

GROUNDED THEORY OF ADVERSARIAL RELATIONSHIP IN MALAYSIAN
CONSTRUCTION INDUSTRY

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A thesis submitted in fulfilment of the
requirements for the award of the degree of
Doctor of Philosophy (Quantity Surveying)

Faculty of Built Environment
Universiti Teknologi Malaysia

APRIL 2016

Specially dedicated to my *Father* and *Mother*,
whose lives have been testimonies of God's unfailing love
for more than thirty years.

- *Luke 15:20*

ACKNOWLEDGEMENT

This research is the result of team effort. I would like to acknowledge those individuals or organisations who have been instrumental during the course of this study. First, I thank my school, Universiti Teknologi Malaysia (UTM) and Ministry of Education, Malaysia, for the scholarship and research grant offered to me which made this study possible. In fact, the school provides some of the best facilities and environment for our learning and research. Sincere gratitude is due to my main supervisor, Assoc. Prof. Dr. Nur Emma Mustaffa for her helpful guidance, encouragement and acceptance throughout these six years. Your unwavering commitment has been significant to the completion of this study. And I thank the respondents who have given their valuable time and contributions at every point of data collection and validation. Due to confidentiality, their names are not mentioned here. Nonetheless, you are part of this team. My appreciation also goes to the teaching staffs at UTM without whose ideas, supports and constant reminders this study would not have come to fruition. For Dr. Maizon's supervision, Dr. Kherun's assistance, Dr. Rosli's generosity and Dr. Fadhlin's timely reminders, I am indeed grateful. I am also indebted to my spiritual family, Ps. Elijah, Chris, Gary, Joseph Petinrin, Obadiah, Gabriel, Titus and Peniel for their constant prayers and assistance in manuscript reading. To other friends whom I am not able to list down one by one here, my heartfelt appreciation goes to you. Besides that, I want to also acknowledge the support and love of my parents. Above all, you have given me a healthy and complete family that I needed to grow in maturity and in fulfilment of God's vision in my life. You have given me so many things that you never had yourself. Thank you Papa and Mama. Finally and certainly most important of all, I give thanks to Jesus Christ, my Lord and Saviour for moulding me into who I am today. May this work brings glory to Your name.

ABSTRACT

Malaysian construction industry has long suffered from adversarial relationship. The literature review disclosed an emerging trend globally to study the impact of “soft” issues towards stakeholders’ relationship. However, there are limited studies that capitalised on this locally. Thus, the aim of this research is to develop a conceptual model based on the cause and effect of adversarial relationship, of which a grounded theory is constructed. The research questions have been explored through mixed-method research design. It began with a quantitative survey sequentially followed by a qualitative inquiry involving in-depth interviews with individuals, focusing primarily on three principal stakeholders (clients, consultants and contractors) in the industry. Postal questionnaire has been distributed to investigate the emerging critical success factors (CSFs) for local construction project and the statistical results helped to form the basis for subsequent investigation into the “soft” issues associated with the research. Interviews were carried out on individuals who were selected based on theoretical sampling strategies to gain insights from variety of respondents. The analysis resulted in the formulation of six phenomena that together formed four key components from which a grounded theory of adversarial relationship among stakeholders was constructed. The components were divided between an individual and organisational level of analysis that underpins the new theory– stakeholders’ mindset. It accentuates on the opportunistic behaviours that are evident in the relationships among stakeholders, where motivations and value systems are often self-centered, in view of the lack of accountability and challenging operating environment. The theory was validated by experts through an online survey and follow-up interviews. The contribution of this research can be viewed in terms of a critical understanding on the stakeholders’ adversarial mindset in the industry. The theory provided a framework for identifying suitable relationship-based strategies that can be incorporated into local procurement procedure.

ABSTRAK

Industri pembinaan di Malaysia telah lama menghadapi masalah hubungan bertentangan di antara ahli-ahli projeknya. Kajian ilmiah mendapati satu trend yang semakin menekankan kesan isu-isu “lembut” terdapat hubungan ahli-ahli projek di serata dunia. Namun begitu, kajian di peringkat tempatan mengenai isu ini adalah terhad. Justeru itu, tujuan kajian ini adalah untuk membangunkan satu model konseptual yang berdasarkan sebab dan akibat hubungan bertentangan ini, di mana satu teori yang baru dapat dibangunkan. Persoalan bagi kajian ini telah diterokai melalui reka bentuk penyelidikan yang melibatkan pendekatan kuantitatif dan disusuli oleh siasatan kualitatif. Penekanan diberi kepada tiga ahli utama dalam pengurusan projek iaitu pihak majikan, perunding dan kontraktor utama. Pada permulaannya, borang soal selidik diedarkan bagi mengenalpasti faktor kejayaan kritikal (CSFs) projek pembinaan tempatan. Analisa statistik dan penghuraian membuka jalan kepada siasatan lanjutan terhadap isu-isu “lembut” dalam hal pengurusan projek. Selain daripada itu, sesi temubual juga telah dijalankan ke atas beberapa ahli projek yang dipilih berdasarkan strategi persampelan teori supaya pendapat yang menyeluruh dapat diperolehi. Analisa kualitatif bagi temubual ini telah menghasilkan enam fenomena di mana empat komponen utama telah dibentuk. Komponen-komponen ini telah dikaji dari perspektif individu dan organisasi bagi usaha pembentukan teori yang baru – iaitu *stakeholders’ mindset*. Ia menghuraikan punca and kesan tingkah laku bertentangan terhadap hubungan antara ahli-ahli projek, di mana motivasi dan sistem nilai mereka hanya mengutamakan kepentingan diri sendiri hasil daripada kemerosotan budaya akauntabiliti dan keadaan operasi yang semakin mencabar. Teori ini juga telah disahkan oleh pakar-pakar melalui soal selidik dan temu bual susulan. Sumbangan penyelidikan ini adalah dari segi pemahaman kritikal terhadap set minda bertentangan antara ahli-ahli dalam industri. Teori ini juga berguna dari segi persediaan rangka kerja bagi strategi pengeras hubungan yang bakal diamalkan dalam prosedur perolehan tempatan.

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LIST OF ABBREVIATIONS

ACEM	-	Association of Consulting Engineers Malaysia
ANOVA	-	Analysis of Variance
BQSM	-	Board of Quantity Surveyor Malaysia
CEO	-	Chief Executive Officer
CIDB	-	Construction Industry Development Board
CIMP	-	Construction Industry Master Plan
CIPPA	-	Construction Industry Payment and Adjudication Act
CSF	-	Critical Success Factors
EOT	-	Extension of Time
ETP	-	Economic Transformation Programme
FSM	-	Formal System Model
GDP	-	Gross Domestic Product
GT	-	Game Theory
JKR	-	Jabatan Kerja Raya
LAM	-	Lembaga Arkitek Malaysia
MRT	-	Mass Rapid Transit
PD	-	Prisoners' Dilemma
PAM	-	Pertubuhan Arkitek Malaysia
PWD	-	Public Works Department
REHDA	-	Real Estate and Housing Developers' Association Malaysia
SCM	-	Supply Chain Management
SME	-	Small and Medium Enterprise
TCE	-	Transaction Cost Economics
VO	-	Variation Order

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CHAPTER 1

INTRODUCTION

1.1 Background to the Study

The construction industry is of vital importance for employment and the economic growth of Malaysia. It has contributed approximately 4 per cent of the country's Gross Domestic Product (GDP) value in 2014, with a forecasted 10.7 per cent growth in the subsequent year (Department of Statistics Malaysia, 2015). The labour force serving the construction industry also accounts for approximately 9.4 per cent of the country's total labour force in 2013 (Department of Statistics Malaysia, 2015). Moreover, the industry serves as a catalyst of growth for numerous industries such as manufacturing, transportation, and financial services due to its extensive linkages with many other business sectors (Abdullah, 2004).

In 2011, the government announced several mega development projects under the Tenth Malaysian Plan (2011-2015) and the Economic Transformation Programme (ETP), hoping that these projects will help to bring about long-term sustainable growth to the nation's economy. One of the example is the Mass Rapid Transit (MRT) system, which costs over RM40 billion with an estimated demand of up to 130,000 construction manpower of various trades (CIDB Malaysia, 2011). While these developments may provide abundant jobs for players in the construction industry, numerous concerns have been raised by the general public over the ability of the local industry to perform up to the time, cost and quality standards expected due to the inherent challenges in the industry.

The general perception of the Malaysian construction industry as a whole is under-achieving in terms of its low productivity and little emphasis on quality (CIDB Malaysia, 2006, 2015). It has often been characterised by opportunistic behaviours that stems from an adversarial relationship due to traditional competitive approach to procurement which relied on independent firms brought together through competitive bidding (CIDB Malaysia, 2006, 2009b, Mohammad *et al.*, 2014). It is an inefficient process as it promotes delayed payment progress, excessive demand and variation as well as unrealistic bidding. Hence, it is not surprising that late payments, construction delays, cost overruns and disputes are among the most common challenges faced by the local industry (CIDB Malaysia, 2006; Danuri *et al.*, 2006; Alaghbari *et al.*, 2007; Sambasivan and Soon, 2007; Ramanathan *et al.*, 2012, Abdul-Rahman *et al.*, 2013; Memon *et al.*, 2014; Shehu *et al.*, 2014). Government organisations, researchers and practitioners at large have therefore called for a change in attitudes, behaviours and procedures to address the challenges brought about by such adversarial relationship. The industry is urged to look into some new procurement strategies that can promote better working relationship and at the same time alleviating the opportunistic behaviours among project stakeholders thereby improving the project performance of the industry (CIDB Malaysia, 2006, 2009b; Mohammad *et al.*, 2014).

1.1.1 Adversarial Relationship in Construction Industry

As construction is a project-based activity, in which time, quality and budget are associated with one-time individual project (Dubois and Gadde, 2002), relationships were often built upon a short-term basis with construction stakeholders attempting to take advantage from one another from an existing project. Such phenomenon often leads to adversarial relationship. It has been criticised by a number of authors over the years such as Axelrod (1984), Cox and Thompson (1997), Larson (1997), Thomas and Thomas (2005), Oade (2011) and Meng (2012).

According to Oxford English Dictionary (OED Online, 2015b), an adversarial relationship can be defined as a relationship that is characterised by

conflicts, hostility, or opposition; involving adversaries or opposing parties. In fact, conflicts, lack of trust, ineffective communication, uneven bargaining power and lack of end-user involvement are among the most significant shortcomings in the construction industry owing to its widespread adversarial attitude (Latham, 1994; Egan, 1998; Chan *et al.*, 2003; Harmon, 2003; Eriksson, 2006).

Larson (1997) regarded such relationship as characterised by a win-lose philosophy whereby the construction stakeholders are suspicious of one another, having a tendency of withholding or manipulating information, and usually allocating risk in an unfairly manner. Notwithstanding, Thomas and Thomas (2005) asserted that adversarial relationship often originated from a selfish attitude that leads to self-seeking objectives, characterised by lack of trust, confrontational practices, poor communication, problem escalation and lack of continuous improvement. Bishop *et al.* (2008) further concurred that adversarialism is an “endemic” feature in the construction industry whereby hostility and the culture of distrust is a norm. He further elaborated that in an adversarial relationship, the different parties involved at each stage of the construction process often worked opportunistically whereby each spend considerable amount of time trying to exploit one another, hoping to extract a return when the terms of contract has been violated. Apart from that, Baiden *et al.* (2006) attributed adversarial relationship to the fragmented nature of the industry. He opined that the design phase of the construction project has traditionally been treated as a separate activity to the construction phase. The different teams who involved in a project work towards individually-defined objectives that are usually in conflict with one another.

1.1.2 Adversarial Relationship in Different Industries

The problem of adversarial relationship is by no means exclusive to construction *per se*, other industries on the wider business sector that engage in a buyer-supplier or management-labour relationship such as finance, automobile, and manufacturing sector are facing similar challenges over the years. Oade (2011) for example, who wrote in a more general business context, opined that adversarialism

can be regarded as behaviours and dynamics in a relationship that are characterised by little or no trust and support. According to her, an adversarial partner or member is someone who uses behaviours that erodes trust and work against his or her manager, peer or team members, regardless of how closely structured his or her role may be. Trust and support are likely to remain low throughout the transaction period as members of the team actively pursuing their own internally derives, emotionally driven agenda in opposition to the mutual objectives. Oade (2011) argued that though there are various reasons for a person to behave in an adversarial manner; the main reason could be attributed to a person's lack of security. Most adversarial partner or member will try to avoid placing themselves in a position which they will be vulnerable to exploitation. As such, the adversarial behaviours represent a misguided attempt to feel safe. Worst still, an adversarial partner may even look down and be motivated to oppose the team members who are adept at developing rapport with other colleagues.

Apart from that, Kumar (1996) reported on the widespread adversarialism between manufacturers and retailers. In one of the example given, consumer packaged-goods manufacturer such as Procter & Gamble was exploiting their power to extract unfair concessions from their buyers. They limit the quantities of high-demand products they would deliver to the supermarket chain, insist the retailers to carry all sizes of certain products and demand the retailers to participate in certain promotional programmes. Later development revealed that when the supermarket chains have become enormous, they in turn exploit their power upon the manufacturers thus forming a vicious cycle (Kumar, 1996).

On the other hand, Helper and Henderson (2014) and Cody (2015) investigated the adversarial relationship between the U.S. auto industry and United Auto Workers (UAW) union, contending that the dysfunctional relationship had nearly led to the demise of the U.S. auto industry. They asserted that years of confrontation among the industry, union and their suppliers have resulted in low productivity, low level of trust and non-competitive wages that eventually weakened the industry to the extent where it continuously losses its market share to companies from foreign nations such as Japan and Germany.

Adversarial relationship is also apparent in the healthcare industry. A recent strike by the junior doctors under the British Medical Association (BMA) brought to surface some of the negative sentiments among the junior doctors concerning their unfair salary structure and work conditions stipulated in the proposed new contract (Bagenal, 2015). The new terms and conditions suggested by the UK National Health Service (NHS) were seen as a threat to extend the junior doctors' standard working hours while cutting their pay by up to 15 per cent. The resentment has also fed into the wider frustration across the healthcare sector where staffs reporting that they felt demoralised, disenfranchised and undervalued (Bagenal, 2015). On top of that, the adversarial relationships were made worst by the general distrust towards the Prime Minister whose government threatened to impose the new terms without further consultation.

1.1.3 Defining Adversarial Relationship

The review is by no means an exhaustive account of adversarial relationship in various business sectors but rather the objective is to provide a brief understanding of the field and to highlight the universal nature of the issue. The summary helped to identify relevant features to be adopted, in order to derive at a suitable definition of adversarial relationship within the context of this study. Despite the numerous definitions being presented, a consensus on adversarial relationship is that traditional way of thinking and working has formed barriers to the industries' supply chain management, regardless of the nature of business. A consolidation of the various features as presented in Table 1.1 indicated that a culture of distrust, confrontational and exploitative practices that were originated from self-centered and opportunistic behaviours best exemplified this traditional way of working.

Adversarial relationship in the context of this research can therefore be accurately defined as a relationship that is characterised by little or no trust with confrontational practices aimed to exploit another party, which originated from a self-centered and opportunistic behaviour of the adversarial party. In view of this, the

successful application of supply chain management in construction requires a major shift from the traditional adversarial to the collaborative relationships in its projects.

1.2 Problem Statement

The construction industry in Malaysia is commonly organised by hierarchically linked contractual chain whereby independent firms such as the consultants, main contractors, subcontractors and suppliers who possess different skills and knowledge, are brought together through competitive biddings. The complicated web of relationships within the project teams provides a “conductive” environment for the emergence of adversarial attitudes and fragmentation of the industry (CIDB Malaysia, 2006, 2009b; Mohammad *et al.*, 2014). Looking into the adversarial attitudes among stakeholders within the Malaysian construction industry is important because it was seen as a major contributing factor for many of the industry’s problem (CIDB Malaysia, 2006, 2009b; Mohammad *et al.*, 2014).

The local industry is prone to disputes (Lim, 2005) due to the commonly faced challenges such as payment defaults, construction delays and cost overruns (CIDB Malaysia, 2006, 2009b). This is on top of the increasing pressure for a more competitive budget and a higher demand for project performance in terms of its delivery time and quality. There has been no official statistics concerning the full gravity of these disputes in the local industry but anecdotal evidences among legal practitioners and professionals in the arbitral community suggested that a substantial amount of the disputes were related to arbitration cases involving stakeholders from the construction industry (Oon, 2003). Notwithstanding, a recent study conducted by Shehu *et al.* (2014) discovered that more than 50 per cent of the construction projects in Malaysia are prone to cost overruns leading to arbitration, project abandonment, disputes and litigations.

Table 1.1 Comparison of critical elements of adversarial relationship

Features of Adversarial relationship	OED Online (2015b)	Larson (1997)	Thomas & Thomas (2005)	Baiden et al. (2008)	Bishop et al. (2008)	Oade (2011)	Kumar (1996)	Helper & Henderson (2014) Cody (2015)	Bagenal (2015)
Win-lose philosophy	•	•	•		•		•		
- Self-seeking objectives			•	•		•			
Lack of Trust			•		•	•		•	•
- Suspicious of one another		•							
Poor Communication			•						
Conflicts	•			•	•				
- Confrontational practices			•			•		•	•
- Revenge							•		
Problem escalation			•						
Lack of continuous improvement			•						
Opportunistic behaviours					•	•	•		
- Unfair risk allocation		•							
- Withholding / Manipulating information		•							
- Exploitation					•		•		•
Functional fragmentation				•				•	
Low productivity								•	

While these challenges have been investigated by various researchers (Abdul-Rahman *et al.*, 2006; Danuri *et al.*, 2006; Alaghbari *et al.*, 2007; Sambasivan and Soon, 2007; Ramanathan *et al.*, 2012; Abdul-Rahman *et al.*, 2013; Memon *et al.* 2014; Shehu *et al.* 2014), there appears to be limited studies that examined the main cause of these problems which is the adversarial relationship among stakeholders. There is a paucity of research on the opportunistic behaviours and lack of trust among construction stakeholders in Malaysia, being the two main characteristics of an adversarial relationship. Furthermore, the literature review also disclosed a weak theoretical and empirical understanding on the overall behavioural aspect of project management in Malaysia, for example issues like trust, stakeholders' behaviour, and culture. This realisation thus prompted the researcher to investigate on the adversarial relationship among stakeholders in order to identify the causes of the adversarial attitude and ascertain its relative effect upon project performances. This research gap will be discussed in detail in the following section.

1.3 Research Gap

Numerous studies have been conducted in the past to look into the possible ways of improving project performances in Malaysia (see Table 1.2). However, most of them were conducted long time ago and could not sufficiently depict the current development of the industry. In addition, majority of the studies did not take into account the inclusive examination on the factors that are critical to the success of the project but rather the focus is on the specific challenges of the industry for example, payment defaults (Danuri *et al.*, 2006; Sambasivan and Soon, 2007), construction delays (Abdul-Rahman *et al.*, 2006; Alaghbari *et al.*, 2007; Sambasivan and Soon, 2007; Ramanathan *et al.*, 2012; Memon *et al.* 2014) and cost overruns (Abdul-Rahman *et al.*, 2013; Memon *et al.* 2014; Shehu *et al.* 2014).

Table 1.2 Summary of studies concerning project performances in the Malaysian construction industry

Areas of concern	Authors	Nature of research
<p><u>Project management success</u> Concerns with attaining the project goals such as completion within contractual period (Time), allocated budget (Cost) and conforming to the standard as per project requirement (Quality).</p>	<p>Examples include : Lim and Mohamed (1999); Takim <i>et al.</i> (2004); Abdul-Rahman <i>et al.</i> (2006); Danuri <i>et al.</i> (2006); Alaghbari <i>et al.</i> (2007); Sambasivan and Soon (2007); Takim and Adnan (2008); Ali and Rahmat (2010); Al-Tmeemy <i>et al.</i> (2011), Ramanathan <i>et al.</i> (2012); Wai <i>et al.</i> (2012); Abdul-Rahman <i>et al.</i> (2013); Memon <i>et al.</i> (2014); Shehu <i>et al.</i> (2014)</p>	<p>The focus of the research are predominantly on the “hard” factors mainly concern with time, cost, quality and profitability of the project.</p>
<p><u>Product success</u> Relates to the functionality, fulfilment of technical requirement as well as customer satisfaction towards the project.</p>	<p>Examples include : Lim and Mohamed (1999); Takim <i>et al.</i> (2004); Ali and Rahmat (2010); Al-Tmeemy <i>et al.</i> (2011); Wai <i>et al.</i> (2012)</p>	
<p><u>Market success</u> Relates to project’s potential in contributing to the company’s long term benefits in terms of gaining a competitive advantage; enhancement of company reputation; increasing market share; and reaching specific revenue and profits.</p>	<p>Examples include : Takim and Adnan (2008), Al-Tmeemy <i>et al.</i> (2011); Wai <i>et al.</i> (2012)</p>	

The body of literature in Malaysia tend to overlook the potentials of human-related “soft” factors or behavioural aspect of the project management in improving project performances; rather the focuses are predominantly on the “hard” factors that are mainly concerns with time, cost, quality and profitability of the project. In addition to that, most of these studies were conducted long time ago and may not sufficiently represent the current need of the industry.

A literature search would revealed that there is an increasing number of research on behavioural aspect of the project management globally, recognising the importance of soft issue towards project performances and its relative influence on stakeholders’ relationship. As such, it is timely to obtain a renewed understanding of the critical success factors (CSFs) considered by various stakeholders locally in order to identify if there is any emerging factor that concerns with human-related “soft” issues and, if they are, to what extend does these soft issues lead to the

development of an adversarial attitude among stakeholders and how do they affect overall project performances under different circumstances. Hence, local stakeholders' opinions on the emerging CSFs are important to chart the path for subsequent investigation as it delivers the basis, justification and empirical support to look into the adversarial relationship among stakeholders in Malaysia.

The subsequent investigation will focus on the “soft” issues as related subjects such as stakeholders' relationships, trust and commitment in relation to project success in Malaysia is less studied. Most of the researches carried out thus far have been unable to capture the heart of the industry's problem – adversarialism in its entirety in the nature of the relationships among construction stakeholders in Malaysia. On top of that, even though various dimensions of project success have been discussed, but research community has remained relatively silent on the soft issue particularly on the opportunistic behaviour and lack of trust among construction stakeholders.

It is therefore, timely to investigate on the cause and effect of adversarial relationship among construction stakeholders in the local industry. Understanding the interplay between the individual and organisational aspects of the stakeholders' adversarial relationships will enable the researcher to ascertain the impact of stakeholders' perceptions, value and behaviours towards their relationships. This would promote the formation of trust as well as instil a greater level of confidence among the stakeholders. Without addressing the opportunistic behaviour and the lack of trust in the adversarial relationship at first, other strategies and efforts on project success would be futile.

Since research on adversarial relationship is uncommon in the local industry, this study is therefore an attempt to fill in that gap. As the issue under investigation is “soft” in nature and little is known about the situation in Malaysia, grounded theory methodology was deemed suitable for this stage of the inquiry. Further discussion on the research methodology is reported in section 1.6 of this chapter.

Apart from identifying the cause and effect of adversarial relationship, the researcher intends to drive the study from a mere “descriptive” analysis to a “conceptually” driven analysis with the goals of theory building. In addition to a descriptive list of cause and effect, the in-depth analysis challenged the researcher to think analytically and help to dig deeper beneath the surface of the data to present new understanding on the issue concerning adversarial relationship. According to Corbin and Strauss (2008, p.64), theorizing is the act of “*constructing an exploratory scheme from data that systematically integrate different concepts, their properties and dimensions, through statement of relationship to form a theoretical framework*”.

The integration of various phenomena on the cause and effect of adversarial relationship through the conceptual model and the construction of theory based on this integration necessitate the data to be explored fully and be considered from many different angles for greater applicability across the industry. The theory grounded in the concepts (or commonly referred to as “grounded theory”) derived from the analysis, usually consists of an overarching core concept taken together with the other sub-concepts that explains the surrounding context of the issue thereby giving it greater explanatory power. The theory could provide a framework for identifying suitable collaborative strategies that can be incorporated into local procurement procedure in the future.

In order to provide a more specific guidance towards the investigation, three research questions resulting from the problem statement and conceptualisation process, have thus been formulated: -

1. What are the emerging factors that are significant for the success of the construction projects in Malaysia?
2. What are the causes of the adversarial relationship among construction stakeholders and how do these behavioural issues affect project performances?

3. To what extent that identifying these stakeholders' adversarial attitude has been significant for the implementation of collaborative procurement strategies?

1.4 Aim and Objectives

The overarching aim of this research is to develop a conceptual model that embodies well-constructed phenomena on the cause and effect of adversarial relationship in the Malaysian construction industry. It would represent schematically the concepts arise from the in-depth analysis, of which a grounded theory of adversarial relationship in the Malaysian construction industry would be constructed. The specific objectives are as follows:-

1. To investigate the critical success factors of the local construction projects.
2. To investigate the cause and effect of adversarial relationship in the Malaysian construction industry.
3. To develop a conceptual model of adversarial relationship in the Malaysian construction industry thru the phenomena derived from analysis.
4. To construct new theory that is grounded in various phenomena of the conceptual model.
5. To validate the conceptual model and grounded theory through "*members checking*".

The relationships between these objectives to the problem statement and methodology have been depicted in the research framework in Figure 1.1.

1.5 Scope of Study

This research concentrates on three principal target groups namely, the clients, consultants and contractors, in the Malaysian construction industry. They are selected because of their distinct roles and nature of relationships in the project. In addition to that, they are also the main decision-makers in the industry. The stakeholders were selected from the states of Selangor and Kuala Lumpur. Both places were chosen because of their reputation as the country's commercial and industrial heartland. In fact, 29.7 per cent of the construction projects or equivalents to 35.8 per cent of the total project value in the country were awarded to these areas in year 2014 (CIDB Malaysia, 2014). In addition, the target group for the contractors is further narrowed down to companies that are registered with the Construction Industry Development Board (CIDB) under class G7 (projects greater than RM10 million). Class G7 was selected as this group of contractors occupied 71.3 per cent of the total project value in year 2014 (CIDB Malaysia, 2014). Furthermore, both states have the largest group of professionals and contractors registered. For examples, out of 5,618 G7 contractors in the country, 2,869 or equivalent to 51 per cent of them were registered under Selangor and Kuala Lumpur (CIDB Malaysia, 2014).

In terms of construction sector, the study focuses on the building construction sector as the main scope to examine the issue, considering that the building industry occupied more than 60 per cent of the number of projects and total project value in year 2014 (CIDB Malaysia, 2014) as compared to others such as civil engineering, electrical and mechanical sectors. Notwithstanding, in terms of procurement procedures, the research concentrates on the traditional type of contract as it is still the preferred choice of procurement in Malaysia with a whopping 97 per cent of the project procured under the traditional procurement procedure in year 2014 (CIDB Malaysia, 2014). On top of that, the traditional competitive approach to procurement has also been identified as an inefficient procedure that contributed to the industry's fragmentation (CIDB Malaysia, 2006, 2009b; Mohammad *et al.*, 2014).

1.6 Research Design

In order to answer the research questions discussed in previous section, the essential elements of a theory as defined by expert such as Whetten (1989) are used as a lens to critically review existing theories in construction management research. The dominant perspectives from these existing theories are then integrated into a theoretical framework for further conceptualisation and operationalisation of the research. For the purpose of this research, Game Theory (GT), Transaction Cost Economics (TCE) and Trust theory are employed to the widely used traditional procurement in the construction industry, in order to understand and analyse the various aspects of buyer-supplier relationships in the construction project.

Methodologically, this research employed a balanced philosophical stance in terms of its research methods and data collection techniques. It has been designed according to the quantitative (hard issue) and the qualitative nature (soft issue) of the research. Both 'positivist' and 'interpretivist' approaches were adopted. The intention for adopting the quantitative paradigm is driven by the first research question on the emerging CSFs for construction projects in Malaysia. As the purpose is to identify relevant CSFs using standardised procedures, instruments and involve generation of quantitative data, a 'positivist' approach whereby an objectivist ontological position is adopted, was deemed suitable. The deductive nature of the paradigm is also well-suited to the objective of reducing the numerous CSFs into several set of variables in order to establish causal relationship between those set of variable. The findings will be used to either support or refutes the existing findings or theories found in the literature to pave the way for further route into the research (Creswell, 2009). The deductive method via the 'positivist' approach which draws out vital factors for the success of construction project is essential to construction stakeholders. In short, this aspect of the research investigates on the 'objective' nature of the study whereby it focuses on facts (hard issue) and the operationalisation of these facts into concepts that can be measured and tested. On top of that, the researcher is independent from the data without influencing it and being influenced by it.

Apart from understanding ‘what’ are the CSFs for projects in Malaysia, the researcher intended to understand ‘why’ do the stakeholders think that these factors are important and ‘how’ do these factors actually affect or improve the project relationships. Such intention leads to an interpretative approach. As little is known about the area of study, naturalistic approach such as interview is deemed most suitable to inductively and holistically understand human phenomena for example, the behavioural aspect of the adversarial relationship among stakeholders in this research. An ‘interpretivist’ or ‘constructivist’ ontological position is adopted as this aspect of the investigation is subjective in nature due to the assertion that there are multiple realities because of the different ‘construction’ or perception of reality from a person being investigated (Sale *et al.*, 2002). It focuses on the meanings that the stakeholders ascribe to their relationship with one another and try to understand what causes it to be adversarial by looking at the situation in its entirety.

In terms of research method, a sequential transformative mixed method research design as suggested by Creswell (2009) is adopted. It began with a quantitative survey sequentially followed by a qualitative method involving in-depth interviews with different individuals. Nevertheless, the weight of this research was given to the qualitative phase as the main issue under investigation are “soft” in nature.

In summary, the quantitative survey was undertaken to investigate the emerging CSFs for local construction project and the results of this survey formed the basis for subsequent investigation into the “soft” issues associated with the research through qualitative interviews. Grounded theory methodology were employed whereby these interview data will be analysed line by line and coded into various differing concepts. A conceptual model based on the various phenomena on the cause and effect of adversarial relationship among the stakeholders is generated through the integration of these concepts by which a new theory that underpins the various components of the model is constructed.

1.7 Contribution to Knowledge

Past literature on the Malaysian construction industry tend to attribute “hard” factors such as time, cost and quality to project success. As discussed previously, only a limited number of studies on human-related factors appear to have been done in Malaysia. There has yet been any widely published research that described construction stakeholders’ attitudes and behaviours, either on the individual or organisational level, in relation to project relationship and performance in Malaysia.

It is in line with the emerging trend observed from the literatures, which have departed from the usual criteria of time, cost and quality to accentuate on the potentials of human-related “soft” factors such as competence, commitment and communication on improving project performance. In the past, such assumptions were made based on anecdotal evidence and heresay, but it is now empirically proven by the research that the industry is in need of a paradigm shift to improve project performance amidst fierce global competition.

The novelty of this research lies in its critical understanding on the stakeholders’ adversarial mindset in the industry particularly on the individual level of analysis whereby the impact of stakeholders’ perceptions, value and behaviours towards project relationship were empirically investigated. The global consensus on the importance of human-related factors has thus far been limited to project and industry level exploration (Phua, 2013). The conceptual model developed will be able to help the project stakeholders to understand the cause and effect of the adversarial relationship among three principal stakeholders (clients, consultants and contractors) in the Malaysian construction industry. New theory will be added to the collective knowledge on project relationship, particularly on the concepts underpinned various dimensions of mindsets that may affect stakeholders’ relationship at different stages of construction. The theory provided a framework for identifying suitable collaborative strategies that can be incorporated into local procurement procedure in the future.

It is hoped that through the identification and operationalisation of various relationship constructs that mainly concern with attitude change, mutual spirit and strong commitment in improving team relationship, it will bring forth a fundamental change to the way the industry operates. Authentic leadership and management style that foster trust and commitment can be nurtured with relationship-based procurement in place.

1.8 Structure of Thesis

The thesis is divided into eight chapters including this introductory chapter. Figure 1.2 provides a flow diagram showing the organisation and interrelationships of the thesis chapters. The chapters are organised as follows:-

Chapter 1: Introduction

It forms an introductory chapter that explains the background and overall content of the thesis. It comprises of the problem statement, scope of the study as well as aim and objectives of the research. An explanation and justification for the methodology adopted and the structure of the thesis is also reported in this chapter.

Chapter 2: Literature Review

The literature review is compiled in this chapter and divided into two parts. Part A discussed on the emerging trend of critical success factors (CSFs) for construction projects in Malaysia. Part B encompasses scholarly works that investigated on some of the dominant theories relating to human rationality and behaviours during decision making. Strong emphasis on the need to examine the empirical understanding of opportunistic behaviour embedded among local stakeholders' relationship is also highlighted.

Chapter 3: Research Methodology

This chapter outlines the research design for the issues in question. It firstly discusses on the research methodology, data collection techniques and data analysis

methods that have been adopted in construction management in general followed by detail elaborations and justifications given for those methods that have been undertaken in this research. Summary of the research methods adopted for this research is also presented in Figure 1.1

Chapter 4: Survey Analysis and Results

This chapter reports on the findings and discussion for the quantitative part of the research that has been conducted via a full-fledged questionnaire survey designed to investigate a renewed understanding of the emerging trend of critical success factors (CSFs) considered by three principal stakeholders in the Malaysian construction industry. The findings show that local industry's responses are in line with the emerging trend from the literature, in recognising the importance of human-related "soft" factors for project success.

Chapter 5: Grounded Theory of Adversarial Relationship in the Malaysian Construction Industry

An exploratory grounded theory of adversarial relationship among construction stakeholders in Malaysia is explained in this chapter. Eight semi-structured interviews were conducted whereby each is carried out based on the preceding information and analysis made from the previous interview. Six vital phenomena have been established from this grounded theory approach and were utilised to conceptualise the cause and effect of adversarial relationship in the Malaysian construction industry.

Chapter 6: Model Development and Theory Building

A conceptual model of adversarial relationship in the Malaysian construction industry is developed through the six phenomena identified from grounded theory analysis. The various processes that formed the basis of the model are incorporated into the chapter. The process of building the new theory that is grounded in various components of the conceptual model is also explained in this chapter.

Chapter 7: Model Validation

The purpose and format of the validation process is explained. It is validated through taking the final outcome – the conceptual model and grounded theory, back to the respondents who were involved in the qualitative inquiry and see if these respondents agree that it is accurately represented. Its procedure involves conducting an online survey or face-to-face follow-up interview with the respondents.

Chapter 8: Conclusion

This chapter presents the conclusions for this research and recommendations for future research. It also summarises the findings of the research. Limitations of the research and academic issues are also presented in this chapter.

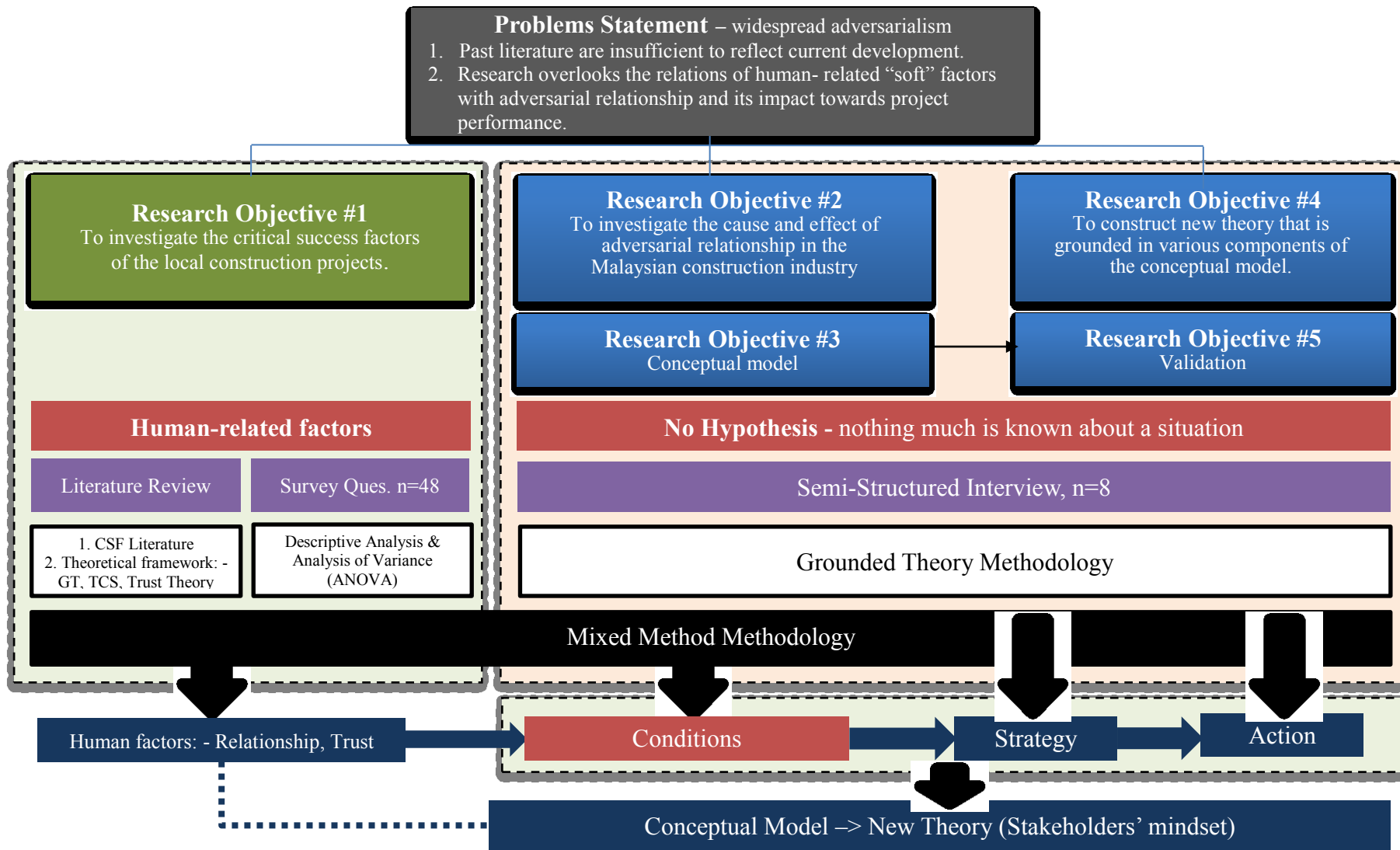


Figure 1.1 Research framework

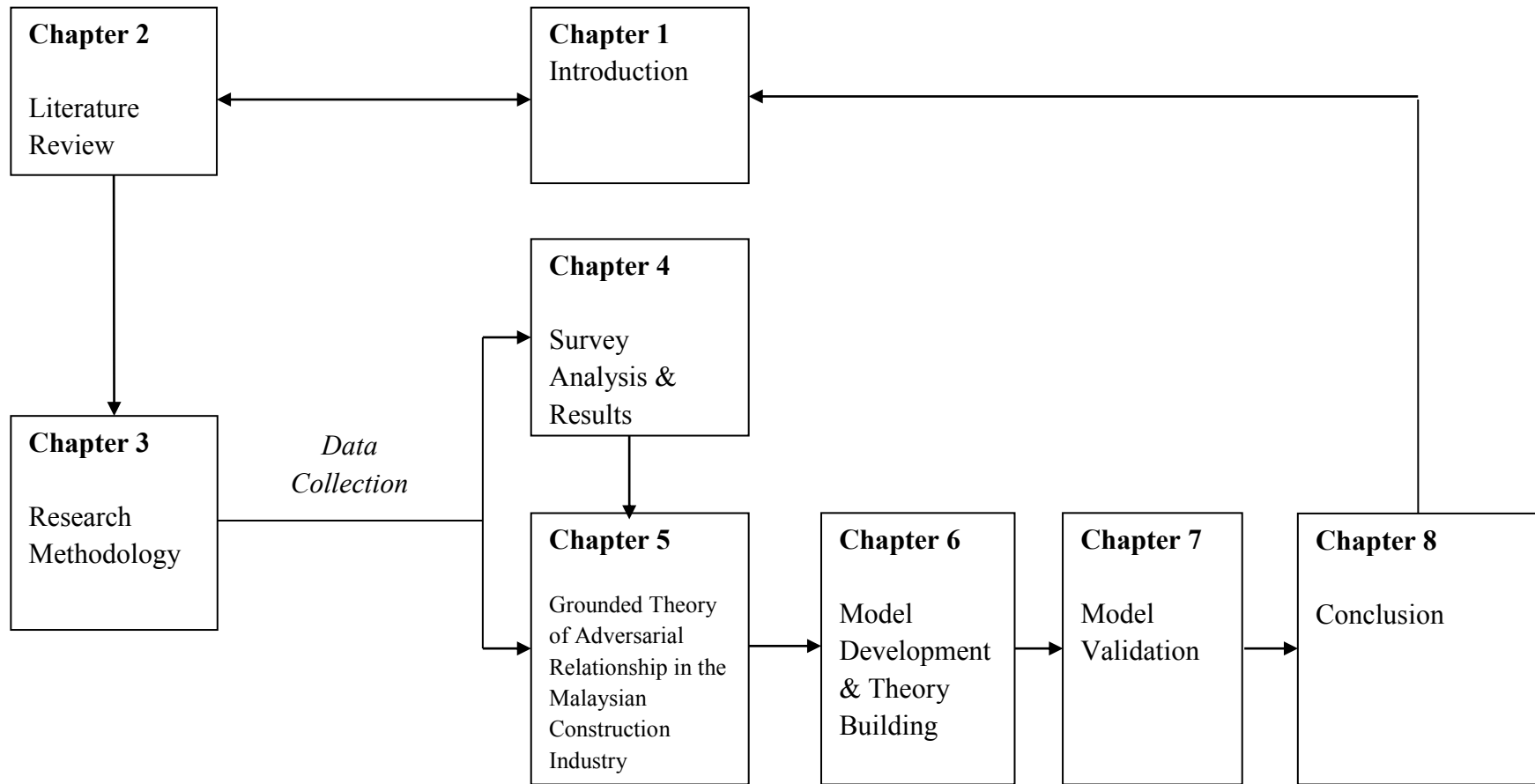


Figure 1.2 Chapters flow

The journal papers were produced based on the empirical results from the first objective of the research, on the emerging CSFs of the local construction projects. All four papers were Scopus indexed. The researcher regarded the experience to present papers at international conferences and the processes involved in submitting papers to international journal as a steep learning curve and confidence boosting exercise. The comments given by the reviewers have provided an avenue for honest re-examination and refinement of the research itself. The opportunity to deliver the presentations during conferences and responding to the journal reviewers has assisted the progress of the study and provided much clarity to the theoretical underpinnings, methodological as well as practical issues related to the research.

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