated to be effective models for

understanding the development process of either contractual conflicts or conflict avoidance measures in international construction projects.

Policy implication made to ODA donor organizations is to promote precontract negotiation activities as capacity development opportunity by inviting all relevant project administrators, not only to participate in contract negotiations but also to offer education on proper application of international contract procedures. In addition, active involvement of consultant engineers from contract planning phases should be promoted by ODA donor organizations in order to help both project employers and contractors establish a thorough contract execution plans based on their expertise.

Some of tips offered on improving the applicability FIDIC Red Book-based contract conditions in international construction projects in developing countries are: adopt *Delay and Disruption Protocol* as part of the contract for determining additional cost for extension of time (EOT); remove reference of Sub-Clause 4.21 in Sub-Clause 14.3 to eliminate unnecessary documentation requirement; clarify Sub-Clause 3.1 by further stating the extents, as well as limitations, of the engineer's role and authority; and establish flowcharts for interim and variation procedures with time limit specified for each stage.

Some limitations for this study are that interviewees representing international contractors were all either Korean or Japanese companies; only small number of project employers participated in this project; validation findings are limited to the nine project cases included in this research, and confirmation of research findings with research participants were limited to several participants who were accessible via email.

Recommendations for further study include expanding this research to include viewpoints of western construction companies operating in developing countries; further investigating employers' perspectives on recurring contractual conflicts to identify potential factors that international participants can address; conducting case study of international projects in other developing countries for further generalizability of findings from this research, and conducting a quantitative study to strengthen the findings of this research through more accurate validation measures.

## **DEDICATION**

*To the loving memory of my grandfather*

I dedicate this work to my parents for always motivating me and then providing me with the necessary support, to my sister and brother for being a good sister and a brother to me, and last but not least, to my lovely wife and son, Suh Yeon and Juwon, who are the reasons of my life.

## ACKNOWLEDGEMENTS

This has been the most challenging commitment in my life so far. This work is a representation of many help I have received from many people in many ways. Foremost, I owe a huge debt to my advisor, Kazumasa Ozawa sensei, for first providing me with this valuable opportunity and then carefully orchestrating to maximize my learning possibility. He has not only extracted the best out of me, but also he has shown me what it takes to be a good mentor. I have learned many valuable life lessons from him.

I need to express my gratitude to my other thesis committee members: Professors Tsuyoshi Seike, Tetsuya Ishida, Masahide Horita, and Petr Matous. Their insightful comments have enabled my thesis to make continuous improvements until the end. I truly appreciate their willingness to make time and effort to contribute to my learning process, and I have gained an utmost respect for the role they play as academic advisors.

This research would not have been realized without the scholarship provided by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT), and additional financial supports from my parents as well as from Ozawa sensei. I realize that not everyone gets this kind of opportunity, and it will be my duty to find out ways to repay this debt throughout my life.

Gathering interview participants as well as carrying out interview tasks was a huge effort for this research, and I was fortunate to receive lots of help from people around me. Among many of them, I would like to express special thanks to Mr. Lee Kun Ki, the Vice Mayor of Seoul Metropolitan Government, and chairman Lee Byung Mook for responding to my last minute requests. Also, I need to express a huge thanks to Hoang Chi Thanh and Mai Linh for dedicating their time and effort to arrange many interviews, to travel to Vietnam together, and to provide simultaneous translations during interviews when necessary. Only true friends would give this kind of support (for free of charge), and you guys are my true friends!

Beside my thesis committee members, I was fortunate to receive additional research advices from many other people around me. Among many of them, I would like to express special thanks to Professor Mike Handford for offering me his valuable comments on various aspects of my research, and Dr. Lee Keun-moo and Dr. Jeong Kook In for teaching me the basics of grounded theory method in a hurry. Also, I



would like to thank Dr. Toshio Kodama senpai, Mr. Yasushi Okada, and Mr. Takuya Matsusaki for offering their insightful tips on my research topic as well as arranging interviewees for me. They, along with many others not mentioned here, have contributed to the quality of this thesis.

My research experience at the Construction Management and Infrastructure Systems Lab has been an amazing one, and the memories I have made here will last a lifetime because of those people who I have interacted with. There are too many senpais, kohais, researchers and staff members to be all listed here, but I do need to express my gratitude to Ms. Mihoko Kubota for always taking care me, and everyone else in the lab, through her administrative role in our lab.

I also received lots of research and moral supports from many Korean, Japanese, Vietnamese as well as friends of other nationalities, within the Todai community. Many beers, exercises, laughter, and occasional research discussions have fueled me to finish my PhD study at Todai. Again, there are too many of them to be all listed here, but they will not be forgotten in my heart.

Finally, I need to acknowledge my parents on both sides for giving me unconditional support and making many sacrifices over the past four years, so that I could concentrate on my thesis. My thesis is complete, and now it is my turn to give back.

Thank you everyone!

*March 2, 2015*

**Eugene Kim**

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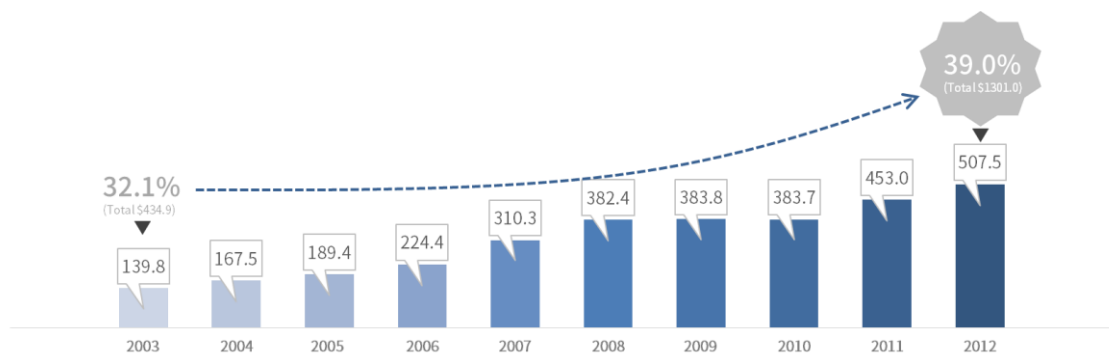
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# 1. INTRODUCTION

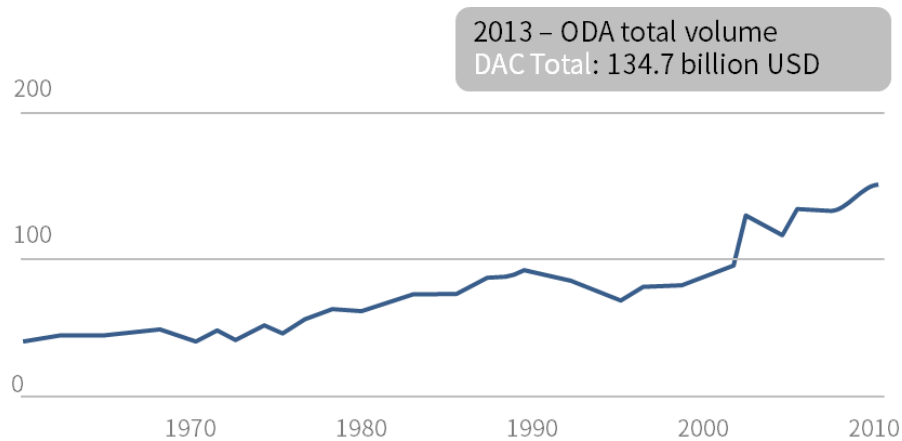
## 1.1 Research Background

International construction market has experienced a tremendous growth over the past decade. Based on figures from Engineer News Record (ENR, 2013), as shown in Figure 1.1, international market size has grown over 300% over the past decade and the total overseas contracting revenue by top 225 international contractors has reached 508 billion USD in 2012. In addition, the breakdown of top 225 international contractors' revenue suggests that their reliance on international projects have increased as well over the past decade. Figure 1.1 shows the percentage of international revenue over total (domestic and international) revenue of top 225 international contractors increasing from 32.1 percent in 2003 to 39.0 percent in 2012.



**Figure 1.1 Growth trend of international construction revenue**  
(Source: ENR, 2013)

Another trend observed is that developing countries are increasingly dominating the international construction market. A possible explanation is that while the developed countries of the world are entering a period of decline in demand for construction services, many developing countries are concurrently carrying out a number of large-scale construction projects in order to accelerate their economic growth. In addition, external sources of funds such as official development assistance (ODA) and foreign direct investments (FDI) have become increasingly available, which developing countries have greatly utilized to speed up their infrastructure developments. Figure 1.2 shows increasing growth trend of ODA total volume over past decades. In 2013, the total aid to developing countries has reached an all-time high at 134.7 billion USD, of which a significant amount is invested on public construction projects (OECD, 2014).



**Figure 1.2 Growth trend of ODA total aid**  
(Source: OECD, 2014)

International construction projects offer opportunities for developing countries to speed up their growth, and international companies to increase their profit and market share (Chan, Suen, & Chan, 2006). With most of international companies coming from advanced industrialized countries, they utilize the most up-to-date expertise and know-hows effectively (Dikmen & Birgonul, 2006). More importantly, for international companies facing with diminishing markets from their domestic developed countries, international projects serve as new market opportunities (Hall & Jaggar, 1997).

Despite offering a number of potential benefits, international construction projects in developing countries are also widely known to be inefficient. For example, a Vietnamese government official estimated that 20%-40% of capital investment in construction is wasted due to poor management (Long, Ogunlana, Quang, & Lam, 2004). Problem of delays and budget overrun for international construction projects in developing countries have been widely reported and frequently studied (e.g., Arditi, Akan, & Gurdamar, 1985; Assaf & Al-Hejji, 2006; Le-Hoai, Dai Lee, & Lee, 2008; Lo, Fung, & Tung, 2006; Toor & Ogunlana, 2008), and they also suggest that those problems are often due to human and management-related issues.

However, previous studies have mainly focused on identifying list of possible causes without offering clear explanations on how the problems are initiated and why similar problems have remained persistent throughout developing countries. Naturally, solutions offered in previous studies have often been too general to be effective. There is a need to explore the problems of international construction projects in developing countries in greater depth, in order to provide more accurate assessment of the and consequently offer solutions that are practical and effective. In this chapter, a general overview of research objective, the research process, and contributions are presented. The chapter concludes with overview of dissertation.



## 1.2 Research Objectives

While there appears to be a general consensus that many contextual causes contribute to contractual conflicts in international construction projects, there have been limited explanations on how those causes interact and contribute to development of contractual conflict. In order to clarify this relationship, three research objectives are established:

1. Using Vietnam as a case, identify recurring contractual conflicts in international construction projects and their perceived underlying causes.
2. Clarify relationships among contextual factors of contractual conflicts in international construction projects.
3. Validate proposed causality diagrams for contractual conflict by applying to real international project cases.

## 1.3 The Research Process

With three research objectives established from the review of previous studies, the research is conducted in three phases with each phase focusing on addressing each objective. The first phase is about exploring the phenomenon of recurring contractual conflicts in international construction projects, which involves in-depth interviews of construction professionals and qualitative analysis of those interview data. The second phase is about developing causality diagrams for contractual conflict, which involves extracting contextual factors of contractual conflict from the interview data and proposing causal relationships among those extracted contextual factors. The third phase is about validating the proposed causal relationships of contextual factors by applying them to real international project cases. In essence, this research follows an inductive research process of exploring, finding patterns, and then developing theories.

## 1.4 Research Contributions

The finding of this research is an incremental step to further the understanding of how various contextual factors influence development of contractual conflict in international construction projects. 19 contextual factors of contractual conflict were validated to be applicable to international construction projects in developing countries. Also, causality diagrams that describe causal relationship of the 19 contextual factors were validated to be an effective tool for describing the development process of contractual conflicts as well as conflict avoidance measures. Policy implications to the ODA donor organizations and tips on improving the clarity of FIDIC Red Book-based contract conditions for application in developing countries are offered.

## 1.5 Structure of Dissertation

This dissertation has seven chapters. Chapter 1 provides an overall view of the research. It addresses the background of the research, research objectives, research process, research contributions, and dissertation structure.

Chapter 2 reviews previous studies that cover the topics contract, conflict, and construction organizations. Through the comprehensive review, limitations of previous studies are identified and objectives for this research are established.

Chapter 3 describes and justifies the research design used in achieving the research objectives derived from Chapter 2. The nature of this research is explored by investigating the different aspects relevant to designing the research study; these aspects comprises purpose of the study, types of investigation, extent of researcher interference, study setting, unit of analysis, time horizon, data collection method, sampling design, measurement, data analysis, and ethical considerations. A detailed research process is then developed. A description of how the knowledge is gained from the use of the selected research method is provided.

Chapter 4 explores contractual conflicts in international construction projects by utilizing grounded theory approach. Description of the interview process for collecting primary research data, as well as the output of interview data analysis is provided. Open coding and axial coding is performed as qualitative analysis, and 123 concepts, 23 sub-categories, and six main categories are found.

Chapter 5 describes the process for developing causality diagrams for contractual conflict. Contextual factors are extracted from open coding concepts produced in Chapter 4, and then they are used to develop cause-and-effect diagram for contractual conflict in international construction projects. Causality diagrams for contractual conflict in international construction projects are developed by displaying causal relationships among contextual factors. Four possible root causes among contextual factors are identified.

Chapter 6 validates causality diagrams for contractual conflict, developed in Chapter 5, by applying to nine real project cases. Using causality diagrams, development of specific contractual conflicts are described for five project cases and avoidance of specific contractual conflicts are described for the remaining four project cases. Effectiveness of each conflict treatment approach observed in project cases is clarified.

Chapter 7 summarizes the research findings in relation to the research objectives, and presents academic and practical contributions of this research. The chapter

concludes by pointing out limitations of this study and offers recommendations for future studies.

## **2. LITERATURE REVIEW**

### **2.1 Introduction**

Contractual conflict in international construction projects is essentially interface problems among contract parties which the causes of conflict may be rooted from various factors. Hence, this chapter presents various topics and studies that are relevant to understanding the multi-layered context which international construction project participants are surrounded by. Literature on conflict in teamwork suggests two types of conflicts; cognitive and affective conflicts (Moura & Teixeira, 2010).

Cognitive conflicts are task-oriented and focused on differences of judgment about data or facts on the way to achieve objectives (Moura & Teixeira, 2010). Based on this description, cognitive conflicts among project parties during construction period can be assume to originate from the contract since official tasks and responsibilities to be fulfilled by each party are specified in the contract. Affective conflicts are more focused on differences in characteristics, emotions or values, and they tend to be more dysfunctional and less constructive (Moura & Teixeira, 2010). In the field of business management, such differences are commonly discussed at organizational level, and structural differences at national level are also included for international business management (Alvesson & Willmott, 1992; Hofstede, Neuijen, Ohayv, & Sanders, 1990; Trompenaars, 1996).

In order to provide the relative positioning of the research topic, previous studies on cognitive conflict of construction contract as well as affective conflict due to differences at organizational and national level are broadly discussed. In addition, more practical studies on investigating problems in international construction projects conducted in the past are reviewed in order to identify the limitations and, subsequently, establish appropriate objectives for this research.

### **2.2 Conflict and Contract**

#### **Construction Contract**

Contract is a legally enforceable promise between two or more parties to do something for a consideration. Construction contract is different from most other types of contracts due to the length of the project, its complexity, its size and the fact that the price agreed and the amount of work to be carried out may change as it proceeds. Due to the complex nature of construction contract, occurrence of conflict and dispute between contract parties are common and they may affect work quality and delay the progress of the construction process (Sutrisna, 2004). It is therefore important to have a proper understanding of the contents of the contract documents

which leads to the enhancement of the contractual relation and assurance of the intended deliverance of the product (Mohamad & Madon, 2006).

### **Contract Interpretation**

Hartman and Snelgrove (1996) investigated the subjective nature of contract interpretation by asking owners, contractors and consultants to indicate the degree of risk apportionment they perceived as having been assigned between an owner and a contractor by specific contract clauses. Their survey results indicated that contracting parties consistently interpreted risk apportionment of contract clauses differently; hence re-emphasizing the notion that conflict potential is naturally inherent in any contractual situation.

Traditional construction contracts were often written in legal languages that were not easily understood by engineers and site managers who actually applied them in projects. Hence, the authors of the New Engineering Contract (NEC) aimed to achieve 1) ease of understanding, 2) clearer text, and 3) clearer risk allocation for NEC Engineering and Construction Contract (ECC) Second Edition. Compared to a traditional construction contract, Broome and Hayes (1997) found the NEC ECC second edition to be a significant improvement in terms of clarity and described the resulting benefits to effective project management.

Rameezdeen and Rajapakse (2007) carried out a study to find out whether there is a relationship between readability of contract clauses and their interpretation. Readability measures how comfortably or easily a text can be read, and it is distinct from legibility and comprehension. Selected corresponding clauses in two commonly used standard forms of contract, the FIDIC (1999) and the NEC (1993), were interpreted by clients, contractors, and consultants using the risk allocation scale developed by Hartman, Snelgrove, and Ashrafi (1997). Based on the readability formula used by the authors the NEC (1993) was found to have higher readability score than the FIDIC (1999), and the survey results showed that a higher degree of commonality in interpretation by different readers were found for the NEC (1993) compared to the FIDIC (1999). Furthermore, additional study in this area by Rameezdeen and Rodrigo (2013) established a linear relationship between readability and comprehension, proving their claim that improved readability increased the comprehension of a contract clause.

### **Contract Evaluation**

Several methods for evaluating conditions of construction contract were proposed. Bubshait and Almohawis (1994) proposed a simple quantitative method based on 11 attributes: clarity, conciseness, completeness, internal and external consistency, practicality, fairness, effect on quality, cost, schedule, and safety. Evaluator must first assign relative importance of each of the 11 attributes, and then indicate his/her level of agreement with each of the statements representing the attributes after a careful review of the general conditions. The authors suggest that the results of the

evaluation can also be used to assess the risk level associated with the general conditions.

A more complex evaluation method has been proposed by Podvezko, Mitkus, and Trinkūniene (2010). For their evaluation concept, experts chose nine criteria describing the contents of construction contract in terms of the functions performed by their conditions. They were:

- 1) Customer's obligations;
- 2) Contractor's obligations;
- 3) The right to change the cost of construction works if it increased by more than 15% due to circumstances beyond the contractor's control;
- 4) Guarantee;
- 5) Payment conditions;
- 6) Subcontracting;
- 7) Contract insurance;
- 8) Contract suspension;
- 9) Contract termination.

The significances (weights) of construction contract criteria were calculated by experts using Analytic Hierarchy Process (AHP) approach. Using multi-criteria evaluation methods, six construction contracts were compared and the best alternative was determined.

### **Contract Conflict and Dispute**

Conflict and disputes are believed to be inescapable in construction industry (Fenn, Lowe, & Speck, 1997; Hellard, 1988). Resolving disputes can be time consuming, expensive and the good relationship of involved parties may be affected (Fenn, 2008). Conflict and disputes in construction are known to be used inconsistently at times. Conflict is generally understood as when two or more individuals see the same situation differently, whereas disputes arise when a claim made by one party to the other is rejected. Kumaraswamy (1998) has adopted the definition of dispute under Rule 1 of the Institution of Civil Engineers Arbitration Procedure which describe dispute as 'where a claim or assertion made by one party is rejected by the other party and that rejection is not accepted'. It is worth noting that conflict can be managed, possibly to the point of preventing it from leading to dispute, while disputes require resolution and therefore are associated with distinct justiciable issues (Fenn et al., 1997).

Sources of disputes in construction projects have been presented in number of studies. Bristow and Vasilopoulos (1995) identified six areas: unrealistic expectations; contract documents; communications; lack of team spirit; and changes. Six areas identified by Conlin, Langford, and Kennedy (1996) are: payment; performance; delay; negligence; quality; and administration. Heath, Hills, and Berry (1994)

identified seven areas: contract terms; payment; variations; time; nomination; re-nomination; and termination. Six areas suggested by Hewitt (1991) are: change of scope; change conditions; delay; disruption; acceleration; and termination. Lastly, ten areas identified as sources of disputes by Jones (1994) are: management; culture; communications; design; economics; tendering pressures; law; unrealistic expectations; contracts; and workmanship. Frequently mentioned areas as sources of disputes in construction appear to be contract, changes, payment, delay, and unrealistic expectations.

### **Conflict on the Engineer's Role**

Three main parties involved in construction contract, whether it is domestic, international, building, or engineering project, are 1) owner, 2) engineer (or architect), and 3) contractor. The owner and the contractor having principal-agent relationship are clear, but role the engineer plays in the construction contract is not as clear. The role of the engineer adopted by commonly used standard forms of contract, such as FIDIC, follows the model in England, especially in the conditions for civil engineering construction of the ICE (Knutson & Abraham, 2005). In this role, the engineer is not only the representative of the employer but also have functions in which they act as an administrator of the contract and of the relations between the employer and the contractor. This function is particularly prominent with respect to certification and dispute settlement (Knutson & Abraham, 2005).

Hughes and Shinoda (1999) conducted a questionnaire survey on the role of the engineer described in FIDIC the Red Book 1987 edition, which has been widely used for large projects financed by international banks (Molineaux, 1995). The result revealed that the engineer's role is not generally perceived as neutral in the contractual relationships between clients and contractors. In addition, contractors feel that engineers are rarely impartial in administering the contract, and all three parties feel that engineers' partiality is toward clients.

With continuing criticism of the Red Book 1987 edition, regarding the duality in the traditional role of the engineer as the employer's agent and as an independent third party holding the balance fairly between the employer and the contractor, FIDIC produced a replacement in 1999 known as the new Red Book. Three major changes identified by Ndekugri, Smith, and Hughes (2007) are: 1) a duty to act impartially has been replaced by a duty to make fair determination of certain matters; 2) it is open to parties to allow greater control of the engineer by the employer by stating in the appropriate part of the contract powers the engineer must not exercise without the employer's approval; 3) there is provision for a Dispute Adjudication Board (DAB) to which disputes may be referred.

With the engineer's role and decision power more controlled by the employer, increase of direct confrontation between the contractor and the employer and conflicts quickly developing as dispute matters can be expected for projects with contract based

on FIDIC the new Red Book. Although FIDIC the new Red Book was not part of the studied contract form, Fenn et al. (1997) compared 15 standard forms of contract in their study and concluded that certain contracts may contribute to the frequency of dispute, and that therefore some contracts may cause more disputes than others.

## **2.3 Conflict and Organization**

### **Role conflict and role ambiguity**

Role conflict and role ambiguity can be resulted from the differences between formal and informal expectations. In construction projects formal expectations are contracts and other types of written communication, whereas informal expectations are endless informal communication exchanges occurring during a project. The role of project manager and how it changes over the course of the project was studied by Georg and Tryggestad (2009), and they criticized the commonly held view that: “Roles are presumed to be relatively stable and dictated by contracts and/or cultural relations.” They learned from their study that the role of project manager involves not only managing the project, but also negotiating roles such as acting as a mediator for the project or transferring different points of view. They concluded that roles are not necessarily stable during a project and they considered both the formal documents and informal relationships in the project.

Gluch (2009) examined how environmental professionals form their roles and identities in relation to project practice. The research showed how different communication cultures and different world-views created tensions between environmental work and project practice. In order to cope with this tension environmental engineers adopted a formal role in line with their job description and an informal role which is more suitable for that specific project. This need to satisfy both formal and informal expectations separately and in different ways put extra pressure and stress on environmental professionals. He concluded that contradictory practices hindered environmental professionals from fulfilling their expected role and function.

Although the contracts are assumed to clarify the rights and expectations, many participants do not read them properly and this has been characterized as an industry problem. The Association of Consulting Engineers, the Institution of Civil Engineers as well as the Office of Government Commerce have made serious efforts to develop standardized contracts and guidelines, partly in order to clarify legal expectations and to provide guidelines for construction participants to work more coherently (Egan, 1998; Kershaw & Hutchison, 2009; Latham, 1994). However, the issue of incompatible role expectations has not been resolved within the construction industry, and Kabiri, Hughes, and Schweber (2012) argues that one reason is because expectations do not originate solely from formal documents and informal communications also have a big impact on role expectations. Loosemore (1999)



offered a similar argument that responsibilities in construction projects are not entirely predetermined by construction contracts. Many emerge arbitrarily from the resolution of power struggles between opposing interest groups who are trying to minimize their exposure to an unexpected resourcing demand. Hence, he concludes that conflict in construction projects emerges from the power struggles which are the mechanism by which responsibilities are resolved.

### **Principal-agent Theory**

Principal-agent theory concerns information asymmetry, where one of the parties is better informed than the other, and where parties do not share the same interests. Construction management field provides an appropriate setting for applying this theory, since construction project parties bring together a wide variety of both expertise and interests to the task at hand. In accordance with the principal-agent theory, the following types of information asymmetry apply for project parties: hidden characteristics, hidden information, and hidden intention. These three types of information asymmetry respectively generate the following risks: adverse selection, moral hazard, and hold-up (Jäger, 2008). Conflicting interests between principals and agents, that the theory postulates, have also been studied from morality and ethics point of view (e.g., Quinn & Jones, 1995).

In project management, the relationship between the project owner and the project manager engaged for a particular project has been the initial focus (e.g., Müller & Turner, 2005; J. R. Turner & Müller, 2004). However, the focus has been widened to other agents participating in construction, such as contractors, sub-contractors, designers, consultants, and so forth. In the simplest form, the principal is called the project owner and the agent is called the contractor, and both are naturally guided by self-interest. According to the theory, opportunistic behavior can be expected from both, but much of the literature is concerned with the contractor's opportunistic behavior. As the number of project parties grows, however, the relationship becomes much more complex. It can be assumed throughout that agents will attempt to maximize their benefits even when that may face a higher damage on the side of the principal (Schieg, 2008).

Several studies have focused on ways to minimize information asymmetry in construction projects. Schieg (2008) noted that asymmetric distribution of information in co-operations can have effects before as well as after closing a contract. Therefore, a special focus on the design of information duties of the involved parties, as well as transparent flow of information is the key to detecting where information imbalances occur. Schieg proposes the use of project communication systems which provides following advantages:

- Responsibilities within the project are transparent for all project participants.

- The employee who is responsible in the respective case will be informed automatically by e-mail over the contributions and tasks assigned to him.
- All project contributions are accessible 24 hours a day and thus allow an overview over the current state of the project at any time.
- Information can be recorded, processes and viewed regardless of time.

Ceric (2012) conducted a survey of project managers to learn about important strategies for minimizing information asymmetries in the construction phase. The study showed that trust is the most important strategy, which is followed by bureaucratic control (contracts) and information systems. Also, reputation, corporate culture, and incentives (bonuses) were identified as other strategies for minimizing information asymmetries in construction projects.

### **Conflict and Team Effectiveness**

How conflict between team members relate to team effectiveness has been studied in depth by organizational behavior scientists. Conflict in an organization can be described as the process resulting from the tension between team members because of real or perceived differences (Thomas, 1992; Wall & Callister, 1995). Since team members contribute to the team through social inputs and task inputs, conflict in teams is concerned with either relationship or task issues (Amason & Schweiger, 1997; Jehn, 1997; Kabanoff, 1991). Conflicts regarding personal taste, political preferences, values, and interpersonal style are examples of relationship conflict, while conflicts about the distribution of resources, procedures and policies, and judgments and interpretation of facts are examples of task conflict (De Dreu & Weingart, 2003).

Early conflict and group theorists have suggested that team conflict interfere with team performance and reduce satisfaction because it produces tension, antagonism, and distracts team members from performing the task (Brown, 1983; Hackman & Morris, 1974; Pondy, 1967). In addition, empirical evidence has supported the negative relationship between conflict and team productivity and satisfaction (Gladstein, 1984; Saavedra, Earley, & Van Dyne, 1993; Wall & Callister, 1995).

However other researchers, such as Coser (1956); Deutsch (1977); Walton (1969), recognized that low levels of conflict could be beneficial because when conflict is absent, teams might not realize that inefficiencies exist. Schulz-Hardt, Jochims, and Frey (2002) observed from their research that teams made better decisions when pre-discussion preferences were in disagreement rather than agreement. Also, research on team decision making by Hollenbeck, Colquitt, Ilgen, LePine, and Hedlund (1998); Hollenbeck et al. (1995) indicated that, all else equal, team members whose recommendations are uncorrelated or negatively correlated (i.e., conflict) provide more value as a unit than do team members whose recommendations are correlated high and positive (and hence redundant).

It is important to note that while low levels of conflict could be beneficial when it becomes more intense team performance can be negatively affected. De Dreu and Weingart (2003) best explained this by noting that, “A little conflict stimulates information processing, but as conflict intensifies, the cognitive system shuts down, information processing is impeded, and team performance is likely to suffer.”

Jehn (1994, 1995, 1997) proposed a more specific view on conflict and team performance by noting that although relationship conflict generally interferes with task performance, task conflict can be beneficial to task performance when working on non-routine tasks. Non-routine tasks are described as complex tasks without standard solutions, therefore requiring some consideration by the team. Task conflict, according to Jehn, increases group members’ tendency to scrutinize task issues and to participate in deep processing of task-relevant information. This environmental setting fosters learning and the development of new and sometimes highly creative insights, leading the team to become more effective and innovative (De Dreu & West, 2001; Jehn, 1995).

Routine tasks, however, typically have highly developed and effective standard operating procedures, and task conflict is more likely to interfere with those procedures than improve on them (De Dreu, 1997; Jehn, 1997; M. E. Turner & Pratkanis, 1997). The notion that task conflict may be productive and that relationship conflict is dysfunctional has gained a strong popularity, and many textbooks in management and organizational behavior conclude that task conflict is largely functional, whereas relationship conflict is dysfunctional (e.g., McShane & Von Glinow, 2000; Robbins, 2000; Rollinson, 2008).

### **Organizational Culture**

Analyzing culture within organizational studies accommodates multiple philosophical positions, allowing researchers to engage with culture by differing theoretical standpoints (Martin, 2004). According to Smircich (1983), conceptualizations of organizational culture can be divided into two polar categories – the functional and non-functional view. Functional approach views culture as one variable among many others (communication, organizational structure, strategy, etc.) in an organization or project which is subject to conscious manipulation. From this perspective, it is possible to manage culture and to link culture to organizational performance implying a causal relationship, but at the same time, culture is reduced to those limited aspects that are perceived to influence organizational efficiency (Gajendran, Brewer, Dainty, & Runeson, 2012).

Many researchers have adopted the functional paradigm in order to understand, or change, cultures for improved performance of project organizations. Examples of such studies include management of adversarial attitudes arising out of procurement (Cheng, Li, Love, & Irani, 2004; Phua & Rowlinson, 2003; Walker, Peters, Hampson,

& Thompson, 2001) approaches to improve the landscape of the construction industry, cultural issues associated to improved knowledge transfer in project organizations (Bröchner, Rosander, & Waara, 2004) topologies of corporate culture of construction firms (Igo & Skitmore, 2006) and motivational aspects in the construction workplace (Nielsen, 2007; Smithers & Walker, 2000). With the functional view of culture as a variable that can contribute to organizational performance, quantitative research (e.g. statistical inference, large sample sizes, reliability and validity measures) is the method generally adopted by researchers in order to seek generalizable outcome.

Researchers who argue that the notion of culture as a variable is simplistic and seriously underestimates the theoretical potential and value of culture, favor a non-functional approach to culture whereby culture is ‘thickly’ described (Alvesson, 2012; Geertz, 1973; Meyerson, 1994; Meyerson & Martin, 1987). Such ‘thick descriptions’ do not only attempt to explain human behavior, but also its context, so that the behavior becomes meaningful to an outsider (Gajendran et al., 2012). Also, this paradigm supports the study of the informal aspects of organization – aspects that may be obscured, paradoxical and contradictory. Hence, such descriptions may offer drastically differing perceptions of culture and its consequences within organizations.

Contrary to the view that culture is something that an organization can possess and command, the non-functional view stress that the organization is itself a culture, or a collection of cultures. The proponents of a ‘root metaphor’ approach argue that culture is a context in which social events, behaviors, and institutions materialize. Smircich (1983, p. 348) describes this approach below:

*“Culture as a root metaphor promotes a view of organizations as expressive forms, manifestations of human consciousness. Organizations are understood and analyzed not merely in economic or material items, but in terms of their expressive, ideational, and symbolic aspects.”*

Advocates of the root metaphor conceptualization of culture calls for a more general understanding of cultural settings, and oppose the view that organizational effectiveness can be achieved through direct cultural manipulation as this fails to address the negative features of people’s behavior such as resistance to change (Gajendran et al., 2012).

Since studies based on non-functional view of organizational culture aims to provide an interpretative frame within a cultural context (Martin, 2004), qualitative research and context specific analysis (e.g. ethnography) are research method generally adopted by the researchers (Gajendran et al., 2012). Examples of such studies include ethnographic studies with industry members to analyze ‘the claims culture’ of construction industry (Rooke, Seymour, & Fellows, 2003, 2004) and qualitative assessment of the organizational culture as project context in order to provide ‘context

specific' solutions (Van Marrewijk, 2007; Van Marrewijk, Clegg, Pitsis, & Veenswijk, 2008).

### **Cultural Manifestations**

Manifestations are the aspects that enable culture to be felt, observed and deciphered, and the literature suggests that culture can be evaluated via different levels (or layers) of cultural manifestation (e.g. shallow to deep). The level of manifestation impacts on the ability to decipher and study culture, hence Cheung, Wong, and Wu (2011); Van Marrewijk (2007) have emphasized the need for using appropriate manifestations to decipher culture when conducting project management research.

Although researchers generally agree that culture is manifested through various levels, the details of how those levels should be classified have yet not reached a consensus. Hofstede et al. (1990) identifies symbols, heroes and rituals as cultural manifestations, which he believes that these manifestations are exposed or brought to the surface by practices adopted by organizations. However, he proposes 'values' as the core manifestation of culture and uses them to decipher cultures. Schein (1984, 2006) suggested three levels of cultural manifestations, namely 'artefacts' and 'espoused values and beliefs' as superficial attributes of culture, and 'underlying assumptions' as the core attributes of culture.

Rousseau (1990) agrees with Schein's conceptualization, but inserted two more layers of cultural manifestations between 'artefacts' and 'espoused values and beliefs', namely 'behavioral norms' and 'patterns of behavior'. Artefacts, including behavioral norms and patterns of behavior, are believed to be the more visible parts of culture, while espoused values are generally reflected in the goals and strategies of an organization. The underlying assumptions generally represent taken-for-granted perceptions or beliefs that are powerful and deep-seated, and thus they are more difficult to detect than espoused values (Gajendran et al., 2012).

Which manifestations are most appropriate and useful for assessing culture are highly contested within the literature. Earlier cultural studies commonly focused on the outer layers of manifestations, such as artefacts and patterns of behavior, and linked culture to organizational performance. However, Rousseau (1990); Schein (1993, 2006) have stressed the importance of in-depth understanding, labelling artefacts as 'superficial'. Alvesson (2012) also agreed that employing artefacts in cultural analysis can be misleading, suggesting that trying to understand organizational culture by studying the coffee breaks, dress code, and meeting arrangements, may not give the best insight into culture. The surface level cultural data are easy to obtain but difficult to analyze and decipher (Alvesson, 2012; Schein, 2006). This level of analysis describes behavioral patterns, but it does not explain why a group behaves in a particular way.

The core manifestation of culture, the underlying assumptions/beliefs and values, must be analyzed in order to explain why the artefacts and patterns of behavior have

certain characteristics. Understanding the underlying assumptions will enable identification of the reasons for conflict, ambiguity and self-contradiction in organizations and groups (Alvesson, 1993; Meyerson & Martin, 1987). Extracting the inner core layers of manifestations generally involves ethnographic methodologies and interviews with key members of an organization (Morse & Richards, 2002; Schein, 1993).

## **2.4 Conflict at National Level**

When conducting any kind of business in foreign countries, various types of conflict can arise due to national differences such as political, economic, legal and social settings. Also, the fact that these differences are not clearly discernable unless one experiences such conflicts in first hand makes it difficult to avoid them. For example, while unethical behavior may be frowned upon in any country, the term unethical proves to be a vague term. In some countries it is unethical to break your promise, contract or an agreement, while in other countries breaking a contract that proved to be unfair is not considered as unethical. For such countries, following an unfair agreement is not accepted because they tend to respect the relationship more than formal agreements. The following discusses potential conflicts at national level by focusing on international construction market.

### **International Construction**

International construction is a project arrangement where one or more parties represent a firm of any country that contributes at a foreign site. This is commonly associated with complications and risks that must be offset by expertise, intangible assets, and transactional advantages (Strassmann, 1989). During the last century, globalization process has enabled the ease of movement of goods/services across borders as well as advancements in communication, and construction started to become a global activity. Emergence of multilateral agreements between countries (such as the General Agreement on Trade and Tariffs (GATT) and the General Agreement on Trade and Services (GATS), and the establishment of the World Trade Organization (WTO)), as well as joint ventures and other form of partnership between companies themselves enabled construction companies to perform businesses in foreign countries (Hall & Jaggar, 1997). International construction market has experienced a continuous growth over past decades, and the total overseas contracting revenue by top 250 international contractors has reached 544 billion in 2013 (ENR, 2014).

### **International Construction Risks**

The international construction market is enormous, mature, highly fragmented, increasingly competitive, and subject to diverse list of risks. As a result, working in an international setting often requires a much wider considerations of the project's context than with domestic projects (Mawhinney, 2008; Miller & Lessard, 2000).

An international construction firm must consider added risks such as bidding procedures, availability of contractors, and the availability of resources (Hastak & Shaked, 2000).

Additionally, international construction business is very sensitive to world events and regional conditions, involving political, economic, regulatory and legal risks, as well as cultural aspects. These factors could affect a foreign construction firm's ability to operate in the host country. According to Han, Diekmann, Lee, and Ock (2004), international construction firms are exposed to a complex bundle of risks such as currency and interest rates, inflation, and other business risks. Meanwhile, Baloi and Price (2003) defined factors related to socio-cultural, economic, technological, and political environments within which organizations operate as global risk factors.

A number of studies offered more concrete knowledge by taking specific and descriptive approaches. By surveying the executives in charge of international construction of large United States based contractors, Gunhan and Arditi (2005) found that the most important risks relative to international markets were loss of key personnel, shortage of financial resources, and inflation and currency fluctuations. Jaselskis and Talukhaba (1998); Kalayjian (2000) focused on describing construction risks that are especially common in developing countries, which include government/political instability, client's financial instability, low levels of productivity and materials theft at the site.

Cultural risk in international construction is an area that has received steady focus by researchers. Hall and Jaggar (1997) pointed out several areas including management of foreign staff and operatives, negotiation styles, code of conduct and ethical standards that can be impacted by cultural differences and hence effect international construction practices. Also, Chan and Tse (2003) identified culture as one of the major issues that affects the success of international construction projects, and reviewed the characteristics of international construction activities by referring to their cultural context.

Differences in legal system and regulatory standards used in construction practices pose additional challenge on multinational firms. Yates and Smith (2007) provided information on comparative legal systems, and also identified construction contract clauses that could differ in contracts throughout the world and which clauses are important to include in international contracts. Furthermore, Chua, Wang, and Tan (2003) cautioned that there are unique regulations and procedures relating to design, approval, and handing over that differ from international practice.

### **International Construction Risk Management Models**

Moving on to more conceptual level, several studies have focused on categorizing international construction risks in various ways, or complex cause-and-effect

relationships among identified risks were proposed in attempt to make the research findings to be useful as a risk assessment guide models.

Zhi (1995) proposed a four-step risk management process that can be generally adopted by all international construction projects. For risk classification stage (step 1), he proposed classifying risks in terms of their initial sources: the external and internal aspects of an international construction project. The external and internal division would then be further divided into the national/regional market, local construction industry, companies involved, and project's own nature. For risk identification stage (step 2), he described some risk factors that can affect international projects in general, such as inconsistency of government policies, interest rate fluctuation, bribe and corruption etc. For risk assessment stage (step 3), he proposed prioritizing identified risks based on assessment of the probability of occurrence and the degree of impact of each identified risks. For risk response stage (step 4), he proposed utilizing contract and insurance to allocate risks to external parties, or control the risks by internal management.

A major uncertainty international construction projects must deal with is host country's political aspects. Prior to 1980s, political risk studies carried out were primarily for manufacturing or heavy industrial firms (Green & Korth, 1974; Haendel, 1979; Root, 1972; Zink, 1973). Ashley and Bonner (1987) published one of the first studies which focused on political risks in international construction. They explained that unlike traditional multinational enterprises, multinational contractors are not involved in direct capital investment in another nation and hence does not have the exposures that come with establishment and maintenance of a production facility.

Also, while multinational firms must look reasonably far into the future for the economic break-even point, contractors realize their returns in a much shorter time period. As a result, contractors are primarily concerned with the stability of those expected returns (Ashley & Bonner, 1987). The researchers clarified the impact of political risks on construction project cash-flow elements by identifying nine political risk factors and showing how they influenced risks at project consequence level; hence, indirectly impacting labor cost, material cost, overhead cost, and revenue.

The work by Ashley and Bonner seem to have laid a foundation for scholars who have later developed decision support tools based on suggestion of inter-relatedness among risks at project level and risks at outside of project level. For example, Hastak and Shaked (2000) developed the International Construction Risk Assessment Model (ICRAM-1). Their study in year 2000 categorized 73 identified risks into macro (or country environment), market, and project levels, and used the Analytical Hierarchy Process (AHP) to analyze the hierarchy of risk indicators within each level and to determine the relative importance of the risk indicators by establishing priority among the criteria, sub-criteria, and indicators. Four main results that can be



obtained from the ICRAM-1 analysis are 1) high-risk indicators; 2) impact of country environment on a specific project; 3) impact of market environment on a specific project; and 4) overall project risk.

Similarly, Wang, Dulaimi, and Aguria (2004) proposed a risk management framework for construction projects in developing countries. 28 critical risks were identified from the survey, then categorized into three hierarchical levels, country-market-project, and they were evaluated and ranked. For each of the identified risks, practical mitigation measures were also proposed and evaluated. In addition, a risk model showing the hierarchical levels of the risks and the influence relationship among the risks was proposed. Then based on the findings, a qualitative risk mitigation framework was proposed.

Lastly, Han, Park, Kim, Kim, and Kang (2007) proposed a comprehensive hierarchical framework to investigate the cause-and-effect relationships of various profit-influencing factors for international construction projects. Based on literature reviews, expert interviews, and project case reviews, 64 profit-influencing factors and their cause-and-effect structures were identified to address all aspects of loss elements that can make international construction risky. The 64 risk variables were divided into five categories: (1) conditions of the host country and project owner; (2) the bidding process; (3) project characteristics and contractual conditions; (4) characteristics of the organization and participants; and (5) the contractor's ability and capacity.

## **2.5 Construction Delay Studies in Developing Countries**

Many previous studies have conducted investigations on construction problems and delays in specific developing countries. In this section, such studies conducted on various developing countries are introduced in order to show the popular study trends.

### **Turkey**

Arditi et al. (1985) conducted a questionnaire survey to identify the causes of delays in public projects in Turkey. The survey covered investor public agencies and contractors that undertake projects for public agencies. Some of reasons for construction delays identified in this study were: contractors' difficulties in receiving monthly payments from public agencies, deficiencies in public agencies' organization, large quantities of extra work, shortage of technical personnel, frequent change orders, disagreement on contract clauses, and difficulties in obtaining construction licenses. The authors recommended that public agencies must make sure that sufficient time and effort are allocated to the feasibility study and design process, and they should devise ways to improve the authority structure and decision-making mechanism in their organizations.

Birgonul, Dikmen, and Akintoye (2001) conducted a questionnaire survey to identify risks faced by foreign contractors that had worked in Turkey. 39 foreign contractors responded to the questionnaire, and organizational and cultural differences with local partners, delays in progress payments, political interferences, high bureaucracy, and legal risk were identified as major difficulties they faced. A risk management strategy offered in the study was to establish partnership with local contractors in order to increase familiarity with local practices.

### **UAE**

Faridi and El - Sayegh (2006) conducted a questionnaire survey to identify significant factors causing delay in the UAE construction industry. A total of 93 construction professionals participated in the survey, and they have identified owner's slow decision-making process, excessive bureaucracy/uncooperative owner, delays in progress payment by owner, difficulties in obtaining permit/approval from government authorities, lack of coordination between the parties as some of significant causes. Some of recommendations offered by this study to help the UAE construction professionals in minimizing construction delays were: involvement of construction management companies to help minimize delays or their impacts, contractors needing to act early to obtain permits and approvals from the different government agencies, and incorporating requirements for scheduling and schedule control in the contract documents.

### **Nigeria**

Mansfield, Ugwu, and Doran (1994) conducted a questionnaire survey to identify causes of delay and cost overruns in Nigerian construction projects. 50 construction personnel from contractor, consultant and client organizations in Nigeria completed the survey, and some of major causes were identified as: payment of completed works, nominated subcontractors and suppliers, frequent design changes, delayed inspection and testing of completed portions of work, and bureaucratic checking and approval procedures. Recommendations made in this study included: clients ensuring that adequate funds are available before projects are started, utilizing qualified and experienced personnel to design and manage construction programs, and improving institutional strength and manpower development in the area of project management, information and database management.

### **Saudi Arabia**

A questionnaire survey was conducted by Assaf and Al-Hejji (2006) to determine the causes of delay in construction projects in Saudi Arabia and their importance according to each of the project participants, i.e., the owner, consultant and the contractor. The study showed that 70% of projects experienced time overrun and found that 45 out of 76 projects considered were delayed. Total of 73 causes were identified in this study, and some of most frequently mentioned causes identified included: delay in progress payments by owner, suspension of work by owner, change

orders by owner during construction, slowness in decision-making process by owner, and late in reviewing and approving design documents by owner. Some of recommendations offered in this study were: pay progress payment to the contractor on time, minimize change orders during construction to avoid delays, and avoid delay in reviewing and approving of design documents than the anticipated.

### **Malaysia**

A questionnaire survey was conducted by Alaghbari, Kadir, and Salim (2007) to identify the major factors causing delay in construction projects in Malaysia. Total of 78 responses were collected from contractors, consultants, and employers. Some of key factors identified were: delayed payments, slowness in making decisions, contract changes, poor site management, and coordination problems with others. Based on findings from this study, the authors recommended that financial support and technical are a very necessary and urgent step for construction investments, since the study revealed that financial problems and coordination problems were two major factors causing delay in construction projects in Malaysia.

### **Jordan**

A questionnaire survey was conducted by Odeh and Battaineh (2002) to identify the most important causes of delays in large construction projects in Jordan from the viewpoint of contractors and consultants. Total 82 questionnaires were completed, and some of most important factors identified were: owner interference, financing and payments, labor productivity, slow-decision making, and improper planning. Adopting new contracting approaches, such as design-build and construction management (CM) types of contracts was a recommendation offered in order to reduce delays by limiting owner interference, improving the design, and improving the contractual relationships among all parties to the project.

### **Thailand**

Questionnaire survey and interviews were conducted by Toor and Ogunlana (2008) on a major construction project in Thailand to explore the most significant problems causing construction delays. Total 75 problems were identified in the study, and some of significant problems were found to be: lack of resources, poor contract management, design delays, planning and scheduling deficiencies, and changed orders. In order to effectively overcome the construction delays in developing countries, suggestions are offered regarding fundamental and large-scale reforms in procurement systems, value chain management and stakeholder' management.

### **Vietnam**

Long et al. (2004) identified problems in large construction projects in Vietnam. 109 questionnaires were completed by domestic owners, consultants and contractors involved in large projects in Ho Chi Minh City, and sixty two total problems were identified. Some of top ranked problems were inadequate project management assistance, poor site management, excessive change orders, bureaucracy, fraudulent

practices and kickbacks, slow site clearance and improper planning and scheduling. While some general recommendations were made, no practical strategies for reducing identified problems were made in this study.

Le-Hoai et al. (2008) identified and ranked the causes of delays and cost overruns in Vietnam construction projects in terms of degree of occurrence and level of severity. 87 questionnaire surveys were collected from owners, contractors and consultants involved in large projects in Vietnam. Some of highly ranked causes included: poor site management and supervision, design changes, unforeseen site conditions, slow payment of completed works, mistakes in design, poor contract management, slow inspection of completed works, and additional works. Some of recommendations offered in the study were that: all parties should identify clear responsibility for each party in contract; there should be experts and professionals in contract management; apply ISO standard to design works; increase commitment of parties in planning and careful survey.

## **2.6 Point of Departure**

### **On trends and shortcomings of reviewed literatures**

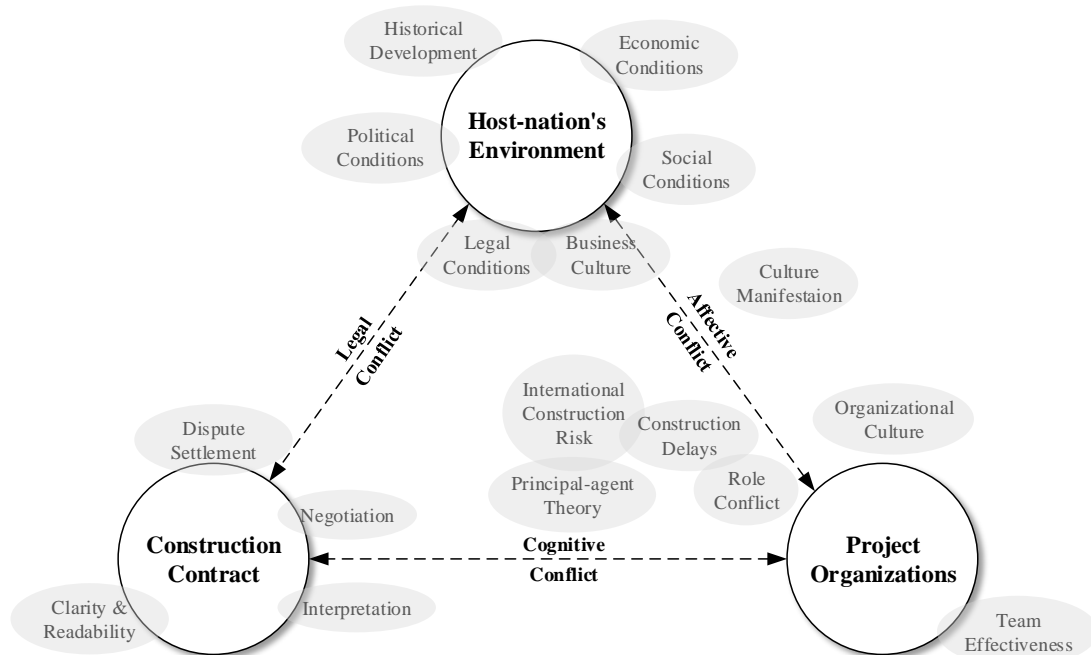
This chapter has broadly covered the topics and discussions relevant to understanding the various conflict-prone aspects that international construction project organizations are exposed to. As relationship and responsibilities of construction project stakeholders are specified in construction contract, how the contract is written, interpreted, and exercised can all initiate conflicts among the contract parties. Also, differences in interests, expectations, values, and goals at the project organizational level can bring out the conflict among construction project parties. Furthermore, conflicts in international construction projects may be triggered or escalated due to unique business environment, custom, and culture of the host nation; often labeled as international construction risks.

A comprehensive assessment of conflicts occurring in international construction projects, therefore, requires through investigation of each conflict matter from contract, organization, and national level, and the interaction among them. However, many previous studies have focused on only one level or two levels at best. Also, while some studies have proposed international construction risk management models that clarified interaction of risk factors covering contract-organization-national levels, those studies were done at conceptual level and hence they cannot be utilized to investigate specific causes of recurring contractual conflicts in international construction projects.

For those studies that have conducted practical investigation of construction delays in developing countries, they have mainly focused on identifying causes of delay. These existing studies have clearly made valuable contributions by reporting the

causes of delay in construction projects, because they have made construction practitioners aware of major problems. However, the fact that delays are still a common feature of projects in developing countries make one question the contribution the previous delay studies made in terms of practically minimizing the causes of delay. According to AlSehaimi, Koskela, and Tzortzopoulos (2013), improvement measures offered in previous delay studies are often impractical or sometimes not offered at all.

In general, the trend appears to be that more focus has been put on identifying problems rather than trying to discover practical solutions for those problems. Therefore, the focus of this research design is to cover the gap in literature by taking the holistic approach to uncover the root causes of recurring contractual conflicts in international construction projects by identifying specific causes at contract, organization, and national levels, and then clarify relationships among those causes. Figure 2.1 provides an overall view of areas covered in this research.



**Figure 2.1 Main areas covered in this study**

### On methodology

While previous studies focusing on construction delays in developing countries have identified issues with management and project environment to be the two main areas that causes that delay, their recommendations poorly matched with their findings and contributed in a limited way to problem solving. Naturally, methodologies applied in the previous investigative researches must be questioned. Existing studies in this field mainly fall under descriptive and explanatory research type, and knowledge produced from this approach is difficult to have an impact in management (AlSehaimi

et al., 2013). According to Denyer, Tranfield, and Van Aken (2008), descriptive knowledge is distinct from prescriptive knowledge; and additional translation process is needed in order to convert descriptive knowledge into prescriptive knowledge.

Also, in order to provide practical recommendations the root causes of each specific problem must be first effectively uncovered. However, traditional delay studies have mainly relied on surveys and questionnaires and it is not easy to uncover several layers of causes with these types of methods. In addition, they have often solely focused their studies on poorly managed projects instead of concurrently looking into projects that are considered to be well-managed to provide comparative analyses. In order to effectively penetrate several layers of cause and effect of contractual conflicts occurring in the international construction field, qualitative in-depth interview approach is more appropriate. Also, documents from various sources must be gathered to triangulate the findings from the interview data. In addition, project cases consisting of both successful and unsuccessfully managed cases must be utilized to validate the analysis of reasons of specific contractual conflicts observed in international construction projects. In this way, practical management solutions for avoiding contractual conflicts that have been also proven to be effective can be offered as the end of the research.

### **Questions and Objectives for this research**

As literature review suggests, issues with delays in international construction projects have persisted for a long time throughout developing countries. While many of those issues can be regarded as contractual conflicts among project participating parties, various project environmental factors have been identified as contributing causes of recurring contractual conflicts. However, recommendations previously made were often too general and hence limited implementable solutions have been provided. In order to be able to offer recommendations at practical level, a deeper causal factors need to be identified and their interactions need to be clarified. Hence, the following two questions are posed to guide this research:

1. What are the factors influencing contractual conflicts in international construction projects in developing countries?
2. How do these factors contribute to the development of contractual conflicts?

Also, to effectively answer the two research questions following three objectives are established:

1. Using Vietnam as a case, identify recurring contractual conflicts in international construction projects and their perceived underlying causes.
2. Clarify relationships among underlying causes of contractual conflicts in international construction projects.
3. Validate proposed causality diagrams for contractual conflict by applying to real international project cases.

By achieving the three objectives, the development process of contractual conflict in international construction projects will be better understood, and more appropriate conflict avoidance recommendations are to be provided as a result.

## **2.7 Summary of the Chapter**

This chapter has broadly covered concepts and studies that are considered to be the foundations of this study. General trends as well as shortcomings of previous studies on international construction problems with respect to their objectives, methodologies and recommendations were identified and discussed. Consequently, appropriate objectives as well as methodological strategies for this research were established.

### **3. RESEARCH DESIGN**

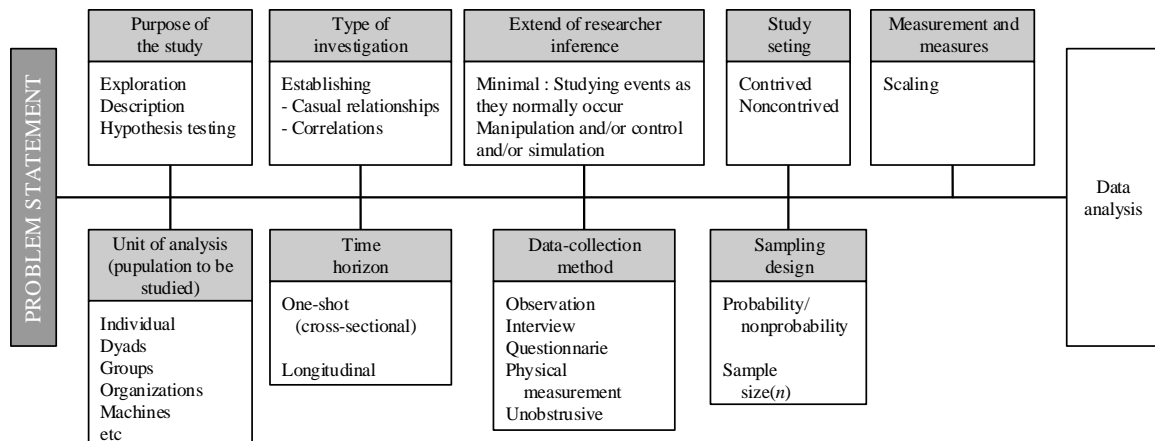
#### **3.1 Introduction**

The objectives for this research have been described in Section 2.6. To systematically achieve those objectives, the research is designed carefully. Key considerations for research design and research process are described and justified in this chapter. First, the nature of this research is examined in Section 3.2 by investigating into different aspects relevant to designing a research study. The considered aspects comprise of purpose of the study, types of investigation, extent of researcher interference with the study, study setting, unit of analysis, time horizon, data collection method, sampling design, measurement, data analysis, and ethical considerations. Then, the detailed research process and the methods used to gain deeper knowledge on recurring contractual conflicts in international construction projects are described in Section 3.3

#### **3.2 Considerations for the Research Design**

In order to develop a research study, various aspects related to the nature of the research need to be carefully considered. Figure 3.1 shows key aspects illustrated by Sekaran (2006). As shown, key aspects pertinent to the research design are (1) purpose of the study, (2) what type of study (type of investigation), (3) the extent to which the researcher manipulates and controls the study (extent of researcher interference), (4) where the study will be conducted (study setting), (5) at what level the collected data will be analyzed (unit of analysis), (6) the duration of the study period (time horizon), (7) how the data would be collected (data collection method), (8) the choice of sample (sampling design), (9) how the variables will be measured (measurement), and (10) how the data will be analyzed to verify the hypotheses (data analysis). In this section, the nature of this research is explored by addressing these key aspects related to research design.





**Figure 3.1 The aspects related to research design**

(Source: Sekaran, 2006)

### 3.2.1 Purpose of the study

Research can be explorative, descriptive, and/or hypotheses testing. Exploratory research attempts to explore and clarify an idea, event, or poorly understood phenomenon, or to develop propositions for further enquiry (Stebbins, 2001). It is focused on ‘what’ questions, using observations, open-ended questions in interviews, and/or focus groups (Sekaran, 2006). A descriptive study is conducted in order to establish and to be able to describe the characteristics of variables in a situation (Sekaran, 2006). Descriptive research is often performed as the next step to exploratory research, construction paradigms that offer a more complete theoretical picture through either qualitative or quantitative data (Sekaran, 2006). Studies engaging in hypotheses testing typically try to explain the nature of certain relationships, or establish the differences among groups or the independence of two or more factors in a situation (Sekaran, 2006).

The design for this research study is a combination of exploration, description, and hypothesis testing. The aim of this research is to identify recurring contractual conflicts as well as their various underlying causes by exploring the phenomenon of contractual conflict in international construction projects. Following the exploration, identified underlying causes are categorized and described. Then, causal relationships among those causes are proposed and validated by applying to real project cases. This research essentially follows an inductive approach, where study begins from observation of specific data to finding patterns and then making generalizations.

### 3.2.2 Types of investigation

A researcher should determine whether a causal or a non-causal study is needed to answer the research question (Sekaran, 2006). In this research, two research questions are posed: (1) What are the factors influencing contractual conflicts in

international construction projects in developing countries?’ and (2) ‘how do the identified factors contribute to the recurrence of contractual conflicts in international construction projects in developing countries?’ Answering the first question requires identifying the factors ‘associated with’ the phenomenon under investigation, which Sekaran (2006) called this type of research “a correlational study”. Answering the second question, however, requires a causal study to establish a definitive ‘cause and effect’ relationship among the identified factors that ultimately results in contractual conflicts.

### **3.2.3 Extent of researcher interference with the study**

The extent of researcher interference has “a direct bearing on whether a causal or correlational study is undertaken” (Sekaran, 2006). A correlational study is conducted in the natural environment of the organization with the researcher minimally interfering with the normal flow of events. This research does not intend to change the normal development of the phenomenon under investigation in any way. The practitioner perceptions are collected and considered representative of their individual situation, and synthesized to ultimately develop the cause-and-effect framework for recurring contractual conflicts in international construction projects in developing countries as completely as possible

### **3.2.4 Study setting**

A research study can be conducted in the natural environment, where the investigated events normally occur, that is, in non-contrived settings, or in artificial and contrived settings (Sekaran, 2006). This research study follows the natural development of contractual conflicts in international construction projects in developing countries, and therefore has a non-contrived setting.

### **3.2.5 Unit of analysis**

The unit of analysis refers to the aggregation level of the data during subsequent analysis (Sekaran, 2006). The units of analysis comprise individuals, dyads, groups, organizations, cultures, and etc. In this research, data is primarily collected from individuals representing different organizations to understand recurring contractual conflicts (conflicts among contracting organizations). Therefore, the unit of analysis is organization.

### **3.2.6 Time horizon**

The research time dimension is either cross-sectional or longitudinal (Sekaran, 2006). A cross-sectional approach is the study of phenomena at one point in time, and produces a ‘snapshot’ of data. A longitudinal approach examines phenomena over an extended period of time, producing a “diary perspective” (Saunders, Saunders, Lewis, & Thornhill, 2011). Cross-sectional studies often employ a survey strategy,

or interviews conducted over a short period of time. Exploratory and descriptive studies are often cross-sectional, while hypothesis testing studies can be either cross-sectional or longitudinal (Saunders et al., 2011). In this research, cross-sectional approach is taken for the exploratory and descriptive phase of the study in the form of a ‘snapshot’ of the practitioner perceptions, while longitudinal approach is taken for the latter hypothesis verification phase in the form of a “diary perspective”.

### **3.2.7 Data collection method**

In order to determine the appropriate data collection method, ontological and epistemological assumptions appropriate for the overall research method need to be established first. Ontology refers to assumptions concerned with a particular approach of social enquiry, and answers the question “what is the nature of the reality to be investigated?” (Blaikie, 2009). Epistemology is the way knowledge can be obtained in this reality by answering the question “how can knowledge of this reality be obtained?” (Blaikie, 2009). Paradigm is a model or a framework that are derived from a worldview or belief system about the nature of knowledge and existence. Paradigms are shared by a scientific community and guide how a community of researchers acts with regard to inquiry. Methodology is how we gain knowledge about the world or “an articulated, theoretically informed approach to the production of data” (Ellen & Firth, 1984, p. 9).

The positivist paradigm is associated with realist ontology and representational epistemology. Realist ontology assumes that there are real world objects apart from the human knower. In other words, there is an objective reality. Representational epistemology assumes people can know this reality and use symbols to accurately describe and explain this objective reality. By positing a reality separate from our knowledge of it (separation of subject and object), the positivist paradigm provides an objective reality against which researchers can compare their claims and ascertain truth.

Positivist approaches rely heavily on experimental and manipulative methods. These ensure that there is a distance between the subjective biases of the researcher and the objective reality he or she studies. This generally involves hypothesis generation and testing, and quantitative methods are typically used. Quantitative research mainly focuses on testing a hypothesis or a theory proposed deductively at the beginning of the research. The study typically consists of variables that are measured with numbers, and analysis utilizing statistical procedures. Thus, data obtained from quantitative research are countable, tangible, and objective in nature. Use of quantitative method is recommended when researching a fact about a concept or a question by gathering factual evidence and studying the relationships among those facts (Naoum, 2012).

The interpretivist paradigm is generally associated with relativist ontology and transactional epistemology. Relativist ontology assumes that reality as we know it is constructed inter-subjectively through the meanings and understandings developed socially and experientially (Cohen & Crabtree, 2006). Transactional (or subjectivist) epistemology assumes that we cannot separate ourselves from what we know. The investigator and the object of investigation are linked such that who we are and how we understand the world is a central part of how we understand ourselves, others and the world (Cohen & Crabtree, 2006). By positing a reality that cannot be separated from our knowledge of it (no separation of subject and object), the interpretivist paradigm posits that researchers' values are inherent in all phases of the research process. Truth is negotiated through dialogue.

Interpretive approaches rely heavily on naturalistic methods (interviewing and observation and analysis of existing texts). These methods ensure an adequate dialogue between the researchers and those with whom they interact in order to collaboratively construct a meaningful reality. Generally, meanings are emergent from the research process, and qualitative methods are typically used. Qualitative research probes on attitudes, behaviors, meanings, and experiences through collecting an in-depth opinion from the research participants. Because a deeper study at people's opinions is necessary, it involves a relatively less number of participants compared to the quantitative method and is also subjective in nature (Dawson, 2002). Since construction engineering and management research field also involves studies regarding human issues, social science research methodologies are regularly inherited (Abowitz & Toole, 2009).

This approach becomes especially appropriate when study topics focus on human behaviors, such as investigating organizational conflicts. Contractual conflict is essentially a disagreement among contracting parties (i.e., organizational conflict), and to understand the complex interplay among various areas of issues a qualitative method is called for where attitudes, behaviors, meanings and experiences through an in-depth opinion from relevant practitioners must be collected.

Four data collection methods are available for qualitative research (Yin, 2013): (1) interviewing, (2) observing, (3) examining texts, and (4) feeling. Based on the research objectives stated in Section 2.6, specific data needed to collect are 'recurring contractual conflicts', 'the underlying causes', and 'real international project cases'. While interviewing, observing, and examining texts are feasible data collection methods for this research, observation method appears to be economically inappropriate since observing development of contractual conflicts may require months and years of observation at construction project sites. For this research, in-depth interview is used as the primarily, and document examination as the supplementary, data collection methods.

### 3.2.8 Sampling design

The word “population” refers to the entire group of people, events, or things of interest that the researcher wishes to investigate (Sekaran, 2006). The population in this research includes the participants of international construction projects in Vietnam who have experienced contractual conflicts first hand. Knowledge of the selected population indicates the involvement of two major types of sampling designs: probability and non-probability sampling (Sekaran, 2006). In probability sampling, elements of the population have some known chance or probability of being selected as sample subjects. In non-probability sampling, the elements do not have a known or predetermined chance of being selected as subjects. Purposive sampling, a type of non-probability sampling method, has been applied for empirical studies in this research. It is commonly used by qualitative researchers as a method for extending knowledge through intentionally seeking sample participants who are known to be rich sources of data (Tashakkori & Teddlie, 1998).

### 3.2.9 Measurement

Four types of scales can be used for data measurement as shown in Table 3.1. A nominal scale is one that allows the researcher to assign subjects to certain categories or groups. An ordinal scale not only categorizes variables in such a way as to denote differences among various categories, but also it rank-orders categories in some meaningful way. An interval scale lets us measure the distance between any two points on the scale. A ratio scale is the most powerful of the four scales because it has a unique zero origin and subsumes all the properties of the other three scales. Due to the qualitative nature of this research, only nominal and ordinal scales were used for data measurement.

**Table 3.1 Types of scales for data measurement**

Scale	Definition	Example
Nominal	Categorical variable, its values cannot be ranked	Gender (male, female), nationality, color etc.
Ordinal	Qualitative variable, its values can be ranked	Aggression (weak, moderate, strong intensity)
Interval	The values of the variable can be ranked, and the differences of the values show the distances between the values. This scale does not have a true zero point.	Temperature (e.g., $40^{\circ}\text{C} - 20^{\circ}\text{C} = 20^{\circ}\text{C}$ , but $40^{\circ}\text{C} / 20^{\circ}\text{C} \neq 2$ ), date, direction etc.
Ratio	The differences of the values show the distances between the values and also the ratio of values is defined, as the variable has true zero point	Height, mass, duration etc.

### 3.2.10 Data analysis

As described in Section 3.2.7, a qualitative approach is deemed to be appropriate in order to better understand the complex phenomenon of contractual conflict in international construction projects. Also, as described in Section 3.2.1, this research study has established three objectives, with each objective addressing ‘exploration’, ‘description’, and ‘hypothesis testing’ phase of the research respectively. In the exploration phase, data obtained from in-depth interviews are qualitatively analyzed to identify major themes and categories related to the phenomenon of contractual conflict. In the description phase, key factors of contractual conflict are extracted from the interview data and their relationships are clarified to effectively describe how contractual conflicts are developed in international construction projects. In the hypothesis testing phase, the proposed causal relationships of key factors of contractual conflict are validated by applying to real project cases. The detailed data analysis process performed for this research is described in Section 3.3.

#### Qualitative Validity

Guba (1981) proposed four criteria for judging the soundness of qualitative research and they are: credibility, transferability, dependability, and confirmability. The credibility criterion involves establishing that the results of qualitative research are credible or believable from the perspective of the participant in the research. As the purpose of qualitative research is to describe or understand the phenomena of interest from the participant’s eyes, the participants are the only ones who can legitimately judge the credibility of the results (Guba, 1981). For this research, confirmation effort of research findings were mainly achieved by exchanging follow-up emails with the interview participants throughout the data analysis phase.

Transferability refers to the degree to which the findings of qualitative research can be generalized or transferred to other contexts or settings. From a qualitative perspective, transferability is primarily the responsibility of the one doing the generalizing (Trochim & Donnelly, 2001). The qualitative researcher, however, can improve transferability by doing a thorough job of describing the research context and the assumptions that were essential to the research. For this research, contexts for each collected project cases, limitations of interviewee samples as well as the extent to which key research findings can be generalized were clarified in attempt to enhance the transferability.

Dependability emphasizes the need for the researcher to justify the constantly changing context within which research occurs. The research is responsible for describing the changes that occur in the setting and how these changes affected the way the research approached the study (Trochim & Donnelly, 2001). To check the dependability of a qualitative study, one can perform a thorough review on whether the researcher has been careless or made mistakes in conceptualizing the study, collecting the data, interpreting the findings and reporting results. For this research,

efforts were made to clearly present the steps and logics behind for selecting interview participants, project cases, and processing the collected data.

Confirmability refers to the degree to which the results could be confirmed or corroborated by others (Trochim & Donnelly, 2001). Some strategies for enhancing confirmability include the researcher documenting the procedures for checking and rechecking the data throughout the study, or another researcher taking a “devil’s advocate” role with respect to the results, which this process can be documented. Also, the researcher can actively search for and describe negative instances that contradict prior observations. For this research, various sources of documents, both original and published, were obtained and utilized to triangulate the interview data, and the research findings were also referenced to literature and findings by other authors as a validation effort.

### **3.2.11 Ethical considerations**

Though not included in Figure 3.1, ethics is another key consideration for a research design. Research ethics is considered as “a code or expected societal norm of behavior while conducting research” (Sekaran, 2006). A research study must recognize the importance of three aspects of ethics (Bourne & Walker, 2005): (1) informed consent in recruitment of participants, (2) avoidance of harm in the fieldwork, and (3) confidentiality in reporting the findings, and the subsequent provision of assurances of privacy, confidentiality and anonymity (Miles & Huberman, 1994).

It is vital that ethical behavior is maintained throughout all phases of the research including data collection, data analysis, reporting, and publication of information. Through all phases, the confidentiality of organization’s information and the privacy of individual must be protected. In this research, all the interview participants were presented with the description of the research as well as the participants’ role during the data collection process. This ensures that the participants were clear on the nature of the research and participated in this research voluntarily. They should be given an option to withdraw at any time throughout the study. Permission was sought regarding the use of a recording device during interviews. The organization, projects and participants in this research were all treated as anonymous and with assurance of confidentiality.

## **3.3 The Research Process**

The design and structure established for this research is a combination of exploration, description and hypothesis testing, with minimal researcher interference, a mixture of cross-sectional and longitudinal studies, and inductive reasoning. The primary

research methods are in-depth interviews following a grounded theory approach, multiple-case studies, and literature review.

Once research objectives are established based on review of previous studies, as described in Section 2.6, the research is conducted in three phases: Phase 1 is exploring the phenomenon of contractual conflicts in international construction project; Phase 2 is clarifying relationships among contextual factors of contractual conflict; and Phase 3 is validating the proposed causality diagrams of contractual conflict. Detailed research process is shown in Figure 3.2.



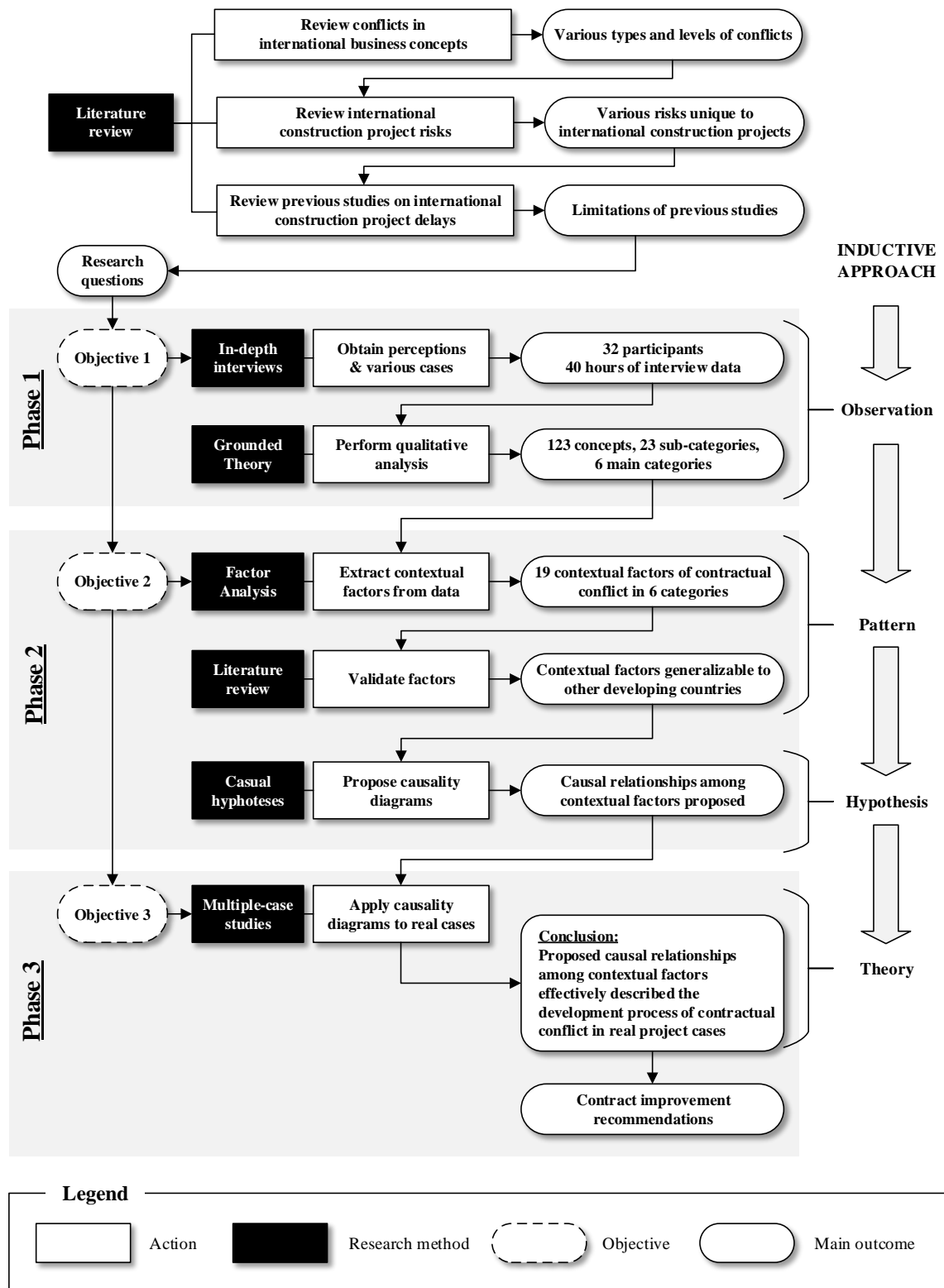


Figure 3.2 The detailed research process

### 3.3.1 Phase 1 – Exploring Contractual Conflicts

#### 3.3.1.1 *A grounded theory approach*

Among a wide selection of qualitative approaches available, grounded theory study is employed as the primary research method because theoretically informed interpretations is believed to be the most powerful way to bring reality to light (Glaser, 1978). In addition, Strauss and Corbin argue that “the theoretical formulation that results not only can be used to explain that reality but provides a framework for action.” (1990, p. 22); which makes grounded theory approach appropriate for achieving the objectives for this research.

Grounded theory methodology was originally introduced by Barney Glaser and Anslem Strauss in the mid-1960s. Interestingly Glaser was a quantitative researcher and Strauss was a qualitative researcher. Over the time, however, the literature identifies a departure in the original author’s views and development of grounded theory since their classic statements in 1967 (Glaser & Strauss) and 1978 (Glaser). In addition, there exists yet another ‘school’ in which scholars has distanced grounded theory away from the positivism associated with both Glaser’s and Strauss and Corbin’s versions of grounded theory (Bryant, 2002, 2007; Charmaz, 2005; Clarke, 2003).

The Glaserian version of grounded theory approach has its ontological roots in critical realism. Critical realism assumes that an objective world exists independently of our knowledge and belief, and hence the researcher is considered to be independent of the research (Annells, 1996). This position is in contrast to the Straussian version of grounded theory which has its ontological roots in relativism where it is argued that reality can only be interpreted. Understandably, Straussian approach encourages the researchers to be involved in the method (Strauss & Corbin, 1998). The Constructivist version of the grounded theory (Charmaz & Mitchell, 2001; Charmaz, 1990), like the Straussian version, has its ontological roots in relativism. However, the difference is that the Constructivist grounded theorist takes a reflexive stance on the modes of knowing and representing studied life. This is achieved by researchers giving close attention to the empirical realities and people’s collected renderings of them and locating themselves within these realities (Charmaz, 2005).

Glaser’s version is described as a more relaxed approach that patiently waits for the theory to emerge from the data, while Straussian version takes on a more verifiable position by using a systematic set of technical procedures that must by followed rigidly (Strauss & Corbin, 1998). The Constructivist version, on the other hand, views grounded theory methods as a set of principles and practice, not as a prescriptions (Charmaz, 2014). Hence, flexible guidelines are emphasized, rather than methodological rules and requirements.

For this research, Straussian version of grounded theory method is chosen due to the following reason. The nature of the phenomenon to be researched is such that validity of concepts developed from the interview data can be triangulated with other data sources, such as project, legal, and historical documents. In addition, selected project cases will be studied in this research, as a second analysis step, that will effectively act as another validation measure of the interview analysis results. Hence, following a structured set of methodological procedures offered by the Straussian version of grounded theory method to perform the qualitative analysis of this research is found to be most advantageous.

### 3.3.1.2 *Qualitative analysis of interview data*

As mentioned earlier, interview data analysis for this study is performed using grounded theory method suggested by Strauss and Corbin (1990). While the analysis steps suggested by the authors include open coding, axial coding, and selective coding, they also remark that for studies primarily focusing on thematic analysis or concept development need not go further than axial coding process. Selective coding is the analytic “process of integrating and refining the theory” (Strauss & Corbin, 1998, p. 143), but because the aim of the overall research is to be able to explain how contractual conflicts are initiated, real project cases is to be studied once thematic analysis of interview data is completed. Hence, multiple-case study approach is considered to be more appropriate, which is Phase 3 of this research, than continuing with selective coding procedure of grounded theory method.

Open coding is an inductive analytic process of breaking down, examining, comparing, labelling (conceptualizing), and categorizing data (Strauss & Corbin, 1990). The labelling of data is equivalent to creating a code, and these labels can be either created using a participant’s actual words (*in vivo* code) or using other words which reflects understanding of the data. The series of created labels, or concepts, are analyzed and grouped together based on common themes and assigned a higher order label (Strauss & Corbin, 1990). Grouping concepts together under a higher order label triggers the commencement of category development (Strauss & Corbin, 1998).

Axial coding is a combination of inductive and deductive process of reassembling fractured data in new ways after open coding, by making connections between categories (Strauss & Corbin, 1990). This is achieved by utilizing a coding paradigm involving conditions, context, action/ interactional, strategies and consequences. Strauss and Corbin elaborates on this process by saying that, “in axial coding [the] focus is on specifying a category (*phenomenon*) in terms of the conditions that give rise to it; the *context* (its specific set of properties) in which it is embedded; the action/ interactional *strategies* by which it is handled, managed, carried out; and the *consequences* of those strategies.” (1990; p. 97)

Axial coding enables a framework to be developed for the researcher to utilize (Charmaz, 2014) and this framework may extend or limit the researcher's vision. In this study, the framework generated not only enhanced the clarity of the relations between the categories, but also it suggested directions on the areas that needed to be further understanding through document analysis (e.g., the role of legal and political system in Vietnam). Once the context and phenomenon being studied has been sufficiently analyzed based on open and axial coding procedures, comparative case study analysis was performed on selected projects in order to extrapolate "smart practices".

### ***3.3.1.3 Maintaining objectivity and sensitivity***

To develop a series of concepts from collected data, researcher constantly moves between generating categories from data, an inductive process, and the consideration of how these categories fit with other data, a deductive process. Especially, the grounded theory approach forces the researcher to be immersed in the data and hence plays an integral role in every aspect of the research. Therefore, maintaining a balance between objectivity and sensitivity during this process becomes a critical aspect of the analysis.

Strauss and Corbin argue that objectivity is necessary to arrive at an impartial and accurate interpretation, while sensitivity enables the researcher to "perceive the subtle nuances and meanings in data" (1998: p.42). Understanding these subtle differences enables the researcher to discover the relations among the concepts that are emergent in the data. Objectivity during the research process was maintained by ensuring that the researcher kept an openness and willingness to 'give voice' to the participants (Strauss & Corbin, 1998).

In an effort to maintain such level of objectivity, data was compared with other data, different data collection methods as well as analysis methods were utilized, and multiple and diverse representatives of the targeted population were interviewed. Furthermore, knowledge gained from the review of relevant literature was used to assist in the development of sensitivity to the concepts that were emergent in the data. It is appropriate to use this knowledge as well as prior experience in enhancing the sensitivity of the researcher to the meanings in the data without forcing explanations on the data (Strauss & Corbin, 1998).

### **3.3.2 Phase 2 – Contextual Factors of Contractual Conflict**

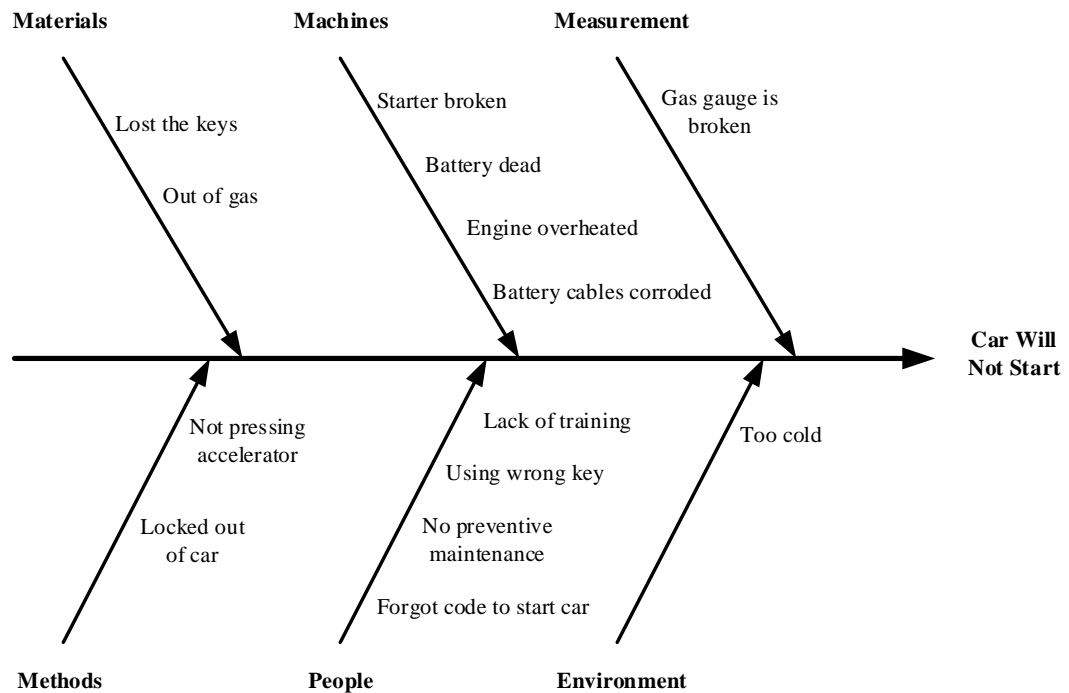
Presented in Phase 2 of the research is a process for developing causality diagrams for contractual conflict. The process begins with extracting contextual factors from the interview data analyzed from the Phase 1. Subsequently, cause-and-effect diagram for contractual conflict is created by displaying the extracted contextual factors as

contributing causes. In addition, those contextual factors are validated through literature review. Finally, causal relationships among the contextual factors displayed on the cause-and-effect diagram are proposed to clarify the causal development process of contractual conflict, hence completing the causality diagram for contractual conflict in international construction projects. This is the scope of the second phase of the research, and the complete process and results are presented in Chapter 5.

### ***3.3.2.1 Extraction of contextual factors from open coding concepts***

A qualitative factor analysis is performed by extracting contextual factors of contractual conflict from open coding concepts by grouping them into more manageable set with a minimum loss of information. Total of 19 contextual factors that are considered to be variables that the project participants have control over are extracted. In addition, these factors are categorized under six categories.

Extracted and categorized contextual factors are presented in cause-and effect (Ishikawa) diagram. The cause-and-effect diagram was invented by Dr. Kaoru Ishikawa of the University of Tokyo in 1943 (Kenett, 2007). Also known as fishbone diagram because of its shape, it is a tool to graphically identify and organize many possible causes of a problem or event. It came into wide use in the Japanese industry and became a critical tool for quality control and quality improvement all over the world (Kenett, 2007). Ishikawa diagram is one of the seven essential tools for quality and process improvement also called the *magnificent seven* (Ishikawa & Loftus, 1990). The ‘fish head’ represents the problem or event under investigation, and the potential causes of the problem are indicated in the ‘fish bones’ of the diagram. Figure 3.3 shows an example of cause-and-effect diagram.



**Figure 3.3 Example of cause-and-effect diagram**

Ishikawa diagram can be used when the need exists to display and explore many possible causes of a specific problem or condition. It allows the user to systematically analyze cause-and-effect relationships, and also help with the identification of root causes. Root cause, according to Rosenfeld (2013), is the basic reason for an undesirable consequence; its treatment or elimination will prevent the recurrence of the problem. Regarding the applicability of Ishikawa diagram in construction management studies, Rosenfeld (2013) has applied it to perform root cause analysis of construction cost overruns. A detailed extraction process is described and justified in Section 5.2

### ***3.3.2.2 Validation of cause-and-effect diagram for contractual conflicts***

Contextual factors applied in the cause-and-effect diagram for contractual conflict are validated through literature review. Because contextual factors were extracted from the interview data where all the interviewees were participants of international construction projects in Vietnam, previous studies on international construction project risks and problems are reviewed to see if the generalization can be further extended. Section 5.3 provides description of each extracted contextual factor as well as their validation and generalization measures.

### ***3.3.2.3 Causality diagrams for contractual conflict***

Using the cause-and-effect diagram for contractual conflict, causal relationships among contextual factors are proposed. The causal relationships among contextual factors are

proposed based on analysis of interview data as well as logical sequence of events taking place. Hence, causality diagram showing development of contractual conflict in international construction projects is created. Also, causality diagram for avoiding contractual conflict is proposed by reversing the description of each contextual factor to opposite in meaning. These two causality diagrams are to be applied to project cases in Chapter 6. The details of developing causality diagrams for contractual conflict are described in Section 5.4

### **3.3.3 Phase 3 – Application of Causality Diagrams of Contractual Conflict**

The final phase of this research focuses on validating the proposed causality diagrams for contractual conflict in international construction projects by applying them to real project cases. The validity of causality diagrams is to be judged based on how accurately the proposed causal relationships describe the development and outcome of real project cases. Total of nine project cases are applied, where five cases focus on the development of specific contractual conflicts and the other four cases focus on process for avoiding certain contractual conflicts. This is the scope of the third phase of the research, and the specific case studies are presented in Chapter 6.

#### **Why is multiple-case study appropriate?**

Case study method can be either a single case study or multiple-case study (Yin, 2013). Multiple-case study approaches have advantages and disadvantages in comparison to single-case study approaches. The advantage is that, the evidence from multiple cases is often considered more compelling, and therefore the overall study is regarded as being more robust (Herriott & Firestone, 1983). The drawback, however, is that the rationale for single-case designs cannot be usually satisfied by multiple cases. By definition, the unusual or extreme case, the critical case, and the revelatory case all are somewhat expected to involve only single cases (Yin, 2013). Also, the decision to undertake multiple-case studies cannot be taken lightly, because it can require extensive resources and time beyond the means of a single student or independent research investigator. For this research, however, verifying clear patterns through multiple observations is the main objective, and hence, multiple-case study design was considered as a more vigorous approach over a single-study case design.

#### **Multiple-case study as replication logic, not sampling logic**

According to Yin (2013), there exists a misleading analogy that incorrectly considers multiple cases to be similar to the multiple respondents in a survey – that is, to follow a “sampling” design. The sampling logic necessitates an operational enumeration of the pool of potential respondents and then a statistical procedure for selecting a specific subset of respondents to be surveyed. The resulting data from the sample that is actually surveyed are assumed to reflect the entire universe of pool, with inferential statistics used to set the confidence intervals for which this representation is presumed accurate. The entire procedure is typically used when a researcher

wishes to determine the prevalence or frequency of a particular phenomenon (Yin, 2013).

Application of this sampling logic to case study research is illogical, because case studies are not the best method for assessing the prevalence of phenomena. In addition, a case study would have to cover both the phenomenon of interest and its context, producing a large number of potentially relevant variables. As a result, this would require an impossibly large sample of cases. It would be unrealistic to perform a detailed examination of any given case. Hence, it is important that multiple cases be considered as one would consider multiple experiments – that is, to follow a “replication” design (Yin, 2013).

According to Yin (2011), the logic underlying the use of multiple-case studies should be that each case must be carefully selected so that it either (a) predicts similar results (*a literal replication*) or (b) predicts contrasting results but for anticipatable reasons (*a theoretical replication*). In this research, nine cases are examined to see if hypothesized causal patterns are clearly observed in multiple occasions, hence following a literal replication logic.

### 3.4 Summary of the Chapter

This chapter describes and justifies the research design used in achieving the research objectives established in Chapter 2. The design and structure selected for this study is a mixture of exploration, description and hypothesis testing, with minimal researcher interference, a mixture of cross-sectional and longitudinal studies, and inductive reasoning. The primary research methods in this study are qualitative in-depth interview and data analysis following a grounded theory approach, multiple-case studies, and literature review.

The study is conducted in three phases: Phase 1 is exploring the phenomenon of contractual conflicts in international construction project; Phase 2 is clarifying relationships among contextual factors of contractual conflict; and Phase 3 is validating the proposed causality diagrams of contractual conflict.



## **4. EXPLORING CONTRACTUAL CONFLICTS**

### **4.1 Introduction**

This chapter covers the first phase of the research. The first phase is about exploring the research problem, which is identifying and understanding the problem of recurring contractual conflicts in international construction projects. It covers collecting data through in-depth interviews and other relevant documents, and then qualitatively analyzing the gathered data. Grounded theory method provided a structured guidance throughout this research phase. Section 4.2 presents the output for each step of grounded theory method, and Section 4.3 provides a detailed and integrated interpretation of the analysis output. Section 4.4 provides the summary of this chapter.

### **4.2 A Grounded Theory Approach**

The topic of recurring contractual conflicts in international construction projects being a complicated phenomenon, this research opted to begin the study by exploring the subject and its context in a rigorous fashion. As discussed in detail in Section 3.3.1.1, grounded theory approach is regarded as an effective method for understanding complex phenomenon (Strauss & Corbin, 1990). This section covers the output for each step of grounded theory method applied in this research, namely information regarding interview participants, open coding output, and axial coding output.

#### **4.2.1 In-depth interviews**

The primary data collection method for this study was achieved through face-to-face in-depth interviews. Individual interview approach allow the researcher the opportunity to use semi-structured question guide (St John, 2007), and such guide avoids the potential of the researcher limiting discussion to a set of pre-determined questions based upon researcher bias. According to Morgan (1997), interviewer bias occurs in situations where the emphasis is placed on the researcher's perceptions of the issues being investigated, instead the focus being on the participants' perceptions of the issues.

In the early stages of the interviews, an unstructured questioning approach was used in order to elicit the participant's perceptions of the issues being studied. As the interview progressed, open-ended questions formulated based on the emergent theory that had been postulated through the analysis of previous interviews were integrated. There is a close interplay between sampling, data collection and data analysis in the grounded theory method with data analysis dictating further data collection strategies

in this study (Charmaz, 2005; Strauss & Corbin, 1990). It was this interplay that influenced the interview questions to become progressively more structured in latter interviews. The increased structure was due to theoretical sampling and an attempt to retrieve specific data from the participants during these interviews.

Face-to-face interviews took place at various cities in Vietnam, as well as in Tokyo, Japan. Depending on the interviewees' preferences, interviews were conducted either at their project site, head office, or at neutral settings such as restaurants or coffee shops. Interviews typically lasted from 60 minutes to 90 minutes each, and upon agreement, all interviews were recorded and then transcribed during the analysis stage. Transcription of the interviews verbatim greatly assisted with the analysis of the interviews as the exact statements made by the participants were available (Sim, 1998). Audio recording the interviews also reduce the danger of the 'data' being forced based on the researcher's bias (Charmaz, 2014) and reliance on the memory. In addition, follow-up discussions were conducted through e-mail exchanges for areas that required further confirmation and clarification before finalizing the analysis.

Upon agreement and availability, certain projects that interview participants were involved were selected for project case study. For those projects that were determined, during interview conversations, to be worthy of deeper analysis the researcher requested the interview participants for project related documents in order to gain additional contextual knowledge and other unique characteristics regarding the projects. These obtained project specific documents became an important source of data for this study since they, along with other openly available legal and historical data, served as triangulation for the interview data. Upon completion of the overall analyses for this research, four project cases were chosen as subjects for multiple-case study, which is presented in Chapter 6.

#### ***4.2.1.1 Study participants***

This study focuses on contractual conflicts among key project parties in international construction projects. Consequently, employers, engineers, and contractors who have experienced international construction projects in Vietnam were all considered as potential study participants. For this study, all participants were personally introduced by close and trustworthy acquaintances in an effort to ensure that participants felt comfortable and thus were willing to actively participate and offer their honest viewpoints.

This study used purposive sampling in the initial stages by identifying participants who were in the middle of experiencing contractual conflicts in international construction projects. Upon completion of the initial study, theoretical sampling dictated the rest of the sampling process. Theoretical sampling is a form of purposive sampling method used in grounded theory after the initial sample is selected and the initial data collection and analysis has been commenced. Coyne

(1997) suggested that theoretical sampling is an ongoing process which interacts with data collection and simultaneous analysis to guide further data needs, which are then met by the sampling strategy. Thus, theoretical sampling is determined through the analysis of the data, instead of being predetermined by the researcher.

In one instance during this research, consulting engineers working for firms representing different nationality (e.g., Japanese vs American firms) were explored in an effort to develop a clearer understanding of the differences in handling contract conflicts in construction projects in Vietnam. In another instance, participants who are involved in projects that represent different supervising government agency were the subject for exploration in order to learn about different levels of government involvement in the project. With this sampling approach, a broad range of participant perceptions was not only collected, but also they became truly meaningful to this research. As Morse (2001) suggests, a well-rounded and balanced explanation of the phenomenon can only be produced through sufficient variation in the sample population. In addition, the selection of a diverse range of participants in this study acted as a validity tool (Smith & Biley, 1997).

#### ***4.2.1.2 Sample profile***

Demographics of interview participants for this research are presented in Table 4.1. It is to be noted that an overwhelming number of samples represent international contractor. This may portray the data to be potentially biased in a way that foreign practitioners just like to complain about unfamiliar local setting which they are placed under. However, almost half of the participants were actually Vietnamese practitioners, and a number of them represented local engineers working for international contractor and consulting firms. They truly served as valuable resources, since their viewpoints (as local participants) helped balance the viewpoints of foreign participant, and effectively eliminating the concern for potential bias mentioned above.

Figure 4.1 shows locations of international construction projects which interview participants were involved when interviews were conducted. While most interviewees provided their perspectives based on their multiple project experiences in Vietnam, the nine projects which the participants were involved at the time of interview were more closely observed. They offered more specific examples based on their currently involved projects, and project-original documents were provided in some cases.

**Table 4.1 Demographics of the interview participants**

<b>Nationality</b>	<b>n</b>	<b>%</b>
American	1	3%
British	1	3%
Japanese	7	21%
Korean	9	27%
Vietnamese	15	45%
<b>Organization type</b>	<b>n</b>	<b>%</b>
International consultant	7	21%
International contractor	20	61%
Vietnamese consultant	1	3%
Vietnamese contractor	1	3%
Vietnamese employer	4	12%
<b>Years of experience in international projects</b>	<b>n</b>	<b>%</b>
less than 5 years	4	12%
5- 10 years	10	30%
more than 10 years	19	58%
<b>Years of experience in project management</b>	<b>n</b>	<b>%</b>
less than 5 years	9	27%
5- 10 years	6	18%
more than 10 years	18	55%
<b>Number of projects participated in Vietnam</b>	<b>n</b>	<b>%</b>
1	6	18%
2	9	27%
3	2	6%
4	4	12%
5 or more	12	36%

All nine projects shown in Figure 4.1 were largely financed through ODA (Official Development Assistance) loans, and eight projects utilized a variant of FIDIC contract forms. For the remaining project, the contract was based on the Model Form of International Contract for Process Plant Construction published by the Engineering Advancement Association of Japan (ENAA). In addition, the project employer organization for six projects were under direct management of the state government (ministry level), whereas the project employer organization for the remaining three projects were under the management of a local government (i.e., People's Committee) level.

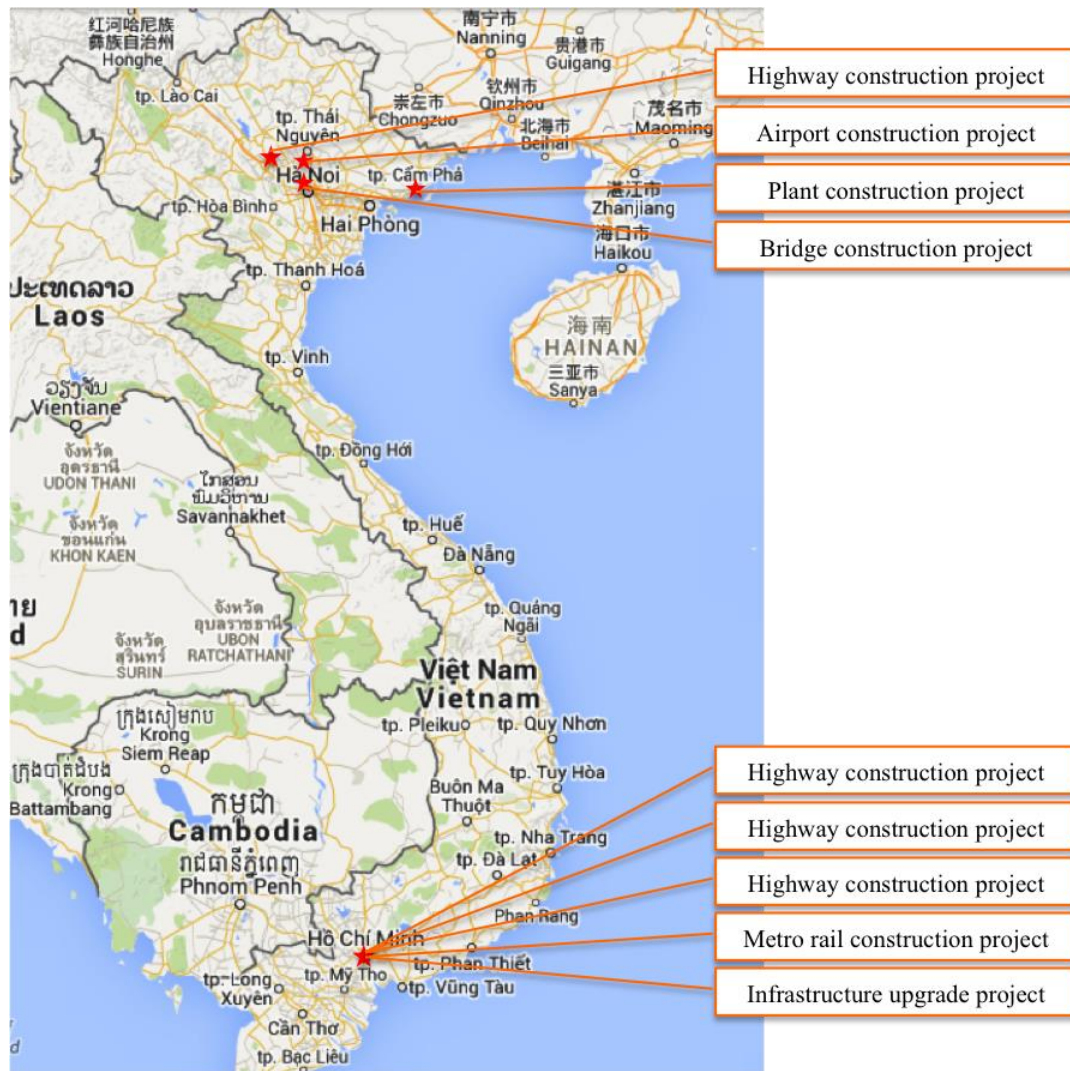


Figure 4.1 Project cases studied during interview periods

#### 4.2.2 Open coding output

Open coding procedure for the gathered interview data initially produced nearly 300 concepts, but similar concepts were combined, and hence, the final number of concepts was reduced to 123 which made it more manageable. Then, these concepts were grouped into 23 sub-categories and then to six main thematic categories. Table 4.2 presents the final open coding output based on all the interviews conducted for this research. As can be seen from the output, various contextual layers surrounding the phenomenon of contractual conflict in international construction projects were discovered through analysis of interview data. A comprehensive interpretation of each category and sub-categories, as well as representative interview quotes, is provided in Section 4.3.

Table 4.2 Open Coding Output

Concept		Sub-category	Category
CASUAL	Inconsistent directions among Vietnam legal documents (construction law, decrees, circulars... etc.)	Conflict in contract and legal procedure	
	Contradictions between international contract (FIDIC) and Vietnamese legal procedures		
	FIDIC procedures are interpreted differently in Vietnam		
	Inconsistent interpretation and application of local regulations		
	No clear distinction between mandatory vs non-mandatory laws		
	Construction related regulations in Vietnam are too general for application		
CONTEXT	Inconsistent directions among Vietnam legal documents (construction law, decrees, circulars... etc.)	Supervising state ministries' Struggle	All parties struggling
	Coordination issues among MOT, MOC, MOF, MOPI... etc.		
	Lack of competent state officers to oversee all ongoing projects.		
	Cannot complete resettlement tasks as promised	Local authorities' struggle	
	Lack of qualified staffs who can make confident decisions		
	Cannot issue permits and licenses in timely manner		
	"Each department of Hanoi People's Committee is a kingdom"	Employer's struggle	
	Lack full decision authorities as specified in the contract		
	Lack management competence for large-scale international projects		
	Staffs lack technical knowledge to make independent judgments		
	Decisions made by staffs are monitored and scrutinized by state authorities		
	Primary focus on job security and personal benefits, rather than on project outcome.		
	Limited communication skills to clearly instruct contractors		
	Cannot provide logical explanation to relevant authorities for approval		
	Low salary reduces motivation and cannot attract talented individuals		
	Procedures required by the employer frequently change.	Contractor's struggle	
	Difficult to manage progress due to slow payment and approval decisions from the employer		
	Additional works must be completed first without the assurance of proper payment.		
	Contractor's contractual rights are not fully recognized		
	Limited bargaining power		
	Threat of being fired by the employer.		
	Employer's requirements become more and more unreasonable as the contractor is further removed from the "neutral ground"		

Concept		Sub-category	Category
	Engineer's determination on claims is not honored by the Employer.	Engineer's struggle	
	Becoming a passive participant due to the unclear role in the project		
	Resident engineer fired for supporting the contractor's side		
	Employer's requirement of JV with local consultant as a control mechanism		
	Employer blocks competent local staffs from being directly hired by foreign consultant firm		
INTERVENTION	Frequent rotation of jobs in construction industry among Govt/PMU/Contractor/Engineer	Construction as a "family" business	Vietnam political, legal and socio-economic environment
	Employment based on relationship rather than skills		
	For domestic projects, teams are formed based on close personal relationships.		
	Government hold controlling stake on privatized construction companies		
	Notion project delay as a part of normal process in Vietnam	Collective and flexible approach	
	"It's about working together and being flexible"		
	"Need to focus more on the trust in friendship not just on the contract"		
	No single government organization makes the final decision alone		
	Many signatures are required	Law as a tool used by the ruling class	
	Frequent revision of local regulations		
	Government authority = legal power		
	Ineffective government monitoring mechanism		
	Contractor's claim perceived as a challenge to government's legal authority		
	Unclear regulations as flexible control mechanism		
	Strict bureaucracy		
	Ineffective court system		
	Local government modifying local regulations to avoid state's influence		
	Low salary of state-owned subcontractors compensated by informal payments from subsidiaries	Commission culture	
	Consulting engineers receive money from contractors and subcontractors		
	Employer receives rebate from sub-contractors		
	Open market in Vietnam = how to maximize personal benefits?		
	"Public officer jobs can be purchased for 15,000 USD"		
	Repayment (rebate) for receiving a favor = sharing the wealth		
ACTION/ INTERACTION STRATEGIES	Employer always ready to quietly settle issues informally	Sacrificing profit	From principle to compromise
	Contractors giving up too much profit just to maintain good relationship with employers		
	Asian contractors norm = "contractors always lose"		
	Korean and Japanese contractors never dare to exercise "contract termination" clause, even under the most difficult situation.		
	To minimize schedule delay contractor must pay for the employer's indirect costs		
	Employer's give and take mentality		

Concept		Sub-category	Category		
	Facilitation payment for inspection, permit and license approvals	Informal payment			
	Under-the-table-money as a hidden agenda				
	Employer withholding the final payment for the "other" requirement				
	"Korean contractors know well how to satisfy Vietnam employers"				
	Contractors maximizing profit by sacrificing quality (reducing quantity) and bribing consultants during inspection.	Sacrificing quality			
	Vietnam Employer does not care too much about the actual quality				
	Even when the contractor rejects subcontractor's work, the Employer and the Engineer force the contractor to approve.				
	Claims are not fairly evaluated by the employer	Principle approaches not accepted			
	"In the beginning, we strictly followed the contract, but we did not get paid... so we naturally had to change our approach."				
	Employer agreeing on contractor's claim = officially accepting the fault				
	"In Vietnam, if you have a clean professional image it is harder to win businesses."				
	PHENOMENON	IPC draft must be resubmitted many times before the final certificate can be issued by the Engineer.		Interim payment delay	Inefficient process
		Frequent request of additional supporting documents by the Employer			
		Once the Engineer checks and approves the payment statement, the Employer checks again every detail.			
Land acquisition delay causing construction delay		Delay in site handover			
"100% of projects [in Vietnam] suffer delay in access to the site"					
Compensations for resettlement do not meet the actual market value.					
Lack of transparency in land acquisition procedure		Conflict in price adjustment method			
Lack of specific regulatory guidance on price adjustment method					
Concept of price adjustment recently adopted in Vietnam projects					
Employer's decision on price adjustment delaying over two years					
Publication of local price indices are unstable		Inspection approval delay			
Employers lack expertise to perform and approve inspection					
Frequent involvement of non-contract parties as inspectors					
Employers afraid of having to bear legal responsibilities					
The Employer insists that even every detail of the road shape must exactly match the drawing.					
The Engineer's expertise not utilized properly		Delay by local authority			
Delay in permit and license approvals					
Complicated approval process					
"If we don't follow the local agency's requests, maybe they will call police. They are VERY powerful."					
Many design changes = many approval delays by local authorities					



Concept		Sub-category	Category
	Requiring supporting data and supporting data for the supporting data... etc.	Excessive documentation	
	12 original copies of supporting documents for all 1000 units		
	Resubmission of entire set for a minor typing error		
	Waste of preparation time by the contractor, waste of papers, and then waste of reviewing time by the employer.		
	Resubmission of previously approved documents using newly provided format		
	Payment on additional works delaying for more than a year	Variation approval delay	
	Employer deferring decision on additional cost items.		
	The Prime Minister's approval may be required for additional payments.		
	Conflict between the state and local authorities on who should pay for additional works.		
CONSEQUENCES	Assistance on integrating international practices into local regulations	Capacity development/ donor assistance	Need for capacity development and more transparent process
	Help develop international project approval guidelines for local agencies/authorities to follow.		
	Need to standardize templates for various submittals for approval, which currently vary by each project.		
	Capacity development focusing on human resource management for public agencies		
	Provide loan for budget on resettlement compensation		
	Empowerment of the Engineer's authority by the donor		
	Donor's (and the engineer's) active involvement in contract negotiation		
	Safety training for local staff and clearer safety guideline by the donor		
	Loan condition should clearly include reimbursement for safety costs		
	Current mission reviews do not accurately reflect the real project situation		
	Utilize "deemed approved" clauses to encourage quicker responses	Simplify process	
	Punch list for inspection procedures		
	Implementation of 9,000-item ITP check list		
	Donor must help prevent involvement of local JV consultant and JV contractors		
	Shorten and specify review deadlines		
	Integrate and prioritize among international contract and local regulations		
	Detailed execution plans, procedure, methodology must be agreed before contract signing.	Clarify responsibilities	
	Clarify main point of contacts among project participants		
	Restore and maximize the Engineer's role and expertise		
	Clarify roles and responsibilities of the employer and other involved agencies in the contract		
	Accountability for land acquisition delay should be more specifically specified in the contract		

### 4.2.3 Axial coding output

Axial coding is a set of procedures whereby data are put back together in new ways after open coding, by making connections between categories (Strauss and Corbin, 1990). This is achieved by employing a coding paradigm involving causal conditions, context, action/ interactional, intervening conditions and consequences. Essentially, it provides an overall picture of what is happening both within and around the problem under the investigation, by way of proposed relationships. Strauss and Corbin elaborates on this process by saying that, “in axial coding [the] focus is on specifying a category (phenomenon) in terms of the conditions that give rise to it; the context (its specific set of properties) in which it is embedded; the action/ interactional strategies by which it is handled, managed, carried out; and the consequences of those strategies.” (1990; p. 97).

Strauss and Corbin (1990) offer definitions for the following terms used in axial coding procedure:

**Causal conditions:** events, incidents, happenings that lead to the occurrence or development of a problem.

**Phenomenon:** the central idea, event, incident about which a set of actions or interactions are directed at managing, handling, or to which the set of actions is related.

**Context:** the specific set of properties that pertain to a phenomenon; that is, the locations of events or incidents pertaining to a phenomenon along a dimensional range. It represents the particular set of conditions within which the action/interaction strategies are taken.

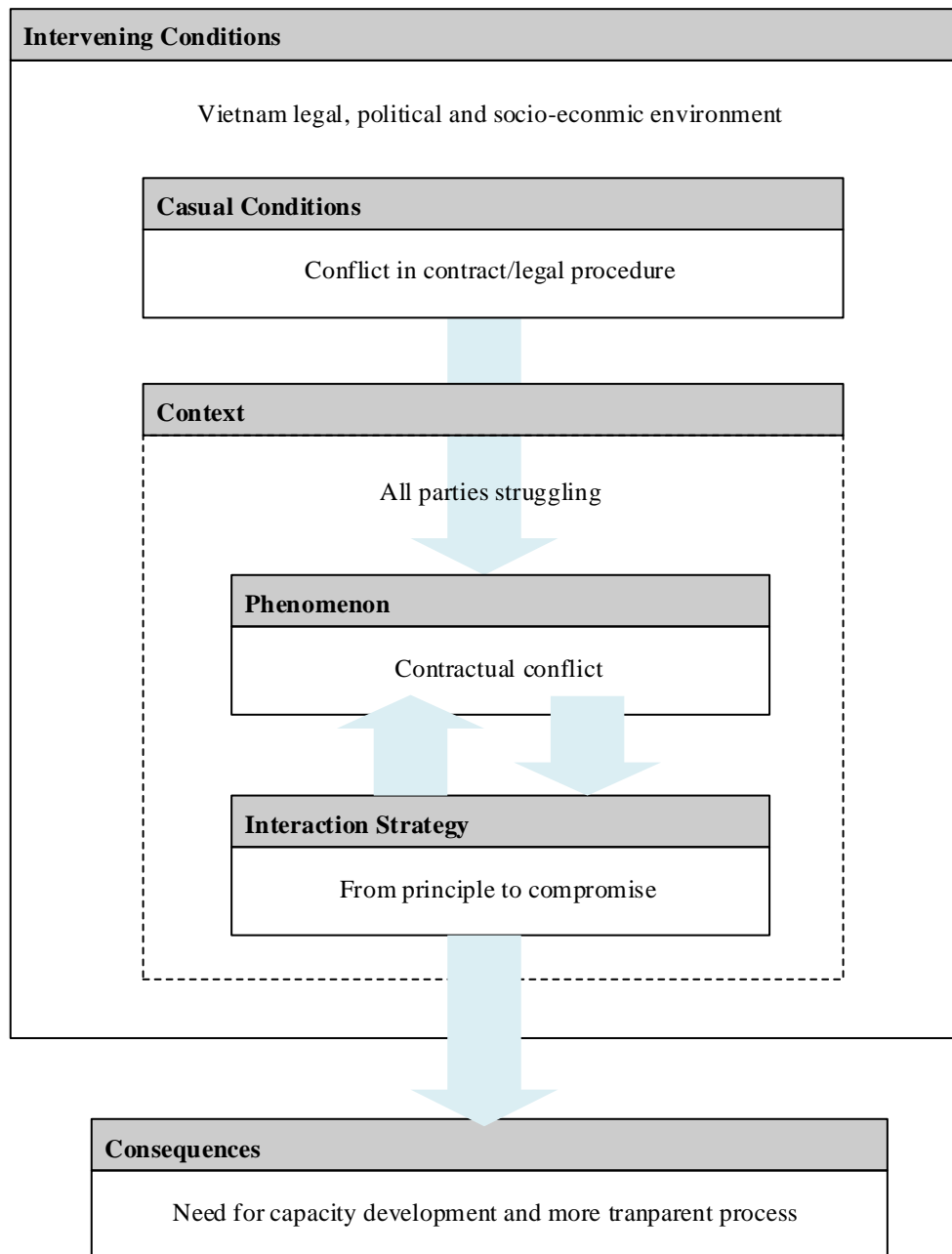
**Intervening conditions:** the structural conditions bearing on action/interactional strategies that pertain to a phenomenon. They facilitate or constrain the strategies taken within a specific context.

**Action/interaction:** strategies devised to manage, handle, carry out, respond to a phenomenon under a specific set of perceived conditions.

**Consequences:** outcomes or results of action and interaction.

From the open coding process, six categories were identified as shown in Table 4.2. Six terms used to describe axial coding, as defined previously, are assigned to each of six identified categories. The *inefficient process* category, which represents seven identified recurring contractual conflict, is labeled as the phenomenon being investigated. The *all parties struggling* category, which represents difficulties faced by each of organization involved in contractual conflicts, is labeled as the context directly surrounding the inefficient process. The *conflict in contract procedure* category, which represents various perceived differences in application of international contract conditions, is labeled as the causal condition that leads to *inefficient process*.

The *from principle to compromise* category, which represents the typical strategy taken among involved parties to overcome contractual conflicts, is labeled as interaction strategy. The *Vietnam legal, political, and socio-economic environment* category, which is the broader context that is perceived to influence the phenomenon, is labeled as the intervening conditions. Finally, *the need for capacity development and more transparent process* category, which is the ideal direction that the interview participants called for, is labeled as the consequences. Figure 4.2 shows to the final axial coding output diagram.



**Figure 4.2 Axial coding output diagram**

### 4.3 Data Interpretation

Analysis of interview data through open and axial coding process have enabled establishment of a framework for conducting an interpretative study. Findings from interview data are triangulated through review of relevant legal documents and literatures. The category “Vietnam legal, political, and socio-economic environment” is first discussed in Section 4.3.1, in order to provide a macro level of environmental setting under which the interview participants experienced contractual conflicts. Then, categories *inefficient process*, *all parties struggling*, and *conflict in contract & legal procedure* are interpreted in an integrated form in Section 4.3.2. Category *from principle to compromise* is discussed in Section 4.3.3, and category *need for capacity development and more transparent process* is discussed in Section 4.3.4.

#### 4.3.1 Vietnam legal, political, and socio-economic environment

During the interview, a number of unique features of the local context were commonly mentioned while describing recurring contractual conflicts in international construction projects in Vietnam. Five sub-categories were identified within this category during the open-coding analysis; hence this section further investigates these five sub-categories through review of various historical, social, political and legal documents and literatures about Vietnam. First, the following timeline presents notable events that took place in recent Vietnam history, as an overview, which also may have influenced the construction industry.

1975	End of Vietnam War
	North defeats South Vietnam. President Minh surrenders at discretion.
1976	North and South Vietnam unified
	Socialist Republic of Viet Nam is established. Vietnam joins the United Nations.
	Vietnamese Labor Party holds the fourth party convention. It changes its name to Vietnamese Communist Party.
1980	Constitution amended which was called the transitional constitution
1986	Beginning of economic transition in Vietnam
	Nguyen Van Linh secretary-general is selected at the 6th Vietnamese Communist Party Convention. It changes old socialism line and adopts Doi Moi (“renovation”) program. (Complete economic reform promotion group gains power)

1987	The Law on Foreign Investment in Vietnam passed
1988	Promulgation of the Land Law
1990	The Law on Companies and the Law on Private Enterprises passed
1992	New Constitution passed. A Constitution of the renewal process (Doi Moi) and created a legal foundation for a new Vietnamese legal system.
	Japan resumes financial aid to Vietnam
2001	Constitution amended.
2003	Construction Law passed
2005	The Law on Tendering passed
2008	The current Law on Promulgation of Legal Documents

#### ***4.3.1.1 Public construction projects as a “family” business***

The following are interview quotes that are representative of this sub-category, which is about the inter-dependence on strong informal networks among local construction project stakeholders for initiating, conducting, and maintaining businesses.

*“An interesting thing about Vietnam is frequent changes in roles. That is, people shift from consultant to contractor and client to contractors and vice versa... very frequent. I believe that there is more merit than demerit.”*

*– Resident engineer of a Japanese consultant*

*“Vietnamese [people] change their positions project by project. For instance, a person in sub-contractor from our previous project is our client for this project.”*

*– Project manager of a Korean contractor*

*“Instead of making claims the local contractor like Cienco, they go to the employer and discuss directly and internally, because Cienco is like a state-owned company. They are under MOT [Ministry of Transportation] and MOT is the employer. Formal general directors of Cienco are now in the MOT, so they are easier to talk with them directly rather than writing official documents based on the contract. For international contractors like us it is very difficult.”*

*– Planning manager of a Korean contractor*

Number of interviewees emphasized on the existence of strong inter-relationships among domestic construction organizations in Vietnam. According to interviewees, project participants were usually pre-determined through the informal relationships

for domestic public construction projects, long before project plans became official. Compared to the relationship, technical ability was usually not a significant deciding factor. With the existence of such strong inter-personal relationships among project participants, domestic construction projects were naturally carried out informally and without conflicts rather than strictly following legal and contractual procedures. The maintenance of strong inter-personal relationships within Vietnam construction industry can be contributed to the state historically having a strong control on domestic business enterprises in Vietnam.

### **Vietnam in economic transition**

After the end of Vietnam War in 1975, socialist transformation program begins and South Vietnam's market economy is integrated into centrally planned economy. Hence, all private companies and lands became state-owned. However, after failing to revive the struggling economic conditions, centrally planned economic system is abandoned and accepts market based economic system in 1986. A main motivation for this move was to revive the domestic economy through allowance of foreign investments (in 1987), such as Official Development Assistant (ODA) and Foreign Direct Investment (FDI). Vietnam pursues legislation reform to free the economy by passing laws such as Law on Companies and Law on Private Enterprises in 1990, but at the same time socialist single-party system is maintained. Hence, Vietnam is currently going through a socialist economic transition period.

During the socialist era, all business entities in Vietnam became state-owned enterprises (SOEs) hence, all individuals essentially worked for the government. This enabled construction professionals to freely crossover between employer, contractor, and consultant positions in public construction sector since the boundary separating public servants from private business operator did not exist. While privatization process of state-owned construction enterprises has started, government continues to have control over privatized companies and job exchanges continue to take place in Vietnam. According to the Vietnam Ministry of Finance, state maintained a clear majority share of privatized companies and made all management decisions. In addition, most privatized companies still followed the old SOE way of doing things, with the common business characteristic of SOEs being "to make no loss, but only a little profit." (Nguyen, 2005)

With such kind of strong informal business network still dominating Vietnam public construction sector, many types of conflict of interests is likely to flourish. For Vietnam construction professionals who are traditionally used to informal business practice, international construction professionals insisting on strictly following the contract can be viewed as foreign entities that are interfering with their local ecosystem. Thus, international participants are likely to be lured by the employer organizations to follow a set of informal practices that has become the norm in Vietnam construction sector. For international participants, their goal of maximizing

company profit as well as maintaining business ethics is likely to be tested by the local project participants.

#### ***4.3.1.2 Collective and flexible approach***

The following are interview quotes that are representative of this sub-category which is on social and cultural unique factors that are perceived to be dominant in Vietnam.

*“In Vietnam, no single organization makes the final decision by itself. For major contract payments although Ministry of Finance is the final issuer, other organizations such as Ministry of Construction, the State Bank, and Ministry of Justice need to agree first.”*

*– Project Control Manager of a Korean contractor*

*“In my opinion, if an organization wants to invest in one country, first you need to obey the regulation of the organization. Second the organization has to understand the law of that country. To develop a country they should follow the general orientation, but honestly... there is something wrong... The solution is... both sides have to listen to each other, change, and meet each other in the middle.”*

*– Vice General Director of an employer organization*

*“The knowledge of [local] sociology will make the negotiation easier. For example, if two people hate each other it can't result in a good deal.”*

*– Deputy General Director of an employer organization*

*“Normally in Vietnam it is very difficult to win a project by yourself. Nearly 90% is based on the relationship, 10% is only for your price. Even if it is the lowest price... But almost, it is the relationship.”*

*– Vietnamese QC engineer of a Korean contractor*

Interviewees expressed that Vietnamese project participants favored collective and flexible ways of handling project issues. For example in domestic projects, when a problem arises in a project instead of issuing an official claim letter to decide the responsible party for the problem, informal negotiation took place to resolve the problem flexibly. Hence, in domestic projects in Vietnam claims are virtually non-existent. Also, project related decisions were often made based on consensus among various individuals or organizations, which naturally took a long time to reach to the final decision. These approaches often created conflicts against contractual approaches that were expected from international participants. While contract-approach can be characterized as specifying each party's responsibilities and impose strict time lines in order to avoid commercial conflicts, the approach preferred by Vietnamese participants was rather opposite. The behavior patterns of Vietnamese project participants can be better understood by Vietnamese Confucianism and Socialism values embedded in their society.

### **Influence of Vietnamese Confucianism and indigenous agricultural norms**

While Vietnam has officially become a law-governed society with introduction of the current constitution which was passed in 1992, social norms continue to govern many aspects of Vietnamese society from one generation to another. Confucianism was first introduced into Vietnam during the ten centuries of Chinese domination (Nguyen Dang Thuc 1967, cited in (Nghia, 2005)), and it continued to serve as the leading ideology of the Vietnamese monarchy from the Le dynasty in 15th century.

However, it is believed that the Vietnamese indigenous agricultural norms and Confucian values have converged along the way, and this convergence appears to have expanded the ideology to generate the standard norms that would govern the society for centuries. Some of dominant traditional values that help explain behaviors of Vietnamese construction participants are identified and discussed.

A strong sense of collectivism in current Vietnam society is rooted from the common efforts to cultivate crops throughout their agricultural-oriented history, as well as their recent experience with socialist-oriented economic system. It emphasizes that a human being is born to be a member of not only a family, but also a village and a member of a country in a broader sense. Each individual lives in natural connection with other members of the society, as an integrated part of one organic body. Under such a system, the collective interest of society dominates over individual interests, and people who fight for their own interests are considered to be selfish and egotistical (Marr, 2000). While this is a major characteristic of the Vietnamese mentality, it is also a key factor hindering the emergence of individualism in Vietnam (Nghia, 2005).

Building consensus as a way to maintain harmony and avoiding conflict within and among organizations is another traditional Vietnamese value which has been rooted from Confucius and agricultural lifestyle. The importance of maintaining balance and harmony is emphasized in all aspects of life, from family, to lineage, to village and state issues. This is well acknowledged by most Vietnamese. In issues relating to lineage of people with the same ancestors, decisions were normally made by consensus among all relatives. The same principle can be seen in the organization of the villages, where consensus building is the major force keeping the village in order. This also explains historically mild instances of personal politics or cult-infused leadership in communist Vietnam compared to China or North Korea (Nghia, 2005).

As a result of strong collectivism, the respect and opinion of the community is crucial to the life of each individual in Vietnam. A person's success is dependent on their trustworthiness as well as their ability to build and maintain relationships with other people. Direct confrontation or criticism is to be avoided and instead focus on developing amicable solutions in order to maintain good relationships and save their faces (Meyer, Tran, & Nguyen, 2006). Fear of bad public opinion still motivates the Vietnamese at all levels of society.



#### 4.3.1.3 Law as a tool used by the ruling class

The following are interview quotes that are representative of this sub-category, which is about Vietnam government's perceived treatment of laws and other regulations as an authoritative tool.

*“One-way interpretation of the law is made by the employer, and for this reason claims by contractors cannot be expected to be judged fairly”*

*– Vietnamese contract expert*

*“All of the ministries they follow the rule and obey the state law. But the local agency is more difficult to deal with... For ministries, they have the law, but for local agencies they have regulation... It means the ministry obey the law, local agency obey the regulation. Some regulations are made by them so... it's difficult...”*

*– Deputy Project Director of an employer*

*“If the government gave the decision authority to the client, PMU, then the client can solve problems quick but government wants to keep their power, making PMU submit to DOT, DOC or MOT, MOC. It means taking more time. It means delay... Because of their group benefit.”*

*– Vietnamese consultant engineer*

*“The Employer intervenes with our consultant role too much... This is due to lack of separation of powers in government system and especially independence of judiciary does not exist in here in Vietnam. Normally the consultant works as “Judge in dispute items” in 3-party (Employer/Contractor/Engineer) contract system but it is not recognized in Vietnam. And the opinion of communist party and the Employer is final and binding.”*

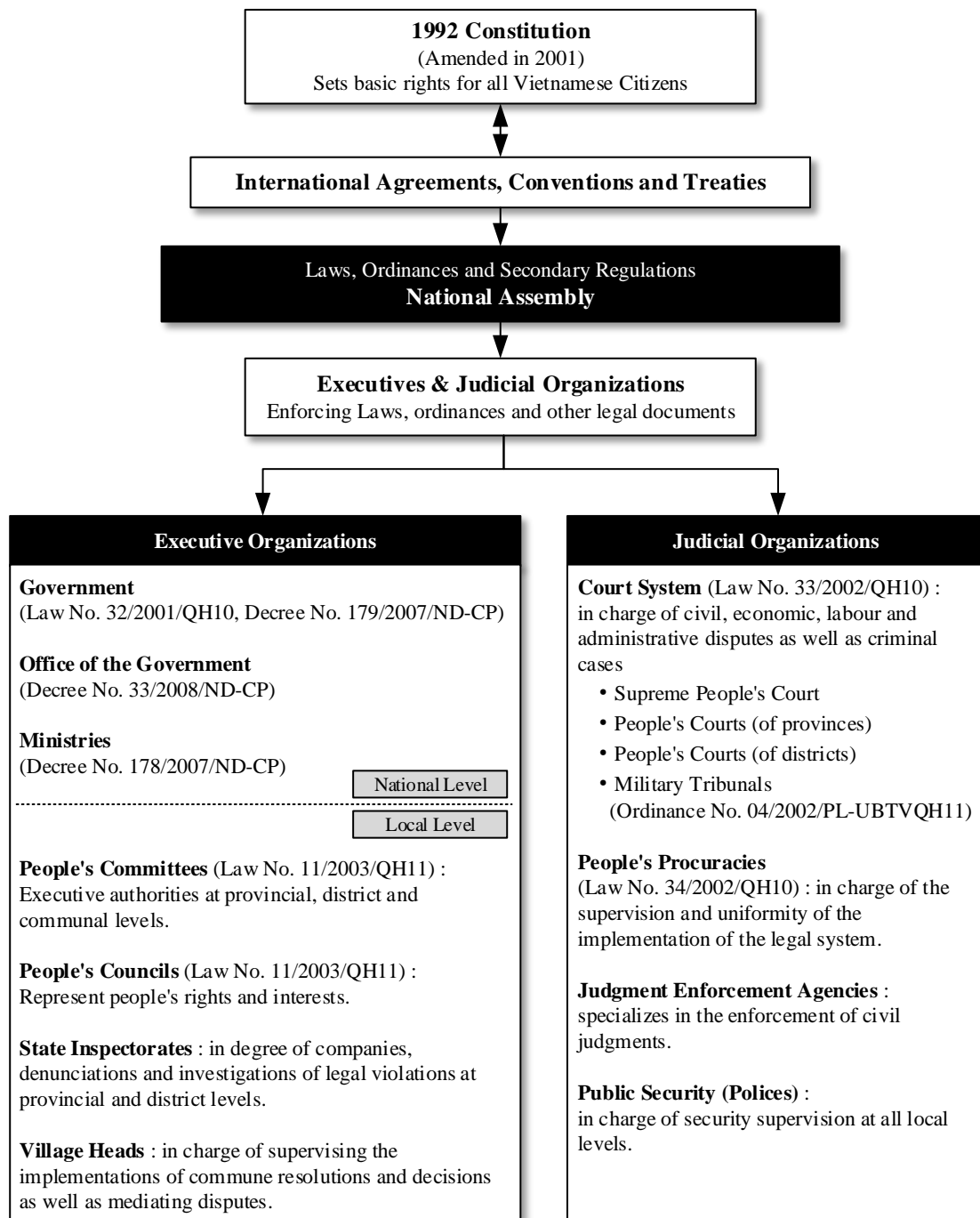
*– Project Manager of a Japanese consultant*

Many interview participants explained that project related decisions made by the government, or the employer organization, were perceived as final and indisputable, hence local contractors never challenged their decisions. When international contractors file construction claims, it can be perceived as a direct challenge to the employer and furthermore the government body who are used to exercising the absolute authority. Thus, the employer tends to take claim matters emotionally, rather than rationally, and tries to reject all of them to reinforce their absolute power to the international contractors. Further review of political and legal system in Vietnam justifies the legal authority of government organizations.

#### **Political organization in Vietnam**

In Vietnam, there are three major branches that govern the state as shown in Figure 4.3; National Assembly, Executive and Judicial organizations. National Assembly is the highest constitutional body and it is the only body vested with constitutional and legislative powers (Article 83 of Constitution 1992 – amended). The Government is the executive body of the National Assembly and the highest administrative State

body of the Socialist Republic of Vietnam, which assumes the unified administration of the implementation of all political, economic, cultural, social, national defense, security and external activities of the State (Art 109 of Constitution 1992 – amended). Governments consist of Prime Minister, Deputy Prime Minister, ministers and other members. The Supreme People's Court, the local People's Courts, the Military Tribunals and other Tribunals provided by the law make up the judicial bodies of the Socialist Republic of Vietnam (Article 127 of Constitution 1992 – amended).



**Figure 4.3 Legal Institutions in Vietnam**  
(Source: Loan, 2010)

It is important to realize, however, that according to Article 4 of the Constitution the Communist Party of Vietnam is the force assuming the leadership of the State and society. The National Assembly functions as the legislative arm of the Political Bureau of the Communist Party of Vietnam (CPV). The current 13th National Assembly (2011-2016) consists of 500 elected deputies, of which 458 members represent CPV and 42 members represent an independent political group. Some of duties and powers of National Assembly under the current constitution are mentioned below:

**Article 83**

The National Assembly is the highest representative body of the people, the highest State authority in the Socialist Republic of Vietnam.

The National Assembly is the only body vested with constitutional and legislative powers.

**Article 84**

The National Assembly has the following duties and powers:

1. To draw up and amend the Constitution; to make and amend laws; to decide on the program for the building of Vietnamese laws and decrees.

...

7. To elect, suspend and revoke the President, the Vice-President, the Chairman and Vice-Chairmen and the members of the Standing Committee of the National Assembly, the Prime Minister of the Government; the Chief Justice of the Supreme People's Court, the Chief Prosecutor of the People's Inspectorate General.

**Article 102**

The President is elected from among National Assembly representatives.

The President is responsible and accountable to the National Assembly.

**Article 114**

The Prime Minister of the Government has the following duties and powers:

...

2. To make recommendations to the National Assembly on the establishment or abolition of Ministries and agencies at ministerial level; to submit proposals on the nomination, removal or dismissal of Deputy Prime Ministers, Ministers and other members of the Government to the National Assembly.

**Article 135**

The Chief Justice of the Supreme People's Court is responsible and accountable to the National Assembly.

Unlike traditional rule of law societies where separation of powers exists, in Vietnam state power is viewed as inseparable. With the National Assembly possessing such influential and interconnected powers not only with the executive but also with the judicial body, the mechanism for regulating illegal and unconstitutional actions by the government and legislature is under question in Vietnam.

### **Inseparable politics and legal system in Vietnam**

The legal system in Vietnam is enmeshed in the political system. This has been the case since 1959 in the North and during that time a culture of interconnection between the state's leadership (party) and implementation (state organs) has developed (Nicholson, 2001). Figure 4.4 shows an overview of the legal documents of Vietnam. This is important because different state agencies at different administrative levels are authorized to draft, adopt and promulgate specific categories of legal documents. The current legal system, as regulated under the Law on the Promulgation of Legal Documents No. 17/2008/QH12 (the 2008 law), consists of twelve types of legal documents issued by different state agencies at national and local levels.

Laws/ordinances, passed by the National Assembly, are the highest constitutional body of the Socialist Republic of Vietnam. Secondary regulations are issued by state organizations (administrative and judicial organizations) as legal documents of a lower rank than laws/regulations relating to the legal force in the legal documents' hierarchy. It is worth noting that only three among the twelve types of legal documents are subject to legal explanation, and the remaining documents cannot be formally explained. According to Article 91 of the Constitution, the Standing Committee of the National Assembly has the duty to explain the Constitution, laws and ordinances. The current framework does not say how the remaining nine types of legal documents should be explained if should different understanding of their texts arise. As for the role of judiciary in Vietnam, regulation describe that a court's role is to apply laws rather than interpret them. According to the 2008 law, Supreme People's Court (SPC) performs its mandate by issuing Resolutions and Joint-Circulars with other government agencies. Thus, the SPC is treated as an administrative agency that takes part in lawmaking similar to other government institutions.

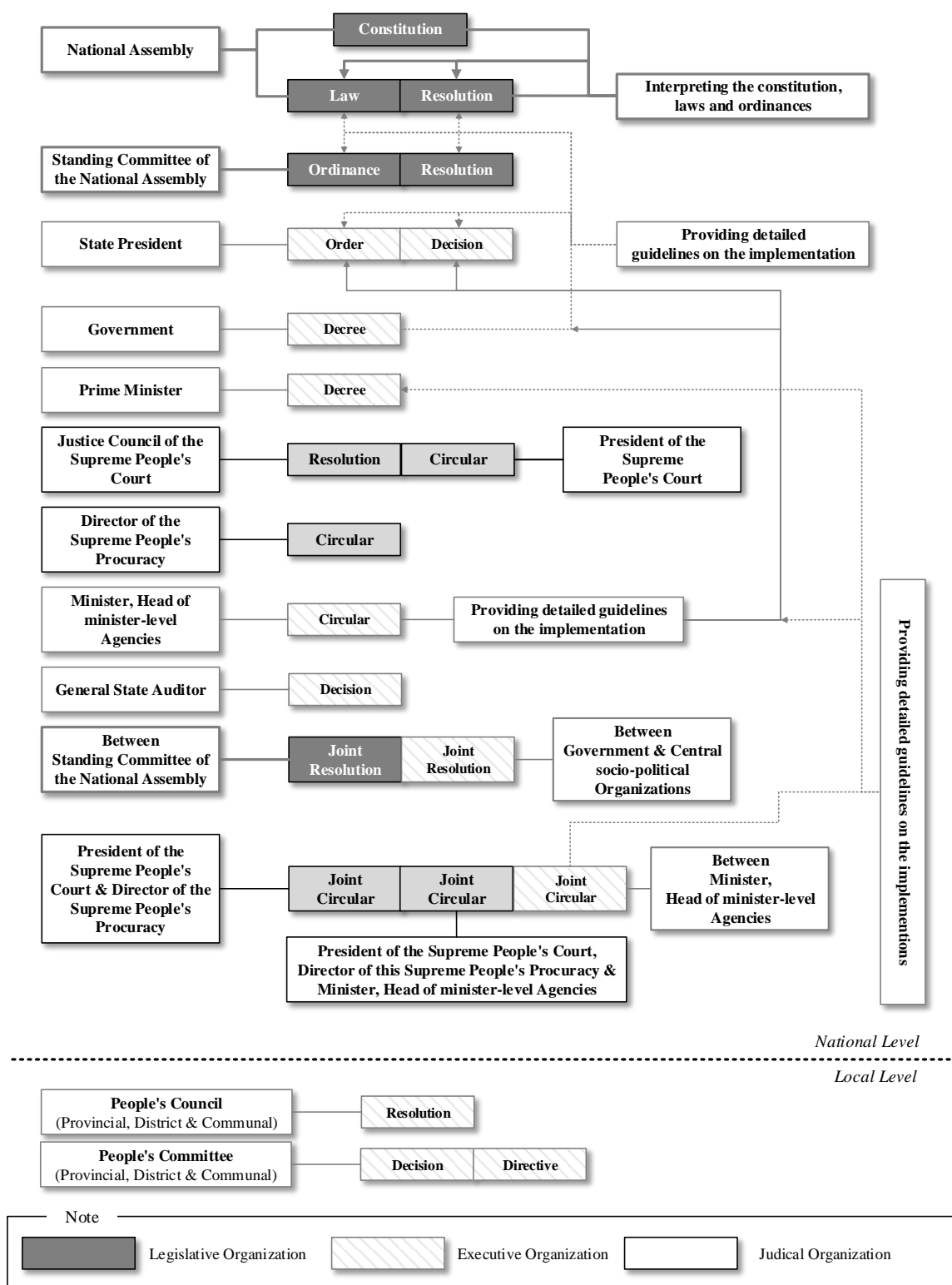


Figure 4.4 Hierarchy of Legal Documents in Vietnam

(Source: Loan, 2010)

### Legal conflicts and interpretation

While the current legal system in Vietnam may provide considerable flexibility for the state to use legislation to respond quickly to economic and social changes, because legislation is drafted by different agencies it is very common to find conflicts between sub-law regulations and laws or even the Constitution (Lien, 2011). Driven by a state management mentality, government authorities often use regulations for their comfort and convenience. For example, it is common to see local authorities breach laws to fulfill local interests or government ministries use their discretionary powers to set situational policies that are inconsistent with the spirit of the laws (Lien, 2011).

Business communities and legal practitioners routinely consult relevant government ministries or executive agencies for clarification and implications of legislation. Legal interpretations, according to Lien (2011), can be done ad hoc, verbally or in written form, and results can vary greatly. Also, interpretation can become a bargaining process in which citizens or small and medium enterprises rely on relational transactions and personal relationships with state officials to seek favorable outcomes (Lien, 2011). With the absence of a fair mechanism for interpreting secondary regulations, public construction projects where the government acts as the client can expect many controversies on the subjectivity of legal interpretation by the government.

#### 4.3.1.4 Commission culture

Involvement of additional informal commissions in various business-related transactions was reported to be a part of business culture in Vietnam. For example, this following quote describes a normal practice of charging additional fee for site data that should have been provided by the employer for free at the beginning of the project:

*“This is a very delicate matter. In this country, information is like money. If you take some information, you should compensate. It is the culture, like a custom. If we go into a shop by introduction, the shop takes 5~10% commission. For our case, regarding site data, it should be supplied by the client. This site data should have been made available at the very beginning stage, but we have still not received it yet. So, whenever I go to the client’s office, I make photocopies of information, unofficially, and bring it back. This is unofficial. Whenever you can obtain information, you must take it. Otherwise, there are great difficulties in getting necessary data when you need them.”*

*– Project Manager of a Korean contractor*

There are plenty of situations where exchange of informal commission occurs during construction project stages. This quote describes a typical practice in Vietnam, where the project employer selects project-related businesses and receives commission in return:

*“The Employer decides sub-contractors, material suppliers and everything. And they get money from them... They are all connected.”*  
 – Administrative Manager of a Korean contractor

When a service from public servant needs to be expedited, issuance of building permit for example, additional commission solved the problem immediately. In addition, informal payment exchanges were reported to be a normal practice even when a consultant engineer performed inspections of sub-contractor's work or when sub-contractors inspected their subsidiaries' works. Hence, the practice of requesting and providing commissions appeared to be a normal practice throughout Vietnam business environment, based on the interviewees' comments.

### **Facilitation payments as “helping money”**

According to research by Segon and Booth (2010), many expat managers in Vietnam confirmed that the majority of bribery and corruption requests were typically in the form of facilitation payments to speed up requests of document processing. Several local entrepreneurs also confirmed that the majority of requests were for small facilitation payments related to permits, building requirements etc. In fact one entrepreneur acknowledged that whilst he frowned upon the activity, it was a common and accepted practice in Vietnam which he rationalized by referring to it as “helping money”.

Andenas (1995) reasons that a large proportion of the civil service in underdeveloped or transitioning economies, such as Vietnam, are significantly underpaid relative to the economic growth and wealth generation that often occurs due to the liberalization of the economy and the privatization of assets. Underpaid public servants see a chance to take part in the conspicuous consumption becoming a part of their societies, or at least to maintain living standards in a period where the purchasing power of public sector salaries is radically reduced in relative terms (Andenas, 1995 p. 60).

A similar explanation offered made by Gray and Kaufman (1998), where they suggested that corruption is a symptom of fundamental economic, political and institutional causes and is more widespread in developing and transition economies, not because of a difference in people's values or ethics, rather the motivation for monetary gain is usually heightened by poverty, low public sector salaries, little accountability and poorly enforced laws and principles of ethics.

### **4.3.2 Contractual conflicts: contract and legal conflicts -> all parties struggling**

Throughout the interview sessions various inefficient construction processes were heard, and notably, several contractual conflicts appeared to occur regularly

throughout projects in Vietnam. These recurring contractual conflicts in Vietnam international construction projects discovered the interview process is the following:

- Delay in site hand-over
- Price adjustment payment delay
- Inspection approval delay
- Interim payment delay
- Variation approval delay
- Excessive documentation required by employer/authority
- Permit/license approval delay

Each of the contractual conflict topics is investigated in-depth, with each sub-section covering each topic beginning with Sub-section 4.3.2.1. Taking cues from descriptions by the interviewees, general conditions of international construction contract and Vietnam construction law and regulations were investigated to identify the presence of any actual conflicts or contradictions. General conditions of each relevant section from FIDIC MDB Harmonized Edition (2006), the standard contract form used by all ODA-funded civil construction projects, are compared to relevant sections under Vietnam construction law and other influencing regulations. Project-specific particular conditions for two project cases were obtained and investigated, and no meaningful conditions that may potentially influence the identified recurring contractual conflicts were discovered. In fact, particular condition section was surprisingly under-utilized considering that projects were considered to be large-scale. Hence, it was assumed that contractual procedures specified in the general conditions of contract forms largely dictated the project implementation phases.

Regarding Vietnam construction law and secondary regulations that may influence procedures for performing international construction projects in Vietnam, the following documents were reviewed for potential conflicts and contradictions:

- Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)
- Decree No. 48/2010/ND-CP on Contracts in Construction Activities
- Decree No.131/2006/ND-CP on Issuance of Regulation on Management and Utilization of Official Development Assistance
- Decree No. 112/2009/ND-CP on Management of Work Construction Investment Expenses
- Decree No. 12/2009/ND-CP on Management of Investment Projects on the Construction of Works.
- Decree No. 209/2004/ND-CP on Quality Management of Construction Works



The legal documents listed above were all retrieved from the official website of Vietnam Ministry of Construction (<http://www.xaydung.gov.vn/en/legal-documents>) on August 15, 2014.

As described in Sub-section 4.3.1.3., there exists many types and enormous amount of legal documents in Vietnam. Over 100 construction-related secondary regulations (decrees, decisions, circulars etc.) were discovered from the Ministry of Construction's website, which made it impossible to investigate every single document. However upon sufficient investigation of contents and hierarchy of legal documents, the five decrees mentioned above appeared to have the most direct influence on international construction projects as well as the contractual conflict subjects under investigation.

Upon investigating contract and legal conflicts for each conflict subject, some representative perspectives of interview participants are presented under "all parties struggling" heading along with additional contextual description based on literature reviews.

#### ***4.3.2.1 Delay in site handover***

In Vietnam, it is regarded as typical for construction projects to experience delays at the very beginning phase due to delay in handing over the site to the contractor (Le-Hoai et al., 2008). Inability to complete the resettlement of affected households according to the execution plan by the local responsible authority is known to be one of the main causes for the delay in site handover. Most of the interviewees acknowledged that delay in site handover was a serious matter which caused delays, usually months and years, to many international construction projects in Vietnam.

#### **Contract and legal issues**

Regarding the site handover requirement, both FIDIC MDB 2006 and Vietnam construction regulations are in agreement that the Employer is responsible for clearing out the site within agreed time frame so that the Contractor can carry out the work without any schedule interference. They are also in an agreement that should the Contractor's schedule be affected by the delay in site handover, the Employer is obligated to compensate the Contractor for both time and monetary loss. For public investment projects, however, employer organizations must depend on local authorities for land clearance and resettlement, yet Vietnam regulations does not specify the consequences of local authorities for failing to complete their job within proposed deadline. Hence, the current regulations imply that the Employer organization is obligated to compensate the Contractor for delay damages caused by local authority's inability to handle their job.

However, the issue with both general conditions of FIDIC MDB 2006 and Vietnam legal documents is that it is unclear how the compensation for the delay will be

calculated. What should be considered as “damage”, and what cost items shall be included as additional cost to be compensated by the employer? Also, who authorizes the compensation? This type of questions should be addressed among the employer, contractor, and the engineer at the pre-contract negotiation period. The related contract and legal conditions discussed above are summarized in Table 4.3.

Table 4.3 FIDIC and Vietnam legal conditions for site handover procedure

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p><b>2.1 Right of Access to the Site</b> If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Employer to give any such right or possession within such time, <u>the Contractor shall be entitled subject to Contractor's Claims to:</u> (a) an extension of time, and (b) payment of any such Cost plus profit.</p> <p>→ What cost items shall be included as additional cost to be compensated by the employer may become the focus of the argument.</p>	<p><b>Article 69. Requirements on ground clearance for construction work</b> The ground clearance for work construction must satisfy the following requirements: <b>2.</b> For projects requiring the resettlement, the plans or projects on resettlement must be worked out and executed before the ground clearance;  <b>4.</b> The time limit for construction ground clearance must comply with the requirements on the progress of executing the approved projects or the competent persons' decisions.</p> <p><b>Article 75. Obligations of the Employer</b> <b>2b.</b> To join the competent People's Committees or assume the prime responsibility for, and coordinate with the competent People's Committees in, clearing and handing over the construction grounds to the work construction contractors; <b>2k.</b> To make compensations for damage caused by contract breaches to the work construction contractors.</p> <p>→ What is considered as "damage", and who authorizes the compensation?</p>	<p><b>Decree No. 48/2010/ND-CP on Contracts in Construction Activities</b></p> <p><b>Article 26. Obligations of the Employer</b> <b>2b.</b> To hand over the construction site in whole or part by part to the contractor for management and use according to the set schedule and agreements of the contract.</p> <p><b>Article 27. Rights of the Contractor</b> <b>1c.</b> <u>To claim compensations for damage caused by the late handover of the construction site and other damage caused by the Employer.</u></p> <p>→ What is considered as "damage", and who authorizes the compensation?</p> <p><b>Article 38. Adjustment of construction contract performance schedule</b> <b>2.</b> The contract performance schedule may be adjusted in the following cases: <b>c.</b> The construction ground is handed over not in accordance with agreements in the contract or related procedures slows down the construction contract performance but the contractor is not at fault.</p>

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
	<p><b>Article 76. Rights of construction contractors</b></p> <p><b>1d.</b> To stop the work construction if the employers fail to strictly perform their commitments in the signed contracts, thus causing obstacles and damage to contractors;</p> <p><b>1e.</b> <u>To request compensations for damage caused due to faults of the Employer.</u></p> <p>→ What is considered as "damage", and who authorizes the compensation?</p>	<p><b>Decree No. 131/2006/ND-CP on Issuance of Regulation on Management and Utilization of Official Development Assistance</b></p> <p><b>Article 29. Compensation, land clearance and resettlement</b></p> <p><b>2.</b> The application dossiers for compensation, land clearance and resettlement of the programs and projects shall include an official <u>written commitment of the competent land clearance and resettlement authorities</u> on progress and deadline for completion of compensation, land clearance and resettlement corresponding to the implementation schedule of respective bidding packages in the programs and projects.</p> <p>→ Consequences for failing to meet the deadline is not specified.</p>

### All parties struggling

Various perceptions were collected through interview conversations, and some of representative quotes regarding delay in site handover issues are presented. The following quote describes how delay in land acquisition is affected by unstable market conditions in Vietnam, and how this is perceived as a “no fault” situation and hence, the project employers have traditionally not compensated contractors for the delay damages.

*“100% of projects [in Vietnam] suffer delay in access to the site as compensation unit price [for resettlement] never reflects the current market value, and this results in cost incurred by contractors but cannot receive compensation.”*

– Vietnamese contract expert

*“A deputy project director from an employer organization emphasized the importance of timely land acquisition, because land acquisition delay triggered many other problems throughout the construction. How to improve the situation of land handover, especially how to speed up the schedule of land acquisition is most important. Because once the implementation for the project is delayed many matters come. The efficiency of the project becomes less when we are stuck.”*

– Deputy Project Director of a PMU

A deputy project director of an employer organization saw the problem of land acquisition delay mainly as the lack of motivation by the local authority in charge.

*“It all depends on the local government’s determination. If they want to remove all, they can. If they want to do that, they will figure out the way. By talking, giving more money, and lastly using enforcement. But if they don’t have the motivation... land acquisition becomes a big problem.”*

– Deputy Project Director of an employer

Land acquisition is known to be a complicated and sensitive process in Vietnam. A vice general director of a major project management unit (PMU) organization in Ho Chi Minh provided his expertise based on his experience on reasons for land acquisition delays by Ho Chi Minh People’s Committee:

*“First, Ho Chi Minh People’s Committee is currently doing so many projects and they don’t have enough resources to take care of each affected household. Second, because land acquisition is a difficult job... dealing with sensitive issues of local people... it is not a popular job and especially people with good skills are not interested in doing this kind of job. Third, some citizens do not own legal document showing that the land belongs to them... and this makes the situation more difficult. And finally the biggest problem is the price. According to the law, government must offer the market price to the affected households. But once the project plan is announced, the land price goes up three times or four times, and the government cannot afford to pay the inflated*

*price. The regulation changes frequently to adjust for each situation, but this make it difficult for land acquisition staff to follow the rules.”*  
 – Vice General Director of a PMU

For domestic construction projects, local contractors do not expect delay damages to be compensated by the Employer, and hence official claims are never made.

Knowing that the longer the delay the more damage they accumulate, some local contractors eventually spend their own capital to speed up the land acquisition process (news article ref.). The problem with this is that as this becomes that mechanism for solving land acquisition delays, the Employer and the local authority in charge further loses their motivation to fulfill their duties. The power hierarchy of organizations within Vietnam construction industry is very pronounced, and the weakest party, usually contractors and sub-contractors, end up sacrificing the most. This has become the norm in Vietnam construction sector, because no clear mechanism for regulating illegal government actions under the current constitution is available.

State governments are fully aware of inefficiencies caused by local authorities, yet they have limited control over them because local government has the legal power to promulgate their own set of regulations.

Land acquisition delay has been a chronic problem for construction projects in Vietnam, because the primary responsibility belongs to the relevant local authority yet their legal consequences are not clearly stipulated. While the contractor's right to request the employer for damage due to delay in site handover is clearly stipulated in Vietnam regulations, local contractors did not exercise this right and they have traditionally absorbed the losses. Unless responsibilities are legally enforced the problem is unlikely to be fixed.

#### ***4.3.2.2 Price adjustment payment delay***

In Vietnam construction projects, payment process for price adjustment of materials and services can take several years according to the interviewees. Calculation method can be highly controversial, or publication of regional construction price index (CPI) can suddenly terminate, hence leaving contractor and employer to search for an alternative index to rely on.

#### **Contract and legal issues**

Sub-clause 13.8 Adjustment for Changes in Cost under FIDIC MDB 2006 GCC specify that the Engineer's determinations should be followed for any unclear circumstances regarding price adjustment, such as unavailability of a reliable CPI. For local regulations, Decree No 48/2010/ND-CP on Contracts in Construction Activities describes general direction for price adjustment:

**Article 36.****Adjustment of prices of construction contracts**

1. Adjustment of contract prices may apply only to fixed unit-price contracts, adjustable unit-price contracts and time-based contracts. In a construction contract, contracting parties shall agree on specific cases in which contract price adjustment is permitted, and the order, scope, method of and ground for contract price adjustment. The method of contract price adjustment must be suitable to the type of contract price and characteristics of jobs in the contract.

...

3. Methods of construction contract price adjustment:

a. The application of price adjustment methods must be suitable to characteristics of work, type of contract price and agreed upon by the parties in the contract;

b. Input data for price calculation and adjustment must be suitable to jobs indicated in the contract. The contract must indicate the use of competent state agencies' sources of information on prices or price indexes for price adjustment according to the following formula...

4. The Ministry of Construction shall specifically guide methods of construction contract price adjustment.

Clause 4 of Article 36 may be interpreted as requesting the Ministry of Construction for verification and approval of price adjustment conducted for each case. In addition, Decree No. 112/2009/ND-CP on Management of Work Construction Investment Expenses provides additional guideline on formulation of construction price indexes

**Article 17. Construction price indexes**

...

3. For particular construction works not yet taken into account in construction price indexes announced by the Ministry of Construction, investors may hire qualified consultancy organizations to determine construction price indexes for these works according to the method of price index formulation announced by the Ministry of Construction for use as a basis for the formulation and adjustment of total investment and construction cost estimates of these works, construction contract prices and the management of expenses. The consultancy organizations shall take responsibility for the accuracy and reasonability of construction price indexes they have provided.

Clause 3 of Article 17 suggests hiring of a third party consultant to determine construction price indexes to be used, when CPI to be used is unavailable. Consequently, different approaches for settling price adjustment are presented among FIDIC general conditions and Vietnam regulations. These varying directions should be discussed during the pre-contract negotiation period, and consolidate into one direction that all parties can agree on. The related contract and legal conditions discussed above are summarized in Table 4.4.

Table 4.4 FIDIC and Vietnam legal conditions for price adjustment procedure

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p><b>13.8 Adjustment for Changes in Cost</b></p> <p>The cost indices or reference prices stated in the table of adjustment data shall be used. <u>If their source is in doubt, it shall be determined by the Engineer...</u> Until such time as each current cost index is available, <u>the Engineer shall determine a provisional index for the issue of Interim Payment Certificates.</u> When a current cost index is available, the adjustment shall be recalculated accordingly.</p> <p>→ The engineer's determination on price adjustment is to be followed under atypical situations.</p>	<p>No provisions on price adjustment</p> <p>→ Price adjustment concept is introduced in 2008 in Vietnam.</p>	<p><b>Decree No. 48/2010/ND-CP on Contracts in Construction Activities</b></p> <p><b>Article 36. Adjustment of prices of construction contracts</b></p> <p><b>3. Methods of construction contract price adjustment:</b></p> <p><b>a.</b> The application of price adjustment methods must be suitable to characteristics of work, type of contract price and agreed upon by the parties in the contract;</p> <p><b>b.</b> Input data for price calculation and adjustment must be suitable to jobs indicated in the contract. The contract must indicate the use of competent state agencies' sources of information on prices or price indexes for price adjustment...</p> <p><b>4.</b> The Ministry of Construction shall specifically guide methods of construction contract price adjustment.</p> <p>→ MOC is in charge of determining price adjustment procedure.</p> <p><b>Decree No. 112/2009/ND-CP on Management of Work Construction Investment Expenses</b></p> <p><b>Article 17. Construction price indexes</b></p> <p><b>3.</b> For particular construction works not yet taken into account in construction price indexes announced by the Ministry of Construction, <u>the Employer may hire qualified consultancy organizations to determine construction price indexes for these works according to the method of price</u></p>



CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
		<p><u>index formulation announced by the Ministry of Construction for use as a basis for the formulation and adjustment</u> of total investment and construction cost estimates of these works, construction contract prices and the management of expenses. The consultancy organizations shall take responsibility for the accuracy and reasonability of construction price indexes they have provided.</p> <p>→ Additional third party consultants are encouraged to participate.</p>

### All parties struggling

Interviewees have provided their perspectives, as well as some example cases of conflicts regarding determining price adjustment amount. The following quote is about the employer and the contractor having disagreements on how the contract condition is to be interpreted:

*“For calculating material costs, we had conflicts regarding whether to apply actual purchase cost, index by Ho Chi Minh, or index by Hanoi... Also, we had conflict with our Employer on when to use which formula [between two formulas provided in the contract] for calculating escalation.”*

– Construction Manager of a Japanese contractor

This quote is also an example where contract condition did not clearly specify the exact calculation procedure, which was further complicated by delay in construction schedule due to land acquisition problems.

*“The contract mentions that we can request for price adjustment one year after the employer issues the notice to proceed (NTP), but it does not mention about the exact quantity... The problem for our project was that the construction schedule was delayed because only 25% of land acquisition was completed at the NTP. The employer’s argument was that according to our originally submitted progress schedule first year 20%, second year 30%, third year 30%, and fourth year 20% completion; so we should apply adjustment for the remaining 80% at the end of the first year. However in reality, we only progressed 2% in the first year due to the delay in land acquisition. So our argument was that we should apply 98% for the adjustment.”*

– General Manager of a Korean contractor

This quote is an example where the applicable CPI mentioned in the contract was unavailable once construction started, which the payment has not been decided for more than two years.

*“Our contract said to follow the Hanoi CPI, but Hanoi stopped publishing it at the end of September 2011. Hanoi ordered each province to be responsible for creating its own CPI. So at this moment, we cannot use Hanoi CPI we cannot use the local CPI... We have to create a third CPI that is appropriate for this project... [The employer] previously agreed to pay us the initial 4.5 million USD based on Hanoi CPI, but then they changed their decision... so now it’s a serious problem because it has passed more than two years now... Last time they asked Ministry of Construction but they could not help create the index. [The employer] also wants to pay but they don’t know how much to pay, they cannot decide the amount because they are scared that they will have to take the responsibility. So nobody can sign and that is a big problem.”*

– Administrative Manager of a Korean contractor

International contractors have explained that project employers in Vietnam are not familiar with the proper calculation method for price adjustment. While basic input data are specified in the contract, adjustments to some of those data are inevitable

along the way. For example, when a project becomes significantly delayed due to land acquisition problem the adjustment schedule needs to be updated to reflect the actual progress of the project. Also, regionally published construction price index (CPI) specified in the contract for the calculation purpose frequently became unavailable during the construction period. When employers were faced with payment related decisions which they have no prior experience, they became extremely indecisive. Settlement of price adjustment usually took years of negotiation. While the Engineer is in the position to offer their expert opinions on how to settle the price adjustment issue, the Employer did not rely on them.

The concept of price adjustment was introduced in Vietnam after having experienced a “price-storm” in 2008. Hence not many construction professionals have experienced applying price adjustment in their previous projects. Because project employers as well as government bodies in Vietnam feel a great pressure for setting new precedents, they try to defer their responsibility to someone else. For example, when a project employer requested MOC to help create the appropriate indexes for their project, MOC advised the Employer to create it based on their own judgments.

Especially for payment related matters, Vietnam legal documents often state that the person making the decision must bear the legal responsibility and compensate for any faults that may be discovered in the future. In attempt to mitigate this personal pressure a time consuming consensus building approach is often adopted to spread the responsibilities. In one project, when finalizing the price adjustment the entire board members of the employer’s parent company had to grant the permission. If one member did not feel comfortable taking the responsibility the decision on price adjustment would be further postponed.

#### ***4.3.2.3 Inspection approval delay***

Interview participants expressed that inspection and hand-over process take a very long time in Vietnam construction projects. While the engineer performs inspections for typical international construction projects, in Vietnam the employer was directly and deeply involved with all inspection activities and at the end they were hesitant to make final approval decisions. In addition, third party consultants were often involved for additional checks and comments which the contractor also needed to address.

#### **Contract and legal conflicts**

FIDIC general conditions assume that the employer does not possess the full technical capacity to handle the inspection and testing of completed works. Thus, the engineer is empowered to make judgments on acceptance procedure and issue taking-over certificates on behalf of the employer. Vietnam regulations, however, require several conflicting conditions from FIDIC general conditions. First, the employer is required to fully participate in all inspection phases because they are held legally

liable for accepting the quality inspections and proceeding with the next phase of the work. As a result, the employer becomes extra cautious with checking the validity of all supporting documents and trying to identify any minor mistakes or incongruences from design documents. Any unidentified mistakes can potentially cost firing of their jobs, according to an interviewee.

Second, Vietnam regulations encourage involvement of third party consultants for additional inspection. For example, Article 75 Clause 2f of the Vietnam Construction Law states that the Employer is obligated to hire consultancy organizations to test the quality of works when necessary. Whenever the Employer doubts their ability to make decisions, they will be inclined to hire additional consultants as an effort to reduce their liability. In addition, the Employer is required to comply with inspection activities by the Construction Inspectorate. Construction Inspectorate is a ministerial agency directly under the supervision on the Prime Minister, and they conduct independent inspection of all construction activities in Vietnam to monitor the compliance of construction legislation. Their tasks and roles are stipulated in Article 114 and 115 of the Vietnam Construction Law (also summarized in Table 4.5).

Table 4.5 FIDIC and Vietnam legal conditions for inspection and takeover procedure

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p><b>7.4 Testing</b></p> <p>The Contractor shall agree, with the Engineer, the time and place for the specified testing of any Plant, Materials and other parts of the Works.</p> <p>The Engineer shall give the Contractor not less than 24 hours' notice of the Engineer's intention to attend the tests. If the Engineer does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Engineer's presence.</p> <p>→ The employer is not involved in the testing procedure.</p> <p>If the Contractor suffers delay and/or incurs Cost from complying with these instructions or as a result of a delay for which the Employer is responsible, <u>the Contractor shall give notice to the Engineer and shall be entitled subject to Contractor's Claim</u> to:</p> <p>a. an extension of time for any such delay, and b. payment of any such Cost plus profit.</p> <p>"</p> <p><b>10.2 Taking Over of Parts of the Works</b></p> <p><u>The Engineer may, at the sole discretion of the Employer, issue a Taking-Over Certificate for any part of the Permanent Works.</u></p>	<p><b>Article 75. Obligations of the Employer</b></p> <p><b>2.</b> The Employer has the following obligations in the work construction:</p> <p><b>e.</b> To organize the pre-acceptance test, payment and settlement of works;</p> <p><b>f.</b> <u>To hire consultancy organizations having full construction operation capability to test the quality of works</u> when necessary;</p> <p><b>Article 80. Pre-acceptance test and hand-over of construction works</b></p> <p><b>4.</b> The Employer shall have to organize the pre-acceptance test and reception of works. Persons taking part in the pre-acceptance test and hand-over of works shall bear personal responsibility for products certified by them in the course of work construction and work hand-over.</p> <p>→ Third party consultants are encouraged to be involved. → The Employer is required to be directly involved with inspection and hand-over procedure.</p> <p><b>Article 114. Tasks of the Construction Inspectorate</b></p> <p><b>1.</b> To inspect the observance of the construction legislation; <b>2.</b> To detect, prevent and handle according to its competence or propose the competent State agencies to handle violations of the construction legislation.</p> <p><b>Article 115. Rights and responsibilities of the</b></p>	<p><b>Decree No. 48/2010/ND-CP on Contracts in Construction Activities</b></p> <p><b>Article 26. Obligations of the Employer</b></p> <p><b>2h.</b> To conduct takeover test and make payment and settlement of the contract <u>within the set time limit.</u></p> <p><b>Decree No. 209/2004/ND-CP on Quality Management of Construction Works</b></p> <p><b>Article 21. Construction quality supervision by investors</b></p> <p><b>4.</b> Investors shall have to compensate for their contract breaches to construction contractors; <u>be accountable before law for poor-quality checking and acceptance</u>, thereby distorting the checking and acceptance results, for checking and acceptance of wrong volumes, volumes performed at variance with designs, and other acts of violation.</p> <p>→ The Employer is legally liable for accepting the quality.</p> <p><b>Article 25. Checking and acceptance of construction parts or construction stages</b></p> <p><b>2.</b> Contents and order of checking and acceptance:</p> <p><b>b.</b> Checking the results of tests and measurements already performed by construction contractors; <b>c.</b> Checking the construction completion drawings of</p>

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p><b>10.3 Interference with Tests on Completion</b></p> <p>If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Employer is responsible, the Employer shall be deemed to have taken over the Works or Section on the date when the Tests on Completion would otherwise have been completed.</p> <p>The Engineer shall then issue a Taking-Over Certificate accordingly.</p> <p>→ FIDIC assumes that the Engineer, rather than the Employer, is better suited to inspect and issue Taking-Over Certificates to the Contractor.</p>	<p><b>Construction Inspectorate</b></p> <p><b>1b.</b> To request the examination of contents related to the quality of works in case of necessity;</p> <p><b>1c.</b> To apply deterrent measures according to law provisions;</p> <p><b>1d.</b> To make written records on inspection and handle violations according to its competence or propose the competent State management agencies to take handling measures;</p> <p>→ The Employer must satisfy additional requirements by the Construction Inspectorate.</p>	<p>construction parts;</p> <p><b>d.</b> (amended) Take-over test before allowing the shift to another construction phase. Take-over test results must be recorded in writing with the following details:</p> <ul style="list-style-type: none"> <li>- Objects of the take-over test;</li> <li>- Participants directly engaged in the take-over test; time and location of the take-over test;</li> <li>- Bases for the take-over test;</li> <li>- Assessment of the quality of the performed work items or construction phases;</li> <li>- Take-over test conclusions.</li> </ul> <p>→ The Employer must lead the checking and acceptance procedure.</p>

**All parties struggling**

Various opinions on slow inspection process in Vietnam construction projects were heard during interview conversations, and some of representative quotes are presented. Employers struggling to make technical judgments based on their limited knowledge instead of relying on the engineer's expertise, and frequent involvement of non-contract parties as inspectors were some commonly mentioned issues. The following quote describes a situation where the employer is struggling to make decisions based on their limited technical knowledge:

*"The checker sometimes doesn't have enough experience to approve... sometimes they need everything... for example for some simple structure they have experienced, they know very well and no need to ask designer to submit design calculation sheet. But for complicated structures they ask for additional calculation support, and we have to begin with the basics... explain them from basic calculations."*

– Vietnamese Engineer working for an international consultant

This quote describes an example situation where the employer is overly insistent on minor issues, which then could result in approval delays:

*"The Employer and the local authority have strong power regarding inspection. The problem is that even good Contractor cannot construct the road exactly matching the drawing. Highway construction is different from building work. So, inspection delays occur due to some very minor differences as per the approved drawing and the inspector try to make issues."*

– Vietnamese Site Manager

This quote describes a situation where there is a limited number of staff in employer organization who can sufficiently understand technical aspects of the project:

*"[In our project] there are only two staff members in the employer organization that are capable of conducting a normal discussion on project problems. Rests of the staff don't have the capacity to understand.... Still this is better than other projects [in Vietnam]. We are lucky to have these two key persons; everything goes through these two persons."*

– Project Director of a Japanese consultant

This quote explains the employer's burden of making accurate decisions due to direct legal responsibility imposed by Vietnam construction law, which may be a possible explanation for their delayed decision making behavior frequently observed by project participants:

*"The government organizations put complete responsibility of decisions to the people who are directly making the decisions. 'If you agree on something, you are responsible'. That's why they are hesitant to accept or approve anything."*

– Planning Manager of a Korean contractor

The quote describes how a third party (non-contract) is often involved in the project in Vietnam due to conditions under the regulation, which may easily lead to delays and additional work to be performed by the contractor:

*“Vietnam regulations require involvement of many third parties (outside the Contract) but who bear no responsibilities if any shortcomings occurred. This leads to time consuming interim process. The Employer has no budget to employ a qualified inspector is other issue of concern.”*  
 – Vietnamese Contract expert

Vietnam currently lacks highly motivated and capable personnel in the public sector due to underdeveloped human resources management. Employment is often based on personal relationships and the staff salaries relatively lower than the comparable positions at the private sector. Hence, talented individuals tend to be concentrated in the private sectors. With employer's staffs often under experienced and below the capacity to handle large-scale international projects, they try to build consensus by having more people and organizations involved in the approval process. In this way, their basis for approval is strengthened and the responsibility is dispersed. Yet, the length of the entire process becomes very long and indefinite.

#### **4.3.2.4 Interim payment delay**

Delay in interim payment was another frequently observed issue in international construction projects in Vietnam. Contractors were directly affected by interim payment delays since they influenced the project cash-flow and hence their ability to make progress with their project. International contractors who are familiar with the use of FIDIC international contract from other countries were frustrated with the different treatment of interim payment process by the Vietnamese project employers.

#### **Contract and legal conflicts**

Several conflicts are identified between FIDIC general conditions and Vietnam regulations regarding interim payment procedure. First, while FIDIC stipulates that the engineer takes charge of authorizing interim payment certificates (IPC) Vietnam regulations does not mention the engineer's involvement, and instead the employer must authorize interim payments and take full responsibility for their decisions. Second, while FIDIC general conditions specify payment procedure to be completed within 56 days, Vietnam regulations stipulate that payment procedure must be completed within 14 days. Summary of related FIDIC conditions and Vietnam regulations are shown in Table 4.6.



Table 4.6 FIDIC and Vietnam legal conditions for interim payment procedure

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p><b>14.6 Issue of Interim Payment Certificates</b> The Engineer shall, within 28 days after receiving a Statement and supporting documents, deliver to the Employer and to the Contractor an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with all supporting particulars for any reduction or withholding made by the Engineer on the Statement if any. <u>An Interim Payment Certificate shall not be withheld for any other reason...</u> The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate.</p> <p><b>14.7 Interim Payment</b> The Employer shall pay to the Contractor: <b>b.</b> the amount certified in each Interim Payment Certificate <u>within 56 days after the Engineer receives the Statement and supporting documents...</u></p> <p>→ The Engineer has the full authority to approve, make adjustments when necessary, and issue Interim Payment Certificate for payment release.</p>	<p><b>Article 81. Payment and settlement in construction activities</b> <b>1.</b> The contractors shall have to compile dossiers on payment or settlement of already performed work volumes. The Employer shall have to make payment to the contractors according to the pre-acceptance tested volumes. <b>3.</b> <u>Persons responsible for payment and/or settlement shall be held responsible before law for their jobs and shall have to make compensations for damage incurred due to their late or improper payment</u> and settlement.</p> <p>→ No involvement of the Engineer regarding payment authorization. → Payment approvers are legally liable for any damage incurred due to their mistakes.</p>	<p><b>Decree No. 48/2010/ND-CP on Contracts in Construction Activities</b></p> <p><b>Article 18. Payment for construction contracts</b> <b>10. Payment time limit</b> <b>a.</b> <u>Within seven 7 working days after receiving a complete and valid payment request dossier of the contractor,</u> the Employer shall complete procedures and forward the payment request to the capital-allocating or -lending agency; <b>b.</b> <u>Within seven 7 working days after receiving a complete and valid payment dossier of the Employer,</u> the capital-allocating or -lending agency shall transfer the whole payment installment to the contractor.</p> <p>→ Payment processing turnaround period is stipulated as 14 days</p> <p><b>Article 27. Rights of the Contractor</b> <b>1c.</b> <u>To request the Employer to pay loan interests due to late payment</u> under agreements in the contract.</p> <p><b>Article 42. Responsibilities for construction contract breaches</b> <b>2d.</b> The Employer that delays payment shall pay compensation to the contractor at the overdue interest rate announced by the commercial bank at which the employer</p>

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p><b>14.8 Delayed Payment</b></p> <p>If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [Payment], the Contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [Payment], irrespective of the date on which any Interim Payment Certificate is issued.</p> <p>The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy.</p>		<p>has an account from the first day of late payment to the date of full payment to the contractor.</p> <p>→ The Employer shall pay interests to the Contractor for late payments."</p> <p><b>Decree No. 112/2009/ND-CP on Management of Work Construction Investment Expenses</b></p> <p><b>Article 29. Payment of work construction investment capital</b></p> <p>1. <u>Within 7 working days after the receipt of valid payment dossiers</u>, investment capital-paying agencies shall pay...</p> <p>2. <u>Investors shall bear responsibility before law</u> for unit prices, workloads and values proposed for payment in payment proposal dossiers.</p> <p><b>Article 25. Rights and responsibilities of the Employer</b></p> <p>2i. <u>To decide on and take responsibility for the accuracy and reasonability of values</u> which they propose investment capital-paying agencies to pay to contractors;</p> <p>2k. <u>To claim compensations or initiate lawsuits before administrative or economic tribunals to claim compensations for damage caused by the late payment by investment capital-paying agencies.</u></p> <p><b>Article 27. Rights of construction contractors</b></p> <p>5. To request payment of interests on late payments."</p>

In actual practice, interim payment procedure which the employer requires is a complicated mixture of FIDIC conditions and Vietnam regulations. The employer controls the engineer as his subordinate and influences them and the contractor to continuously revise the IPC draft until the employer is satisfied for approval. With the engineer merely acting as a messenger between the employer and the contractor, their involvement actually slows down the interim payment process even further. Within the employer's organization, there are several bureaucratic hierarchies to overcome. On top of this, payment processing period is usually extended through particular conditions. Hence, international contractors experience extreme delay compared to their experience of FIDIC-based projects in other countries. Figure 4.5 shows the differences in interim payment procedure interpreted by international contractors and Vietnam project employers.

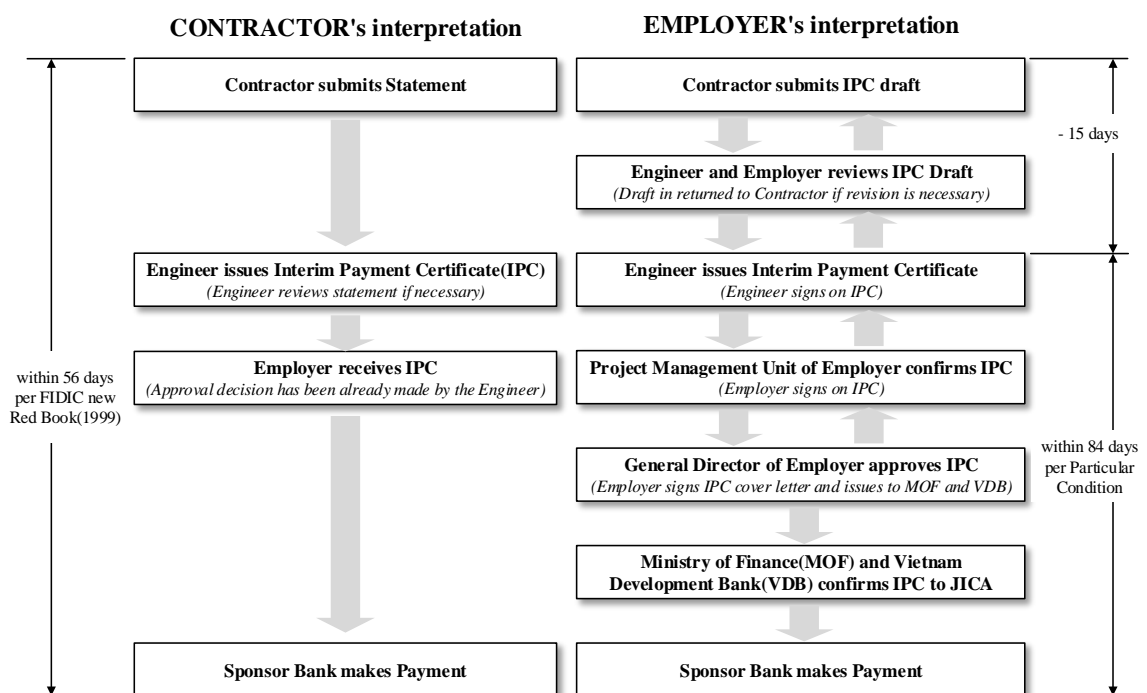


Figure 4.5 Different interpretations of interim payment procedure

### All parties struggling

Various comments on slow payment process in Vietnam construction projects were heard during interview conversations, and some of representative quotes are presented. The following quote describes how the review for payment is performed twice, once by the engineer and once again by the employer. This is typically perceived as a waste of time by both the engineer as well as the contractor.

*“[For projects] in other Asian countries, employer will pay after check and approval from the engineer for interim payment. However in Vietnam, employer will check everything again after approval from the engineer. It takes*

*“many months to get interim payment after preparation of documents.”*  
 – Construction Manager of a Japanese contractor

This quote describes how the employer in Vietnam and international contractor have different expectations on the payment procedure to be followed, which often result in interim payment delays.

*“In FIDIC, it mentions that there is no need to follow the local practice but if we do not follow, the payments are suspended. We struggled with our first IPC (interim payment certificate) which took us 3 months, and I resubmitted 8 times. Because I am the QS (quantity surveyor) for this project, I received a lot of warnings from the employer for not submitting all the requested original documents and not following the local practice. I was threatened to be replaced... Normally in other countries we just need to submit the summary because all other documents are checked and signed at the site by the engineer. The employer here wants to see all of original documents by themselves.”*  
 – Planning Manager of a Korean contractor

This quote also explains how different payment procedure is expected from the Vietnamese employers, compared to project employers in other countries.

*“So when we issue a payment request statement the engineer issues a payment certificate and normally that certificate must not be altered by the employer, because the Engineer has the power to make measurement and determination. But in Vietnam, after issuing IPC by the engineer, this document goes through the employer’s management office and they make comments and return to the engineer, which then the engineer returns to us. Even if the certificate is issued by the engineer, we should revise and resubmit... For other countries that follow FIDIC contract, it is not like this.”*  
 – Project Manager of a Korean contractor

This quote describes the employer’s high perceived risk of making wrong decisions, which appear to naturally delay their actions.

*“The employer member who signs the approval of payment he must take the full responsibility. If some mistakes are found in document, he must take the responsibility. That’s why only a minor mistake makes them reject the whole documents. That is the problem... That is why the employer also wants to pay, but because of the lack of documentation, they cannot sign. That is the situation.”*  
 – Project Director of a Japanese consultant

As a bottom tier of the bureaucratic hierarchy, project employer’s staff members for public construction projects in Vietnam bear an enormous pressure for having to personally sign on payment approvals. Their decisions are known to be monitored by several government bodies, such as the Construction Inspectorate and the Economic Police, and hence a minor negligence during the review process can end up

costing their jobs. In fact an interviewee mentioned that if a payment approval is made too quickly, the approver in charge can be suspected for involvement of illegal transactions by the Economic Police. As a measure for spreading the responsibility risk, the employer organization builds a wide consensus through hierarchical approval process. In addition, many copies of comprehensive supporting documents are demanded for review, and for presenting to the higher authority as a basis for their approval, which appears to slow down the payment procedure furthermore.

#### ***4.3.2.5 Variation approval delay***

International construction projects are typically complex and large in scale, and hence many unforeseen variations occur throughout the construction phase. Variations may lead to additional work by the contractor which the project employer is obligated to compensate. In Vietnam projects, international participants expressed that this additional payment approval process was even slower than the interim payment process because the engineer as well as the employer (typically labeled as Project Management Unit or PMU in Vietnam) do not have the clear authority to approve additional payments, or increase project budget in other words. The final decision is to be made at the government ministry level. Decisions may not be finalized for months and years from the initial payment request date. Hence, receiving the provisional payment before carrying out actual additional works was said to be unrealistic in Vietnam projects.

#### **Contract and legal conflicts**

A conflict exists between FIDIC MDB 2006 general conditions and Vietnam regulations regarding variation procedure. Upon approval by the employer, FIDIC stipulates that variation work shall be handled between the contractor and the engineer. However under Vietnam construction law, any adjustment in contract or design must be permitted by the investment decider. Investment decider is either the Prime Minister or one of ministers for ODA-funded construction projects. Due to this condition, the employer organization is reluctant to decide even on minor variations, and large-scale international construction projects are constantly faced with variations throughout the project. Interestingly, Decree 48/2010/ND-CP on Contracts in Construction Activities specifies that the Employer is permitted to decide on additional costs that does not exceed the pre-approved contingency budget (usually additional 15%). This appears to conflict with the approval requirement specified in the Vietnam Construction law.

Even with the Employer having the authority to approve minor variations according to the Decree 48, they do not dare to approve by themselves due to legal responsibility they must potentially bear. Construction law and secondary regulations repeatedly stipulate that whoever making the decision on contract or design adjustment must take the legal responsibility. FIDIC conditions and Vietnam regulations on variation procedure are summarized in Table 4.7.

Table 4.7 FIDIC and Vietnam legal conditions for variation procedure

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p><b>13.1 Engineer's Duties and Authority</b> The Engineer shall obtain the specific approval of the Employer before taking action under the following Sub-Clauses of these conditions:</p> <p><b>a.</b> Agreeing or determining an extension of time and/or additional cost</p> <p><b>b.</b> Instructing a Variation, except;</p> <p>ii. if such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the Contract Data.</p> <p><b>c.</b> Approving a proposal for Variation submitted by the Contractor.</p> <p><b>13.3 Variation Procedure</b> The Engineer shall, as soon as practicable after receiving a variation proposal, respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.</p> <p>Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.</p> <p>Each Variation shall be evaluated in accordance with Clause 12 [Measurement and Evaluation], unless the Engineer instructs or approves otherwise in accordance with this Clause.</p>	<p><b>Article 40. Adjustment of work construction investment projects</b></p> <p><b>2.</b> Adjusted contents of work construction investment projects <u>must be permitted by the investment deciders</u> and must be re-evaluated. <u>Persons deciding on adjustment of work construction investment projects shall be held responsible before law for their decisions.</u></p> <p><b>Article 60. Changes in work construction designs</b></p> <p><b>1.</b> The already approved work construction designs shall be changed only in cases where the adjustment of work construction investment projects requires changes in designs or in other necessary cases.</p> <p><b>2.</b> <u>Persons competent to decide on changes in designs shall be held responsible before law for their own decisions.</u></p> <p><b>3.</b> The Government specifies the changes in work construction designs.</p> <p>→ Variations must be approved at the ministry level. → Approver shall be held legally liable for their decisions.</p> <p><b>Article 76. Rights and obligations of work construction contractors</b></p> <p><b>1.</b> Work construction contractors have the following rights:</p> <p><b>a.</b> To reject unlawful requests;</p> <p><b>d.</b> To stop the work construction if the employers fail to</p>	<p><b>Decree No. 48/2010/ND-CP on Contracts in Construction Activities</b></p> <p><b>Article 26. Obligations of the Employer</b></p> <p><b>2j.</b> To promptly consider and approve in writing the contractor's proposals related to engineering and construction in the course of work construction</p> <p><b>Article 27. Rights of the Contractor</b></p> <p><b>1a.</b> To propose to the principal a work volume arising outside the contract; <u>to refuse to perform jobs outside the contract not yet agreed upon by the two parties and unlawful requests of the principal.</u></p> <p>→ The Contractor has the right to refuse to perform the variation work until final approval is granted.</p> <p><b>Article 37. Adjustment of construction contracts</b></p> <p><b>2.</b> In case the adjustment of a construction contract will not result in a change in investment objectives or an excess of the approved total investment, the Employer may decide on the adjustment. In case the adjustment will result in a change in investment objectives or an excess of the approved total investment, it must be permitted by the person with investment-deciding competence.</p>

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p>→ While approval is first required from the Employer, specific variation procedure is handled only between the Contractor and the Engineer."</p>	<p>strictly perform their commitments in the signed contracts, thus causing obstacles and damage to contractors;  <b>e.</b> To request compensations for damage caused due to faults of the Employer.</p> <p>→ The Contractor has the right to refuse to perform the variation work until final approval is granted.</p> <p><b>Article 109. Adjustment of contracts in construction activities</b></p> <p><b>1.</b> Contracts in construction activities shall be adjusted only when the investment deciders so permit in the following cases:  <b>a.</b> When work construction investment projects change;  <b>2.</b> Persons who permit the adjustment of contracts shall be held responsible before law for their decisions and have to make compensations for damage caused by such decisions.</p> <p>→ Variations must be approved at the ministry level.  → Approver shall be held legally liable for their decisions.</p>	<p>→ Cost increase not exceeding the pre-approved contingency budget may be decided by the Employer, otherwise ministry level shall decide."</p>

**All parties struggling**

Many perspectives regarding delay in variation approval in Vietnam construction projects were gathered during interview conversations, and some of representative quotes are presented. A frustration by a project manager of an international contractor can be observed on the following quote, for unclear and slow variation payment approval procedure in Vietnam construction projects:

*“Payment is impossible [for our project]. It takes us six months to one year to get any response regarding payment request. Some requests have to go through the entire Vietnamese administration. For additional payment requests PMU does not have the authority, so they get passed around to Ministry of Transport, Ministry of Finance and finally to the Ministry of Planning and Investment. In the end, somehow the documents seem to get lost...”*

– Project Manager of a Korean contractor

This quote describes how the approval procedure for variation order is perceived to be different, by an international participant, in Vietnam compared to international construction projects in other countries.

*“In normal practice [in other countries] when we request for variation, before we work on the site we submit quantity estimate to get a tentative payment beforehand. But in Vietnam, we can never get the payment before or during the work. It has to be after the work is completed, due to a long approval procedure, and some variation transactions take more than one year.”*

– Planning Manager of a Korean contractor

This quote describes how payment for variation work is sometimes unsettled even after the completion of the project.

*“In many cases the contractor has to start the variation work without agreement on the price. That is a huge issue, because it will take another three, four, five years or more before deciding on the price of the construction that is finished four years back. So the contractor needs to pay attention. Without having consent, without having agreement they should not start the work. They should not rely on verbal instructions.”*

– Contract Manager of a Japanese contractor

This quote provides a perspective of the employer side, and from his point of view, strict documentation process they need to follow is the main cause of delayed decisions on variation orders.

*“For variations and change orders, we need to own all the document, quantity, quality, certifications, we say all documents. And, “who is in charge? Find those*



*people.” For example you, Mr. Kim [is in charge]. Mr. Kim is a foreign consultant. But he not available... he already demobilized, so he not available. We have to bring this document to Kim in Seoul [for his signatures]. That is why the document [process] takes very long time. Before employer makes variation order, we need time... or how [else] can we decide?”*  
 – Deputy General Director of an employer

This quote shows how international contractor perceives the employer’s interference on the engineer’s role to be the cause of inefficient variation process in Vietnam.

*“The consultant has no authority. The final decision is always made by the client. Effectively speaking, the engineer becomes burdensome for us to do our job. Why even bother to make a claim or variation order to the engineer if the very claim has to go through the employer? It translates into inefficient use of time... wasted time.”*  
 – Project Manager of a Korean contractor

In Vietnam, project employer’s decisions are known to be strictly monitored by several government bodies such as the Construction Inspectorate and the Economic Police. As a result, a minor negligence on regulation requirement can become the basis for them to lose their jobs. According to an interviewee, the Construction Inspectorate is entitled to withhold any payment transactions approved by the employer for investigation. Hence, the employer naturally tries to avoid the risk by requesting the relevant higher authority for judgment on variation order approvals. The situation may become more complicated if the employer receives two different opinions from different authorities, which the matter may easily go unsettled for years. The following quote provides such example:

*“Ho Chi Minh City People’s Committee could not make project decisions because they were very afraid. There are many tiers, first the PMU they are afraid to make decisions by themselves. Next tier, Ho Chi Minh City People’s Committee they also afraid to make decisions without consent from the higher authority. Then they ask the same question to MOF and MOC, and they get two different answers so they get in trouble. This kind of things always happened. I don’t know why they cannot organize a joint meeting to resolve the issues... I have seen this kind of things so many times.”*  
 – Contract Manager of a Japanese contractor

This quote also shows the general fear PMU staff has for making decisions on additional cost matters.

*“PMU never dare to approve cost increase without reporting to the higher authority for instruction and/or approval. Even if it is within already-approved project*

*contingency.”*  
*– Vietnamese Contract Expert*

According to several interviewees, another cause for delayed decision on variation is that disagreement tends to arise between local and state government on who should pay for the additional cost. Regulations frequently change and both state and local government can issue their own set of regulations, hence continuously creating newly conflicting and grey areas. Due to these unclarified local procedures, it is not unusual that some variations are unsettled even after construction project have been completed.

#### ***4.3.2.6. Excessive documentation required by employer/authority***

International contractors and consultant engineers expressed that project employers and government in Vietnam required many copies of detailed supporting documents in all originally signed format regarding various approval matters. The problem was that, the exact required supporting documents were often unclear, which often led to number of re-submissions. Thus, long preparation hours as well as materials were consumed for going through each approval item. Subsequently, the approver on the employer side needed to spend long hours to check on those submitted documents.

#### **Contract and legal conflicts**

Three problematic areas that seemingly caused excessive documentation requirement or repeated re-submissions that resulted in perception of excessive documentation required by the employer in Vietnam international construction projects were identified. One area was found in the international contract, while the other two areas were found in Vietnam regulations. Regarding excessive supporting documentation requirement for interim payment, after a lengthy investigation, a group of international consultant engineers realized that the probable cause was the Vietnamese employers' strict interpretation of the requirements under FIDIC general conditions.

As shown in Table 4.8, FIDIC MDB GCC 2006 Sub-clause 14.3 [Application for Interim Payment Certificates] directs to Sub-clause 4.21 [Progress Reports] for supporting document requirements for interim payment certificate. Requirements under Sub-clause 4.21 clause (e) include copies of quality assurance documents, test results and certificate of Materials. According to an interview participant representing an international contractor, based on his experience, these documentation requirements were not strictly followed in international projects in other countries that used FIDIC based contracts. While all detailed documents were submitted to the employer for the request of the final payment, for monthly interim payment the employer did not require all the requirements specified in Sub-clause 4.21. However in Vietnam, the employers were reported to strict follow all the requirements stated under Sub-clause 4.2.

On the other hand, the documentation requirements for contract payment dossiers stipulated in Article 19 of Decree No. 48/2010/ND-CP on Contracts in Construction Activities appear to be relatively reasonable. The following show conditions for documentation requirement under Article 19:

**Article 19. Construction contract payment dossiers**

1. Construction contract payment dossiers shall be made by contractors in conformity with types of construction contract, construction prices and agreements in contracts. Payment dossiers (including also enclosed forms, if any) must be clearly indicated in construction contracts and certified by principals.
2. A contract payment dossier comprises the following major documents:
  - c. For adjustable unit-price contracts:
    - A written record of takeover test of the actually completed volume (larger or smaller than the contractual volume) in the payment period, certified by representatives of the principal or the consultant (if any) and the contractor;
    - A calculation table of unit prices adjusted based on market price fluctuation (also referred to as payment unit prices) according to agreements in the contract, certified by representatives of the principal or consultant (if any) and the contractor;
    - A calculation table of the values of jobs without any unit prices indicated in the contract (if any), showing both volumes and unit prices of these jobs, certified by representatives of the principal or consultant (if any) and the contractor;
    - The contractor's payment request which must have the following details: value of the volume completed under the contract, value of the additional job volume (if any), deduction of advances and the value requested to be paid in the period following the clearing of these amounts, certified by representatives of the principal and contractor.

Based on comparison of documentation requirement under FIDIC MDB 2006 GCC and Vietnam regulation for interim payment, it appears that the unreasonable conditions specified under the international contract were causing the excessive documentation requirements by the project employers in Vietnam.

Several interview participants representing international contractors also mentioned incidents when they were required by the employers to re-submit previously approved documents using a newly updated format. This was reportedly due to an update of a major regulation. Based on investigations, it appears that the interviewees were referring to the introduction of Decree No. 48/2010/ND-CP on Contracts in Construction Activities. With the effective date of this Decree being summer of 2010, many interview participants' projects were affected by this change. According to Article 52. Organization of implementation:

## Article 52. Organization of implementation

1. Construction contracts performed before the effective date of this Decree are not required to comply with this Decree. For contracts in the process of negotiation and not yet concluded, investment deciders shall decide on the application of this Decree.

### **Article 52. Organization of implementation**

1. Construction contracts performed before the effective date of this Decree are not required to comply with this Decree. For contracts in the process of negotiation and not yet concluded, investment deciders shall decide on the application of this Decree.

Due to the sentence “investment deciders shall decide on the application of this Decree”, many on-going projects were required to comply with this new Decree 48 which introduced several major changes in contract procedure as well as use of newly standardized documentation forms.

Another example of unclear area identified that can potentially results in unnecessary re-submissions was identified in Decree No. 49/2008/ND-CP on Amendments of Decree No. 209/2004/ND-CP on Quality Management of Construction Works. According to Clause 2 of Article 3 Transitional handling:

### **Article 3. Transitional handling**

2. After this Decree takes effect, investors may issue by themselves new forms of take-over test records or use forms of take-over test records specified in construction and take-over test standards or in other legal documents, which, however, must have all the details specified in Clauses 2, 3, 5, 6 and 7, Article 1 of this Decree.

By providing flexible options that the project investor can decide, there is a potential for miscommunication among project parties which can lead to unnecessary re-submissions of take-over test records. Existence of these unclear and unreasonable areas, if not addresses prior to contract signing, may easily cause conflicts regarding excessive documentation requirements by the employer. The related contract and legal conditions discussed above are summarized in Table 4.8.

Table 4.8 FIDIC and Vietnam legal conditions affecting excessive documentation requirement

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p><b>14.3 Application for Interim Payment Certificates</b> The Contractor shall submit a Statement in six copies to the Engineer after the end of each month. in a form approved by the Engineer, shaming in detail the amounts to which the Contractor considers himself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [<i>Progress Reports</i>].</p> <p><b>4.21 Progress Reports</b> Unless otherwise stated in the Particular Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.</p> <p>Each report shall include:</p> <ul style="list-style-type: none"> <li>(a) charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [<i>Nominated Subcontractors</i>]),</li> <li>(b) photographs showing the status of manufacture and of</li> </ul>	<p><b>Article 80. Pre-acceptance test and hand-over of construction works</b> <b>4.</b> The work construction investors shall have to organize the pre-acceptance test and reception of works. Persons taking part in the pre-acceptance test and hand-over of works shall bear personal responsibility for products certified by them in the course of work construction and work hand-over.</p>	<p><b>Decree No. 48/2010/ND-CP on Contracts in Construction Activities</b></p> <p><b>Article 19. Construction contract payment dossiers</b> <b>2.</b> A contract payment dossier comprises the following major documents: <b>c.</b> For adjustable unit-price contracts:</p> <ul style="list-style-type: none"> <li>- A written record of takeover test;</li> <li>- A calculation table of unit prices adjusted based on market price fluctuation according to agreements in the contract;</li> <li>- A calculation table of the values of jobs without any unit prices indicated in the contract;</li> <li>- The contractor's payment request which must have the following details: value of the volume completed under the contract, value of the additional job volume, deduction of advances and the value requested to be paid in the period following the clearing of these amounts.</li> </ul> <p>→ Requirement for payment is relatively simpler compared to FIDIC's.</p> <p><b>Article 52. Organization of implementation</b> <b>1.</b> Construction contracts performed before the effective date of this Decree are not required to comply with this Decree. For contracts in the process of negotiation and not yet</p>

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p>progress on the Site;</p> <p>(c) for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:</p> <p>(i) commencement of manufacture, (ii) Contractor's inspections, (iii) tests, and (iv) shipment and arrival at the Site;</p> <p>(d) the details described in Sub-Clause 6.10 [<i>Records of Contractor's Personnel and Equipment</i>];</p> <p>(e) copies of quality assurance documents, test results and certificates of Materials;</p> <p>(f) list of notices given under Sub-Clause 2.5 [Employer's Claims] and notices given under Sub-Clause 20.1 [<i>Contractor's Claims</i>];</p> <p>(g) safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and</p> <p>(h) comparisons of actual and planned progress, with details of any events or circumstances which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.</p>		<p>concluded, investment deciders shall decide on the application of this Decree.</p> <p>→ Decree 48 introduced some major changes in contract procedures as well as use of newly standardized documentation forms. Many international projects were required to update the on-going project to conform to Decree 48, including re-documentation of already approved parts of the work.</p> <p><b>Decree No. 49/2008/ND-CP on Amendments of Decree No. 209/2004/ND-CP on Quality Management of Construction Works</b></p> <p><b>Article 3. Transitional handling</b></p> <p>2. After this Decree takes effect, investors may issue by themselves new forms of take-over test records or use forms of take-over test records specified in construction and take-over test standards or in other legal documents, which, however, must have all the details specified in Clauses 2, 3, 5, 6 and 7, Article 1 of this Decree.</p> <p>→ potential to create conflicts on use of inconsistent forms</p>

### All parties struggling

Many complaints about excessive amount of supporting documents requested by employers in Vietnam were heard during interview conversations, and some of representative quotes are presented. The first two quotes describe international contractors having to re-submit previously approved documents due to introduction of a new Decree in the middle of the project.

*“Decrees change every two [or] three years. But you see projects usually [last] more than three years. The [decree] change will affect every project. For example, our project started from 2010 so we will apply the law [created] before 2010 until we finish the project. But suddenly a new decree is introduced in 2011, and [the employer] wants to apply this [new] decree to our project. That means our project will be affected for next one or two years. We cannot apply. For the criteria or standard, ok we can update it but revising our work... that affects our cost and our resources.... everything.”*

– Vietnamese Site Manager

*“During construction period some regulation changed. For example, first two years we followed this law to submit documents... the rule changed and the employer requested us to change all documents to follow the new regulation. Even those previously approved records must be changed. Many documentation work all the time...”*

- Construction Manager from a Japanese contractor

An interviewee commented that a Japanese contractor once had to submit a 3-meter amount of supporting documents for an interim payment certificate, which every page had to be hand signed. This magnitude of excessive documentation is not unusual in current Vietnam construction industry. The following describes other cases of excessive documentation in Vietnam construction projects:

*“I have just finished this project... it was a building project. And our employer asked us to prepare 12 sets of QA/QC documents and as-built drawing for all apartment units... there are almost 1000 units [in this project]. It took us one month just to print and sign all of them... Both employer and the government need to have all the evidence.”*

– Group Manager of a Korean contractor

The following quote shows an international contractor’s perception on why Vietnam employers behave differently from employer in other countries. He perceives that lack of trust among project participants in Vietnam is the reason for unusually excessive documentation required by project employers.

*“The difficulty of the practice [in Vietnam] comes from mistrust. The high position in Hanoi, they don’t trust people at the site especially even though all the staff belongs to their side, they don’t trust them. They want to see all the documents. There are no trusts within the organization. The people who approve payments or variations, they want to see everything documented.”*

*Normally in other countries we just need to submit the summary because all other documents are checked and signed at the site by the Engineer.”*  
 – Planning Manager from a Korean contractor

Due to strict bureaucratic government structure, as well as legal emphases on personal liabilities for all decisions made, heavy documentation is regarded essential proof for maintaining one's job in Vietnam. Reportedly, the State Inspectorate or the Economic Police can investigate anyone for any matter at any time. Furthermore, this environment puts bureaucrats in the position to demand informal incentives to those who are solely dependent on their approvals. Also, because the employer bears personal legal responsibility for all approvals made during construction process, they make their best efforts to satisfy all requirements under local regulations as well as FIDIC contract conditions. This also explains why the engineer's duties are often taken over by the employer, especially regarding payment matters.

#### **4.3.2.7 Permit/license approval delay**

Local government, such as Ho Chi Minh People's Committee and Hanoi People's Committee, are involved in construction projects with not only completing the land acquisition but also issuing various construction related permits and licenses. Many contractors and employers complained that permit and license approval process were unclear and took extremely long time.

#### **Contract and legal conflicts**

The main issue regarding permit and license approval delay appears to be that the delay is caused by someone, i.e. the governing local authority, who is not directly involved in the construction contract. Hence, it is difficult to enforce strict responsibility through contract condition. Sub-clause 2.2 [Permits, Licences or Approvals] in FIDIC MDB 2006 GCC is as follows:

##### **2.2 Permits, Licenses or Approvals**

The Employer shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:  
 b. any permits, licenses or approvals required by the Laws of the Country.

Sub-clause 2.2 does not appear to be strongly stated enough to motivate the employer to actively provide assistance to the contractor for obtaining permits and licenses approval from the local authorities. In fact, many interviewees mentioned that their employers rarely provided necessary assistance. Sub-clause 8.5 [Delay Caused by Authority] in FIDIC MDB 2006 GCC may be applied for permit and licenses approval delays by local authorities, which states that:

##### **8.5 Delays Caused by Authorities**

If the following conditions apply, namely:



- (a) The Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country,
  - (b) these authorities delay or disrupt the Contractor's work, and
  - (c) the delay or disruption was Unforeseeable,
- then this delay or disruption will be considered as a cause of delay under sub-paragraph (b) of Sub-Clause 8.4 [Extension of Time for Completion].

Unless additional specific directions are given through particular conditions, it appears to be difficult to apply Sub-clause 8.5 for permit and licenses approval delays by local authorities. First, the permit and licenses approval procedures are unclear to begin with; hence, it is difficult to provide the evidence that the contractor has diligently followed the procedures laid down by the relevant local authority. In theory, the local authority can make up a number of reasons that the contractor did not diligently follow the procedure. Or, they can continuously reject the contractor's permit or license application for number of reasons, and then it becomes difficult for the contractor to argue that they have followed the procedure diligently. Second, it is also appears to be difficult for the contractor to prove that the permit or license approval delay actually disrupted their work, if their applications were continuously sent back for re-application.

Looking at the Vietnam's side of the procedural requirements, Article 67 of Vietnam construction law states that:

**Article 67. Responsibilities of the agencies granting construction permits**

- 2. To grant construction permits within no more than 20 working days after receiving complete and valid dossiers.
- 4. Persons competent to grant construction permits shall be held responsible before law and make compensations for damage caused by their wrong granting or delayed granting of construction permits.

Also, Article 25 of Decree 12 states that:

**Article 25. Responsibilities of construction licensing agencies**

- 2. To supply in writing information on the grant of construction permits at the request of applicants. The time for information supply is 7 working days as from the date of receipt of a request.
- 4. To grant a construction permit within 20 working days from the date of receipt of a complete and valid dossier.
- 5. To take responsibility before law and compensate for damage caused by improper licensing or licensing behind the time limit specified in Clause 4 of this Article.

Both Vietnam construction law and Decree 12 appear to be too vaguely written to be enforceable. Because the granting procedure is not clearly specified, it is difficult to

judge if the delay is due to the fault of the local authority or the fault of the contractor. For conflicts caused by permit and license approval delays, it appears that lack of clearly enforceable conditions is the main issue that has not been adequately addressed.

Table 4.9 FIDIC and Vietnam legal conditions on obtaining permit and licenses

CONFLICT IN CONTRACT/LEGAL PROCEDURE		
FIDIC MDB 2006 GCC	Vietnam Construction Law (No. 16/2003/QH11 of November 26, 2003)	Vietnam Secondary Regulations
<p><b>2.2 Permits, Licences or Approvals</b></p> <p>The Employer shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:</p> <p><b>b.</b> any permits, licenses or approvals required by the Laws of the Country.</p> <p><b>8.5 Delays Caused by Authorities</b></p> <p>If the following conditions apply, namely:</p> <p>(a) Contractors has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country,</p> <p>(b) These authorities delay or disrupt the Contractor's work, and</p> <p>(c) The delay or disruption was Unforeseeable,</p> <p>then this delay or disruption will be considered as a cause of delay under sub-paragraph (b) of Sub-Clause 8.4 [<i>Extension of Time for Completion</i>]</p>	<p><b>Article 67. Responsibilities of the agencies granting construction permits</b></p> <p><b>2.</b> To grant construction permits <u>within no more than 20 working days</u> after receiving complete and valid dossiers.</p> <p><b>4.</b> Persons competent to grant construction permits shall be held responsible before law and <u>make compensations for damage caused by their wrong granting or delayed granting of construction permits.</u></p> <p><b>Article 68. Rights and obligations of construction permit applicants</b></p> <p><b>1.</b> Construction permit applicants have the following rights:</p> <p><b>b.</b> To lodge complaints and denunciations against law-breaking acts in the construction permit granting</p>	<p><b>Decree 12/2009/ND-CP on Management of Investment Projects on the Construction of Works</b></p> <p><b>Article 25. Responsibilities of construction licensing agencies</b></p> <p><b>2.</b> To supply in writing information on the grant of construction permits at the request of applicants. The time limit for information supply is 7 working days as from the date of receipt of a request.</p> <p><b>4.</b> To grant a construction permit <u>within 20 working days</u> from the date of receipt of a complete and valid dossier.</p> <p><b>5.</b> To take responsibility before law and <u>compensate for damage caused by improper licensing or licensing behind the time limit specified in Clause 4 of this Article.</u></p>

### All parties struggling

Various perspectives on slow permit and licenses approval process by local authorities were collected during interview conversations, and some of representative quotes are presented. The first quote describes the unclear approval procedure as well as continuous re-submissions are necessary to resolve one single issue with local authorities in Vietnam:

*“The local agency takes a long time to review especially regarding the change matter, and it sometimes delays our schedule... The approval process is complicated. One of my staff must deliver the document and explain to them, and also find out what they need in addition. We do this many times for each approval. That’s why I am afraid of design changes.”*  
 – Deputy Project Director of a PMU

This quote explains how the local authority prefers to deal with the local representative, instead of international participants, and also how the ministry level has limited control over the local governments.

*“From the beginning [of this project] we tried to contact the local authority regarding the environmental permission... but impossible... finally we asked our local sub-contractor for help because they can easily obtain, but for foreign contractors it is very difficult. Even the vice minister of MOT held a meeting for all local authorities and urged them to make approvals as quickly as possible, but nothing happened.”*  
 – Project Manager from a Korean contractor

This quote mainly describes the bureaucratic and inflexible attitude of local authorities. It shows that even the employer organization has limited control power when it comes to dealing with the local authorities.

*“Many variation orders are related to the local agency. And it is not easy... I think the most important thing for projects in Hanoi is how to escape from the local agency... They don’t like changes; they want to stay with the original. We try to finish in time for this project, but it’s not their responsibility so they easy to ignore us... I think the most difficult part is getting approval from the local agency, after that MOT decision is no problem. In my opinion, around Hanoi one department is one kingdom.”*  
 – Deputy Project director of a PMU

There appears to be mixed views on why local authorities might be delaying their approval decisions. The first view is that due to strong personal liability imposed by law, as seen from Article 67 of Vietnam construction law and Article 25 of Decree 12, it may be scaring them from making quick confident decisions. The following quote describes such perception made by an international consultant engineer.

*“The major motivation for them is protecting themselves, because it is very dangerous situation they will be fired under wrong decision and lose their job. There is a rumor that economic police is monitoring every decision they make. So naturally they try to make decisions only based on regulation, but regulations are not specific and contract can not specify all the details.”*

*– Contract Manager of a Japanese consultant*

The second view is that local authorities’ such behaviors are due to lack of clear enforcement for their irresponsible acts. This quote shows that, the lack of motivation to make approval decision by local authorities is possibly due to monetary issues.

*“But our sub-contractor can get it... it’s all about money talk... for local sub-contractors they can get permits in one or two months. For international contractors it takes maybe one or two years.”*

*– Project Manager from a Korean contractor*

In addition, local authorities are perceived to have enough power to take legal actions should the project employer not obey their requirements. The following quote is from a deputy project director of a PMU:

*“If we don’t follow the local agency maybe they will make big trouble. If we don’t follow the local agency, may be they will call police. If we do something wrong the police come immediately. So they are very powerful.”*

*– Deputy Project Director of a PMU*

#### ***4.3.2.8 Recurring contractual conflicts causing vicious cycle in Vietnam construction projects***

With construction projects in Vietnam commonly experiencing schedule delays right from the beginning with delays in site handover by local authorities, the employer must request for increase in project budget to the higher authority. The budget approval process often takes more than a year, and as other recurring contractual conflicts discussed in this section mount to further slowdown of the project progress, the overall time for completion must be further extended. By the time the initial budget increase request is finally approved, it is insufficient to cover the current status of project expenditure which then another request for budget increase must be made. This vicious cycle is known to usually last until the project gets completed. Figure 4.6 shows the vicious cycle in Vietnam construction projects.

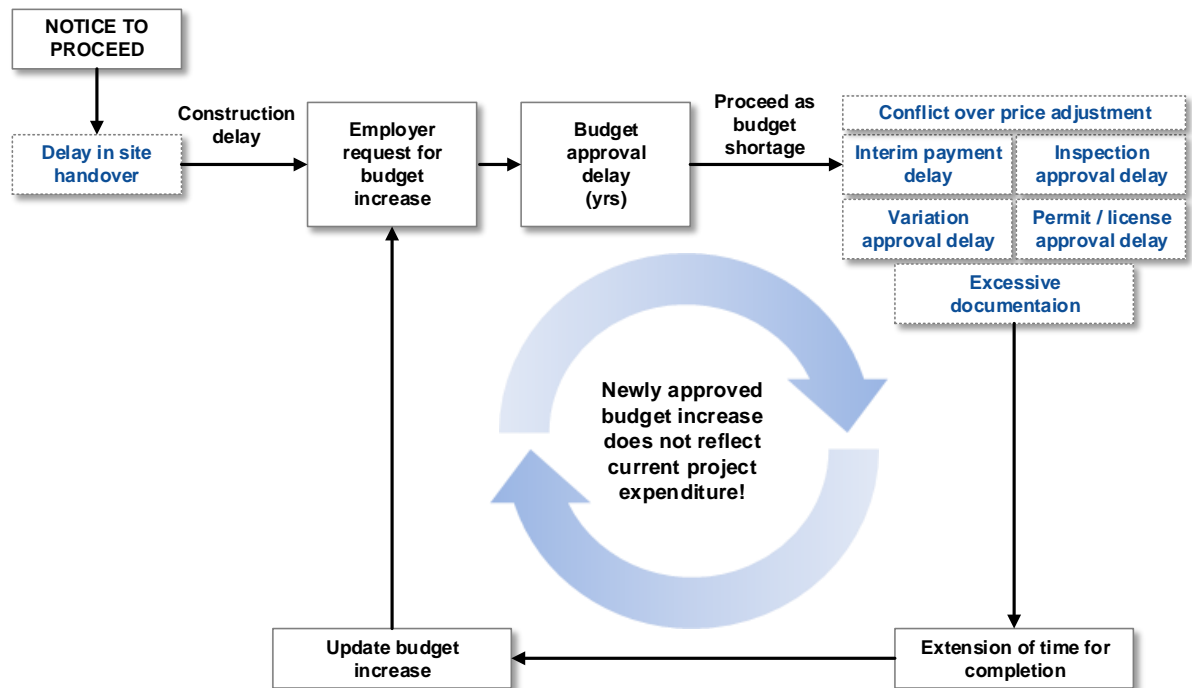


Figure 4.6 Delay vicious cycle observed in Vietnam construction projects

### 4.3.3 From principle to compromise

The category ‘from principle to compromise’ represents the usual strategy undertaken to overcome contractual conflicts. Interview participants have provided various perspectives on how contractual conflicts are typically handled, or avoided, in Vietnam international construction projects. It was clear that principle approaches were abandoned under many circumstances. The following presents sub-categories within this category, and representative quotes are shown with commentaries.

#### 4.3.3.1 Sacrificing profit

Based on the interview data, international contractors were often seen as making financial sacrifices in order to satisfy the employer’s various needs throughout the project. In order to avoid project delays, contractors either had to spend additional money to take care of minor tasks that the employer is responsible for. Also, to avoid negative relationships with the employer, contractors often ate the cost when the employer did not fully compensate for additional works. The following describes how contractors typically did not get compensations for delay damages caused by Vietnam employers:

*“In Vietnam, contractors can never receive compensation caused by project delay even when such delay is due to the employer’s fault.”*

*– A Vietnamese contract expert*

This quote describes how the contractor had made too much financial sacrifices throughout the project phase, and they desperately needed to get compensations from the employer for significant delay damages incurred due to delay in site handover:

*“If we are just nice to the employer to maintain a good relationship we may lose a lot of money, so we have to remain strong for this land acquisition issue. Usually there is a give and take among wide range of matters between the contractor and the employer, but at this point we have nothing else to get from the employer other than additional cost for the EOT. We compromised many things for the employer during the construction.”*  
 – Planning Manager of a Korean contractor

This quote describes how employers in Vietnam wait and postpone some of their duties, especially the ones that require spending of unofficial cost. Eventually, it is contractors who must take care of these duties in order to avoid further delays:

*“If the employer does not complete their responsibilities that are mentioned in the contract, we have the right to claim. Such as land acquisition or obtaining the necessary licenses or permits... these are their [employer's] responsibilities but they just ignore them. Because in Vietnam, although the employer are also government staffs, they still need to spend some [informal] money to take care of these issues with other authorities. But they do not want to spend their money so they just wait. And this delays our work schedule. So even though we claim, we end up spending our money in order to proceed with our work.”*  
 – General Manager of a Korean contractor

This quote describes how some employers in Vietnam exploit the fact that the longer they withhold the payment, the more contractors suffers. Consequently, contractors end up settling on taking the discounted price in order to avoid further damage and finalize the project:

*“Employers [in Vietnam] are not concerned about time. They just continue to say “we can't pay you...” It is no problem for them because the money is in their pocket. But for contractors it is a big problem, we are losing interest because if the employer doesn't pay us we have to borrow the necessary money from somewhere else. And normally under these kinds of situation, even if the contractor must accept some discount they try to get the money and finalize the project as soon as possible. It shouldn't be like this but in reality this is happening in many projects.”*  
 – Project Manager of a Japanese contractor

#### **4.3.3.2 Informal payment**

Informal payment is perceived by most of the interviewees as the quickest way to settle contractual conflicts in Vietnam. For example, inspection delay or permit/licenses approval delays can be quickly resolved by providing facilitation payments to the approver in charge. The following quote explains how the state government in Vietnam desperately wants to improve the administration delays by

local authorities, but they are strongly resistant to the changes and many believe that it is because the current situation provides them with many personal benefit opportunities:

*“The government is trying to improve the administration delay problems, but the first problem is the personal benefit. Everyone wants that kind of right, because if they have right they have benefit.”*  
 – A deputy project director of an employer

This quote describes how a Vietnamese engineer was resisted by the client from signing a contract directly with a foreign consultant company. Instead, the client recommended that he joined a local sub-consultant company because he still had opportunity to earn a high income through informal sources during project period:

*“I will tell you my story... I [once] interviewed for the deputy leader position of a western consulting company [for a new project] .... and I was going to sign contract directly with them with a very high salary. But when they submitted my [contract] document for the [project] client’s review, the client called me and said, ‘Oh, you should not sign the contract with this company. You should sign with the local sub-consultant company instead.’ I said, ‘But if I sign with the local company my salary will be reduced to 50%...’ And he said, ‘Oh don’t worry, I will guarantee a high income for you through other ways.’”*  
 – A Vietnamese site manager of a Korean contractor

This quote explains how exchanges of informal payments are such a dominant practice during construction period; even local engineers working for international contractor demand informal payments from their sub-contractor:

*“Informal payments are very normal in Vietnam... Requesting money for their inspection or their signature... Even our local engineers are the same, sometimes they try to get something from the sub-contractor for their signature. Local people’s income is still very low... the official income. They need some additional money to eat and live.... Not to become rich, but to support their family.”*  
 – Project Manager of a Korean contractor

#### **4.3.3.3 Sacrificing quality**

As informal payment approach becomes such a common way to handle approval issues in Vietnam construction projects, some contractors and sub-contractors take advantage of this situation by making compromises to the construction quality and get away with it by offering informal payments to the approving engineer in charge. The following describes such instance:

*“We have conflict with quality issues everyday... especially with certain sub-contractors. Consulting engineer usually stand by these sub-contractors because they receive money from them and so they have to take care of them. They sometime call us and beg us to let these sub-contractors proceed with their*



*work. But the quality is actually unacceptable.”*

*- A Vietnamese quality control engineer of a Korean contractor*

A similar comment is made by another local consultant engineer that some contractors save cost by cutting quantity or reducing the quality of their work, and local sub-consultants ignore the problem because they received sufficiently compensated by the contractor. At times, even the employer is aware of this problem but they also ignore it because they also receive payments from the contractor. The following is the quote:

*“Some local sub-consultants are just interested in getting more [informal] money from the contractor. Also some contractors utilize that, by reducing the quality or cutting quantity... Also because some local consultants they want to get more jobs, the employer will assign their relations to that local company and to the supervision team. And the contractor will give the money to these guys and it goes to the Employer... Some foreign consultants never touch about these issues even if they know. They just ignore it. That’s why I am telling you the quality is a serious matter.”*

*- A Vietnamese consultant engineer working for an international consultant*

#### **4.3.3.4 Principal approaches not accepted**

In Vietnam, employers are often seen as not accepting principal approaches, i.e., contractual procedures. They often weaken the enforceability of the contract through various means, and hence contractors and the engineer cannot rely on contract procedures to properly handle contractual conflicts with the employer. The following quote describes how the employer rejected all the claims made by the contractor, and they are waiting to settle the issues informally:

*“Our employer has actually rejected all of our claims so far. Even if the engineer agrees with us and request variation to the employer, they rejected without any fair explanation. So the next logical step is arbitration, but the employer did not agree on the dispute adjudication board. So it is quite difficult to make a dispute according to the contract procedure. Some people commented that the employer is waiting to discuss with us internally, but we never visit their office. So they don’t like us actually... They rather resolve the issues unofficially.”*

*– Planning Manager of a Korean contractor*

The following quote explains how contractual claims submitted by the contractor are rarely accepted by the employer, because they are perceived by the employer as challenge to their authority:

*“For international contractors like us it is very difficult... when we file a claim [the employer] doesn’t respond properly. They just get angry and push us to withdraw the claim, or they make it difficult with other matters. That is the real practice on site. So once the claim is opened, delay or additional cost, in FIDIC contract they give a tight time frame. It is very difficult to keep the tight*

*time frame because [the employer] delay the process from the beginning. Making some other offers to us, they may consider agreeing on some variation orders and so we wait... passing the time... and then we lose our chance to claim. We faced this situation with many small cases.”*  
 – Project Manager of a Korean contractor

This quote by a local engineer describes how Vietnamese employers do not like to work with American consultants because they insist on strictly following contract procedures, which prevents the employer’s personal benefit opportunities during the project period. Hence, Vietnamese employers prefer working with foreign companies that are perceived as unprofessional and willing to utilize informal approaches. The following is the quote:

*“In Vietnam, it is easier to get jobs if you are un-professional because then the employer can control you easily... Although the employer very much respect the American consultants but they don’t like them because they lose their benefit and power. So they always try to add a local sub-consultant who is less professional.”*  
 - A Vietnamese consultant engineer

#### **4.3.4 Need for capacity development and more transparent process**

This category represents changes that are called for in order to improve the current state of international construction projects in Vietnam, which is perceived to be inefficient due to the phenomenon of recurring contractual conflicts. The improvement changes were either suggested by interviewees or were observed in project cases, and these cases are presented as detailed case studies in Chapter 6. Also, some of suggestions are presented as policy implications in Chapter 7. The changes called for to improve the efficiency of Vietnam international construction projects are grouped into three sub-categories: 1) capacity development/donor assistance, 2) simplify process, and 3) clarify responsibilities.

##### **4.3.4.1 Capacity development and international donor assistance**

According to several interviewees, international development organizations could provide financial as well as technical assistance on improving Vietnamese regulations for construction industry in number of ways. For example, assistance can be provided on standardizing various construction-related document forms so that single standardized forms can be used throughout all international construction projects in Vietnam. Also, technical assistance can be given on integrating international project procedures into local regulations, or support can be given to help develop international project approval guidelines for local authorities to follow. Some interviewees also suggested that capacity development activities by international development organizations should focus more on human resource management training for public agencies.

Suggestions were also made on how donor organizations can actively support fair contract negotiations at precontract period in order to confirm and clarify any confusing procedures or requirements, and the engineer's authority as stipulated in the international contract can be better supported by the donor. An interviewee also recommended that safety training for local staff and clearer safety guideline can be provided by the donor, and the loan condition should clearly include reimbursement for safety costs. In addition, several interview participants pointed out that current mission reviews conducted did not accurately reflect the real situation of the project. Hence, an improved review method needed to be adopted for an accurate assessment of project activities.

#### ***4.3.4.2 Simplify process***

Several interviewees were contract experts, and they recommended that contract procedure must be simplified as much as possible in order to avoid conflicts among project parties. Some specific tips offered were using checklist for inspection procedures, utilizing "deemed approved" clauses to encourage timely responses from the responsible party, and shorten and specify review deadlines. Also, few interviewees pointed out the importance of keeping the project organizational structure simple. As described in the previous section, involvement of local joint venture consultant and contractor in international construction project often led to the employer gaining more control over the consultant engineer or the contractor. Hence, they recommended that the donor must help prevent unnecessary involvement of local JV consultant and contractors as much as possible.

#### ***4.3.4.3 Clarify responsibilities***

Clarifying responsibilities among project parties was another area to be improved according to contract experts. Specific examples provided were agreeing on detailed execution plans, procedures, and methodologies before signing the contract, clarifying main point of contacts among project participants, and restoring and maximizing the engineer's role and expertise. Also, interviewees mentioned that the employer's role and local authorities' responsibilities needed to be better clarified and enforced. For example, accountability for land acquisition delay and compensation procedure for the resulting delay should be more specifically stated in the contract.

### **4.4 Summary of the Chapter**

This chapter has achieved the first research objective of identifying recurring contractual conflicts and their perceived underlying causes in international construction projects in Vietnam. Seven recurring contractual conflicts in international construction projects in Vietnam were identified through in-depth interviews of international construction professionals, and they were:

1. Delay in site handover

2. Price adjustment payment delay
3. Inspection approval delay
4. Interim payment delay
5. Variation approval delay
6. Excessive documentation requirement by employer
7. Permit/licenses approval delay by local authorities

In addition, many causes of contractual conflicts perceived by interview participants that are dispersed throughout many layers of context were discovered, and they were described in the Section 4.3.2.

## 5. CONTEXTUAL FACTORS OF CONTRACTUAL CONFLICT

### 5.1 Introduction

This chapter addresses the second objective of the research, which is to extract contextual factors of contractual conflict from the interview data, and then clarify their relationships. In order to achieve this objective, the following steps are taken:

- **Step 1.** Extract contextual factors of contractual conflict from open coding concepts by grouping them into more manageable set with a minimum loss of information.
- **Step 2.** Develop cause-and-effect (Ishikawa) diagram for contractual conflict in international construction project by displaying extracted contextual factors as contributing causes of contractual conflict.
- **Step 3.** Expand applicability of the cause-and-effect diagram by validating each contextual factors (the causes) through literature review.
- **Step 4.** Propose causality diagrams for contractual conflict in international construction projects.

Steps 1 and 2 are described in Section 5.2, step 3 in Section 5.3, and step 4 is described in Section 5.4. Section 5.5 provides summary of this chapter.

### 5.2 Developing Cause-and-Effect Diagram for Contractual Conflict

#### **Step 1. Extract contextual factors of contractual conflict from open coding concepts**

Judging from the main and sub-categories of the open coding output, all open coding concepts except for those under the category “need for capacity development and more transparent process” describe context of contractual conflict. Hence, 92 concepts are used as the initial pool where contextual factors of contractual conflict are to be extracted. This reasoning is more clearly visible in the axial coding diagram. The categories “contract and legal conflicts”, “all parties struggling”, “from principle to compromise”, and “Vietnam legal, political, and socio-economic environment” either contain or interact with the category “contractual conflicts”. Yet, the category “need for capacity development and more transparent process” is isolated from all other categories and the arrow signifies that it is the resulting output of the “contractual conflicts”. Hence, the concepts under the category “need for capacity development and more transparent process” are outside of the context that describes contractual conflicts.

Contextual factors are extracted from the 92 concepts by grouping similar concepts together and then labeling them with terms that best characterize the concepts in the group. Some concepts directly described the contractual conflict (effect), hence those did not fall into any contextual factor groups. Also, concepts describing causes that appear to be beyond project participants' control, e.g., "ineffective court system", are eliminated. They are essentially treated as invariables. The reason for this is because one of the purposes of developing causality diagram is to identify possible root causes that involved management has control to fix them. This is a recommended approach by Rooney and Heuvel (2004). In all, 19 contextual factors are extracted from initial 92 concepts. Table 5.1 shows contextual factors extracted from the initial pool of 92 concepts and grouped under six categories.

**Table 5.1 Extraction of contextual factors from open coding concepts**

Concept	Contextual factors	Category
Conflict between the state and local authorities on who should pay for additional works.	Low level of political support on the project	Host Country
In charge of making decisions on payments and contract changes, but are not familiar with each project.		
Coordination issues among MOT, MOC, MOF, MOPI... etc.		
Inconsistent directions among Vietnam legal documents (construction law, decrees, circulars... etc.)	High level of legal conflicts	
Inconsistent interpretation and application of local regulations		
No clear distinction between mandatory vs non-mandatory laws		
Construction related regulations in Vietnam are too general to be applied in practice.		
"If we don't follow the local agency's requests, maybe they will call police. They are VERY powerful."	High level of bureaucratic behavior by authorities	
The Prime Minister's approval may be required for additional payments.		
"Each department of Hanoi People's Committee is a kingdom"		
Decisions made by staffs are monitored and scrutinized by state authorities		
No single government organization makes the final decision alone		
Many signatures are required		
Strict bureaucracy		

# CONTEXTUAL FACTORS OF CONTRACTUAL CONFLICT

Concept	Contextual factors	Category
Compensations for resettlement do not meet the actual market value.	ELIMINATED	
Publication of local price indices are unstable		
Frequent revision of local regulations		
Government authority = legal power		
Ineffective government monitoring mechanism		
Ineffective court system		
Lack of transparency in land acquisition procedure	Lack of transparent practice	Public Construction Industry
Lack of specific regulatory guidance on price adjustment method		
Contractors maximizing profit by sacrificing quality (reducing quantity) and bribing consultants during inspection.		
Vietnam Employer does not care too much about the actual quality		
Even when the contractor rejects subcontractor's work, the Employer and the Engineer force the contractor to approve.		
"In Vietnam, if you have a clean professional image it is harder to win businesses."		
Government hold controlling stake on privatized construction companies		
Notion of project delay as a part of normal process in Vietnam		
Unclear regulations as flexible control mechanism		
Local government modifying local regulations to avoid state's influence		
Frequent rotation of jobs in construction industry among Government/PMU/Contractor/Engineer	Low level of relational-approach utilized	
Employment based on relationship rather than skills		
For domestic projects, teams are formed based on close personal relationships.		
"It's about working together and being flexible"		
"Need to focus more on the trust in friendship not just on the contract"		
Employer always ready to quietly settle issues informally	Low level of informal incentives	
Employer's give and take mentality		

# CONTEXTUAL FACTORS OF CONTRACTUAL CONFLICT

Concept	Contextual factors	Category
Facilitation payment for inspection, permit and license approvals		
Under-the-table-money as a hidden agenda		
Employer withholding the final payment for the "other" requirement		
"Korean contractors know well how to satisfy Vietnam employers"		
Low salary of state-owned subcontractors compensated by informal payments from subsidiaries		
Consulting engineers receive money from contractors and subcontractors		
Employer receives rebate from sub-contractors		
Open market in Vietnam = how to maximize personal benefits?		
"Public officer jobs can be purchased for 15,000 USD"		
Repayment (rebate) for receiving a favor = sharing the wealth		
Once the Engineer checks and approves the payment statement, the Employer checks again every detail.	Employer interferes with Engineer's decisions	Construction Profession
Employer agreeing on contractor's claim = officially accepting the fault		
Employer's requirement of JV with local consultant as a control mechanism		
Employer blocks competent local staffs from being directly hired by foreign consultant firm		
The Engineer's expertise not utilized properly	Engineer's claim decisions are ignored by employer	
Threat of being fired by the employer.		
Engineer's determinations on claims are not honored by the Employer.		
Becoming a passive participant due to the unclear role in the project		
Resident engineer fired for supporting the contractor's side		
Claims are not fairly evaluated by the employer		
Contractor's claim perceived as a challenge to government's legal authority		
Contractor's contractual rights are not fully recognized	Contractor's unfair work scope and compensations	
Limited bargaining power		



# CONTEXTUAL FACTORS OF CONTRACTUAL CONFLICT

Concept	Contextual factors	Category	
Contractors giving up too much profit just to maintain good relationship with employers			
Asian contractors norm = "contractors always lose"			
Korean and Japanese contractors never dare to exercise "contract termination" clause, even under the most difficult situation.			
To minimize schedule delay contractor must pay for the employer's indirect costs			
Lack management competence for large-scale international projects	Lack of strong leadership	PM Organization	
Lack of competent state officers to oversee all ongoing projects.			
Frequent request of additional supporting documents by the Employer	Unreliable internal procedure		
Complicated approval process			
Procedures required by the employer frequently change.			
Resubmission of previously approved documents using newly provided format			
Resubmission of entire set for a minor typing error			
Concept of price adjustment recently adopted in Vietnam projects	Low level of international PM experience		
Employers lack expertise to perform and approve inspection			
Primary focus on job security and personal benefits, rather than on project outcome.	Low motivation to decide/act	Administrative Individual	
Low salary reduces motivation and cannot attract talented individuals			
Employers afraid of having to bear legal responsibilities	High perceived decision risk		
Lack of qualified staffs who can make confident decisions	Low decision confidence		
Staffs lack technical knowledge to make independent judgments	Lack of knowledge in international contract procedure		
Limited communication skills to clearly instruct contractors			
Cannot provide logical explanation to relevant authorities for approval			
Lack full decision authorities as specified in the contract	Low applicability and enforceability of contract conditions		International Conflict
Employer's requirements become more and more unreasonable as the contractor is further removed from the "neutral ground"			

# CONTEXTUAL FACTORS OF CONTRACTUAL CONFLICT

Concept	Contextual factors	Category
"In the beginning, we strictly followed the contract, but we did not get paid... so we naturally had to change our approach."		
Contradictions between international contract (FIDIC) and Vietnamese legal procedures	High level of conflict in interpretation among parties	
FIDIC procedures are interpreted differently in Vietnam		
Frequent involvement of non-contract parties as inspectors	Inadequate contract clarifications performed	
IPC draft must be resubmitted many times before the final certificate can be issued by the Engineer.		
Additional works must be completed first without the assurance of proper payment.		
Land acquisition delay causing construction delay	Delay in site handover	EFFECT
"100% of projects [in Vietnam] suffer delay in access to the site"		
Cannot complete resettlement tasks as promised		
Employer's decision on price adjustment delaying over two years	Price adjustment payment delay	
The Employer insists that even every detail of the road shape must exactly match the drawing	Inspection approval delay	
Difficult to manage progress due to slow payment and approval decisions from the employer	Interim payment delay	
Many design changes = many approval delays by local authorities	Variation approval delay	
Payment on additional works delaying for more than a year		
Employer deferring decision on additional cost items.		
Requiring supporting data and supporting data for the supporting data... etc.	Excessive documentation required	
12 original copies of supporting documents for all 1000 units		
Waste of preparation time by the contractor, waste of papers, and then waste of reviewing time by the employer.		
Cannot issue permits and licenses in timely manner	Permit/licenses approval delay	
Delay in permit and license approvals		

While the open coding output already provided logical categories and sub-categories for these concepts, an adjustment of categorization is necessary to better serve the purpose of developing the causality diagram for contractual conflict in international

construction project. Hence, the logic for re-categorization should not be too different from the logic for original categorizations in open coding output.

Six categories are used to organize the contextual factors of contractual conflicts. The six categories are “host country”, “public construction industry”, “construction profession”, “project managing organization”, “administrative individual”, and “communication via contract”. The following description for each category guided the categorization process:

- **Host Country** – characteristics of business environment of the host country that are perceived to contribute to contractual conflict in international construction projects
- **Public Construction Industry** – characteristics of norms of host country’s public construction industry that are perceived to contribute to contractual conflict in international construction projects
- **Construction Profession** – characteristics of roles of construction professional in host country that are perceived to contribute to contractual conflict in international construction projects
- **Project Managing Organization** – characteristics of host country’s project managing organizations that are perceived to contribute to contractual conflict in international construction projects
- **Administrative Individual** – characteristics of host country’s project administrators that are perceived to contribute to contractual conflict in international construction projects
- **Contract Utility** – characteristics of treatment of the contract that are perceived to contribute to contractual conflict in international construction projects

This categorization logic for contextual factors of contractual conflict in international construction project was compared to previous studies in international construction project management. Zhi (1995) developed a method of managing various risks for overseas construction projects, and he categorized various potential risks under four categories: 1) Nation/Region, 2) Construction Industry, 3) Company, and 4) Project. Meanwhile, Hastak and Shaked (2000) proposed a risk assessment model for international construction projects, which they categorized potential risks into three categories: 1) Country, 2) Market, and 3) Project.

Han et al. (2007) developed a hierarchical framework to investigate the cause-and-effect relationships of various profit-influencing factors for international construction projects. Categories they have used for organizing various factors were 1) Conditions of Host Country and Project Owner, 2) Bidding Process, 3) project Characteristics and Contractual Conditions, 4) Characteristics of Organization and

Participants, and 5) Contractor's Ability. However among categories created by Han et al. (2007), categories related to characteristics and conditions of "host country and project owner", "organization and participants", and "project and contractual conditions" appeared to be comparable to this research.

A possible explanation for this is that because the interview solely focused on the recurring contractual conflicts in Vietnam international projects, instead of focusing on the comprehensive profit-influencing factors as Han et al. (2007) did, interview conversations did not lead to factors related to participating international contractor's possibly causing recurring contractual conflicts in Vietnam. Characteristics of participating international contractors varied too much to be considered as possible causes of recurring contractual conflicts in Vietnam construction projects. Also, possible explanation for the category "bidding process" from Han et al. (2007) being less relevant in this study is that because interview participants ranged from lower level engineers to upper level project managers, not all participants had prior experience or detailed knowledge on the bidding process. Thus, the main conversation scope during the interview was naturally on what the participants perceived and felt as they personally experienced contractual conflicts during construction phases. Figure 5.1 shows the comparison of categorization method for this study to the previous studies mentioned above.

<b>Current Study</b>	<b>Country</b>	<b>Industry</b>	<b>Profession</b>	<b>Organization</b>	<b>Individual</b>	<b>Contractual</b>
Zhi(1995)	<b>Nation/Region</b>		<b>Construction Industry</b>		<b>Company</b>	<b>Project</b>
Hastak & Shaked (2000)	<b>Country</b>		<b>Market</b>		<b>Project</b>	
Han et al. (2007)	<b>Host country &amp; Project owener</b>		<b>Organization &amp; Participants</b>		<b>Project &amp; Contractual</b>	

**Figure 5.1 Comparison of categorization methods in previous studies**

## **Step 2. Develop cause-and-effect (Ishikawa) diagram for contractual conflict**

As shown in Figure 5.2, cause-and-effect diagram for contractual conflict is developed by presenting the extracted contextual factors under the relevant categories as contributing causes of contractual conflict, the effect. At the moment, this diagram can be said to be only applicable to international construction projects in Vietnam, since contextual factors shown in the diagram were extracted from interview data where all interviewees represented participants of international construction projects in Vietnam. Hence, the next step is to extend the applicability of this

diagram by validating the generalizability of each contextual factor based on literature review.

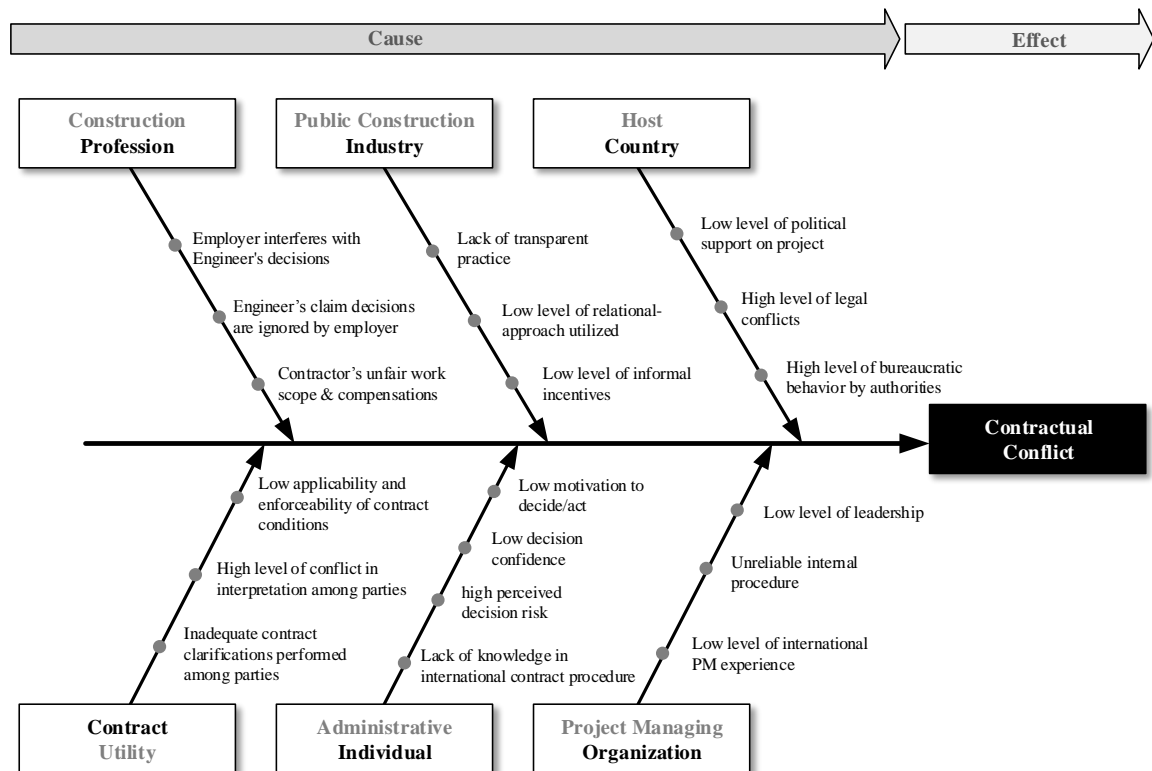


Figure 5.2 Development of cause-and-effect diagram for contractual conflict

### 5.3 Validation of Contextual Factors

**Step 3. Expand applicability of the cause-and-effect diagram by validating each contextual factor (the causes) through literature review.**

This section describes each contextual factor presented on the cause-and-effect diagram for contractual conflict developed in Section 5.2, and also refers to the related literature to show that these factors are mentioned as contributing causes of contractual conflict in international construction projects in other countries as well. The following are description and validation of 19 contextual factors used in the diagram.

#### Host Country

##### 1) Low level of political support on project

Interview participants mentioned that some decisions to be made at the ministry level, such as project budget increase approval, took extremely long time, hence leading to contractual conflicts. Some commented that there were lack of coordination among various ministries, as well as with local authorities, on who should make decisions or from whose budget the additional cost should be covered. However, some other

projects did not observe to experience such slow decision problems from the government. An interviewee representing Vietnam government explained that if the project was considered as a high priority by the state government, they were willing to provide full support to help project finish on-time. Hence, it is labeled as “low level of political support on project” as a contextual factor of contractual conflict. According to Waterston (2006) and Womack (2008), lack of political commitment which can have direct effects on the successful implementation of public construction projects is considered as a key factor throughout developing countries.

## **2) High level of legal conflicts**

Conflicts between local laws and regulations or inconsistent interpretation of legal documents were commented as one of major issue in Vietnam. Local regulations were perceived to be too general to be applicable in real practice, which often needed to be further clarified by the employer side. Consequently, interpretations made by the employer were often perceived to be unfair, which led to contractual conflicts. Stability of laws and rules in developing countries is identified as an international construction risk by Han et al. (2007) as well as Wang, Tiong, Ting, and Ashley (2000).

## **3) High level of bureaucratic behavior by authorities**

As one of the interviewee described Hanoi People’s Committee as a “kingdom”, public authorities’ behavior were perceived as highly bureaucratic. Regarding issuance of construction related permits and licenses, their documentation requirements were very strict and decisions were very slow. Also, interviewees commonly mentioned that they needed to provide facilitation payments in order to expedite the approval process and avoid schedule delays. Multitude of bureaucratic obstacles within public agencies’ organization was reported to be a common cause for delay in public projects throughout developing countries including Turkey (Arditi et al., 1985) and Thailand (Toor & Ogunlana, 2008).

## **Public Construction Industry**

### **4) Lack of transparent practice**

Interviewees described Vietnam construction industry as lacking transparent practice. Because so many informal networks are present at various levels, it is commonly viewed as an industry that cannot operate in a transparent way. For example, many government officials possessed controlling stock of recently privatized local construction companies, which can easily influence their decision making process. Also, commission payments throughout the hierarchy of construction organization are known to be a common practice in Vietnam. Hence, when international participants insisted on following transparent practice, contractual conflicts were perceived to rise. Lack of transparency, particularly in infrastructure construction, is known to be a major concern throughout developing countries (Dabla-Norris, Brumby, Kyobe, Mills, & Papageorgiou, 2012; Kenny, 2007).

### **5) Low level of relational-approach utilized**

Because many informal networks are present throughout public construction industry in Vietnam, relationship approach naturally dictated over contract approach when carrying out projects. Because employment and project team formation in Vietnam is often based on family and close relationships, when international participants tried to approach the project strictly based on contract, employer saw it as lacking trust and friendship. When these two opposing approaches collided, contract conflicts were perceived to rise. Poor project relationship is identified as an important international construction risk factor in developing countries (Bing, Tiong, Fan, & Chew, 1999).

### **6) Unsatisfied informal incentives**

Because act of providing commission is such a prevailing practice in Vietnam public construction industry, when international participants does not provide commission payment to the contract administrator, the approver saw it as requirement not being fully satisfied. This was perceived as one of contextual factor of contractual conflicts. Corrupt activities such as local officials demanding bribes are commonly treated as international project risk in developing countries (Han et al., 2007; Wang et al., 2004).

## **Construction Profession**

### **7) Employer interferes with Engineer's decisions**

Contractual conflicts were perceived to be caused by project employer not granting full decision authority of the engineer, in reality, as stipulated in international contract. For example, FIDIC-based contract stipulate that interim payment certificate is to be issued by the engineer upon his review decisions. However, in reality, project employers in Vietnam frequently overruled the engineer's payment review decisions and ordered the contractor to revise and re-submit the interim payment request form. This has frequently resulted into interim payment delays according to the interviewees. Also, the employer requiring the international consultant engineer to form a JV partnership with their choice of local consultant engineer at the beginning of the project is perceived as to gain control over the international consultant engineer. Employer's interference with the engineer's decisions is commonly known to cause of contractual delays in developing countries such as Nigeria (Mansfield et al., 1994), UAE (Faridi & El - Sayegh, 2006) and Thailand (Toor & Ogunlana, 2008). Lyon (1994) also mentioned that employer's intervention with the engineer's economic and contractual decisions were common throughout international construction projects in developing countries.

### **8) Engineer's claim decisions are ignored by employer**

Interview participants commonly agreed that claim decisions made by the engineer were not fairly reviewed by the employer in Vietnam. It was not uncommon for the employer to reject all claims made during the project. Because practice of making claims to the employer does not exist in Vietnam domestic projects, claims were

perceived as the contractor legally challenging the employer's authority, which naturally led to contractual conflicts. The practice of claiming to employer through the engineer is reported to be uncommon in developing countries, because they are accustomed to implementing construction projects using two-party (Owner-Contractor) system (Niraula & Kusayanagi, 2011).

#### **9) Contractor's unfair work scope and compensations**

With the engineer's claim decisions having no impact, the employer often required additional work scope to without proper compensations at the end. Many instances were heard during interviews regarding introduction of additional work scope after the contract was finalized, and not getting paid after those work has been performed, which often led to contractual conflicts. Excessive request by owner is identified as a common construction project risk in developing countries by Han et al. (2007).

### **Project Managing Organization**

#### **10) Lack of strong leadership**

Several interviewees representing international contractor emphasized the importance of having a strong leader as the project manager of the employer's organization. With strong manager at the top, even less capable staff members were believed to perform better. However, many employer organizations in Vietnam were perceived to lack strong management at the top, which led to under-performance of the overall organization on proper management of international construction projects. This is considered as a contextual factor of contractual conflicts. Lack of leadership and competence of project manager is identified as a construction project risk in non-industrialized countries by Rwelamila (2007).

#### **11) Unreliable internal procedure**

Employer organizations in Vietnam were often perceived as lacking a reliable internal procedure regarding contractual approval matters. The requirements and basis for approval commonly varied throughout the project, and hence re-submissions frequently occurred. This was perceived as a time-wasting process by the contractors that can cause contractual conflicts. Lack of dependable internal procedure is identified as a construction project risk in non-industrialized countries by Rwelamila (2007).

#### **12) Low level of international PM experience**

Many project management organizations in Vietnam were perceived as lacking international project management experiences. They were often not familiar with international contract procedure such as proper application of price adjustment formulas and inspection procedures, which led to contractual conflicts. As a project director of a PMU explained, because there are currently more on-going international projects than existing PMUs can handle, many PMUs were newly formed organizations to handle increasing number of new international projects. Lack of



project manager's experience identified as a problem causing delays in major construction projects in other developing countries by Han et al. (2007).

### **Administrative Individual**

#### **13) Low motivation to decide/act**

Many contract administrators in Vietnam lacking project-oriented motivation was perceived as reason for their slow decision making on approval matters. The similar lack of motivation was observed from both PMU's administrative staffs as well as local authorities' staff. They were perceived to lack motivation to contribute to the efficiency of the project management by actively performing their approval duties, which led to their slow approval decisions and then to contractual conflicts when the matter became worse. Low motivations of civil servants performing administrative duties have been widely documented as a common problem in developing countries (Klitgaard, 1997; Paul, 2010).

#### **14) High perceived decision risk**

Both PMU's administrative staffs as well as local authorities' staff were perceived as being indecisive on contractual approval matters due to the fear of having to be legally responsible for their decisions. In Vietnam, the person signing the contractual approval document assumes the legal responsibility when wrong decisions were found to be made. Hence, their indecisiveness due to the legal risk was perceived to contribute to their delayed decisions as well as contractual conflicts. High decision pressure experienced by the lowest-tier public administrator under centralized government system is known to be a common issue in developing countries (Shah, 1999).

#### **15) Low decision confidence**

Both PMU's administrative and local authorities' staff members in charge of approving contractual matters were perceived as having low decision confidence, which often resulted in approval delays. Their lack of confidence was perceived to be due to lack of experience and lack of proper educational training backgrounds. Lack of competence by public project administrators has been commonly observed throughout developing countries (Fujita, Tsuruga, & Takeda, 2013).

#### **16) Lack of knowledge in international contract procedure**

Because many PMUs in Vietnam were recently formed organizations, the staff members also lacked knowledge in international contract procedure. Due to their lack of knowledge, they often had difficulties making decisions as well as providing clear instructions to contractors. In addition, they were unable to provide sound explanations to relevant authorities for approvals. Hence, their lack of knowledge in international contract procedure is considered as a contextual factor of contractual conflicts. This has been commonly observed in developing countries (Fujita et al., 2013).

### **Contract Utility**

#### **17) Low applicability and enforceability of contract conditions**

Many interviewees believed that international contract, particularly FIDIC-based contract, had low applicability and enforceability in Vietnam. International participants tried to strictly follow international contract procedure at the beginning of the project, but because the employer did not pay them they had to eventually adapt to the local practice to reduce suffering from further payment delays. Hence, low applicability and enforceability of international contract is considered as a contextual factor of contractual conflicts. Potential applicability issues of FIDIC conditions of contract, as well as other three-party (Owner-Contractor-Engineer) contract system, in developing countries have been pointed out by Niraula and Kusayanagi (2011). Also, enforceability of contracts is identified as an operational risk in international construction project by Hastak and Shaked (2000).

#### **18) High level of conflict in interpretation among parties**

Some interviewees representing international contractor complained that FIDIC conditions and procedures were interpreted differently by Vietnam employers compare to employers in other countries. High level of conflict in interpretation of contractual procedure among project participants can lead to inaccurate work scope or compensations, hence potentially contributing to contractual conflicts. Disagreement on contract clauses was also reported to be a common cause of delay in public projects in other developing countries such as Turkey (Arditi et al., 1985), Nigeria (Mansfield et al., 1994) and Thailand (Ogunlana, Promkuntong, & Jearkjirm, 1996).

#### **19) Inadequate contract clarifications performed**

Interviewees mentioned about frequent involvement of non-contract parties suddenly getting involved in projects and interfering with the project progress. Also some explained that, proper interim payment procedure that satisfied the employer's requirements had to be figured out after going through months and months of trial and error period. These can be considered as an example of inadequate contract clarifications performed at the precontract period, hence contributing to contractual conflicts. According to Long et al. (2004), ill-defined duties and responsibilities are known to be construction industry problems in developing economies that are frequently cited in previous studies. Also, a study by Aibinu (2008) suggests that inadequate precontract negotiation among construction project parties would lead to higher chances of cognitive conflicts, which then could raise the intensity of conflict.

Literatures referenced in this section suggest that the 19 contextual factors are considered as contributing causes of contractual conflict in international construction projects either in general or in developing countries. Hence, the developed cause-and-effect diagram for contractual conflict is validated to be generalizable to international construction projects in developing countries.

## **5.4 Development of Causality Diagrams for Contractual Conflict**

### **Step 4. Propose causality diagrams for contractual conflict in international construction projects.**

Based on the analysis of interview data, as well as logical sequence of events taking place, causal relationships among contextual factors are proposed. Arrows are drawn over the cause-and-effect diagram for contractual conflict, which was developed in Section 5.2, to display the causalities among the contextual factors. Hence, causality diagram for development of contractual conflict in international construction projects is proposed, and this is shown in Figure 5.3. When the arrows are traced back, four contextual factors initiate the causal relationships, hence they are labeled as possible root causes among the 19 contextual factors (see Figure 5.3). Referring back to the interview data where the 19 contextual factors were extracted from, four possible root causes represent the outer limits of contextual factors that project participants have control over.

It is likely that other relevant factors that precede those four possible root causes do exist, but the interviewees were either unaware of them or those may be beyond control of project participants. As mentioned in Section 5.2, concepts such as “frequent revision of local regulations” and “ineffective court system” were treated as invariables and were eliminated at the contextual factor extraction process, because they were believed to be beyond what the project managers have control over. If they were included as contextual factors in the causality diagram they could have become the possible root causes, but it would not be of much use since project participants have no control over them. In essence, the proposed causality diagram for development of contractual conflict represents causal relationships among contextual factors that the project participants have control over.

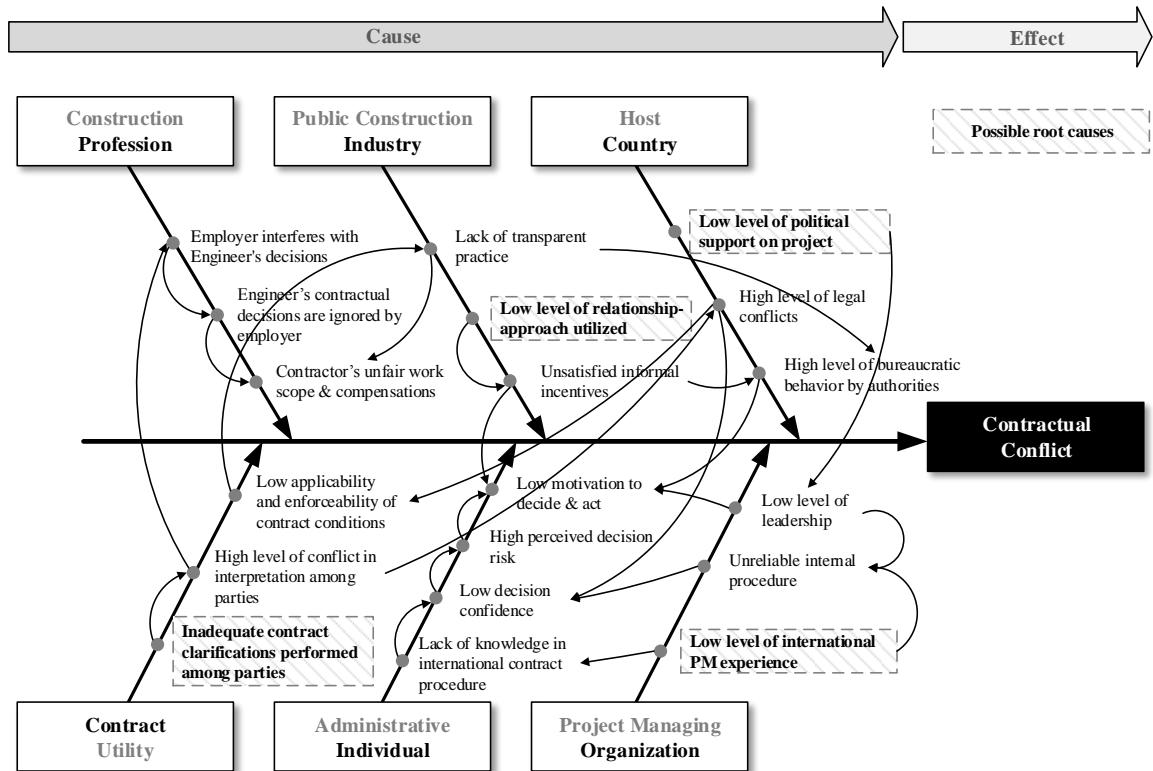


Figure 5.3 Proposed causality diagram for development of contractual conflict

Assuming the proposed causal relationships are valid, treating the four possible root causes would be the most effective way to avoid contractual conflict in international construction projects. In order to visualize this hypothesis, causality diagram for avoiding contractual conflict in international construction projects is proposed, as shown in Figure 5.4. The descriptions of contextual factors have been reversed in meaning to represent that those factors contributing to contractual conflict have been treated. Hence, four possible root causes from the previous diagram are labeled as four root-cause treatment approaches in the causality diagram for avoiding contractual conflict. While the arrows showing the causal relationships have remained unchanged, two types of arrows are introduced in this diagram to represent different effectiveness of each treatment approach. These two proposed causality diagrams for contractual conflict are to be validated, in Chapter 6, by applying to real project cases.

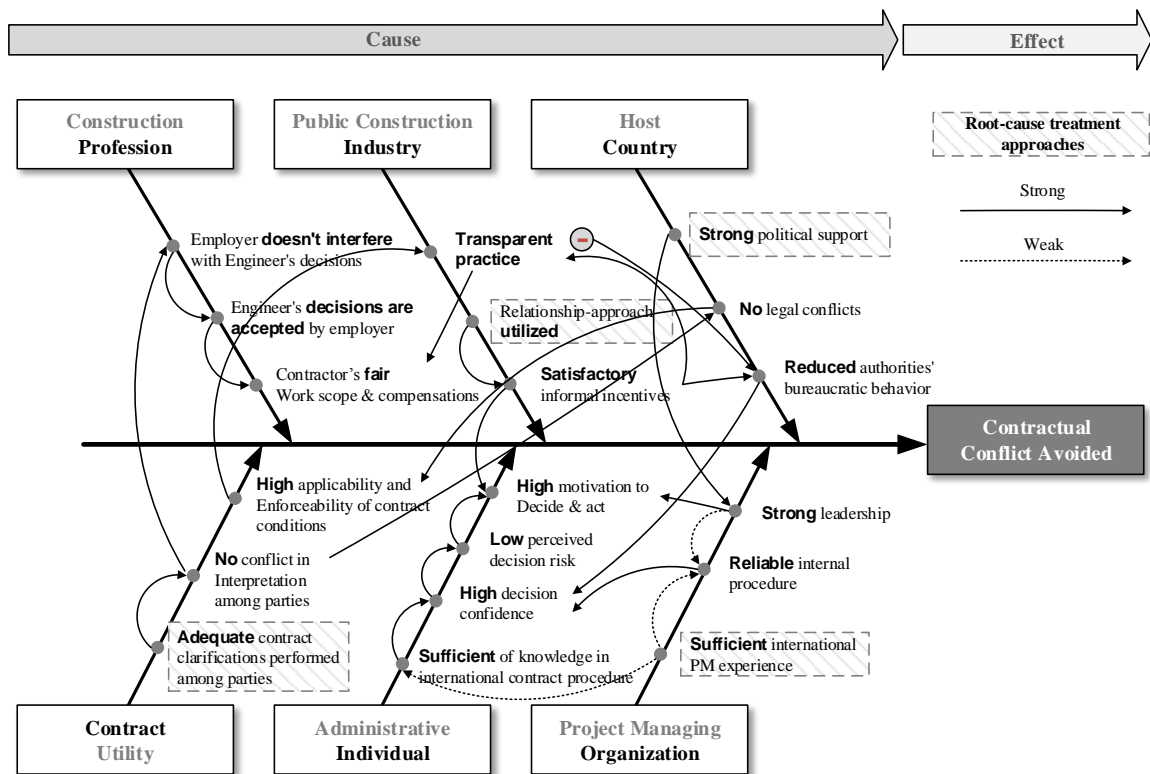


Figure 5.4 Proposed causality diagram for avoiding contractual conflict

## 5.5 Summary of the Chapter

This chapter has achieved the second research objective of clarifying relationships among contributing causes of contractual conflict in international construction projects. Contextual factors of contractual conflict were extracted from the interview data and they were validated to be generalizable to international construction projects in other developing countries. Hence, cause-and-effect diagram for contractual conflict in international construction projects in developing countries was developed. Then, causal relationships among contextual factors were clarified and four possible root causes that initiated the causalities were identified. Finally, two causality diagrams, a causality diagram for development of contractual conflict and a causality diagram for avoiding contractual conflict, were proposed.

## **6. APPLICATION OF CAUSALITY DIAGRAMS OF CONTRACTUAL CONFLICT**

### **6.1 Introduction**

Contractual conflicts in international construction projects were explored using grounded theory approach in Chapter 4. Also, contextual factors of contractual conflict in international construction projects were identified and categorized, and then causal relationships among them were proposed in Chapter 5. The objective of this chapter is to validate the proposed causality diagrams for contractual conflict by applying to various project cases. Rationales for using multiple-case study as a validation method are explained in Section 6.2, and nine case studies are presented in Section 6.3. Furthermore, conclusions drawn from observation of contractual conflict avoidance approaches from Cases 6 through 9 are presented in Section 6.4, and the chapter summary is presented in Section 6.5

### **6.2 Validation of Causality Diagrams Through Multiple-Case Study**

As this chapter focuses on the third research objective, causality diagrams for contractual conflicts proposed in Chapter 5 are to be applied to nine project cases in order to establish their validity. Causality diagram for contractual conflict as well as causality diagram for avoiding contractual conflict avoided is to be applied to describe the causal development and outcome of contractual conflicts or conflict avoidance that each project experienced. The overall validity of causality diagrams is to be judged based on how effectively the proposed causal relationships explain the development and outcome of all nine project cases. Also, the expected value of applying causality diagrams is that they will not only effectively describe the development of contractual conflicts in each project, but also explain the relative effectiveness of some of conflict avoidance measures observed in some of case projects.

It is to be noted that international construction projects selected for the case study are all considered to be complex and large-scale, and hence it is impractical to focus each project in its entirety in terms of all the contractual conflicts faced or avoidance measures utilized throughout the whole project phase. For the practicality, only the development of several specific contractual conflicts and conflict avoidance measures observed during data collection are selected and described for each case study. As a result, the descriptive tone of each case study should not be considered to represent the overall tone of how each project was handled and completed. Description and analysis of each project is based on interview data, project-confidential documents as well as publically available documents. Although data triangulations were

performed rigorously, it is possible that unintentional misrepresentation of facts may still exist.

### 6.3 Description of Nine Project Cases

In this section, nine international construction projects in Vietnam are presented to describe the development or avoidance of contractual conflicts by applying causality diagrams proposed in Chapter 5. For each case, a general project feature is presented under project description section, and then key background information needed to understand how specific contractual conflict is either developed or avoided is described. Specific contractual conflicts discussed in each project case are as follows:

- Case 1:** focuses on development of price adjustment payment delay, inspection approval delay, interim payment delay, and excessive documentation requirement by the employer.
- Case 2:** focuses on development of delay in site handover, interim payment delay, and variation approval delay.
- Case 3:** focuses on development of delay in site handover and permit/licenses approval delay by local authorities.
- Case 4:** focuses on development of delay in site handover by local authority.
- Case 5:** focuses on development of permit/licenses approval delay by local authorities.
- Case 6:** focuses on how conflict in inspection approval, interim payment, and excessive documentation requirement were mitigated.
- Case 7:** focuses on how conflict in interim payment and variation approval were mitigated.
- Case 8:** focuses on how conflict in inspection approval, interim payment, and permit/licenses approval were mitigated.
- Case 9:** focuses on how conflict in inspection approval, interim payment, and permit/licenses approval were mitigated.

Three major ODA donor organizations, namely the World Bank (WB), Asian Development Bank (ADB), and Japan International Cooperation Agency (JICA), either jointly or solely provided the majority of financing for all nine projects. Also, while six projects were civil construction projects, three projects involved both civil and building constructions. For those three projects, civil construction was the primary focus of the case study. Table 6.1 shows the basic features of nine project cases, and they are described at the beginning of each case study.

Table 6.1 Basic overview of nine project cases

Case project	1	2	3	4	5	6	7	8	9
<b>Project location</b>	Ho Chi Minh City, VN	Ho Chi Minh City, VN	Hanoi, VN	Noi Bai-Lao Cai, VN	Ho Chi Minh City, VN	Ho Chi Minh City, VN	Ho Chi Minh City, VN	Hanoi, VN	Northern Vietnam
<b>Construction scope</b>	Road & Tunnel	Road	Bridger & Road	Road, Bridge & Tunnel	Road	Metro Railway Construction	Sewerage System Upgrade	Airport Construction	Power Plant Construction
<b>Project cost</b>	600 million USD	80 million USD (Pkg.3)	640 million USD	1.2 billion USD	50 million USD (Pkg.5a)	1.1 billion USD	590 million USD	900 million USD	1.3 billion USD
<b>Executing agency</b>	HCMC PC	VEC	PMU85	VEC	VEC	HCMC PC	HCMC PC	ACV	VEN
<b>Project employer</b>	PMU of HCMC	SEPMU	SPMB	EPMU	SEPMU	MAUR	IMU of HCMC	PMU of ACV	TPPMB
<b>Consulting engineer</b>	Japan-Vietnam JV	Japan-Vietnam JV	Japan-Vietnam JV	Spain	USA	Japan-Vietnam JV	USA	Japan-Vietnam JV	Finnland & Vietnam JV
<b>Contractor</b>	Japan	Korea (Pkg.3)	Japan and Vietnam	Korea, China, Vietnam	Korea (Pkg.5a)	Japan	Vietnam	Japan-Vietnam JV	Korea
<b>Sub-contractor</b>	Vietnam	Vietnam	Vietnam	Vietnam	Vietnam	Vietnam	Vietnam	Vietnam	Vietnam
<b>Contract form used</b>	FIDIC Red Book (1987)	FIDIC New Red Book (1999)	FIDIC New Red Book (1999)	FIDIC Red Book MDB (2006)	FIDIC Red Book MDB (2006)	FIDIC Silver EPC (1999)	FIDIC Red Book MDB (2006)	FIDIC Red Book MDB (2006)	Model Form of ENAA



### **6.3.1 CASE 1: Construction of road and tunnel in Ho Chi Minh City**

#### ***6.3.1.1 Project overview***

This case is a large-scale highway project in Ho Chi Minh City, which the main scope is construction of 22km of highway that includes building and under-the-water tunnel. The project is largely finance by ODA loan from JICA, and the total contract amount is about 600 million USD. The executing authority is Ho Chi Minh City People's Committee and the project employer is project management unit (PMU) of Ho Chi Minh City. The consultant engineer for this project is a Japanese-Vietnamese joint venture, the main contractor is a Japanese construction company, and major sub-contractors are all Vietnamese companies. The construction contract for this project is based on FIDIC Red Book (1987). The basic project features are summarized in Table 6.1.

#### ***6.3.1.2 Key project background information***

##### **Low level of political support on project**

Despite being a mega-scale in terms of the overall budget, this project is essentially a local development project with the executing authority being Ho Chi Minh City People's Committee. Consequently, the ministry level governments are not directly involved with the execution of such type of projects and hence they may not consider this type of project to be their top priority of concerns in terms of providing special attention. Nevertheless, this project was chosen as one of significant projects by the prime minister, and the State Inspection Committee (SIC) was established for this project to inspect and control the construction quality throughout the construction period. The chairman of SIC is the minister of construction, and hence MOC is essentially the supervising authority of this project. Unfortunately, the involvement of SIC was perceived by the international participants of the project as an interference of inspection approval process by a third party that contributed to contractual conflicts among project parties rather than providing positive supports.

Despite HCMC PC being the project executing authority, they still need to depend on ministry level governments for the final review and release of project-related payments. Hence, the project decisions made by HCMC PC are carefully monitored by the state government officials who are usually unfamiliar with the details of the locally executed projects. In essence, a communication gap existed between the People's Committee level and the ministry level which naturally slowed down the overall approval process. A site manager for this project commented that project administrators often appeared to lack motivation to make approval decisions, due to their overwhelming responsibility of legally and persuasively justifying their approval decisions to the ministry level officials.

**Low level of international project management experience**

The international participants of this project described the character of administrative staffs of the PMU of HCMC as significantly lacking international project experiences, likely this being the first international project experience for many of them. They were young and unfamiliar with the basic international contract procedures. They often insisted on following the local procedures, yet those procedures were inconsistent because they were not clearly defined anywhere for the international participants to correctly follow. In fact, the employer heavily relied on verbal instructions rather than recording in written documents, and this appeared to have contributed to frequent miscommunications among project parties. In summary, the employer organization and its staffs not only lacked knowledge in international contractual procedures but also lacked reliable internal procedures that can be followed to make confident approval decisions.

**Low level of relational approaches utilized**

At the project development phase, this project became a subject of a major scandal that caught the attention of international media. Three managers from a Japanese engineering consultant firm were accused of bribing members of project employer in order to secure this project. The project eventually proceeded after disciplinary actions by both Vietnamese and Japanese governments, however close monitoring by the media throughout the project was inevitable. Hence, international participants in this project were especially sensitive on avoiding any locally practiced relational and informal incentive approaches that may be suspected by the media as committing illegal transactions.

**Inadequate contract clarifications performed at precontract period**

When asked about the precontract negotiation activities for this project, the project manager of the contractor for this project mentioned the term ‘contractors always lose’ to describe the unfair bargaining position contractors are typically placed even before contract is signed. According to him, the employer for this project tried to maximize the contract value, during the precontract negotiation period, by reducing the contract price and at the same time increasing the work scope of the contractor. The employer’s behavior was perceived as forcing the contractor to accept the unfair changes, or otherwise the contractor would lose their negotiation rights to the next lowest bidder. Hence, the precontract negotiation meeting for this project was perceived by the contractor as being unable to perform fair negotiations due to one-sidedness of the negotiation power that the employer possessed. In addition, when the contractor wanted to confirm specific contractual procedures to be applied in the project, the employer provided the “correct” answers at the precontract meeting, yet behaved differently during the contract implementation period. Unfortunately, it appeared that agreements made by the employer at the precontract negotiations were not adequately documented to have a meaningful impact when the employer’s behavior deviated during the contract implementation period.

### **Development of contractual conflicts**

Notable contractual conflicts observed in this project were price adjustment payment delay, inspection approval delays, interim payment delays, and excessive documentation required by the employer. Delay in price adjustment payment stemmed from project parties disagreeing on calculation method for price adjustments stipulated in the contract. At the same time, instead of relying on the engineer for fair determinations, the employer referred to the local regulations when disagreement in contract interpretation occurred. Hence, the engineer's contractual decisions were often ignored and overruled by the employer, which resulted in unfair price adjustment payment amount that the contractor did not accept. It is possible that, adequate clarification of calculation of price adjustments at the precontract period could have avoided development of this conflict.

Conflict in inspection procedures stemmed from third parties getting involved with inspection of various aspects of the project, which often led to additional works to be performed by the contractor. For example, State Inspection Committee periodically visited the project site for quality inspections and they made comments that needed to be addressed by the contractor. However, because they were not deeply involved with the project their comments were often inadequate and impractical.

Also, the employer hired additional consultants to validate the works performed by the engineer of the project, which the comments made by those consultants had to be addressed by either the engineer or the contractor. For example, procedure for investigation of concrete cracks at the tunnel area involved selection of additional international consultant through formal bidding process as well as involvement of many local experts. While the investigation of tunnel cracks was ultimately determined to be non-structural damage, the whole process ended up delaying the construction schedule for about two years. It appeared that a significant difference in expectations existed between the international participants and the employer on inspection procedure to be applied for this project. Inadequate clarification at the precontract period as well as the employer's lack of experience and decision confidence have led to heavy reliance on third parties for inspection approval, which significantly slowed down the project progress and made the situation even more complicated.

Regarding interim payment delay, the employer's slow decision-making was perceived to be due to their low decision confidence that led to high decision risk. Their lack of familiarity with the interim payment procedure stipulated in international contract, unsettled differences between international and local procedures on interim payment procedure, and lack of dependable internal procedure that can be followed in the employer organization all appeared to have contributed to their lack of decision confidence. With the executing agency being HCMC PC, the project director's limited communication network with the ministry level also contributed to the employer's reduced motivation to make quick decisions. For

those projects executed by the ministry level, the project director was usually an executive from a ministry-related organization which strengthened the communication channel between the project employer and ministry level organizations.

Excessive documentation required by the employer was another conflict experienced among project participants. Different expectations among project parties on what is considered as an adequate amount of supporting data appeared to be the cause of this conflict. From the employer's perspective, gathering as much supporting evidences from the contractor improved their basis for approval decisions and reduced any trouble with the higher authority. The basis for documentation requirement could have been clarified and simplified at precontract period, which would have reduced the burden of both preparation efforts by the contractor as well as review efforts by the employer. In addition, excessive documentation repeatedly required by administrative staff, may be a signal for demanding facilitation payments. Providing informal payments may have resolved such conflict but, as mentioned earlier, utilization of relational approach was strictly avoided in this project. Figure 6.1 shows the causal development of contractual conflicts observed in this case.

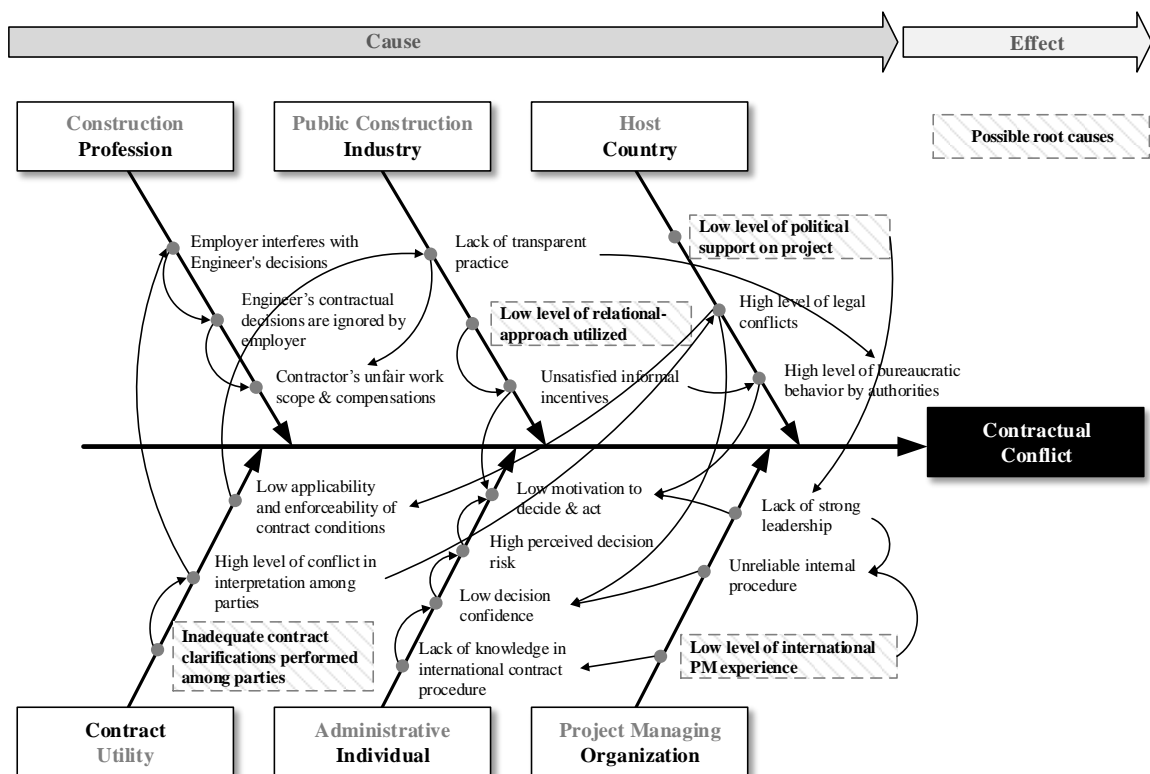


Figure 6.1 Contractual conflict development observed from Case 1.

### **6.3.2 CASE 2: Construction of expressway near Ho Chi Minh City**

#### **6.3.2.1 Project overview**

This case is about a national highway construction project near Ho Chi Minh. This project is divided into several packages, and different contractors are assigned to carry out each package. This case focuses on the package carried out by a Korean contractor, which the main scope was to perform ground improvements and then construct approximately 10 km length of expressway. This package was financed by JICA, and the contract amount of this particular package was about 80 million USD. The executing authority is Vietnam Expressway Corporation (VEC) which is directly under the supervision of Ministry of Transport (MOT). The project employer is Expressway Project Management Unit (EPMU) under the management of VEC. Consultant engineer is a Japanese and Vietnamese joint venture, the main contractor is a Korean construction company, and sub-contractors are all Vietnamese companies. The contract form utilized in this project is FIDIC New Red Book (1999). The basic project features are summarized in Table 6.1.

#### **6.3.2.2 Key project background information**

##### **Low level of political support**

Despite being a national construction project which the Ministry of Transport acts as the supervising agency, this project received relatively low level of special support from the state government. Some possible reasons are that this project lacked the scale of impact compared to other mega-scale projects, such as 1.3 billion USD power plant project described in Case 9. It also lacked symbolic significance compared projects such as an international airport construction project in the capitol city, which is described in Case 8. While VEC personnel attended the monthly project meetings, the Ministry of Transport personnel only attended the quarterly project meetings. This contrasts to the airport construction project (in Case 8), where the minister of MOT himself visited the project site on a monthly basis. Still, the fact that VEC is an organization directly linked to MOT enabled this project with a much tighter communication network with the higher government authorities when compared to locally executed projects such as the one described in Case 1.

To show an example of special treatment that state government can provide to nationally significant projects, an interviewee representing MOT mentioned about a national highway development plan in the central part of Vietnam. According to him, the state governments were willing to change policies and laws in order to accommodate this project because it was considered to be the critical path of the overall socio-economic development plan of Vietnam.

##### **On VEC and EPMU's project management skills**

Vietnam Expressway Corporation (VEC) was founded in 2004 by the Ministry of Transport in order to supervise implementation of national highways throughout

Vietnam. VEC is known to be highly motivated to prove, to the Ministry of Transport, their relevance and worthy of sustained existence. However, despite being around for more than 10 years and having executed number of major highway projects, evaluations about VEC's management ability was mixed at this point. While some interviewees mentioned that number of experienced and highly educated personnel existed within the VEC organization, they still lacked establishment of sound project administration plans.

It was reported that the project employer for this project, the Expressway Project Management Unit (EPMU), did not have any established project documentation forms and templates to be utilized, which resulted in conflict over which documentation form was to be used for interim payment. In addition, EPMU's organizational and communication structure is known to not only span vertically but also horizontally, which may be a sign that they lack sufficient experience and decision making confidence. Based on synthesis of collected data, despite having prior project management experiences, VEC and EPMU are still relatively new and they lacked solid internal protocol for managing international projects.

#### **Low level of relational approach utilized**

For this project, three packages were concurrently carried out by contractors representing different nationalities; hence it provided an opportunity to compare different management approaches utilized by each contractor. While the package in focus was implemented by a Korean contractor, the other two packages were implemented by a Chinese and a Vietnamese contractor. According to the PM of Korean contractor, the Chinese and Vietnamese contractors were able to avoid many contractual conflicts with the employer, because they highly utilized relational approaches. The Vietnamese contractor was naturally familiar with the local practice, and they also had strong connections with the MOT because they were state-owned enterprises. Many formal executives of the Vietnamese contractor were known to be currently with the MOT organization. As for the Chinese contractor, the project manager was known to have flexible spending power of the project budget. Hence, they were able to satisfy informal incentives to the employer staffs or local authorities, which effectively expedited project approval decisions or quickly resolved contractual conflicts.

The Korean contractor, on the other hand, relatively lacked informal relationship with the project employer as well as lacked project manager's authority to flexibly spend project budgets for informal uses. As a result, the Korean contractor relatively under-utilized the informal relational approaches and they were forced to rely on formal approaches. This may explain why this package resulted in more number of contractual claims than the number of claims from other two packages combined.

**Inadequate contract clarifications performed at precontract period**

According to the interviewees who have participated in this package, the official precontract negotiation was finalized in a half-day meeting. Negotiation topics mainly covered were regarding confirmation of construction schedule and confirmation of international bank account to be used for project payments. More specific matters such as interim payment procedure, variation approval procedure, and calculation of delay damage for schedule delays due to the employer's responsibility were not thoroughly discussed during the precontract negotiation meeting.

**Development of contractual conflicts**

Notable contractual conflicts observed from this project package were delay in site handover, interim payment delay, and variation approval delays. Development of conflict in interim payment procedure occurred right at the beginning of the project, due to difference in interpretation of interim payment approval process as well as documentation requirements between the employer and the contractor. The engineer's decision on the issuance of interim payment certificate was often overruled by the employer, and forced the contractor to revise the payment statement as well as resubmit documents as per the employer's request. This often resulted not only in the reduced amount of payment, but also in significant delays in receiving the payment from the initial request made by the contractor.

The actual interim payment procedure insisted by the employer was perceived to be inconsistent with both international contract procedure as well as the one stipulated by the local regulations, hence the contractor and the engineer for this project did not know exactly which procedure was to be followed. Resubmissions iterated among the employer, the engineer and the contractor resulted in monthly payment cycle that were delayed up to three months, which affected the contractor's cash flow status. It appeared that the employer organization's lack of clearly established payment procedure, as well as the fact that the details of interim payment procedure were not adequately clarified at the precontract period among parties played major roles.

As for conflicts regarding variation (additional work) payment approvals, the engineer's decisions were not honored by the employer. The situation became more complex because it was unclear exactly which level among several client organizations (i.e., EPMU, VEC or MOT) were responsible for making which areas of additional payment decisions. Usually when the project employer organization, EPMU in this case, lacks international project management experience and hence lacks decision confidence, they relied more on the higher level organizations to make decisions for them. Hence, when payments for additional works were delayed international participants did not know exactly which client organization was causing the delay. For this package, several additional work payments were not settled even after the entire work had been completed and handed over to the employer. The employer would simply withhold signing the approval documents. According to the Korean contractor, the employer's behavior regarding payment approval matters were

totally different towards the local contractors on the other package. It was viewed that the difference in employer's behavior had to do with the level of relational approach and utilization of informal incentives.

One notable advantage VEC possessed over project executing agencies under People's Committee were receiving additional budget from MOT to help expedite the land acquisition process. However for this package the project schedule was still eight months delayed due to slow site handover process by the local authority, which resulted in the contractor's inability to access the site and perform the works. While the employer granted the extension of time for completion, they did not approve any monetary compensation claimed by the contractor. Their argument was that inclusion of overhead costs as part of additional cost to be compensated by the employer was not clearly stated in the international contract as well as the Vietnamese legal documents.

Reportedly, monetary compensations for delay in land acquisition has never been historically provided by project employers in Vietnam. Traditionally, the contractor is expected to provide additional finances and incentives to facilitate the land acquisition process, either by directly paying the affected households or paying the local responsible authority to increase their motivations to do their job. The Korean contractor for this package did not appear to have utilized these approaches due to company policy reasons. Meanwhile, the procedure for determining compensations when delay in land acquisition occurs could have been clarified at the precontract meeting, but it was not adequately discussed. Figure 6.2 shows the causal development of contractual conflicts observed in this case.



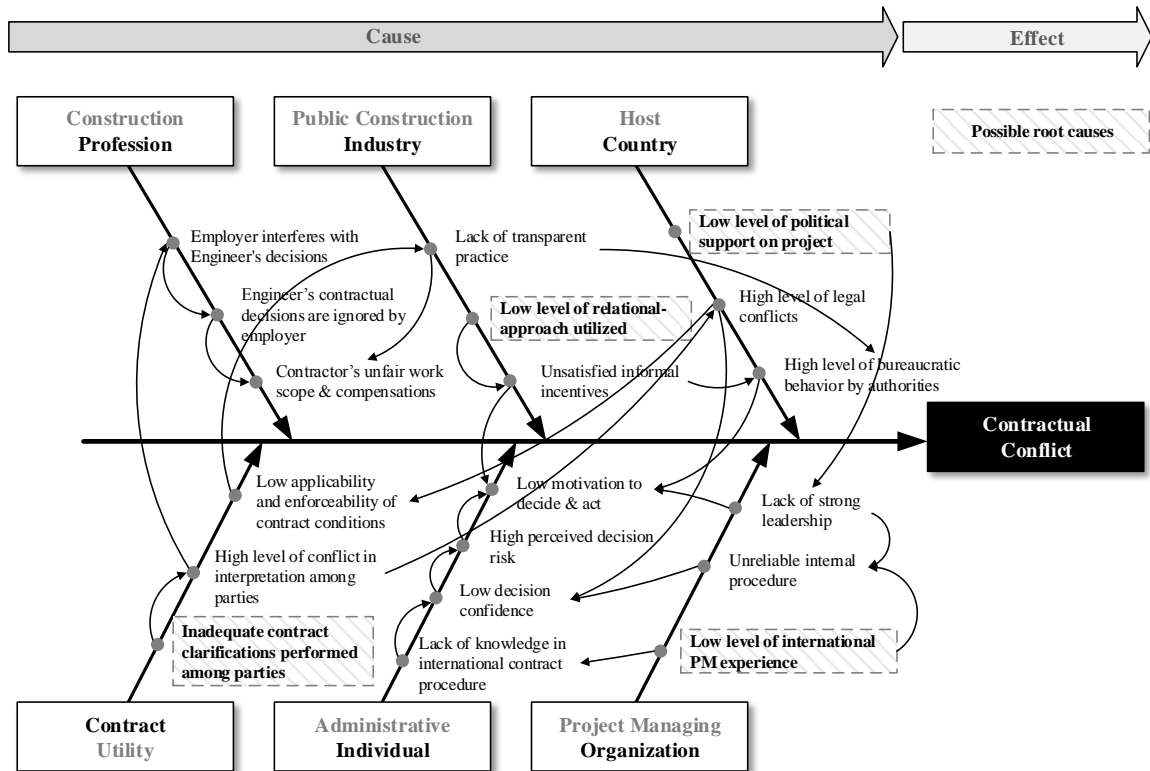


Figure 6.2 Contractual conflict development observed from Case 2.

### 6.3.3 CASE 3: A large bridge construction project in Hanoi

Case 3, 4 and 5 are all regarding contractual conflicts involving local authorities, i.e., delay in site handover and permit/licenses approval delay. Because similar causal patterns were observed from these three cases, the overview and key background information for three cases are reviewed first, and then the summary of development of contractual conflict observed from the three cases is presented at the end.

#### 6.3.3.1 Project overview

This is a large-scale bridge construction project which provides a direct link between downtown Hanoi to Noibai International Airport. It is largely financed through ODA loan by JICA which the cost of the entire project is approximately 640 million USD. Project Management Unit 85 and Ministry of Transport are the official project owners, while the Site Project Management Board (SPMB) acts as the project employer during the construction period. The engineer for this project is a Japanese and Vietnamese joint venture, and the contractor is a joint venture of two Japanese companies for package 1, a joint venture of Japanese and Vietnamese companies for package 2, and a Japanese company for package 3. The contract is based on FIDIC Red Book MDB Harmonized Edition (2006). The basic project features are summarized in Table 6.1.

### **6.3.3.2 Key project background information**

#### **Strong political support, but limited control over local authorities**

This project being an iconic project at the capital city as well as Ministry of Transport being the project owner, it received plenty of attention from the state government. In addition, this project served as a symbol for continuation of strong bilateral relationship between Vietnam and Japan. The fact that this project is also known as Japan-Vietnam Friendship Bridge shows the significance this project carries. According to project participants, project-related approvals from MOT and other ministry levels rarely caused delays. In addition, PMU85 is one of the few project management units that have proven to MOT that they are worthy of sustained existence by successfully managing a number of international construction projects in the past. Hence, the employer's sufficient project management experiences as well as strong support from the state government on this project appeared to have adequately avoided any serious contractual conflicts between the contractor and the employer.

However, the main problem for this project, according to the project employer and the contractors, were with local authorities. Some project-related approvals needed to first pass through the review of relevant local authorities, before going through the ministry level, and it was this intermediary step that caused major approval delays. Site handover procedure is another major task to be performed by the local authority, and due to their slow performance the construction schedule for package 3 ended up being delayed by 27 months. Ministry level and, at times, the ODA donor organization even got involved in attempt to enhance the accountability of local government, but it did not have much impact in terms of changing their bureaucratic behaviors.

#### **High level of bureaucratic behavior by local authorities**

Similar to complaints made by other interviewees regarding authorities under Ho Chi Minh City People's Committee, the employer and the contractors for this project expressed frustrations over the bureaucratic behavior of authorities under Hanoi People's Committee (HPC). While land acquisition process is known to be a sensitive and difficult task, many believed that HPC had enough capability and means to fulfill the task on time if they wanted to. The more serious problem is perceived as the lack of clear accountability that reduced local authorities' motivation to act responsibly. Because local governments in Vietnam have significant legal power to promulgate their own regulations, they had sufficient independence from the state government's authority. Hence, People's Committee of major cities such as Hanoi and Ho Chi Minh City possessed a vast amount of jurisdictional power that even the state government had limited control of.

Variations (design changes) are inevitable for such a large-scale project, and many design change approvals needed to be accepted by local authorities. However, the

approval procedure followed by local authorities were unclear, hence each approval item often experienced several resubmission attempts. A manager of PMU85 described that, typically, an employer staff hand delivered the approval documents to the relevant local agency and explained the contents of documents. Then the agency would instruct additional documents needed to satisfy the approval requirement to the employer staff, which essentially initiated the resubmission cycle.

#### **Low decision confidence**

According to project participants, administrative individuals of local authorities preferred not to make any changes from the original contract documents. Also, when approval items involved complicated designs, the decision delay by local authorities prolonged significantly longer because potential legal responsibilities in the future for making approval outweighed benefit gained from making quick decisions. Hence, slow decisions by administrative staffs were perceived to be related to their low decision confidence and high risks they needed to bear.

#### **Unsatisfied informal incentives**

One way to improve local government's slow decision process is by providing facilitation payments, which is regarded as a Vietnamese business custom. In the case of domestic projects, local authorities typically receive additional payments from the local contractors even for land acquisition activities. However, the participating local authorities appeared to have further exploited the fact that this project was of a national importance, and hence on-schedule completion was a critical factor. Knowing that the project participants were in such a critical schedule, their behavior became even more unreasonable towards approval decisions in attempt to maximize their incentive opportunities. As one project participant put it, the most critical thing for a project in Vietnam to be completed without a delay was to minimize the local authorities' involvement as much as possible.

### **6.3.4 CASE 4: A highway construction project in northern Vietnam**

#### ***6.3.4.1 Project overview***

This case is about a national highway construction project in north of Vietnam. The total length of highway to be constructed is 245km, and is divided into eight packages. The total project cost is approximately 1.2 billion USD, which was mostly financed through ODA loans jointly provided by the World Bank, ADB, and JICA. Executing agency is VEC and the project employer is EPMU. The consultant engineer for the project is a Spanish company and main contractors include three Korean, one Chinese, and a Vietnamese company. Majority of sub-contractors were Vietnamese companies. The contract form utilized in this project was FIDIC Red Book MDB Harmonized Edition (2006). The basic project features are summarized in Table 6.1.

#### **6.3.4.2 Key project background information**

##### **A reliable setup of employer structure**

As described in Case 2, all national highway projects in Vietnam are executed by EPMU-VEC-MOT organizational structure. While project management ability of EPMU may vary by each project, the efficient communication among EPMU-VEC-MOT appears to be consistent. Fortunately, EPMU for this project consisted of highly educated and experienced managers who could confidently handle their roles. For example, a vice director of EPMU for this project received his doctor of engineering degree from France and worked for a French consultant company for few years before returning to Vietnam. Also, he has previously managed more than 10 projects before joining this project. He also mentioned that there were many other talented managers in his organization that he could learn from and also depended on.

With capable EPMU in charge, administrative procedures for this project were smooth. Interim payments were made to contractors within four to six weeks from the request, which met contract requirement. Also, typical technical issues were adequately settled among EPMU, the engineer, and the contractor, and for major issues VEC made the decision based on recommendation proposed by EPMU. For major design changes that required additional budget, MOT was involved and this process naturally took longer time. The reason for delayed decision by MOT was mainly because additional budget had to be borne from MOT's own expense. MOT usually requested the ODA donor for additional budget first, and when they could not receive any additional loans they used their own budget. Hence, approval process for major design changes inevitable took longer time. Still, the overall project administration performed by EPMU-VEC-MOT team for this project was perceived to be highly reliable.

##### **Schedule delay caused by delay in site handover**

While administration performance of EPMU was reliable, this project still suffered several years of delay due to land acquisition problems. The total length of highway construction being 245km long, it naturally involved involuntary resettlement of many households. A total of 5,458 households were reportedly affected by this project due to losses of assets and sources of livelihood. According to an interviewee participating in this project, while majority of land acquisition was quickly done the remaining 10% caused a serious delay. When VEC provided additional budget to the local task force in order to expedite the land acquisition process, they completed the easy parts and left out the difficult areas for the contractors or higher authorities to handle. According to project participants, the remaining households were often relatives of local governments, and the local task force did not wish to directly deal with them. At the end, MOT worked with the leaders of the governing provinces to push the local authorities to complete their remaining tasks.

When looking back, an EPMU manager believed that land acquisition process could have been faster if they secured a tighter and clearer cooperation from the leaders of the affected provinces at the beginning of the project. In other words, lack of establishment of clear accountability of the local land acquisition team led to their reluctance to finish their task on time, which they eventually completed when pushed by higher authorities. When land acquisition process becomes idle, the construction schedule is not only delayed but also frustrates the contractor and sub-contractors because they could not properly prepare for the remaining schedule since no one knew the estimated completion time for the remaining land acquisitions.

### **6.3.5 CASE 5: An expressway project in Ho Chi Minh area**

#### ***6.3.5.1 Project overview***

This case is about another package of the same national highway construction project described in Case 2. The main scope is to construct approximately 14km of road and the contract amount is 50 million USD, which the financing was provided by ADB. This project being a national highway construction project, the employer structure is EPMU-VEC-MOT. The engineer for this package is an American consultant company, and the contractor is a Korean company. Sub-contractors for this package are all Vietnamese companies, and the contract form utilized in this package is FIDIC Red Book MDB Harmonized Edition (2006). The basic project features are summarized in Table 6.1.

#### ***6.3.5.2 Key project background information***

##### **Employer-contractor's familiarity**

Before the construction began, this package was put on a hold for over more than a year because the originally selected contractor had filed for bankruptcy. When it was ready to resume, due to right timing, the Korean contractor who had just completed another package of this project was available. Naturally, this team was chosen to work on this package because they had many advantages over other competing contractors in terms of being familiar with this project as well as having an entire team already mobilized near the site. Despite experiencing multiple contractual conflicts from the previous package, the Korean team believed that their familiarity with the employer organization would lead to better outcome for this package.

Another potential benefit the contractor saw was that the land acquisition was already completed for this package. The Korean contractor experienced a serious schedule delays due to slow land acquisitions (see Case 2), which they were not properly compensated for. With access to the whole site cleared, the contractor believed that they could better manage their performance for this package compared to the previous

one. Interestingly, despite some financial conflicts from previous package still remaining unsettled between the contractor and the employer, the director of EPMU personally requested the full participation of project manager and his entire team from the previous package to carry over to this package. The employer had essentially acknowledged the capability of this contractor team.

#### **Inadequate clarifications performed regarding submittal forms**

Perhaps the contractor's mindset of continuing with the same project under the same employer led to a careless precontract negotiations. As construction of this package began, the contractor naturally applied the same official document forms used in the previous package to make official requests to the employer. However, they later learned that some of document forms used in the previous package were invalid for this package. For example, when the contractor submitted a claim for advance payment, the Vietnam Development Bank (VDB) rejected the claim due incorrect claim form used. VDB's explanation was that advance payment claim form used form JICA-financed package, the previous package, and ADB-financed package, this package, was different. This type of resubmission requests reportedly caused several payment delays at the initial stage of the project. Had the contractor performed confirmation with the employer at the precontract meeting regarding official document forms to be used for this package, they could have avoided such payment delays.

#### **Permit/licenses approval delay by local authorities**

While the contractor was able to better manage the relationship with the employer the second time around, delay in issuance of permit and licenses by local authorities were still a major concern. For example, issuance of environmental permit took more than a year from the initial application. When the contractor initially applied for the environmental permit, the local environmental agency did not respond for several months. When they requested for status update, the agency instructed to resubmit the application with additional requirements. Subsequently, this resubmission process continued for over a year. While the regulation stipulates that the environmental permit shall be issued within four months from the initial application period, the agency rejected the application every few months to reset the deadline requirement and hence the deadline enforced by the regulation was ineffective.

Interestingly, the contractor learned that local authorities behaved differently to the local contractors. The local contractor working on another package received the environmental permit in less than two months from the initial application. Facilitation payment is known as an essential part of Vietnam custom especially when dealing with public authorities, and international contractors are often unaware of this or unaware of how to approach it properly. While FIDIC general condition does imply that the employer shall provide assistance on dealing with local authorities, it is not specifically stated. Hence, employers in Vietnam rarely provided assistance to contractors on settling issues with local authorities. Consequently, international

contractors often avoid delays and conflicts by requesting local sub-contractors to handle local authorities on permit and licenses issues. The contractor for this package perceived that in order to lower the bureaucratic behavior of local authorities and increase their motivation to quickly approve permit and licenses, utilizing informal incentives were essential.

#### ***6.3.5.3 Development of contractual conflicts (Summarizing Cases 3 to 5)***

Delays in site handover and permit/licenses approval by local authorities were contractual conflicts observed from Cases 3 through 5. Inadequate contract clarifications performed at precontract period on procedure for obtaining permit/licenses as well as strict enforcement of Sub-Clause 8.5 “Delay Caused by Authority” led to conflict in adherence of contract among parties, which then led local authorities to insist on project teams to follow local legal procedures that were also unclear and conflicting. This led to reduced enforcement of contract conditions which contributed to lack of transparent practice, and then induced bureaucratic behavior of local authorities. This resulted in delay in contractor’s work progress which they were unable to get compensations for.

Also, lack of utilizing relational approach to handle local authorities led to unsatisfied informal incentives, which then contributed to local authorities’ high level of bureaucratic behavior. This then led to local authorities’ low motivation to approve permit/licenses as well as perform land acquisition tasks in a timely manner. The development process of delay in site handover and permit/licenses approval delay observed from Cases 3, 4 and 5 were effectively described based on causality diagram shown in Figure 6.3.

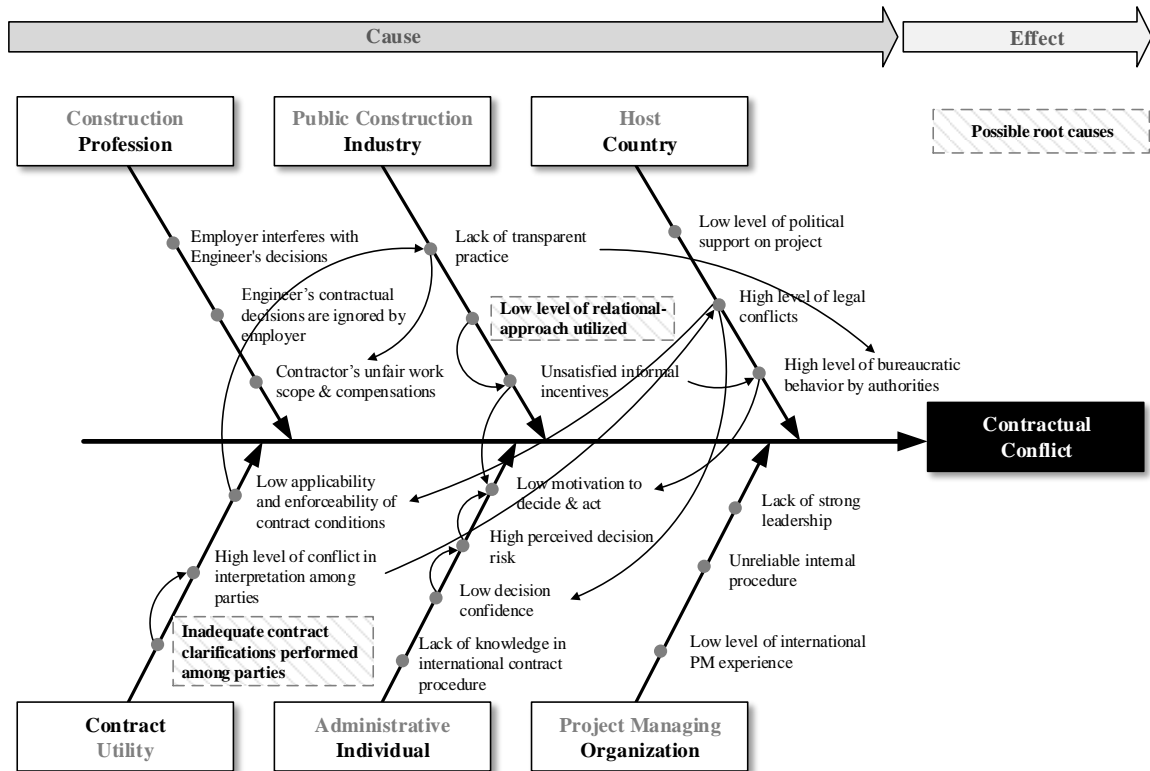


Figure 6.3 Contractual conflict development observed from Cases 3 to 5

### 6.3.6 CASE 6: A metro construction project in Ho Chi Minh City

Both Case 6 and 7 focuses on avoiding contractual conflicts by performing adequate contract clarifications at precontract period. Because similar causal development is observed from Case 6 and 7, application of causality diagram to summarize how contractual conflicts were avoided will be provided jointly in Section 6.3.7.5.

#### 6.3.6.1 Project overview

This case is about a metro rail transit construction project in Ho Chi Minh City in Vietnam. It is a mega international project not only in terms of the project cost (est. 1.1 billion USD), but also the complexity of the project scope as it contains construction of both underground and elevated stations. The method of finance is loan through official development assistance (ODA) which is a popular method of finance for large-scale public construction projects in Vietnam. The supervising authority for this project is Ministry of Transport, and the executing authority is Ho Chi Minh City People's Committee (HCMC-PC). The project employer is the management authority under direct supervision of HCMC-PC. Consultant engineer is a joint venture of several international consultants and a local consultant, the main contractors consists of several international contractors, and the sub-contractors consist of many local contractors. This case study focuses on civil construction portion of the project, which utilized FIDIC Engineering Procurement and Construct



(EPC) contract. Also, because this is one of the first modern rail system implemented in Vietnam the full knowledge transfer including operation and maintenance of the rail system is included as part of the overall procurement contract. The basic project features are summarized in table 6.1

#### ***6.3.6.2 Key project background information***

##### **High perceived employer risk**

This project experienced a struggle before the construction even kicked off. HCMC-PC had gained notoriety over recent years from international contractors due to their poor management of international projects. Number of international contractors who had participated in HCMC-PC executed projects experienced contractual conflicts such as payment and inspection delays as well as excessive supporting documentation requirements. On top of it, this project being one of the first modern rail project in Vietnam, the Employer had no prior experience in handling project of this type. Adopting EPC contract for the civil portion of the project also explains the Employer wanting to allocate more risk to the Contractor. These factors translated into high employer risk perceived by international contractors, and as a result, initial bidding procedure ended unsuccessfully as no qualified contractors showed real interests.

Compared to FIDIC Red Book, FIDIC Silver Book contract require the Contractor to commit to more fixed final price as well as project completion time. However, number of international contractors had experienced significant delays on their previous HCMC-PC executed projects due to reasons that were beyond their control. Their primary complaints were regarding slow inspection and troublesome payment procedure required by the employer.

##### **A need for risk relaxation effort**

With the project idling for more than two years, the employer and the consultant had to propose an improved approach to attract international contractors to participate in the project bidding by reducing their perceived employer risk. The engineer believed that the main reason for inspection and payment delays in international projects in Vietnam was mainly due to the employer's heavy involvement in the approval process. As discussed in Chapter 4, construction related laws and regulations in Vietnam require the employer's deep involvement in the inspection, taking over, and payment approval procedures by putting them legally liable for any negative consequences. This often led to differences in inspection procedure and basis for payment expected between the employer and the contractor. General contract conditions and specifications typically used in international construction projects were not specific enough to align the expectations between Vietnamese employer and participating international contractors. On top of it, the inspection procedure for this project had to be especially written out in a great specificity

because the employer had no prior experience in project of this type and hence, even greater potential for procedural conflict existed.

#### ***6.3.6.3 How were contractual conflicts avoided? How did it work?***

##### **Development of inspection and testing plan (ITP) checklist**

Efforts in several areas were made by the employer and the engineer to make the contract more appealing to the prospective contractor, but one approach was particularly innovative. A 9000-item inspection and testing plan (ITP) checklist covering all components of the project was prepared by the consultant and agreed by the employer at the project planning phase. The ITP checklist utilized Vietnamese standards as well as ASTM (American Society for Testing and Materials) for civil works covering all aspects such as safety, quality assurance, environmental, testing and commissioning. This being a brand new concept, the employer was skeptic and hence was initially reluctant to accept this approach. After many discussions and considering the project circumstances, the employer agreed to apply this concept to their project.

The ITP checklist follows any activity and method statement submissions as a reference. Essentially, the ITP checklist covers all construction work items and hence the Employer's representative only needs to refer to the checklist prior to issuing an acceptance certificate for each completed work component. This procedure meets the local regulation requirements for "Checking and acceptance of construction parts or construction stages" specified in Article 25 of Decree 209. The ITP checklist and corresponding certificates form part of supporting document for payment request statement.

To simplify the interim payment procedure, the employer and the consultant decided to modify the FIDIC general condition so that supporting document requirement for interim payment is more reasonable. While Vietnam regulations consistently mentioned that submission of takeover test record was the basic payment requirement, FIDIC mentioned submission of progress reports as specified in Sub-Clause 4.21 [Progress Reports] for each interim payment procedure. This sub-clause lists numerous requirements including submission of copies of quality assurance documents, test results and certificates of Materials. Vietnam project employers often lack judgment capacity and authority to consider situational reasonableness when interpreting contract requirements. Hence, they follow contract requirements in literal and absolute manner, and for this reason Vietnam project employers required submission of thousands of pages of supporting documents with each pages hand signed in order to satisfy all the requirements under Sub-Clause 4.21.

The employer and the consultant decided to remove the condition referencing to Sub-Clause 4.21 as a requirement for interim payment application, and instead modified the condition so that supporting documents shall follow the general requirement under applicable Vietnamese laws. With this modification, the ITP

checklist and necessary acceptance certificates sufficiently satisfies both contract and local regulation requirement for supporting document for interim payment. The modification concept is shown in Figure 6.4.

#### 14.3

##### Application for Interim Payment Certificates

The Contractor shall submit a Statement in six copies to the Engineer after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers himself to be entitled, together with supporting documents ~~which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].~~

**which are required by the applicable laws.**

The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

**Figure 6.4 Concept for simplifying supporting document requirement**

#### 6.3.6.4 Proven to be effective

The engineer in charge of developing and implementing the ITP checklist approach to this project confirmed that this practice has improved the inspection and payment process compared to previous projects that he has participated in Vietnam. The following is his explanation on the effectiveness of ITP checklist approach:

*“Upto now, the ITP checklist approach has been successful. We have issued four interim payments so far and there has been no delay in payments. The contractor only needs to submit cover letter, acceptance certificates, and ITP checklist as supporting documents, and the employer accepts because this is in compliance with Vietnam regulations. This approach can be applied to any other projects in Vietnam.”*

*- Project Director of engineering consultant*

### 6.3.7 CASE 7: A sewerage system upgrade project in Ho Chi Minh City

#### 6.3.7.1 Project overview

This case is about a wastewater infrastructure upgrade project in Ho Chi Minh City, which consists of number of small jobs carried out by local contractors. This project is only a portion of a major urban upgrading project covering Ho Chi Minh and Can Tho in the south, and Haiphong and Nam Dinh in the north of Vietnam. The main objective is to alleviate poverty in urban areas by focusing on six components: tertiary infrastructure upgrading, complimentary primary and secondary infrastructure, resettlement housing, land and housing management, housing improvement loan program, and capacity building.

The overall cost of the urban upgrading project, which is all financed through ODA, is estimated to be 222 million USD. Hence, the contract amount of each portion of

contract to be focused in this case study is small relative to typical international construction projects. The supervising authority and executing authority are Ministry of Construction and HCMC-PC, respectively, and the project employer is an investment management unit (IMU) under management of HCMC-PC. As mentioned earlier, all works are carried out by local contractors under construction supervision by an international consulting firm. The construction contract is based on FIDIC Red Book MDB Harmonized Edition (2006). The basic project features are summarized in table 6.1.

#### ***6.3.7.2 Key project background information***

##### **Focusing on capacity development**

Due to relatively small size of each contract and the project's strong support on participation by small local businesses, all participating contractors as well as the employer organization had minimal exposure to international construction projects. The participating international consultant engineer was in a position to not only manage the construction process, but also to teach the local participants how international contract principally worked.

During the project preparation phase, the employer tried to have a local consultant firm join the international consultant firm as a joint venture (JV), but both the donor and the main consultant rejected the proposal. The primary concern for forming a JV was that the role of consultant engineer might become obscured, by the employer gaining control over the local consultant firm, and hence possibly complicates matters later during the construction phase. The international consultant wanted to remain as independent as possible, in order to exercise transparent practice.

##### **Learning curve as a natural process**

At the early stage of each construction package, all participating local contractors struggled to prepare the necessary documents, requested by the engineer, for the issuance of interim payment certificate. Most of the participating contractors did not have any prior international construction project experiences, and they were learning everything as they carried this project. Naturally, they could not meet the submission deadline, and as a result, the interim payments experienced minor delays at the beginning.

The payment delays were, however, not just due to the slow preparation by the contractors. The employer also did not respond in a responsible manner, and they tried to ignore the engineer's instructions. Especially, payment decisions regarding variations were made extremely slow due to the employer's lack of confidence on their judgments. Because the participating local contractors were all small businesses, few delayed payments meant serious cash-flow problem for their overall business operations, which could potentially bring their company in to defaults. Surprisingly, the consultant engineer was able to resolve these delays rather quickly

and the project regained the optimal efficiency in terms of quick interim and additional payment turnarounds.

#### ***6.3.7.3 How were contractual conflicts avoided? How did it work?***

The international consultant engineer recognized several key issues that needed to be addressed in order to avoid contractual conflicts in this project. First, they acknowledged that fundamental differences existed between the international contract's 3-party (Employer-Engineer-Contractor) approach and Vietnam's 2-party (Employer-Contractor) approach. Second, in order to avoid confusions among inexperienced local contractors as well as inexperienced employer organization, a clear and detailed contractual procedure had to be documented. Third, in order to "teach" the inexperienced local participants, they needed to be actively involved throughout the project.

In order to address these key issues, the project-specific operations manual was created during the precontract period. It contains project-specific details such as contact information of employer and engineer's key personnel, detailed procedure for initiating meetings, handling variations, inspection, payment and delays. In essence, negotiated procedures were thoroughly documented for all participants to recognize throughout the project implementation phase. The fact that essential information from various references had been carefully integrated into a single manual, and it had been acknowledged by the employer as a part of the contract document makes it extremely valuable especially from the contractor's viewpoint. Another key function served by operations manual was that the engineer's roles and responsibilities, on what they can do and cannot do, were clearly stated. As a result, the engineer's role became clear and meaningful.

According to the consultant engineer for this project, the manual was particularly effective in addressing interim payment and variation approval delays. Regarding the negotiated interim payment approval procedure, steps specified in the operations manual were as follows:

#### ***Interim payment process includes the following steps:***

- A.) Contractors try to complete the Interim Payment Request in draft form (photocopies instead of originals) which includes:
  - "Interim Payment Statement" (in a form provided by the Engineer)
  - "Back-up Documentation": Detailed Calculation of Quantities, Acceptance Records, Summary QC Documents, Drawings, etc.
- B.) The Contractors sends, at the same time, the Interim Payment Request in draft form to the Employer and the Engineer.
- C.) Normally, it takes two or three working days for the Engineer to review Draft. The Employer may need a longer time for this work.

- D.) The Contractors arranges a meeting with the Engineer and the Employer by telephone first, and then sends them a letter confirming the meeting date and time 24 hours prior to the meeting.
- E.) By the minutes of the meeting, the Engineer specifies requirements for the Contractors to complete the documents.
- F.) The Contractors officially submits the IP Request to the Engineer.
- G.) The Engineer reviews the IP Request and issues an Interim Payment Certificate for the Employer's approval. The Engineer should give notice to the Contractor at the same time.
- H.) The Engineer, in consultation with the Employer, may by any Interim Payment Certificate make any correction or modification in any previous Interim Payment Certificate. The difference will be added to or deducted from the ongoing Interim Payment Certificate.

Recognizing the fact that the exact interim payment procedure stipulated in the general conditions of FIDIC Red Book MDB 2006 Harmonized Edition cannot be easily applied in Vietnam, the operations manual specifies procedure that is acceptable to the employer. By providing such level of specific steps, participating international contractors can better anticipate how the overall procedure will take place. Also, by specifying the time period for the engineer to review the draft (in step "c"), it also suggests the reference time frame the employer should consider when they review the same draft. While the actual time limits for the employer to respond is not stated in the steps, for the case of the observed project, the engineer was able to enforce 14-day turnaround period stipulated in Decree 48 for the overall interim payment procedure.

The benefit of explicitly describing each step of the procedure is that, it not only reduces misunderstandings among project participants but also it can accurately point out the step causing the delay when it occurs. Operations manual specifies that the engineer shall "periodically report the progress of all work items, with comments and assessment of causes of delays." Hence the engineer accumulates detailed records of sources that cause delays, and the record can be shared with the higher government authority or the donor agency when they make the project site for inspection. This serves as an effective mechanism which motivates all project participants to finish their tasks on time.

For approval of varied work to be carried out by the contractor, the following steps are described in the operations manual:

***Variations to be done by the Contractors shall be processed as follows:***

- A.) The Contractors may send the Engineer a letter describing a situation that needs a variation. It is necessary to consult the utility owner if relevant.
- B.) The Engineer may propose in writing the scenario that requires variation, and discuss with the Contractor, providing the reasons.

- C.) If the Engineer recommends a Variation but the Contractor cannot readily obtain the Goods required for the Variation, or such Variation triggers a substantial change in the sequence or progress of the Works, the Contractor shall promptly give written notice (with supporting particulars) to the Engineer.
- D.) If the Employer accepts the variation in principle, the Contractor shall not refuse to carry out the varied work.
- E.) The Contractors shall submit bills of quantity, shop drawings, unit prices and cost estimate, etc. to the Engineer. The Contractor should consult the relevant utility company. If the Contract contains any rates applicable to the variation, the rates in the Contract should be used. The Engineer may support the Contractor in preparation of designs and drawings.
- F.) The Engineer forwards the Variation Order to the Employer, with Contractor's design and cost estimates. If necessary, the Engineer can show his own calculation to the Employer.
- G.) The Employer (and the Engineer, if invited) may negotiate with the Contractors about unit prices. In the event of disagreement on the rates or prices, the Employer's decision shall be accepted by the Contractors.
- H.) The Employer provides comments in writing about the variation document submitted by the Engineer.
- I.) The Engineer officially issues a "VO Form" which will be submitted by the Employer to the authorities for approval and gives notice to the Contractors accordingly.
- J.) The Contractor carries out the varied work.
- K.) The Contractors use the approved prices or rates for his IP statement. However, until such time as rates or prices are agreed or fixed, the Employer may determine provisional rates or prices to enable interim payment to the Contractors.

Similar to the interim payment procedure, variation order procedure specified in the obtained sample of operations manual is a tailored version that is more suited under the Vietnam context. For example, the employer's authority to negotiate and decide on the unit price, as described in step "g", is contrary to the variation procedure specified in the FIDIC general conditions. However, by clearly stipulating the actual procedure that is acceptable to the employer reduces confusion among project participants and keeps things moving forward, and step(s) slowing down the approval process can be pinpointed. Additionally, with logical steps clearly written down the contractor will not have to face the risk of carrying out additional works without official approval and determination of compensation.

Clearly specifying responsibilities at each step reduce excuses for delay, and hence participating parties are equally pressured to make quick decisions. Regarding the employer's reluctance to approve variation orders due to fear of legal troubles, in the case of the observed project, the engineer successfully enforced the condition

stipulated in Decree 48, Article 37, Clause 2, which states that, “in case the adjustment of a construction contract will not result in a change in investment objectives or an excess of the approved total investment, the Employer may decide on the adjustment.” The approved total investment accounts for contingency budget which typically is 15% of the total estimated project budget, and the engineer made best efforts that variations did not exceed this limit hence the employer can quickly approve without having to rely on the higher authority.

### **The engineer’s active involvement as a key to success**

Operations manual is a tool that clarifies how the project should be carried out, and without the proper enforcement it cannot play an effective role. This is where active involvement of the consultant engineer became crucial. Although there were struggles at the beginning of the project, the engineer was determined to improve the project progress by actively enforcing the functions of operations manual. Initially, the employer took full 56 days (as stipulated in FIDIC GCC) to review and approve interim payments, but the engineer effectively convinced them to spend no more than 7 days as specified in Decree 48 Article 10. The engineer kept weekly assessment of causes of delays as part of progress monitoring task, and warned the employer that they could be blamed for causing delays when the donor or higher government authority request for project update. In the similar manner, variation order procedure was improved by pressuring the employer to make the direct decision for additional cost not exceeding the contingency limit (as specified in Decree 48 Article 37). Without active enforcement by the engineer, operations manual may have remained simply as a tool that no one utilized.

#### **6.3.7.4 Proven to be effective**

Through clear responsibilities and procedures specified in the operations manual, the engineer had various enforceable tools to control the party that potentially caused delays. This quote, by the engineer for this project, shows how conditions specified in operations manual were effectively utilized to his advantage to control slow behavior of the employer.

*“The PMU really wanted to speed up the construction progress, but it took almost 90 days for the contractor to receive interim payments. The contractor cannot speed up the progress when the payment is so slow. So, I said to the PMU, “We can shorten the process. When the contractor submits the statement the Engineer spend seven days to review, we will finish in three days if possible. And then PMU finish the review in seven days. If you take more than seven days, we will report that you are delaying the progress. And they had to follow, because they were afraid of the donor bank. When the bank comes they only listen to the consultant, not the client. The payment approval process eventually changed to less than 14 days. The bank was happy, because time was reduced and corruption was reduced. Just following the law, that’s all.”*  
– Vietnamese deputy manager of a consultant



### 6.3.7.5 Summarizing the development of causalities observed from Cases 6 and 7

For both case 6 and 7, potential conflict in contract interpretation among parties was avoided by clarifying and documenting the agreed upon procedures, at the precontract phase. This was largely achieved based on the engineer's experience and expertise. Because this clarified procedures also incorporated the local legal requirements, legal conflicts were avoided and made the improved contract approach highly applicable and enforceable. Also, all parties agreeing to adhere to the clarified contract approach meant that the employer easily agreed with decisions made by the engineer, which the contractor perceived it as a fair practice.

With legal conflicts a non-issue, the final administrative approver's decision risk was lowered which increased his decision confidence, which in turn increased his motivation to approve without any further delay. Applying and enforcing clarified contract procedure meant that contractual conflicts were avoided through a transparent practice, which contractors accepted to be fair. In addition, bureaucratic behavior by local authorities involved in inspection process were observed to be reduced by having them accept clarified contract approach, which not only eliminated legal excuses but also reduced their decision risk, as well as increasing their decision confidence, by relying on the approach that all parties have agreed on at the precontract period. Figure 6.5 shows causal developments observed from cases 6 and 7.

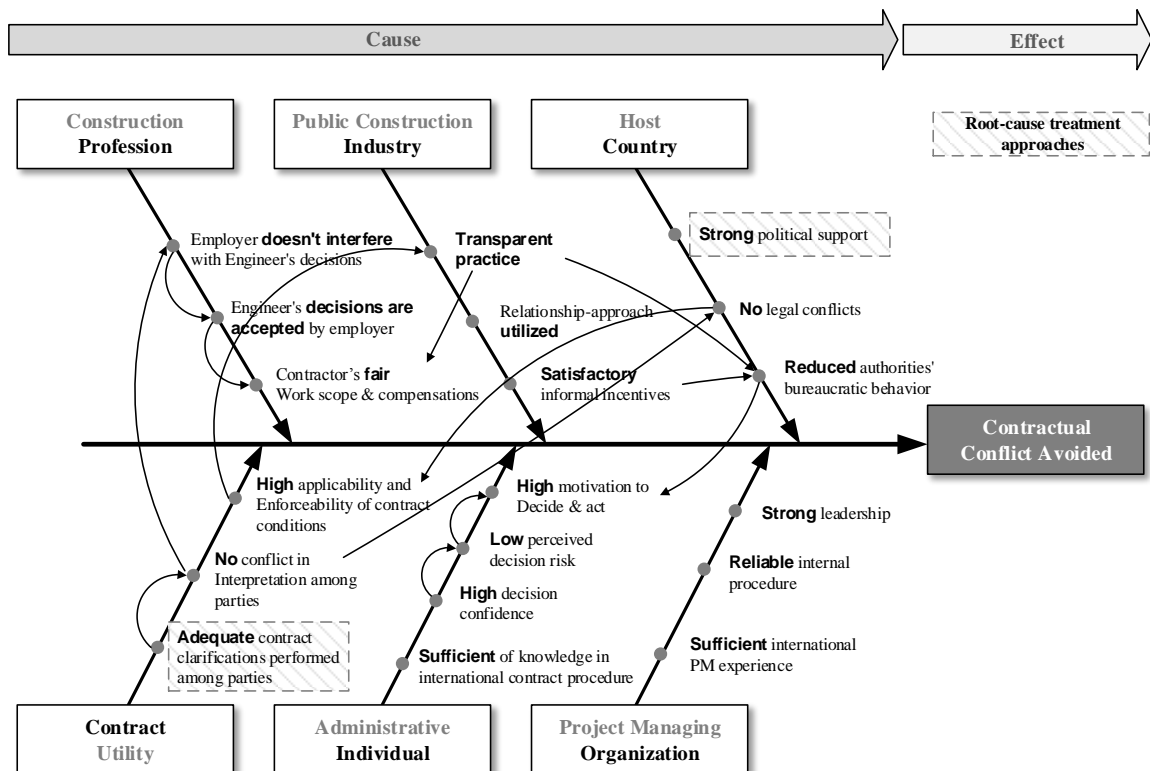


Figure 6.5 Contractual conflict avoidance process observed from Cases 6 and 7

For both Cases 6 and 7, any notable contextual approaches that may have influenced on avoiding particular contractual conflicts discussed in these case studies were not observed. For example, despite Case 6 being a mega-scale project, it did not appear to have received any special support from the state government. In Vietnam, the level of state's support appears to be dictated by whether the project employer organization is directly under the management of the state ministry or not. In this project, the employer was directly under the management of HCMC-PC, which may explain the lack of any special support from the state. For Case 7, as it consisted of number of small infrastructure upgrade projects, they were far too small to be noticed by the state government.

Neither relational approaches nor informal incentives were observed to play any major role, for both Cases 6 and 7, in terms of helping avoid contractual conflicts. In regards to “sufficient knowledge in international contract procedure” by the contract administrator, and project managing organization’s “strong leadership”, “available reliable internal procedure”, and “sufficient international project management experience”; the employer organization in Case 6 had no prior experience on project of this type. The employer organization from Case 7 also reportedly had little prior experience on managing international construction project.

### **6.3.8 CASE 8: An airport construction project in Hanoi**

For Case 8 and 9, similar approaches were utilized to avoid the same contractual conflicts and hence similar causal developments were observed. Thus, application of causality diagram to summarize how contractual conflicts were avoided will be provided jointly in Section 6.3.9.5.

#### **6.3.8.1 Project overview**

This project is construction of airport terminal in Hanoi, Vietnam. The estimated project cost is 900 million USD and it is financed through ODA. The supervising authority for this project is the Ministry of Transport (MOT), and the executing authority is Airports Corporation of Vietnam (ACV) which is directly under the management of the MOT. The project employer is project management unit under the management of ACV. Both the main contractor and the consulting engineer are joint venture of international and local firms, with sub-contractors all being locals. The particular focus of this case study is in the civil portion of the project; hence, the contract was based on FIDIC MDB Harmonized edition (2006). The basic project features are summarized in Table 6.1.

### **6.3.8.2 Key project background information**

#### **Strong political support → strong organizational leadership**

For a large-scaled and high-profiled project such as this international airport construction project, it is only natural to receive a big attention not only from the domestic media, but also from international media. This highly motivates the state government in charge, in this case the Ministry of Transport (MOT), to provide all the necessary support and “push” they can to complete the project on-time by minimizing contractual conflicts. Two mechanisms identified in this project were 1) assigning the vice director of the executing agency, Airports Corporation of Vietnam (ACV), as the project director of the project management unit (PMU) for quick executive project decisions, and 2) the minister of transport personally visiting the project site once a month to resolve any arising major issues instantly.

The donor organization also reportedly had a heavy influence on minimizing the schedule delay by helping deflect a potential stumbling block of the project. Because the project is located in Hanoi, it meant that the Hanoi People’s Committee (HPC) would be directly involved in overseeing the project by exercising the authority for many project-related approvals, such as approving permit/licenses, variations, inspections, and performing land acquisitions. As complained by number of interview participants, HPC-governed agencies were extremely notorious for their slow and bureaucratic behavior. Just recently, international contractor for a large bridge construction project in Hanoi filed a major law-suit against HPC for causing land acquisition delays for over two years. In order to avoid conflicts with HPC in this project, the donor organization reportedly demanded, during the project financing negotiation, a minimal involvement of HPC. This may explain such a direct involvement of MOT in this project.

#### **Strong relationships, strong motivations, and active utilization of informal approaches**

The international contractor for this project had number of motivations to utilize “contextual approaches” to minimize schedule delays, as well as, actively avoid contractual conflicts with the project employer. First, this contractor had recently made a big loss from a project in the Middle East, and hence they were on a mission to make up for this loss from this project. Reportedly, the head office ordered the project manager to strictly focus on the schedule by utilizing local resources and approaches as much as possible. This may explain their joint venturing with one of the local contractor, instead of sub-contracting, which was not typical for large-scale ODA-financed projects.

Second, this contractor was involved in a major construction accident in Vietnam several years ago which made a huge headline both domestically and internationally. This project being their “come back” project in Vietnam, they were motivated to regain their image by re-building a good relationship with Vietnam clients. The

third motivation brought the employer, contractor, and the engineer of this project even closer. Development of another airport construction project was in the works in the form of private public partnership (PPP), and the three organizations were all planning on participating as joint venture partnership.

The international consultant for this project also heavily relied on the local resources. The contractor expressed complaints that the staffs of the engineer consultant for this project were not familiar with international procedure and specifications. They appeared to have simply copied the default specifications from the template without doing any tailoring for this project. Their unfamiliarity with the international practice potentially explains their approach of staying “behind” and not be heavily involved in the construction administration part of the project. They encouraged the contractor to interact with the employer directly, and also let the local JV partner handle various coordination matters through their informal relationships.

The project employer was not only pressured from the above to maintain the construction schedule, but also they were motivated from another informal relationship. In Vietnam, because most of the major contractors were still state-owned-enterprises, they often had influential relationships with the government, as well as project employers. Local contractors acting as sub-contractors in international construction projects meant that they were at the receiving ends for final payments of actual construction works performed. With those contractors being state-owned, they also functioned as the “redistributors” of the public sector economy, both officially and informally. When the delay in interim payment occurs, not only does the international contractor suffer, but also do the local sub-contractors. And it is the suffering of the local sub-contractors that the project employer is usually concerned about. Similarly in this project, the employer was reportedly concerned largely about the local contractors getting angry when the payments got delayed for any reasons. Hence, the employer was motivated to avoid delay in payments.

#### ***6.3.8.3 How were contractual conflicts avoided? How did it work?***

As described earlier, the employer, the contractor, and the engineer all had high motivations to finish the project on-schedule as well as avoid contractual conflicts that can potentially harm their relationships. The employer was not only motivated by the political support (or “push”) they received from the top, but also they were motivated by the informal incentives they received from the local participating contractors. This was the mechanism for avoiding interim payment-related conflicts. Permit/licenses approval delays were avoided by utilization of local resources by international contractor and consultant engineer both forming joint venture with local partners. The local participants exactly knew how to satisfy local authorities’ requirement for permits and licenses, which were often unclear to the international participants. With the future partnership opportunity at stake, all three project

parties appeared to be generous among each other regarding documentation of supporting data and inspection procedures.

Regarding any issues with site handover or price adjustment payment, insufficient data were collected to make clear observations. Interviewees did mention that the overall land acquisition process for this project took about one year, but project parties appeared to have anticipated this time period since no complaints were heard. Also, conflicts regarding price adjustment payment were not heard from the interviewees who have participated in this project.

#### ***6.3.8.4 Proven to be effective? Any side effects observed?***

At the time interview took place, this project was on-schedule to complete with about six more months to go. With project experiencing no schedule delays, no major contractual conflicts were observed. While the approach they have utilized may appear to be effective, a potential compromise in project quality was observed. Reportedly, the actual inspection process of reviewing material and test data were backlogged for three months, and this was mainly due to insufficient manpower at the engineer's organization. In order to address this issue, the employer, the contractor, and the engineer agreed to bypass the document checking procedure for present time being, and instead focus on visual inspections. This was possible because all parties were equally motivated to avoid any kind of schedule delays.

In addition, the head office of the international contractor for this project reportedly ordered the project team, at the beginning, to just satisfy the minimal specification requirement. Knowing that the employer was under strong "push" by the state as well as the donor organization to deliver the project on-schedule no matter what, it is possible that participating contractors may have exploited this as an opportunity to overlook the quality aspect and maximize the profits.

### **6.3.9 CASE 9: A power plant construction project in north of Vietnam**

#### ***6.3.9.1 Project overview***

This project is construction of power plant in northern part of Vietnam. The estimated project cost is 1.3 billion USD and it is financed through ODA. The supervising authority for this project is the Prime Minister, and the executing authority is Vietnam Electricity (EVN) which is a state-owned company directly under the management of the Prime Minister. The project employer is project management board under the management of EVN. The consulting engineer is a joint venture of international and local firms, and the main contractor is an international contractor. Sub-contractors are all local contractors. The contract is based on the Model Form of International Contract for Process Plant Construction

published by the Engineering Advancement Association of Japan (ENAA). The basic project features are summarized in Table 6.1.

#### ***6.3.9.2 Key project background information***

##### **Strong political support**

This being a power plant construction project, the executing authority was Vietnam Electricity (EVN), a powerful and capable state-owned company. EVN is a powerful company because 1) it is under direct supervision of the Prime Minister, and 2) hence it is independent from any political complications with other ministry agencies. This effectively explains why EVN-managed projects are known to be well executed from the outsiders' perspectives. They can make quick project-related decisions without any bureaucratic hurdles. They essentially behave like a private company with the boss being the Prime Minister of Vietnam. EVN-executed projects get direct supports from the Prime Minister.

##### **Strong project management capacity**

Because VEN executes all energy-related projects in Vietnam, they have plenty of experiences in managing large-scale international construction projects. The project director of VEN organization is also known to have a strong leadership with many project management experiences. Because VEN manages many projects simultaneously, there are many branches and sub-branches of project management units handling projects for them. For a mega-scale plant construction project such as this case, the decision maker representing VEN is permanently assigned at the site. In this way, the project employer (or the project management board) can get quick answers from their parent organization on approval matters that they are not comfortable being responsible for.

##### **Relying on relationships**

Notable informal relationships were detected in this project. The project manager and control manager (acting as a deputy PM) of the international contractor, the project director of VEN, and the project manager of a major sub-contractor for this project have all participated in a same plant project about 15 years ago. Hence, it can be inferred that the overall project team was formulated around this strong informal relationship. They must have laid out a clear strategy on how the project was going to be handled among all major participating organizations, even before the contract was signed. Supposedly, the lowest bid for this project was made by another international contractor, but the fact that the contract was given to this particular contractor says something about the strength of the informal relationship as well as potential benefit opportunities the described circle had in mind.

##### **The incentive structure**

The basic informal incentive structure for this project was revealed by key informants. Local contractors commit 4% of the contract amount back to the project employer,

and they were 100% guaranteed a sub-contract. Payments are typically made in three occasions; 1% paid at the bid registration, 2% after signing the contract, and the final 1% about one month later. Also for each interim payment received, sub-contractors pay 0.5% back to the engineer as well as the employer. This appears to be the main driving mechanism for all parties motivated to maintain the project schedule. The main contractor would make profits as long as the project was on schedule. In summary, this incentive system made everyone happy as long as the project did not get delayed. Figure 6.6 shows the basic incentive structure used in this project.

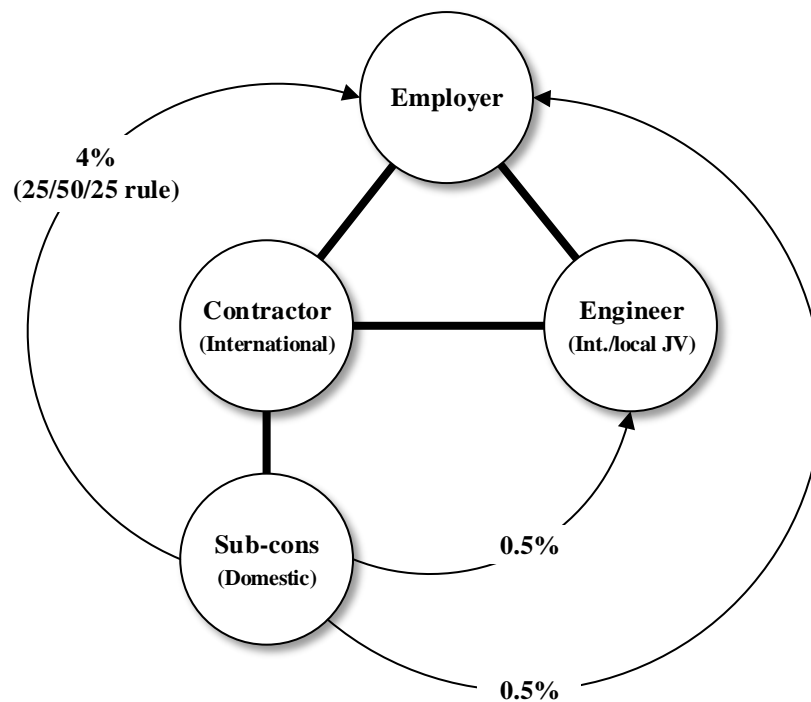


Figure 6.6 Concept for incentive structure

### Informal approaches utilized

The international contractor greatly utilized local resources as well as locally preferred approaches all throughout the project. First, they hired many talented local engineers and empowered them to directly deal with the local counterparts. For example, interaction with local sub-contractors, suppliers, and local agencies were all done by locally-hired engineers. Second, the project manager took a great care of the local leaders and the community. He personally visited the top local officials on special occasions such as local national holidays. He also allowed the local community to borrow machines that are available at the site, and offered to help should they needed one. On top of this, 800,000 USD worth of state-of-the-art school supplies were donated, on behalf of the company, to the local school.

The international consultant for this project played a passive role. They did not have to get much involved because, this project being an EPC contract, the contractor took

on most of the responsibilities. Their main concern was to keep the project on schedule, because they were also involved in the incentive structure. In addition, they formed a joint venture with a local consulting firm, and hence, they let them handle any coordination matters through informal approaches.

#### ***6.3.9.3 How were contractual conflicts avoided? How did it work?***

##### **The clear mechanism**

The informal incentive structure, as described earlier, was the main mechanism that motivated the employer, the contractor, and the engineer to avoid schedule in any way possible. When a problem arose, the top managers collaborated and flexibly resolved the matter expeditiously. With the presence of strong relationship at the top management level, and all parties strongly motivated to maintain the schedule, it was difficult for any major contractual conflicts to develop and start schedule delays. Local resources as well as informal relationships were greatly utilized to control the bureaucratic behavior of local authorities that were commonly observed in other Vietnam projects.

Their combinations of various contextual approaches appeared to have effectively avoided any major contractual conflicts that might delay the project schedule. At least, when the top managers of international contractor for this project were interviewed, no major conflicts were heard. However, when lower level local engineers working for the international contractor were interviewed, they commented on lack of attention on the quality aspect of this project by all participating organizations.

#### ***6.3.9.4 Proven to be effective? Any side effects observed?***

##### **Any flaws with the incentive system?**

In order for the incentive system to be sustainable, constant project profit is a must condition. Once the schedule gets delayed for any reason, there would be no profit available to share and hence, the incentive system would break down. Then, the involved parties would start to blame each other for the losses and contractual conflicts would begin to arise. Fortunately for this project, they were nearing the completion with two months ahead of the schedule! The entire international contractor team did commit to long daily work hours (6:30am to 9pm) and made various positive efforts to achieve this kind of success. Also, the fact that this project did not have to worry about any land acquisition delay issues at the beginning of the project, due to the location of the site, may have contributed to such achievement. But still, there had to be a catch to this attractive incentive mechanism.



**Actually, not everyone was motivated**

In reality, not all involved parties were equally motivated. The sub-contractors or the subsidiaries of sub-contractors who performed the real construction works were not highly motivated to do their jobs. They were the “distributor” of the incentives without any incentives available for them. There was no motivation for them to take care of the quality of the construction when all other parties were constantly pressing them to speed up the work. The fact that the poor quality issues were not adequately addressed by any parties showed that the schedule was the only thing that mattered to them.

**Wrong kind of motivation after all**

The project performance may have looked superb from the outside, but the incentive system appears to have brought a wrong type of motivation and hence, unusual behaviors were detected from project participants. For example, when the quality control (QC) engineer from the international contractor side rejected the poor construction quality of the sub-contractor, the employer complained to the QC manager and demanded that the inspection be approved. The engineer often begged the QC engineers to bypass the strict inspection process. At times, the QC engineers rejecting the poor quality were sent home by the project manager in order to proceed with the schedule. Some examples of poor quality management observed in this project included improper surveying when pushed by the schedule, corroded studs and deformed deck slab, and concrete foundation casted during rain. The following are two testimonials made by the QC engineer of this project:

*“I don’t remember the exact date, but they had to finish the foundation. But the formwork was not even erected correctly... and it was raining. But then they decided to cast the concrete. [PM] told all the managers “you have to finish today no matter what!” ... Then they didn’t care about anything... they just did it. I and one of consulting engineer were in charge of the inspection... we rejected it and they told us to go home.. They casted the concrete without surveying...”*

*“Deck slab... the first thing I saw was that re-bars were corroded. Then some of the deck was deformed. You can see that the quality of deck is as expected... it is all visible. It is not clean. Studs were also corroded. They are all important components.”*

**6.3.9.5 Summarizing the development of causalities observed from Cases 8 and 9**

For both cases 8 and 9, strong political support and strong relationship approaches were observed to have a clear influence on highly motivating the contract administrators to make quick decisions. It was observed that large-scale projects and high-profiled projects directly executed by ministry-level received relatively stronger political support, compared to projects executed by local authorities. Strong political support was provided by either top ministry-level official actively getting involved

with the project or assigning an influential leader as the project director. These approaches were observed to be effective in avoiding project schedule delays by directly motivating contract administrators to decide quickly. Based on cases 8 and 9, strong leadership in project management organization did not appear to influence in development of reliable internal decision making procedures that contract administrators could utilize.

Relational approaches were strongly utilized for both cases 8 and 9, and they appeared to have effectively avoided contractual conflicts by motivating all major parties to complete the project on-schedule. They were highly motivated through unofficial sources such as informal incentives or strengthening future business partnership opportunities. For both cases, self-benefitting incentives were observed to be the stronger motivating factors for the contract administrative individuals to make quick decisions. This at times led to unjustified decisions that overlooked quality performance of the project. Hence, informal incentives were observed to result in lack of transparent practice, which produced a negative side effect. The degree of this effect was more prominent in case 9, compared to case 8, where the informal incentive system utilized were more comprehensive in terms of all major parties getting involved. Figure 6.7 shows causal developments observed from cases 8 and 9.

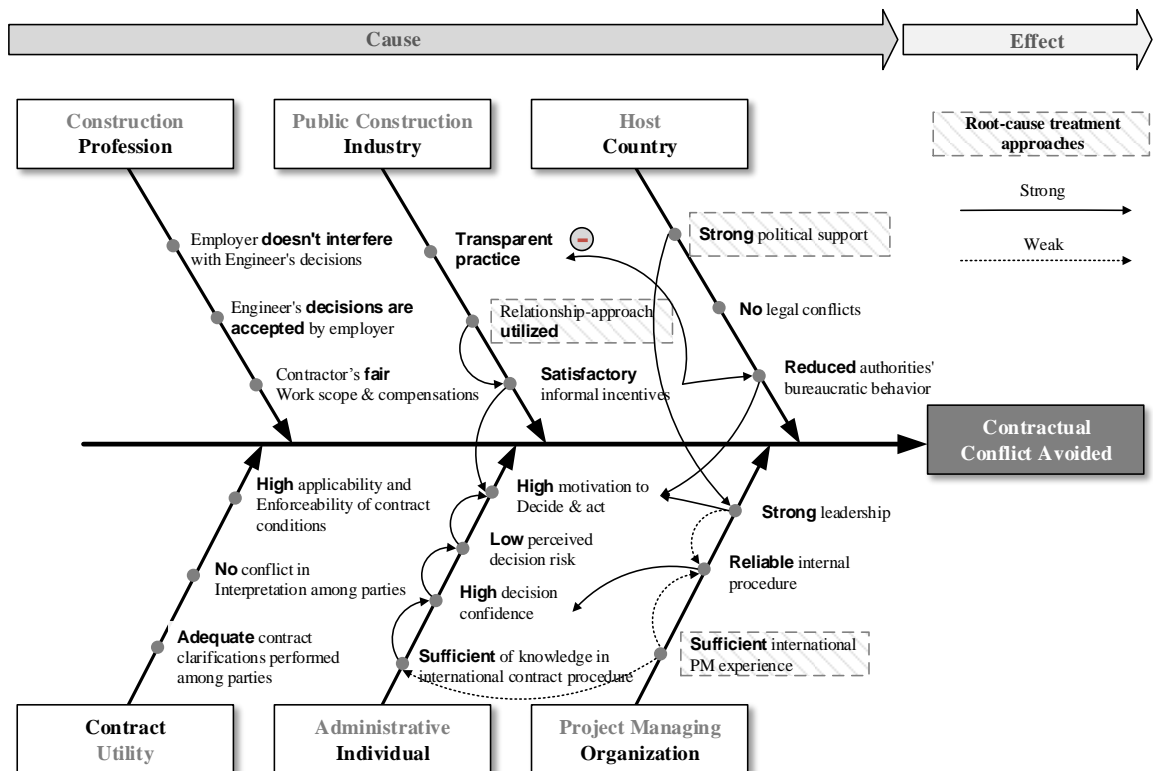


Figure 6.7 Contractual conflict avoidance process observed from Cases 8 and 9

There were no mentions regarding any special contract clarification efforts made at the precontract period, for both cases, that may have contributed to such outcomes. Interestingly, the international consultant engineers for both cases were reported to be passive participants of the project, where both of them heavily relied on their local JV partners.

#### **6.4 Evaluation of Treatment Approaches Observed for Avoiding Contractual Conflict**

Four treatment approaches for avoiding contractual conflict were observed from Cases 6 through 9, and they were:

1. Strong political support on project
2. Utilizing relational approaches
3. Sufficient international project management experiences by the employer
4. Adequate contract clarifications performed among parties at precontract period

The following conclusions are drawn after making cross-comparisons of observed cases.

1. The most effective root-cause treatment approach for avoiding contractual conflict in international construction projects is observed to be the adequate contract clarifications performed among parties at precontract period. Hence, the most likely root cause of contractual conflicts in international construction projects are determined as inadequate contract clarifications performed among parties at the precontract period. Previous studies have suggested that this is a common issue noticed throughout developing countries.
2. The adequate contract clarification approach is the most effective root-cause treatment solution because, from the case study, it not only avoided contractual conflicts but also promoted a transparent practice that did not produce any undesirable side effects. Although the employer was initially hesitant to adapt to the new approach, once they experienced the benefits they fully embraced the approach. The direct benefit is that this approach lowered the approver's perceived legal risk which then increased their decision confidence, and then to his increased motivation to decide.

There is also an indirect benefit potential to this approach in that, the participating employer organization can easily apply this approach to their future projects should they wish to do so. This is a replicable solution that, once the user sees enough benefits in it, they can apply the same concept to their future projects. Hence, this can potentially lead to the overall

efficiency of the construction market by reducing contractual conflicts that often results in delays and cost overruns.

3. While “strong political support on project” and “utilizing relational approaches” were observed to effectively avoid certain contractual conflicts, potential negative effects were also observed from both Cases 8 and 9. Both approaches were observed to induce wrong type of motivations from administrators in charge of making contractual decisions. They were either strongly motivated for personal benefit reasons or were "pushed" from the upper managements to avoid any kind of delays. Once this irrational mechanism is detected by other participating organizations, there is a potential that this situation might be exploited. When other self-interests get involved in the project, the practice appears to lose transparency and tends produce negative side effects. Compromise in project quality was the negative side effect observed from both Cases 8 and 9.

While performing adequate contract clarification at precontract period can be considered as a sustainable and system improvement approach, the political and relational approaches can be seen only as a temporal solutions that hinders the system improvement process of construction industries in developing countries. If these approaches become the dominant practice of a construction market where employers typically lack technical capacity to handle project decisions, as observed in the case of Vietnam, the efficiency of the industry will likely to continue to suffer either through construction delays and cost overruns or through underperformance of project qualities. This may explain why, from Cases 8 and 9, sound project management practice, such as presence of reliable internal procedures, was rather weakly observed from employ organizations with relatively sufficient international project management experiences.

4. A notable difference observed between the adequate contract clarification approach from Cases 6 and 7 versus the other approaches observed from Cases 8 and 9 was the level of involvement and effort made by the international consultant engineer to enforce the transparency of contractual procedures. Consulting engineer's technical competency to provide proper guidance on developing clear and comprehensive procedures, as well as their communication skills to effectively persuade the employer and the contractor the benefits of clarifying (as well as simplifying) contract conditions to make the contract more suitable to the project made this approach possible.

## 6.5 Summary of the Chapter

The objective of this chapter was to validate proposed causality diagrams for contractual conflict by applying them to nine real international project cases. As the causal sequences shown on the diagrams effectively described the developments process of contractual conflicts or process of avoiding conflicts for all nine project cases, the causality diagrams for contractual conflict in international construction projects are deemed to be validated.

Several approaches for avoiding contractual conflicts were observed from project cases, and ‘adequate contract clarifications performed among parties at precontract period’ was observed to produce specific treatment solution that was not only effective, but also promoted transparent practice. ‘Utilizing relational approaches’ and ‘receiving strong political support’ approaches were also observed to be effective in motivating project administrators to avoid approval and schedule delays, but these approaches were also prone to lead to practices that were not transparent. Also, relatively speaking, contribution of ‘sufficient international project management experiences by the employer’ was found to be weak in terms of helping avoid contractual conflicts.

## **7. CONCLUSIONS**

### **7.1 Introduction**

This chapter presents conclusions of this research. Prior to presenting the contributions and significance of this research, objectives of this research are reviewed and the main findings are summarized. Limitations of this research are explained and recommendations for future studies are made.

### **7.2 Review of Research Objectives**

Previous studies suggested that similar contractual conflicts in international construction projects throughout developing countries have persisted for a long time. Primarily relying on perceptions of construction practitioners, they have identified various contextual causes of contractual conflicts, and management recommendations to avoid such conflicts were offered. However, those recommendations were often impractical and hence limited implementable solutions have been provided. The reason for impractical recommendations presented appeared to be that while previous studies have focused on identifying the causes, there has been limited focus on explaining how those causes interacted and contributed to the development of contractual conflict. In order to address these shortcomings of previous studies, three research objectives were established:

1. Using Vietnam as a case, identify recurring contractual conflicts in international construction projects and their perceived underlying causes.
2. Clarify relationships among contextual factors of contractual conflicts in international construction projects.
3. Validate proposed causality diagrams for contractual conflict by applying to real international project cases.

### **7.3 Research Conclusions**

The research objectives have been achieved mainly through a literature review, in-depth interviews of international project participants and observation of nine project cases in Vietnam. Findings from the research can be categorized into the following three areas.

#### **7.3.1 Exploring contractual conflicts in international construction projects**

As indicated in Chapter 4, seven recurring contractual conflicts in international construction projects in Vietnam were identified through in-depth interviews of international construction professionals, and they were:

1. Delay in site handover
2. Price adjustment payment delay
3. Inspection approval delay
4. Interim payment delay
5. Variation approval delay
6. Excessive documentation requirement by employer
7. Permit/licenses approval delay by local authorities

Previous studies confirmed that these seven contractual conflicts are also commonly observed in international construction projects in other developing countries. In addition, the causes of contractual conflicts perceived by interview participants were mostly contextual factors, which is also consistent with similar studies conducted previously.

During interview sessions, interviewees often began the conversation by mentioning that contradictions existed between the international contract and the local regulatory procedures. Similarly, international contract conditions were reported to be interpreted and applied differently under varying local conditions. Comparison of FIDIC general conditions and Vietnam construction law and regulations were made, and some differences were indeed identified. It appeared that differences in expectations existed among project parties on how the contract was to be implemented.

Going deeper in to the conversations on why contractual conflict persisted, interview participants expressed local participants' lack of experiences and knowledge in handling international contract procedures. In addition, the contract administrator's lack of decision confidence and lack of motivation to quickly act was frequently mentioned causes. However, several interviewees have also mentioned that the situation regarding contractual conflicts have become even worse over the past decade as Vietnam as a country have significantly gained more international project experiences.

Going even deeper in to the conversations, interviewees saw the differences in practice at the local's public construction industry and roles played by each construction professions to be the fundamental causes to recurring contractual conflicts in international construction projects. Vietnam public construction industry was perceived to be dominated by informal personal relationships which often made practices and procedures unclear, hence leading to conflicts. In addition, project employers in Vietnam was perceived as holding the absolute authority, which weakened the engineer's role and put contractors in unfair positions. Finally at the country level, interviewees explained that dominant informal personal relationship approach in Vietnam came from their cultural background, particularly the Vietnam Confucianism and agricultural society, as well as unstable legal system.

Regarding employer's authoritative behaviors, Vietnamese communist party-led government structure was largely blamed by the practitioners. Interestingly, similar explanations were provided from both international participants as well as local participants with direct experiences. Causes of recurring contractual conflicts were perceived as varying contextual factors at many levels.

### **7.3.2 Development of causality diagrams for contractual conflict**

As described in Chapter 5, contextual factors of contractual conflict were extracted from the interview data by grouping similar concepts into more manageable set with a minimum loss of information. These extracted contextual factors were then validated through literature review to be generalizable to international construction projects in other developing countries. Consequently, to clarify relationships among the contextual factors, causality diagrams for development of contractual conflict as well as causality diagram for avoiding contractual conflict in international construction projects were proposed. The proposed causality diagram for contractual conflict suggested four contextual factors as the root causes among them, and they were:

1. Low level of political support on project
2. Low level of relationship-approach utilized
3. Low level of international project management experience by the employer
4. Inadequate contract clarifications performed among parties at precontract period

### **7.3.3 Application of causality diagrams for contractual conflict to real project cases**

The proposed causality diagrams for contractual conflict were validated by applying to real international project cases (refer to Chapter 6). Causality diagrams for contractual conflict were applied to nine international construction projects to explain either the development or avoidance of specific contractual conflicts that each project experienced. It has shown that the causality diagrams served as effective tools for describing the development process as well as the outcome of contractual conflicts or the conflict avoidance measures for all nine project cases.

For five project cases, developments of specific contractual conflicts were described focusing on four contextual factors considered to be the root causes. For the remaining four project cases, avoidances of specific contractual conflicts were described focusing on treatment of one or multiple of four possible root causes. From these four case studies, treatments of different root causes were observed to have varying impacts.

Treatment of possible root causes "low level of political support on project" and "low level of relationship-approach utilized" to avoid contractual conflicts was observed to be effective in motivating project administrative members to avoid schedule delays. However, these approaches were also prone to lead to lack of transparent practices



that could lead to other negative effects such as compromise in project qualities. The effectiveness of treating the possible root cause “low level of international project management experience by the employer” was studied by observing how employer organizations with relatively rich international project experiences would contribute to the conflict avoidance. Based on the study, their contribution was found to be relatively weak, which agrees with suggestion by a previous study that construction project management is in general an under-developed area in developing countries.

Treatment of possible root cause “inadequate contract clarifications performed among parties at precontract period” was observed to produce specific treatment solutions that were not only effective, but also promoted transparent practice. Once adopted by each participant, this treatment approach even possesses the practicality to be applied to their future projects.

## **7.4 Contributions of the Research**

### **7.4.1 Academic Contributions**

This research has contributed to new knowledge and improved understanding on how contractual conflicts develop in international construction projects.

Firstly, this research identified limitations of existing studies that investigated problems in international construction projects. While many contributing causes were identified, limited explanations were offered on how those causes contributed to the development of the problem. Hence, recommendations offered were often general or impractical. Previous studies have mainly relied on questionnaire and interview surveys, and limited qualitative analyses were performed. A need for improved investigative study approach is identified.

Secondly, in order to overcome the limitations of previous studies this research applied a grounded theory approach to conduct in-depth interviews and perform a systematic qualitative analysis of collected data. Through the process, contextual factors of contractual conflict in international construction projects were not only identified, but also clarified the relationships among them. Causality diagrams for contractual conflict developed in this research have been validated to be a useful tool to effectively describe how contractual conflict is developed or avoided in real international construction projects.

Thirdly, several contractual conflict treatment approaches were studied and effectiveness of each approach has been clarified. A potential negative impact of utilizing relational approaches, a popular recommendation in previous studies, to avoid potential contractual conflict has been uncovered. In addition, adequate contract clarifications performed among parties at precontract period was found to

produce specific treatment solutions that were not only effective in avoiding contractual conflicts, but also promoted transparent practice.

#### **7.4.2 Practical Contributions**

Based on this research, several policy implications are presented in this section, and practical tips on improving the FIDIC Red Book-based contract conditions for application in developing countries are included as an Appendix.

#### **Policy implications for ODA sponsoring organizations and governments of developing countries**

Multiple-case studies from Chapter 6 showed that contract clarification effort at the precontract period not only avoided contractual conflicts, but also led to a clean and transparent practice. This was because it allowed local contract administrators to make contractual approval decisions based on their improved understanding of contractual procedures. Hence, there appears to be a potential synergy by integrating formalized precontract negotiation activities as a part of capacity development training program, which is commonly offered by multilateral development banks to developing countries. While FIDIC contract management training courses are occasionally offered to project employers as a capacity development program in developing countries, the effectiveness as well as high participation rate is yet to be determined. By encouraging precontract negotiation activities as part of capacity development program, participation as well as learning effectiveness of local employer staff is likely to improve.

Performing extensive precontract negotiations may not be a common practice in developing countries, at the present moment. Hence, for the case ODA-sponsored projects, it is suggested that the donor organization and the host nation's government actively help create an environment such that project participants can proactively collaborate to improve the efficiency of contract procedures. Specifically, the donor organization must explicitly support the Engineer's role as the project facilitator; while the state government must actively encourage the employer organization to seek ways to enhance contract procedures by providing feedbacks on whether the new approaches potentially violate local codes and regulations.

The following policy improvement suggestions are offered to ODA sponsor organizations based on recommendations heard from interview participants.

- Current mission reviews conducted by donor organizations do not accurately reflect the real project situation. Transparency of contract transactions must be more strictly monitored, especially interim payments to contractors and sub-contractors. Contractors and sub-contractors often complained about unfair discounts they must accept for interim payments. Implementation of

real-time updated project management programs should be considered as a potential mechanism to ensure the transparency of transaction activities during the project.

- In order to ensure transparent practice in ODA loaned projects, donor organizations must empower the Engineer's authority that are currently being ignored or overpowered in projects in Vietnam. Project employers in Vietnam currently lack clear understanding of the Engineer's role played in international projects. However, the current "Capacity Building for Processing and Implementing Projects in Vietnam" organized by Asian Development Bank and World Bank does not appear to focus on the proper role to be played by the Engineer in international construction projects. Another way to ensure the Engineer's authority throughout the project is by ODA donor co-signing the Engineer's contract as the co-principal to the project employer.
- In Vietnam, construction-related legal development activities are known to be significantly underfunded and hence they being treated as side jobs. This is part of the reason why many flaws and contradictions exist among Vietnam primary and secondary regulations as dealt in this study. According to local construction professionals who have participated in the interview, funding and technical support by donor organizations to improve the quality of legal documents as well as standardize various construction-related submission forms will improve the efficiency of international construction project process.
- Conflict of interests among local project participants must be more carefully checked. It was discovered from interviews that the relatives of project employer members are often hired by local consultants and sub-contractors in international projects in Vietnam in order to act as middle men in illegal transactions. Also, reporting mechanism for corrupt activities should be revisited to ensure proper incentives as well as anonymity of the reporter.

## **7.5 Limitations of the Research and Suggestions for Future Research**

### **7.5.1 Limitations of the Research**

Limitations are inherent in all research projects. This study had several limitations related to the methodology used, and they are:

- Interview participants representing international contractor were all either Korean or Japanese construction companies. This was due to limited accessibility to other Asian or western construction companies.

- Due to limited accessibility, only small number of project employers participated in the interview. Hence, unavoidably, the overall perception of the researched phenomenon was dominantly from the view point of contractors and consultant engineers.
- While previous studies were used as certain generalization measures, the results of this study primarily reflect the view of the research participants and validation is limited to nine project cases studies conducted in this research.
- Due to time limitations, confirmations of research findings with research participants were limited to several participants who were accessible via email.

### **7.5.2 Suggestions for Future Research**

Based on the limitations of this research as well as observations made throughout the progression of this research, following suggestions for future research are made.

- Limited number of westerners participated in this research. Hence, it will be a recommendable study to expand this research to include viewpoints of western construction and consulting companies operating in developing countries to see if any notable differences in perceptions as well as management strategies exist.
- As participation rate of employers in this research was relatively low, it would be a valuable addition to further investigate employers' perspectives on recurring contractual conflicts and identify factors that international participants in developing countries can potentially address.
- Conducting case studies of international projects in other developing countries to see if the findings from this study can be further generalized would be an ideal future research task.
- Since the findings of this research were based on analysis of qualitative data, conducting a quantitative study to strengthen the findings of this research through more accurate validation measures would be an appropriate next research step.

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## **APPENDIX**

### **Tips on improving FIDIC Red Book-based contract for application in developing countries**



FIDIC Red Book MDB Harmonized Edition (2006)	Improvement recommendations
<p><b>1.9 Delayed Drawings or Instructions</b></p> <p><u>If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:</u></p> <p>(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and</p> <p>(b) payment of any such Cost plus profit, which shall be included in the Contract Price.</p> <p><u>Comment</u> Since instructions may be directly made by the Employer, the condition must be revised accordingly.</p>	<p>-&gt; Suggested revision of the clause: "If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer <b>or the Employer</b> to issue the notified drawing or instruction within a time..."</p>
<p><b>1.13 Compliance with Laws</b></p> <p>The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions:</p> <p>(a) the Employer shall have obtained (or shall obtain) the planning, zoning, building permit or similar permission for the Permanent Works, and any other permissions described in the Specification as having been (or to be) obtained by the Employer; and <u>the Employer shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and</u></p> <p><u>Comment</u> Since construction permit approval delays are common in developing countries, the delay consequences must be more clearly stated by referring to sub-clauses 8.4 and 8.5.</p>	<p>-&gt; An example of specifying the delay consequences: "For obtaining Construction Permit required by the Construction Law in _____, the application documents shall be made through the Employer with his covering letter. In case that unexpected delay in obtaining the Construction Permit for initial construction work causes the delay or disruption to the Project, the matter shall be referred to Sub-Clause 8.5 "Delay Caused by Authority", thus to be subject to the Sub-Clause 8.4 "Extension of Time for Completion."</p>
<p><b>2.1 Right of Access to the Site</b></p> <p><u>If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Employer to give any such right or possession within such time, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:</u></p> <p>(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and</p> <p>(b) <u>payment of any such Cost plus profit</u>, which shall be included in the Contract Price.</p> <p>After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.</p> <p><u>Comment</u> Principles of how delay and related costs should be calculated are not defined in FIDIC. Determination of additional "site management and overhead cost" due to delay in completion is often the conflicting issue.</p>	<p>-&gt; Adopt Delay and Disruption Protocol by the Society of Construction Law as part of the contract, which provides a detailed guidance on fairly determining additional cost resulting from construction delays.</p> <p>This is an internationally recognized standard, and it can be downloaded for free from <a href="http://www.eotprotocol.com">www.eotprotocol.com</a>.</p> 
<p><b>2.2 Permits, Licences or Approvals</b></p> <p><u>The Employer shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:</u></p> <p>(a) copies of the Laws of the Country which are relevant to the Contract but are not readily available, and</p> <p>(b) any permits, licences or approvals required by the Laws of the Country:</p> <p>(i) which the Contractor is required to obtain under Sub-Clause 1.13 [Compliance with Laws],</p> <p>(ii) for the delivery of Goods, including clearance through customs, and</p> <p>(iii) for the export of Contractor's Equipment when it is removed from the Site.</p> <p><u>Comment</u> More specific direction on how the Employer must provide assistance to the Contractor is needed.</p>	<p>-&gt; Examples of specific directions on assistance by the Employer include:</p> <ul style="list-style-type: none"> <li>* Officially sending and/or circulating the Contractor's documents to the relevant authorities.</li> <li>* Organizing official meetings with the relevant authorities.</li> <li>* Assigning specific personnel of the Employer to support the Contractor's works which require approval/concurrence by the relevant authorities.</li> </ul>
<p><b>3.1 Engineer's Duties and Authority</b></p> <p>The Engineer may exercise the authority attributable to the Engineer as specified in or necessarily to be implied from the Contract. <u>If the Engineer is required to obtain the approval of the Employer before exercising a specified authority, the requirements shall be as stated in the Particular Conditions.</u> The Employer shall promptly inform the Contractor of any change to the authority attributed to the Engineer.</p> <p>However, whenever the Engineer exercises a specified authority for which the Employer's approval is required, then (for the purposes of the Contract) the Employer shall be deemed to have given approval.</p> <p><u>Comment</u> Due to the fundamental differences between the 3-party system of FIDIC The Red Book and 2-party contract system specified in local regulations, many confusions are likely to arise on the extent of the Engineer's role and authority.</p>	<p>-&gt; Extent of the Engineer's role and authority must be clearly stipulated for each contractual condition that require judgement or approval from either the Employer or the Engineer. If the Engineer's scope is transferred to the Employer, the changes and resulting responsibility and accountability must be clearly stated.</p>

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<p><b>4.4 Subcontractors</b></p> <p>The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were the acts or defaults of the Contractor. Unless otherwise stated in the Particular Conditions:</p> <ul style="list-style-type: none"> <li>(a) the Contractor shall not be required to obtain consent to suppliers solely of Materials, or to a subcontract for which the Subcontractor is named in the Contract;</li> <li>(b) the prior consent of the Engineer shall be obtained to other proposed Subcontractors;</li> <li>(c) the Contractor shall give the Engineer not less than 28 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site; and</li> <li>(d) each subcontract shall include provisions which would entitle the Employer to require the subcontract to be assigned to the Employer under Sub-Clause 4.5 [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under Sub-Clause 15.2 [Termination by Employer].</li> </ul> <p><u>Comment</u> Employers in developing countries may try to influence on selection of subcontractors.</p>	<p>-&gt; An example condition that can be incorporated to avoid employer's influence on selection of subcontractors: "Within 14 days from the date of receipt of the above Notice, the Employer may inform the Contractor of his objection or suggestion for substitution of such subcontractor, however, the Contractor shall have the right to make the final decision and shall bear full responsibility for his decision.</p>
<p><b>4.10 Site Data</b></p> <p>The Employer shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Employer's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Employer shall similarly make available to the Contractor all such data which come into the Employer's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.</p> <p>To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):</p> <p><u>Comment</u> Inaccuracy of site data provided by the Employer may potentially lead to delay or additional work, hence the Employer's responsibility for providing inaccurate site data must be stated.</p>	<p>-&gt; Tips for clarifying employer's responsibility: "Geotechnical survey data provided by the Employer shall be deemed to be 'data and information which the Contractor cannot verify', thus the Employer shall take responsibility for their accuracy and correctness."</p>
<p><b>10.2 Taking Over of Parts of the Works</b></p> <p><u>The Engineer may, at the sole discretion of the Employer, issue a Taking-Over Certificate for any part of the Permanent Works.</u></p> <p>The Employer shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Engineer has issued a Taking-Over Certificate for this part. However, if the Employer does use any part of the Works before the Taking-Over Certificate is issued:</p> <ul style="list-style-type: none"> <li>(a) the part which is used shall be deemed to have been taken over as from the date on which it is used,</li> <li>(b) the Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Employer, and</li> <li>(c) if requested by the Contractor, the Engineer shall issue a Taking-Over Certificate for this part.</li> </ul> <p><u>Comment</u> Basis for issuing Taking-Over Certificates are not clearly specified. Hence, the Employer may reject or delay the issuance.</p>	<p>-&gt; Provide step by step procedure for issuing a Taking-Over Certificate at precontract period: * Prepare inspection and testing plan (ITP) checklist, by integrating international and local standards, for all take-over stages covering safety, quality assurance, environmental, testing and commissioning.</p>
<p><b>10.3 Interference with Tests on Completion</b></p> <p>If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Employer is responsible, the Employer shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.</p> <p>The Engineer shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Engineer shall require the Tests on Completion to be carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.</p> <p>If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the Tests on Completion, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:</p> <ul style="list-style-type: none"> <li>(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and</li> <li>(b) payment of any such Cost plus profit, which shall be included in the Contract Price.</li> </ul> <p><u>Comment</u> The Employer may potentially bring in third party inspector/ consultants for additional check, hence possibly delaying the take-over process.</p>	<p>-&gt; Clear condition on how third party's involvement will be treated is necessary, for example: "If the Contractor suffers delay and/or incurs Cost as a result of <b>non-contract party's involvement in the take-over process</b>, the Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claim]."</p>

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<p><b>13.3 Variation Procedure</b></p> <p>The Engineer shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 [<i>Value Engineering</i>] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.</p> <p>Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.</p> <p>Each Variation shall be evaluated in accordance with Clause 12 [<i>Measurement and Evaluation</i>], unless the Engineer instructs or approves otherwise in accordance with this Clause.</p> <p><i>Comment</i> The Employer may need approval from the higher authorities in variation order, hence potentially delaying the payment to the Contractor.</p>	<p>-&gt; Include a condition for provisional payment in order to mitigate delay in payment: "While waiting for the approval of the value of any Variation Order by the Authority concerned, a partial payment of 80% of the value may be made by the Employer to the Contractor, on the condition that the works under such Variation Order shall have been completed and certified by the Employer's Representative."</p> <p>-&gt; Include variation procedure flowchart, with time limit specified for each stage, as part of the contract.</p>
<p><b>13.8 Adjustments for Changes in Cost</b></p> <p>The cost indices or reference prices stated in the table of adjustment data shall be used. <u>If their source is in doubt, it shall be determined by the Engineer.</u> For this purpose, reference shall be made to the values of the indices at stated dates for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.</p> <p>In cases where the "currency of index" is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the central bank of the Country, of this relevant currency on the above date for which the index is required to be applicable.</p> <p><u>Until such time as each current cost index is available, the Engineer shall determine a provisional index</u> for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.</p> <p><i>Comment</i> The Employer may not be familiar with price adjustment calculation procedure, hence potentially causing conflict on who's approach should be followed.</p>	<p>-&gt; Work out sample calculations of price adjustment, during precontract period, under various scenarios such as: 1) construction is significantly delayed, and 2) referencing CPI is not available.</p>
<p><b>14.3 Application for Interim Payment Certificate</b></p> <p>The Contractor shall submit a Statement in six copies to the Engineer after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers himself to be entitled, together with supporting documents <u>which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].</u></p> <p>The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:</p> <p><i>Comment</i> Current condition may potentially cause delay in interim payment procedure due to unnecessary and excessive documentation referenced in Sub-Clause 4.21 [Progress Reports].</p>	<p>-&gt; If local regulations stipulate simpler requirement, then delete the underlined condition and replace it with "which are required by the applicable laws."</p> <p>-&gt; Include payment procedure flowchart, with time limit specified for each stage, as part of the contract.</p>
<p><b>14.6 Issue of Interim Payment Certificates</b></p> <p>No amount will be certified or paid until the Employer has received and approved the Performance Security. Thereafter, the Engineer shall, within 28 days after receiving a Statement and supporting documents, deliver to the Employer and to the Contractor an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with all supporting particulars for any reduction or withholding made by the Engineer on the Statement if any.</p> <p>However, prior to issuing the Taking-Over Certificate for the Works, the Engineer shall not be bound to issue an Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated in the Contract Data. In this event, the Engineer shall give notice to the Contractor accordingly.</p> <p>An Interim Payment Certificate shall not be withheld for any other reason, although:</p> <p><i>Comment</i> Whether the Engineer or the Employer shall approve the final issuance of interim payment certificate is the fundamental difference between 3-party and 2-party contract system. Hence, contracting parties must come up with an interim payment process which all parties will agree to.</p>	<p>-&gt; Specify a modified payment procedure that incorporates the local requirement, with time-limits for each stage clearly stated. Consequences for delays in any stages must be clearly stipulated also.</p>