IMPACT OF ORGANISATIONAL CULTURE ON MALAYSIAN INTERNATIONAL CONTRACTORS' BIDDING DECISIONS

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2015

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THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

FACULTY OF BUILT ENVIRONMENT
UNIVERSITY OF MALAYA
KUALA LUMPUR

2015

UNIVERSITY OF MALAYA

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ABSTRACT

With the rapid urbanisation and globalisation, developing countries contractors start to venture into overseas markets. These contractors are exposed to various types of international risks especially external risks. International risks are not merely serious threats to existing and future international contractors but they are critical decision criteria in decision making. According to the previous literature, external risks are considered as the main determinant in bidding and overseas venture decisions. However, not all decisions are made in a logical and rational manner especially during uncertainty and risky situations. This could be explained by culture that corrupt the justification of information process. Although the impact of culture on decisions is known, yet, the effect of organisational culture on international bidding decisions to date is under-research especially in the construction sector. The aim of this study was to develop a conceptual model to illustrate the relationship interaction between organisational culture and international bidding decisions in response to the political (including legal risk) and economic risks. The objectives of the research were: (1) to identify organisational culture dimensions that are currently practising by international contractors; (2) to identify the maximum risk tolerance level of international contractors in international bidding decisions in response to political (including legal risk) and economic risks; (3) to explore empirically the relationships between organisational culture and international bidding decisions in response to political (including legal risk) and economic risks; and (4) to develop an international bidding decision model based on organisational culture perspective. The model was tested empirically through a mixed research strategy. The focus of this research was international contractors in Malaysia. Firstly, a preliminary mini case studies was conducted to test the relevancy of the impact of the identified organisational culture

variables on international risk decisions. Thereafter, the proposed conceptual model was tested through the questionnaire survey. The quantitative findings were then further interpreted by interviews with experienced industry professional and followed by a model validation survey by industry experts. Based on the predictive model, goals, involvement, values, guanxi, strategy and capability orientations play a more critical role on international bidding decisions compared to hierarchy and adaptability orientations. Goals and strategy orientations contribute greater influence on international bidding decisions in response to the political risk. While, goals and guanxi orientations cast the greater influence on economic risk-related international bidding decisions followed by involvement, values and capability orientations. This study found that organisational culture cast the influence on international bidding decisions, yet, it is not the dominant cause especially in risk decisions. In conclusion, it can be construed that organisational culture is not merely impinge on the degree of internationalisation of an organisation but it represents the organisational capability in response to the risks of the host countries. In summary, the model contributes to a greater understanding of the effect of organisational culture on two (2) major types of international risk bidding decisions, namely, political and economic risks.

ABSTRAK

Dengan pembandaran dan globalisasi yang pesat, kontraktor-kontraktor negara-negara membangun mula meneroka ke pasaran luar negara. Kontraktor-kontraktor ini terdedah kepada pelbagai jenis risiko-risiko antarabangsa terutamanya risiko-risiko eksternal. Risiko-risiko eksternal bukan semata-matanya ancaman yang serius kepada kontraktor-kontraktor semasa dan masa depan tetapi ia merupakan kriteria keputusan yang kritikal dalam membuat sesuatu keputusan. Menurut literatur lepas, risiko-risiko eksternal dianggap sebagai penentu utama dalam keputusan pembidaan dan meneroka ke pasaran luar negeri. Tetapi, bukan semuanya keputusan dibuat secara logik dan rasional terutamanya dalam situasi ketidakpastian dan berisiko. Keadaan ini boleh dijelaskan oleh budaya yang menjejaskan justifikasi dalam proses maklumat. Walaupun pengaruh budaya organisasi terhadap pengambilan keputusan diketahui, tetapi, penyelidikan pada pengaruh budaya organisasi terhadap keputusan pembidaan antarabangsa adalah amat kurang setakat kini terutamanya dalam sektor pembinaan. Tujuan kajian ini adalah untuk membina satu konsepsi budaya-keputusan model untuk menggambarkan hubungan interaksi antara budaya organisasi dan keputusan pembidaan antarabangsa akibat daripada risiko-risiko politik (termasuk risiko perundangan) dan ekonomi. Objektif kajian ini ialah: (1) untuk mengenal pasti dimensi-dimensi budaya organisasi semasa yang diamalkan oleh kontraktor-kontraktor antarabangsa; (2) untuk mengenal pasti tahap toleransi risiko maksimum kontraktor-kontraktor antarabangsa dalam keputusan pembidaan antarabangsa dengan respon kepada risiko-risiko politik (termasuk risiko perundangan) dan ekonomi; (3) untuk meneroka secara empirikal hubungan antara budaya organisasi dan keputusan pembidaan antarabangsa dengan respon kepada risiko-risiko politik (termasuk risiko perundangan) dan ekonomi; dan (4) untuk membina satu model keputusan pembidaan antarabangsa berdasarkan kepada

perspektif budaya organisasi. Model ini diuji secara empirikal melalui strategi kajian gabungan (campuran). Fokus kajian ini adalah kontraktor-kontraktor antarabangsa di Malaysia. Pada mulanya, kajian kes mini awalan telah dijalankan untuk menguji kerelevanan kesan budaya organisasi yang terpilih daripada kajian literatur lepas terhadap pengambilan keputusan risiko antarabangsa. Selepas itu, model konspsi yang dicadangkan itu diuji melalui kajian soal selidik. Seterusnya, keputusan kuantitatif ini diterjemahkan berdasarkan cara temuramah dengan profesional industri yang berpengalaman dan diikuti dengan satu kajian model pengesahan dengan pakar-pakar industri. Berdasarkan kepada model ramalan, orientasi-orientasi matlamat, penglibatan, nilai, guanxi, strategi dan keupayaan memainkan peranan kritikal dalam keputusan pembidaan antarabangsa berbanding dengan orientasi-orientasi hirarki dan penyesuaian. Orientasi-orientasi matlamat dan strategi menyumbangkan pengaruh yang lebih besar dalam keputusan pembidaan antarabangsa yang berkaitan dengan risiko politik. Sementara itu, orientasi-orientasi matlamat dan guanxi menyumbangkan pengaruh yang lebih besar dalam keputusan pembidaan antarabangsa yang berkaitan dengan risiko ekonomi diikuti oleh orientasi-orientasi penglibatan, nilai dan keupayaan. Kajian ini mendapati bahawa budaya organisasi mempengaruhi keputusan pembidaan antarabangsa, namun begitu, ia bukanlah penyebab dominan terutamanya dalam keputusan risiko. Sebagai penutup, keputusan kajian dapat ditafsirkan bahawa budaya organisasi bukan sahaja boleh menjejaskan keputusan pengantarabangsaan dalam sesebuah organisasi tetapi ia mencerminkan keupayaan organisasi bertindak balas kepada risiko-risiko negara luar. Kesimpulannya, model kajian ini menyumbang kepada pemahaman yang lebih jelas dan mendalam tentang kesan budaya organisasi terhadap dua (2) jenis keputusan risiko pembidaan antarabangsa iaitu, risiko-risiko politik dan ekonomi.

ACKNOWLEDGEMENTS

First and foremost, I would like to express my deep sense of gratitude and respect to Professor Dr. Hamzah Abdul Rahman and Dr. Norhanim Zakaria, who have been very understanding and patient supervisors to guide and motivate me throughout my PhD academic period. Their valuable comments, expertise, intellect, persistence and motivation have provided me with the foundations to build up the skills as a researcher. It is my pleasure to gratefully acknowledge the Institute of Research, Management and Consultancy (IPPP) for the financial support under the Postgraduate Research Grant (PPP) that has made this research a possibility. My thanks also go to Professor Low Sui Pheng, Dr. Wong, Dr. Ali Mohammed Alashwal, Dr. Wang Chen and other professors and lecturers for their candid comments and advices to improve my research.

My gratitude is extended to all the interviewees and respondents who have been dedicated their precious time to share their accumulated wisdom, experience, understanding and knowledge with me that make this research a success. I feel grateful to all the administrative staff in the Faculty of Built Environment, University of Malaya for their continuous contribution and assistance on the postgraduate related matters.

I heartily thank my husband and family for being my constant sources of inspiration, motivation and pillar of strength. This research would not have been possible without the support, tolerance, patience and love from them. It is to them that I dedicate this research. I will be grateful forever for their love. Thanks to my friends and coursemates for their friendship and encouragement through my academic period. Last but not least, I would like to place on record, my sense of gratitude and apologies to those whom I have missed here, have lent their helping hand directly or indirectly in my research.

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LIST OF SYMBOLS AND ABBREVIATIONS

CAGR	Compound Annual Growth Rate
IMD	International Institute for Management Development
GCR	Global Competitiveness Report
MP	Malaysian Plan
GDP	Gross Domestic Product
FISIM	Financial Intermediation Services Indirectly Measured
CIDB	Construction Industry Development Board
Nos.	Numbers
UAE	United Arab Emirates
ASEAN	Association of Southeast Asian Nation
ENR	Engineering News Record
SOR	stimulus-organism-response theory
PLS	Partial least square
SEM	Structural equation modeling
CVF	The Competing Values Framework
DOCM	Denison Organisational Culture Model
OC-IBDs	Organisational culture and international bidding decisions model
PLS-SEM	Partial least square structural equation modeling
AVE	Average variance extracted
OLS	Ordinary least square
cv-red	Cross-validated redundancy
cv-com	Cross-validated communality
GoF	Global goodness of fit
VIF	Variance inflation factor

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Chapter 1 provides a general introduction of the entire thesis as presented in Figure 1.1. This chapter started with a general introduction and followed by a research background which consists of the definitions of international construction and a general discussion of Malaysian construction sector. The remaining sections are research problems, research questions, research aim and objectives, research model and hypotheses, research delimitations, significance of the research, research methodology and the outline of the thesis. Finally, this chapter is ended with a section of chapter summary.

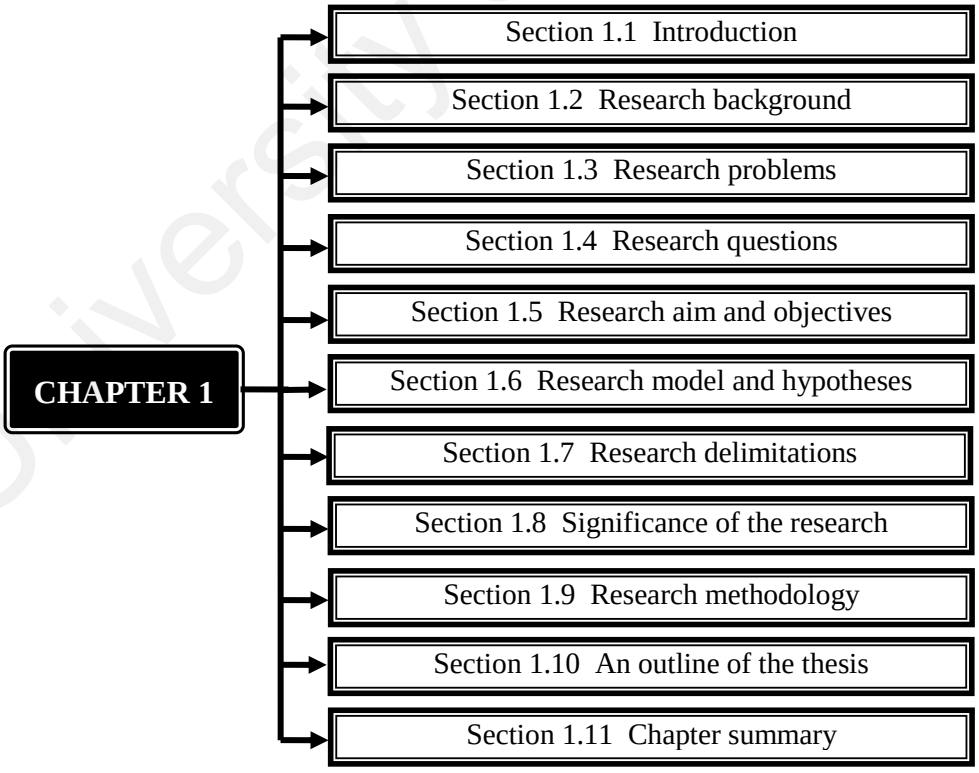


Figure 1.1: The framework for Chapter 1

1.2 Research background

In the era of globalisation, all countries in the world have to face global competition. Globalisation has brought substantial transformation on the economic, political, cultural and environment aspects in the past decades (Held, McGrew, Goldblatt, & Perraton, 1999). These changes are not merely provide opportunities to a country and the world (due to the integration, alliance and partnering in the global market) but offer new challenges, threats and problems to all countries of the world. Thus, attaining competitive advantage has become a key goal for organisations (Isik, 2009). Many organisations from different economic sectors in different countries have sought opportunities and performed changes to improve its performance, efficiency, effectiveness and capabilities to earn a better competitive advantage at local, national, regional and global levels.

1.2.1 Characteristics of construction industry

Generally, construction industry is a complex mix of several sectors of the economy. According to Fox (2007), construction industry consists of very complicated and different process with "a large number of specialists, an enormous range of materials, specialist plant and equipment, organisations, and a huge variety of unique products" (p. 289-290). Construction sector is not merely a project-oriented industry (Chan, Cooper, & Tzortzopoulos, 2005; Egbu, 2004; Ellis, Wood, & Thorpe, 2004; Fong & Chu, 2006) in which construction-related organisations interact and new participants and human relationship take place whenever a new project starts. This sector is also regarded as a knowledge-intensive industry (Carrillo, Robinson, Al-Ghassani, & Anumba, 2004; Fong & Chu, 2006; Hari, Egbu, & Kumar, 2005) which relies heavily on knowledge

input by different participants within the overall project team. In the meantime, construction industry is a "labour-intensive business sector which requires the construction manpower to continually seek and apply knowledge for performance improvement" (Nesan, 2004, p. 50) during the course of the project period.

In addition, based on an extensive literature review in the past 40 years, Dang and Low (2011) addressed that construction industry is statistically significant with economic development and has a strong linkages with other industry sectors. They further acknowledged that construction industry is a vital sector in the growth and expansion of economic in developing countries like Malaysia. Thus, being an important role in the development of Malaysian economy – construction sector, it is imperative for Malaysian construction industry to sustain competitiveness at the local and international levels. To become a competitive sector, it is imperative for construction-related firms to improve their capability to become competitive organisations.

1.2.2 Global view in construction industry

Based on the global view, construction growth is expected to have an average 3.5% compound annual growth rate (CAGR) between 2009 and 2014 and will be led by Non-Japan Asian countries with the growth at a 7.3% CAGR between 2009 and 2014 (IHS Global Insight, 2010) as shown in Figure 1.2. While, the total construction spending in the regions of Asia-Pacific is expected to expand at a 5.8% and lead by China, India and Indonesia as presented in Figure 1.3. With reference to the Global Construction Outlook 2010, although China, Indonesia, Brazil, and Russia have higher construction risk scores than the sixty-nine (69) countries, these countries are expected to undergo great construction gains (IHS Global Insight, 2010).

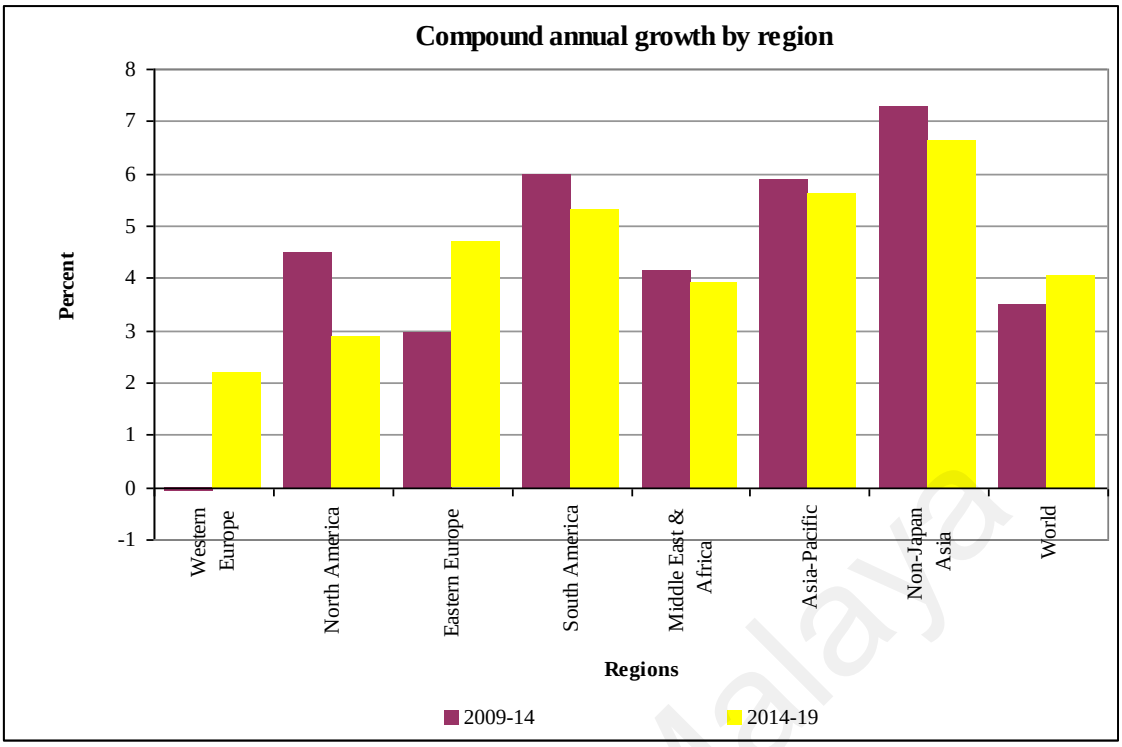


Figure 1.2: Component annual growth by regions
(adapted from IHS Global Insight, 2010)

Figure 1.3: Growth in total construction spending by countries
(adapted from IHS Global Insight, 2010)

1.2.3 Global view in Malaysian country - competitiveness

According to The World Competitiveness Scoreboard 2010-2013, Malaysia's world competitiveness performance was 10th position in 2010, 16th position in 2011, 14th position in 2012 and 15th position in 2013 (International Institute for Management Development, 2011, 2012, 2013). Four (4) criteria are used by International Institute for Management Development (IMD) for ranking computation, namely, economic performance, government efficiency, business efficiency and infrastructure. Among these criteria, international trade and international investment are grouped under the criterion of economic performance, whilst, management practices and attitudes and values are grouped under the criterion of business efficiency (International Institute for Management Development, n.d.a). According to the IMD, a competitive country is guided by four (4) fundamental competitivenesss dimensions and these are attractiveness-aggressiveness, proximity-globality, assets-processes and individual risk taking-social cohesiveness. Yet, competitive organisations are the core players in a country's competitiveness (International Institute for Management Development, n.d.b).

Meanwhile, based on the Global Competitiveness Report (GCR) 2010-2014, Malaysia was ranked as 26th competitive nation in the GCR 2010-2011 (Sala-i-Mart ń, Blanke, Hanouz, Geiger, & Mia, 2010), 21st position in the GCR 2011-2012 (Sala-i-Martin, Bilbao-Osorio, Blanke, Hanouz, & Geiger, 2011), 25th position in the GCR 2012-2013 (Sala-i-Mart ń et al., 2012) and 24th position in the GCR 2013-2014 (Sala-i-Mart ń et al., 2013). These results demonstrate that Malaysia has a higher probability of attaining greater competitiveness in future. To enhance competitiveness in Malaysia, it is important that all sectors to heed the call from the government by venturing and expanding into international market and applying appropriate practices.

1.2.4 Construction industry in Malaysia

Malaysia is moving forward with the mission of Vision 2020 to become a fully developed country by the year 2020. To cater to this demand, Malaysian Government has promoted and implemented various types of competent regulations and policies. In the Third Outline Perspective Plan 2001-2010 (OPP3) (the second decade of development for Vision 2020), sustaining economic growth and enhancing international competition become important strategic directions in Malaysian development plan (Economic Planning Unit, 2001). As a result of the increasing competition from entrants in the domestic and international markets, Malaysian industries are urged and advised to made great endeavour for performance effectiveness through better management and organisational techniques (Economic Planning Unit, 2001).

Under the Ninth Malaysian Plan (9^{th} MP) from 2006 to 2008, the actual gross domestic product (GDP) growth per annum in construction industry was 3.7 percent. The actual construction industry's contribution to the GDP was RM17,321 million at constant 2000 prices in 2009 as tabulated in Table 1.1. Malaysian construction is expected to achieve positive growth with 3.7 percent per annum with the contribution of 2.9% share to GDP during the Tenth Malaysian Plan (10^{th} MP) (2011-2015) periods (Economic Planning Unit, 2010). To strengthen the domestic economy in the increasingly competitive and challenging global environment, Malaysian government is going to implement some measures to enhance the economy under the Tenth Malaysian Plan (2011-2015) such as providing resources and assistance for Malaysian firms that venturing overseas. An allocation of RM230 billion will be provided for development expenditure during the plan period (Economic Planning Unit, 2010). Table 1.2 indicates the types of construction projects that will be implemented from 2011 until 2015.

Table 1.1: Gross domestic product (GDP) in construction sector (Economic Planning Unit, 2010)

States	Ringgit Malaysia (RM) million (in constant 2000 prices)							Average annual growth rate (%)	
	Actual				Estimate	Target		9TH MP	10TH MP
	2006	2007	2008	2009	2010	2012	2015	2006-2010	2011-2015
Overall	*14,640*	*15,707*	*16,366*	*17,321*	*18,187*	*19,775*	*21,818*	*4.4*	*3.7*
Johor	1,427	1,412	1,389	1,877	1,954	2,125	2,384	5.2	4.1
Kedah	427	474	503	559	591	676	750	5.4	4.9
Kelantan	144	129	138	180	189	205	239	4.7	4.9
Melaka	252	372	389	335	351	392	449	5.2	5.0
Negeri Sembilan	370	385	421	485	508	557	619	6.2	4.0
Pahang	460	456	502	599	628	684	751	6.3	3.6
Perak	565	425	448	642	680	739	777	3.0	2.7
Perlis	69	66	64	95	100	110	129	7.1	5.4
Pulau Pinang	669	730	764	878	922	1,046	1,154	5.7	4.6
Sabah	583	422	409	765	804	855	918	8.4	2.7
Sarawak	916	1,061	983	1,200	1,262	1,451	1,579	6.9	4.6
Selangor	4,680	5,188	5,255	6,260	6,581	7,055	7,740	7.0	3.3
Terengganu	414	533	500	541	567	703	783	8.5	6.7
Kuala Lumpur	2,190	2,126	2,243	2,880	3,025	3,149	3,513	6.8	3.0
Labuan	17	12	13	25	26	29	34	8.4	5.5

Note: Excludes import duties and undistributed financial intermediation services indirectly measured (FISIM)

Table 1.2: Tenth Malaysian Plan (2011-2015) for the construction industry (Economic Planning Unit, 2010)

Nos.	Strategies	Estimated budget
1.	***Public-private partnership (PPP) initiatives***	
	• 52 high-impact projects that include: ➢ seven highway projects at an estimated cost of 19 billion ringgit. Among the projects are the West Coast Expressway, Guthrie-Damansara Expressway, Sungai Juru Expressway and Paroi-Senawang-KLIA Expressway; ➢ two coal electricity generation plants at an estimated cost of 7 billion ringgit; and ➢ development of the Malaysian Rubber Board"s land in Sungai Buloh, Selangor covering an area of 3,300 acres at an estimated cost of 10 billion ringgit. • Development projects led by government-linked companies (GLCs): ➢ Kuala Lumpur Strategic Development by 1Malaysia Development Berhad (1MDB) covering the Sungai Besi Airport area; ➢ the KL International Financial District in Kuala Lumpur; ➢ construction of the liquefied natural gas regasification plant by PETRONAS in Melaka at an estimated cost of 3 billion ringgit; and ➢ two aluminium smelters in SCORE Sarawak with an estimated cost of 18 billion ringgit. • A Facilitation Fund of 20 billion ringgit: ➢ Projects that are being considered for financing under this fund include Land Reclamation in Westport in Port Klang, Malaysia Truly Asia Centre in Kuala Lumpur and Senai High Technology Park in Iskandar Malaysia, Johor. • Five Universiti Teknologi MARA (UiTM) branch campuses • Redevelopment of Angkasapuri Complex Kuala Lumpur as Media City • Integrated Transport Terminal in Gombak and privatisation of Penang Port Sdn. Bhd.	RM104,000 million*
2.	***Building world-class infrastructure***	
	• Among the major project is Phase 2 of the East Coast Expressway from Kuantan to Kuala Terengganu at a total cost of 3.7 billion ringgit. This expressway will be linked to the Kuantan Port, which will be upgraded and will spur growth in the east coast; • To improve the road networks to the hinterlands, for examples, roads linking Kuala Lipis to Cameron Highlands and from Jerantut to Sungai Lembing; • The electrified double track rail project from Gemas to Johor Bahru at an estimated cost of 8 billion ringgit, will be implemented to complete the electrified double track rail project from Padang Besar in the north to Johor Bahru in the south; and • The construction of a sewerage treatment plant using green technology in Lembah Pantai, Kuala Lumpur and at a later stage, similar plants throughout the country.	RM11,700 million*
3.	***Raising students quality***	
	• Renovating and upgrading government-aided schools, a sum of 280 million ringgit will be allocated for 2011 and 2012.	RM280 million
4.	***Ensuring a higher quality of life in urban areas***	
	• The transformation of the Lake Gardens in Kuala Lumpur into a botanical garden and • Waterfront areas of cities will be beautified and turned into attractive spaces, similar to the restoration of the Melaka River waterfront.	Unknown

Note: * constitute part of the estimated budget allocation

Table 1.2, continued: Tenth Malaysian Plan (2011-2015) for the construction industry (Economic Planning Unit, 2010)

Nos.	Strategies	Estimated budget
5.	***Expanding essential facilities in rural areas***	
	• Build 6,300 km of paved roads in Peninsular Malaysia, 2,500 km in Sabah and 2,800 km in Sarawak	Unknown
6.	***Enhancing public transport efficiency***	
	• Implementation of the high capacity Mass Rapid Transit system in Kuala Lumpur covering a radius of 20 km from the city centre with a total length of about 150 km • The construction of bus and rail terminals such as the Gombak Integrated Transport Terminal	Unknown
7.	***A healthy people, a productive society***	
	• The construction of 8 hospitals, including specialist hospitals, 197 clinics and 50 additional 1Malaysia clinics, which are expected to be the first half of the plan period	Unknown
8.	***Affordable housing for the people's well-being***	
	• Construction of 78,000 affordable houses • A fund of 500 million ringgit will be established for the repair and maintenance works of public and private low-cost housing	Unknown

Note: * constitute part of the estimated budget allocation

1.2.5 Characteristics of international construction

Construction industry is experiencing rapid globalisation (Horii, Yan, & Levitt, 2004). Globalisation has lead to the exploitation of construction markets as well as the increase of international construction projects (Mahalingam, Levitt, & Scott, 2005; Suen, Cheung, & Mondejar, 2007). International construction is the first move towards globalisation in construction sector (Ngowi, Pienaar, Talukhaba, & Mbachu, 2005). Globalisation of international market provides enormous opportunities to contractors to venture and expand into international market (Han, Diekmann, & Ock, 2005; Oo, Drew, & Lo, 2008). This makes international construction an important sector in the global economy (Chen, 2008).

According to Ngowi et al. (2005), venturing into international construction market is described as organisations perform work or involve in a business in another country. Mawhinney (2001) defined international construction as an organisation which is

resident in a country performs works that are operating in another country. International construction can also be defined as "the combination of business and project management skills with both mobile factors of production and location-bound support industries" (Enderwick as cited in Ling & Hoi, 2006, p. 262).

1.2.6 Malaysia in international construction market

Many countries including Malaysia have been experiencing the negative impacts of the global economic downturn from 1997 to 2005 and from 2006 to 2007 and only the most competitive will survive. As one of the fast developing countries in South East Asia, Malaysian construction industry is no exception from risks and uncertainties and is surrounding with numerous opportunities, challenges, threats and obstacles in good and bad economy conditions at both domestic and international levels.

Based on the statistics bulletin by Construction Industry Development Board (CIDB) Malaysia, a total number of 66,698 contractors have registered with CIDB in June 2014. Out of this figure, there are 10,901 (16.34%) contractors registered under grade G5 to G7 with CIDB (Construction Industry Development Board, 2014). These groups of contractors are qualified to participate in tendered projects valued at RM5 million and above. Majority of these minority group of contractors are main contractors in construction projects. These groups of contractors are facing strong competitions from domestic contractor firms and foreign contractor firms in local and international markets. Among these contractors, less than hundred of them have been involved or are involving in international construction (Construction Industry Development Board, n.d.b).

According to the statistics from the CIDB, the 1986-June 2014 cumulative statistics showed that a total of 719 international projects have been secured by Malaysian contractors, 603 overseas projects (total value of RM60,899.79 million) have been completed and 116 overseas projects (total value of RM46,756.07 million) are still under construction (Construction Industry Development Board, 2014). Table 1.3 indicates the numbers and value of overseas projects undertaken by Malaysian international contractors in the global markets from 2001 till June 2014. In general, the numbers of overseas projects involved by Malaysian international contractors have been reduced in the last few years. The statistics data provides useful information for researchers and industry people to ponder over the reasons of fluctuation and declination in Malaysian contractors venturing overseas. Other than risks, is organisational culture contribute influence to this issue? Also, how significant is organisational culture as a cause of this issue?

Based on the numbers (nos.) of projects secured, most of them venture into Middle East (UAE/Dubai-77 nos., Qatar-29 nos., Saudi Arabia-17 nos., Bahrain-16 nos.) and ASEAN (Cambodia-78 nos., Thailand-50 nos., Singapore-45 nos., Indonesia-25 nos., Philippines-23 nos. Vietnam-22 nos., and Brunei-12 nos.), South Asia (India-92 nos., Maldives-21 nos. and Bangladesh-13 nos.), China (72 nos.) and Sudan (24 nos.) (Construction Industry Development Board, 2014).

China, Vietnam, Indonesia, Bangladesh and Africa countries (such as Kenya and South Africa) are the highest risk markets based on the factors such as transferability of funds, construction materials cost, enforceability of contracts for government and private projects, increased regulations for environmental and import-related issues, currency depreciation, wages, corporate income taxes, import taxes, skilled labour shortage,

corruption and physical hazards. Hence, it is not surprising that the numbers of construction projects in African countries are less as shown in Table 1.3. Whilst, Singapore is a market with low risk scores. In addition, the fastest-growing construction markets such as India, China and Brazil are often higher risk markets (IHS Global Insight, 2010).

Table 1.3: Number and value of overseas projects undertaken by Malaysian international contractors
(Construction Industry Development Board, 2013)

Countries / Year	ASEAN	India	Middle East	Africa	Others	Total	
						Numbers	Value (RM million)
2001	9	11	0	3	10	33	2,443.04
2002	7	18	3	0	24	52	6,186.38
2003	6	5	8	3	24	46	5,737.19
2004	7	2	11	5	5	30	2,990.34
2005	9	11	16	5	15	56	9,554.22
2006	13	10	23	2	10	58	10,189.88
2007	20	8	29	0	17	74	19,514.19
2008	7	1	24	3	20	55	9,467.37
2009	2	2	19	0	5	28	15,384.99
2010	12	3	4	0	5	24	3,963.87
2011	2	2	1	0	4	9	5,543.51
2012	0	0	4	0	2	6	665.70
2013	8	0	3	0	5	16	2,744.05
June 2014	0	4	1	0	0	5	700.89

Based on the Engineering News Record (ENR), only one (1) Malaysian contractor was in the lists of top 225 international contractors and the top 225 global contractors in 2011 (Engineering News Record, 2011a, 2011b). However, none of the Malaysian contractors was in the lists of top 250 international contractors and the top 250 global contractors in 2012 and 2013 (Engineering News Record, 2013a, 2013b). However, none of the Malaysian contractors was listed in 2012 and 2013 (Engineering News Record, 2013a, 2013b). Hence, Malaysian international contractors are still considered new in international construction compared to contractors from Western Europe, North America, even Japan, Korea and China (Abdul-Aziz & Wong, 2010). The smallest share of Malaysian contractors in international construction market mirrors the greatest

difficulties and challenges faced by Malaysian contractors to compete successfully in international construction market.

Although construction firms are seriously influenced by global economy (Cheng, Tsai, & Chuang, 2011), it is imperative that construction firms to explore and seek for opportunities in international market. This is because venturing into international construction will sustain a firm's growth through the reduction of domestic market's cyclical nature impact, establishing balanced growth in industry (Han, Kim, Jang, & Choi, 2010; Park, Han, Rojas, Son, & Jung, 2011), increase long-term and near-term profitability (Abdul-Aziz, 1994) and so on.

Venturing into international construction is never an easy mission (Han & Diekmann, 2001a, 2001b; Han et al., 2005). In international construction market, contractors are not only oppressed by the costs, time and expertise factors and country-related risks, the global benchmarks and standards applied by global consumers on contractors have further increased the challenges to contractors who intend to venture into international construction (Wong, 2007). This situation has further increased the challenges of venturing into international construction.

1.3 Research problems

Construction industry is suffered from more risks and uncertainties than other industries (Flanagan & Norman, 1993). Each construction project constitutes certain degree of risks and uncertainties (Ben-David & Raz, 2001; El-Sayegh, 2008; Miller & Lessard, 2001). However, international construction is fraught with higher uncertainties and risks than in domestic market (Han & Diekmann, 2001a, 2001b; Han et al., 2005; Zhi, 1995).

The inevitable changes and challenges in international construction market pose serious threats to international and global contactors (Han et al., 2010). Based on the ENR records from 1995 to 2005, Han and his fellows disclosed that forty-three percent (43%) of the top global contractors have been withdrawn from the top global contractor list. The high and unique risks in international construction have also caused a phenomenon that only a few firms in advanced industrialised countries are able to sustain in the international market (Ngowi et al., 2005).

Besides, majority risks in international construction are allocated to contractors or shared with contractors (El-Sayegh, 2008; Zhi, 1995). This may due to the general practice in local construction industry in which contractors have to bear the majority of manageable and unmanageable project risks (Ahmed, Ahmad, & Saram, 1999). This phenomenon poses a serious threat in risk response strategic decisions and the inevitable changes environment in international construction may further complicate the process of risk response (Lim, Ling, Ibbs, Raphael, & Ofori, 2011).

Decision making on risks is a difficult task to decision makers (Kartam & Kartam, 2001) especially during the bidding stage. This is because each decision can significantly affect an organisation (Martinsons & Davison, 2007). Hence, international bidding decisions become difficult and complicated strategic decisions to contractors (Han & Diekmann, 2001a, 2001b; Han et al., 2005). External risks such as political, economic, legal, cultural (languages and religious differences) and social risks play an important role on a firm's strategic bidding decisions in international construction (Han et al., 2005) that can spook contractors to venture overseas (Han & Diekmann, 2001b). Construction companies usually tend to make biased international entry decisions which are normally based on personal intuition or past experience (Messner as cited in Han &

Diekmann, 2001b, p. 300) instead of rational decision making. Decision makers are often more risk averse in international bidding decision making (Han et al., 2005) whereby contractors are more willing and confident to perform domestic projects than international projects (Han & Diekmann, 2001a).

Based on the traditional decision theory, rational decision making is made according to the available information (Doyle & Thomason, 1999). Nonetheless, decision-making tends to suffer deviation from rationality (Stein & Welch, 1997) especially during uncertainty and unexpected situation (Hoch, Kunreuther, & Gunther, 2001). Deviation in decision-making could be explained by culture that affect and corrupt the process of information (Oliveira, 2007). Consistently, March and Shapira (1987) concluded that managers do not follow the general principles of decision theory and the way risks are perceived is different from decision theory.

According to Chapman (2006), culture is one of the important elements in determing decision-making on risk response strategies. This is because culture within an organisation dictates the way an organisation responds to the environmental stimuli (Schein, 2010) in terms of the opportunities and threats that affecting an organisation (Morgan, 1986; Thompson, 1993). Martinsons and Davison (2007) addressed that culture will lead to the differences in values and cognitive perceptions which will produce differences in work-related decision making. Within the cultural context, culture constrains and enables the available decision alternatives and contort the universal decision making principles (Palm, 1998) and influence risk awareness and the range of acceptable response (Wildavsky & Dake, 1990). Bate (1984) reinforced that culture is an obstacle to change and problem resolution in an organisation. In addition,

culture tends to explains the incomprehensible and irrational phenomenon (Ankrah & Langford, 2005).

As such, culture and decision making are not new topics in the academic field. Both areas are critical in organisational studies as culture (Fellows & Seymour, 2002) and decision making (Dimitratos, Petrou, Plakoyiannaki, & Johnson, 2011) are always pinpointed as 'black box' in organisational management. Although culture has become a mainstream topic of interest and discussion in construction literature (Ang & Ofori, 2001; Fellows, 2010), the topic of culture issues is not fully explored in construction sector compared with other industries such as business and manufacturing. Existing cultural studies in construction literature (as discussed in Chapter 2) was focused on cultural profile in construction-related organisations, and the impact of culture on performance, effectiveness and management practices such as innovation, total quality management and leardership, just to mention a few.

Another deficiency in cultural studies is the role of organisational culture is often disregarded in international decision making instead of national culture. In line with this, Oney-Yazıcı, Giritli, Topcu-Oraz and Acar (2007) concluded that organisational culture in construction is still at the embryonic stage. Cheung, Wong and Wu (2011) reiterated that organisational cultural is less emphasised in construction compare in business context. Others like Lorenz and Marosszeky (2007) addressed that there is lack of detail researches focus on organisational culture in global construction sector and thus suggested that this research area is worthwhile for future exploration.

Similarly, although decision making has been studied by different disciplines for a few decades (Oliveira, 2007) including in the construction management discipline, this area

is not fully researched and discovered in the existing literature (Hoch et al., 2001). One of the knowledge gaps is the lack of culture elements in the decision-making models although culture is considered as an important element in decision making process (Oliveira, 2007). Besides, the importance of decision making in international context is often passed over in business literature (Buckley, 1993; Dimitratos et al., 2011; Herrmann & Datta, 2002) and this issue becomes more significant in construction field. In addition, majority bidding literature in construction was focused on how to assist contractors to make better bidding decision to increase their competitiveness. Others were interested in bidding behaviour in international market or different countries and conditions.

Based on the previous studies, the importance of culture in decisions has been proven empirically such as strategic decisions in international firms (Dimitratos et al., 2011) and corporate risk taking (Griffin, Li, Yue, & Zhao, 2009). However, more detailed research on organisational culture and decision making are essential to supplement in quality and quantity of the current state of construction literature. Furthermore, discussions and empirical research about the underlying explanation on the direct relationship between organisational cultural and international decision-making are relatively scarce. In addition, a study by Fisher and Ranasinghe (2001) discovered that organisations are affected more by certain types of cultural characteristics than cultural differences when investing in a relative stable country (Fisher & Ranasinghe, 2001). The detailed discussion of the research gaps was presented in Chapter 2.

Based on the above arguments, it can be synthesised that organisational culture may affects international decision making in response to the risks faced by an organisation in overseas venture. Hence, the problem statement in this study is to investigate the impact

of organisational culture on international bidding decisions in response to the risks in international markets as illustrated in Figure 1.4.

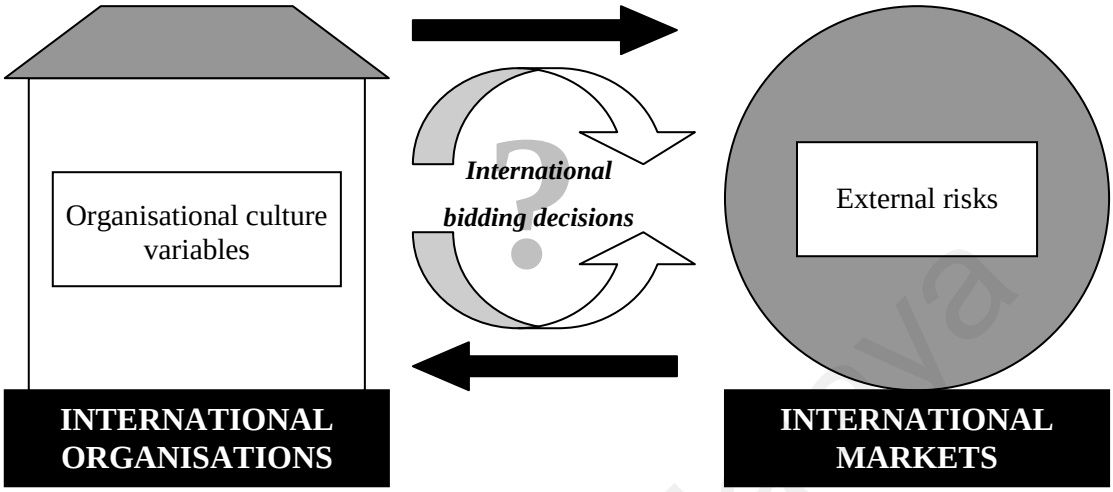


Figure 1.4: An illustration of research problem

1.4 Research questions

Based on the research problems, this study seeks to arise and explore several research questions as below:

i. To what extent do the international contractors practise different organisational cultural dimensions in their organisations?
ii. What is the maximum risk tolerance level among the international contractors in international bidding decisions in response to the political (including legal risk) and economic risks?
iii. Is organisational culture a determinant on international bidding decisions in response to the political (including legal risk) and economic risks?
iv. What is the relationship between organisational culture and international biddings decisions in response to the political (including legal risk) and economic risks?

1.5 Research aim and objectives

The aim of this study is to develop an international bidding decisions model from the organisational culture perspective. Four (4) dominant objectives are formed as follows:

i. to identify organisational culture dimensions that are currently practising by the international contractors;
ii. to identify the maximum risk tolerance level of the international contractors in international bidding decisions in response to political (including legal risk) and economic risks;
iii. to explore empirically the relationships between organisational culture and international bidding decisions in response to political (including legal risk) and economic risks; and
iv. to develop an international bidding decision model with the inclusion of organisational culture variables.

1.6 Research model and hypotheses

The detail discussion and formulation of the theoretical framework, conceptual model and hypotheses were shown in Chapter 3. A simple research model was proposed to illustrate the relationships between organisational culture and international bidding decisions as depicted in Figure 1.5. As illustrated in Figure 1.5, the independent variable is organisational culture which consists of hierarchy, involvement, values, goals, guanxi, strategy, adaptability and capability orientations. The dependent variable is international bidding decisions in response to the two (2) types of external risks, namely, political (including legal risk) and economic risks. The relationship between

organisational culture and international bidding decisions in the research model was supported by three (3) theories, namely, cultural theory, descriptive decision theory and stimulus-organism-response (SOR) theory. The main research hypotheses of the study were: international bidding decisions on political (including legal risk) and economic risks are associated with hierarchy, involvement, values, goals, guanxi, strategy, adaptability and capability orientations.

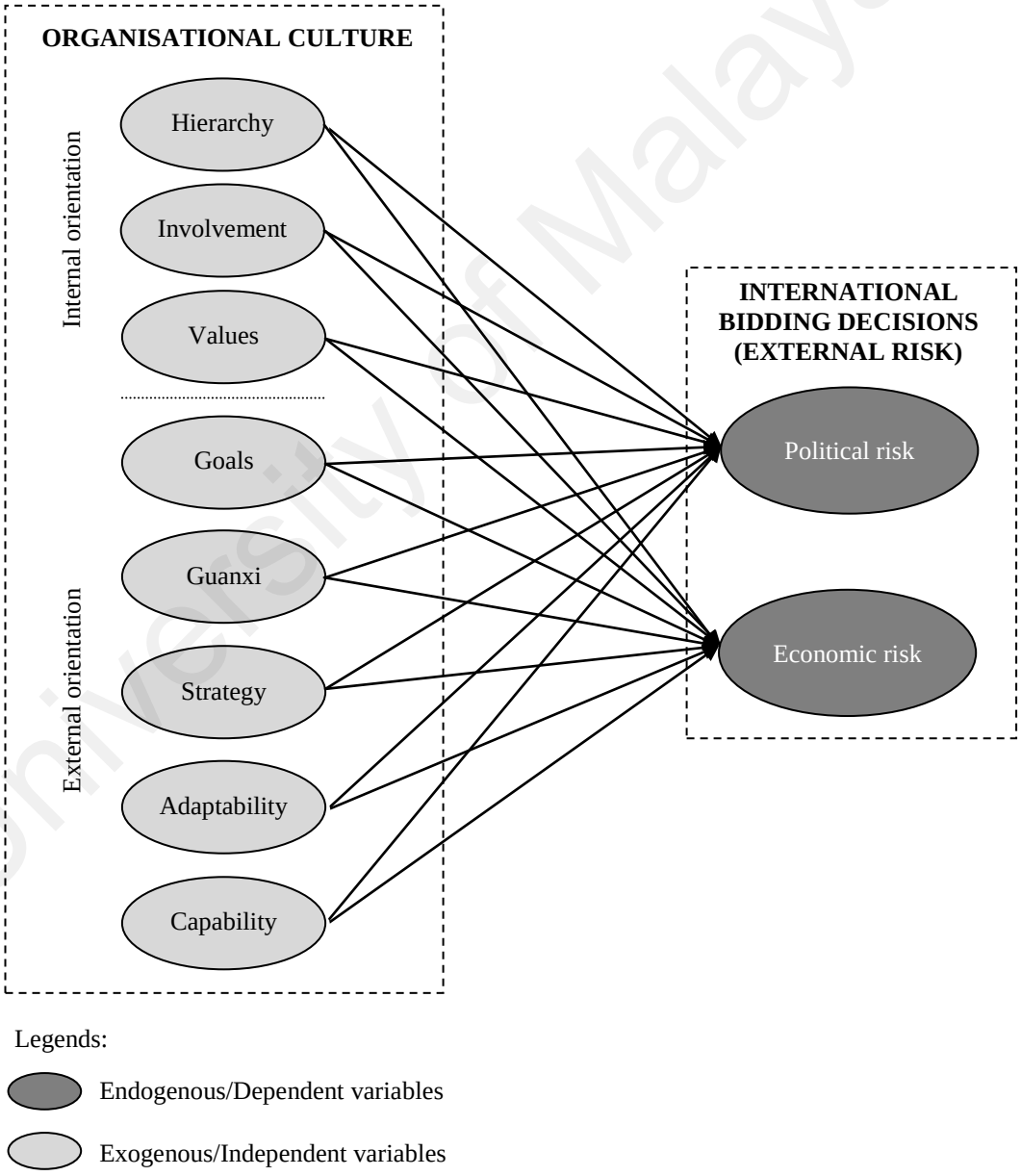


Figure 1.5: Research model of the study

1.7 Scope of the research

In narrowing the research scope for time effectiveness, this study is confined to four (4) main parameters as follows:

i. confine to the research areas of organisational culture, bidding decisions and external risks in international construction;
ii. target to the competitive groups of international contractor firms, registered with CIDB with the specialisation on building and engineering works;
iii. centralise to the Malaysian international contractor firms which are headquartered in Malaysia; and
iv. focus on the bidding stage of international construction projects as this is a critical decision stage in overseas venture (Dikmen & Birgonul, 2004) to decide the extent of risk exposure to be absorbed by an organisation and risk exposure is reducing when the project timeline is approaching to the end (Li, Tiong, Wong, & Chew, 1999); the process of bidding process composed of two critical stages, namely, estimating and adjudication stages in which the latter stage is concerned on the judgment of directors about the commercial factor of the firm's specific conditions, market conditions and risks (Brook as cited in Laryea & Hughes, 2011, p. 248).

1.8 Significance of the study

The outcome of the current study has both academic and practical significance. From an academic perspective, in terms of scholarly research and literature, this research tends to supplement a limited pool of the current construction management literature which are not fully delineated and explored either in the local or international academic field. In

addition, this research provides contribution to the existing theory by verifying the relationship between organisational culture and risk bidding decisions through empirical study. The proposed risk bidding decisions framework advances the current research knowledge about the factors of organisational culture that may influence risk bidding decisions. The research findings serve to contribute new knowledge and a future reference in the subject areas of organisational culture, bidding decisions and international construction.

In terms of practical contribution, the findings of this research highlighted that organisations which intend to venture into international markets should judge, facilitate and stimulate appropriate organisational culture in their organisations. Besides, this study highlights the importance of organisational culture on bidding decisions in international construction which should not be regarded and managed as a negligible matter. The 'soft' side of the understanding may furnish practitioners with the theories of cognition that organisational culture could affect organisational bidding decisions which in turn will affect organisational success. Findings of the study implied that instead of over-emphasising on the tangible assets of an organisation, it is a worthwhile investment for managers to invest on the intangible assets such as organisational culture especially to those organisations that venture into higher risks overseas countries. In addition, the model could be a reference guide to the future potential international contractors in organisational management and strategic decisions. The model can also assist international contractors to predict their competitors' behaviour in the international bidding. Finally, this study aims to response the call from the government to enhance the international competitiveness of Malaysian firms.

1.9 Research methodology

The research methodology of this study consists of nine major (9) steps, viz.: (1) formulating a research proposal (consisted of a preliminary discussion on the research gaps, research aim and objective, research methods and so on); (2) performing an extensive desk study; (3) selection of research design, research methods and data analysis tests; (4) pilot testing; (5) execution of data collection; (6) data compilation and analysis; (7) discussion of research results; (8) modification and validation of research model and (9) discussion of conclusions, implications and suggestions of future research (adapted from Babbie, 2010; Boomsma, 2000; Kumar, 2005). The flow of the entire research process was shown in Figure 1.6.

The literature sources of this research included primary source, secondary source and reference guides. The primary literature source of the study was mainly comprised of international refereed journals, refereed conference papers, conference proceeding, previous dissertations and theses, occasional papers and government publications. The secondary literature source of the study consists of reference books and trade journals. The source of the reference guides was dictionary. Literature search of the study was performed and concentrated on the fields of culture (especially organisational culture), risks (especially on risk identification and risk response), bidding decisions and international construction. These research areas were used as key words to identify and locate existing related articles in construction and other disciplines electronically.

Most of the primary literature source was extracted electronically. Academic research articles in international refereed journals were obtained from the literature databases from the University of Malaya such as ABI/INFORM (ProQuest), Business Source

Complete (EBSCOhost), Emerald and ScienceDirect (Elsevier). Table 1.4 shows the referred databases and some of the main refereed journals used in this study. In addition, the search of related secondary literature source was extended in the libraries at University of Malaya. The World Wide Web (WWW) search engine - Google Scholar search engine was used to search for refereed conference papers, conference proceeding, electronic books and dissertation and so on.

Table 1.4: Key refereed journals in literature databases

Nos.	Database	Refereed journals
1.	ABI/INFORM (ProQuest)	• Academy of Management Journal • Project Management Journal
2.	Business Source Complete (EBSCOhost)	• Academy of Management Review • Building Research & Information • Construction Management and Economics • Engineering Management Journal • Journal of Construction Engineering and Management • Journal of Management in Engineering • Organisation Studies • Strategic Management Journal
3.	Emerald	• Benchmarking: An International Journal • Construction Innovation • Engineering, Construction and Architectural Management • International Journal of Quality & Reliability Management Journal
4.	ScienceDirect (Elsevier)	• Automation in Construction • Building and Environment • Expert Systems with Applications • Habitat International • International Business Review • International Journal of Project Management • Journal of International Management • Journal of Operations Management • Journal of World Business

Literature search and review were conducted in four (4) different phases throughout the entire research period. Each phase was performed with different rationalisations and purposes as indicated in Figure 1.6.

i. Literature review – Phase 1: Formulating a research proposal

- On the threshold of the research, previously published and unpublished related literature was reviewed and analysed to identify potential field of interest, to formulate and clarify a research problem and to identify the knowledge gaps of past literature. Research problem and knowledge gaps were used as a basic to develop research questions, aims, objectives, hypotheses and research theme (Kumar, 2005; Naoum, 2007).

ii. Literature review – Phase 2: Development of theoretical framework and conceptual model

- A more comprehensive literature was implemented for the development of theoretical framework and conceptual model. The purposes of this literature review were to review and discuss the advantages and drawbacks of the existing knowledge models in the pertinent research area, to identify and justify relevant theories to be adopted in this study, to synthesise the linkage among existing theories, and to identify and extract relevant dependent and independent variables (Kumar, 2005; Naoum, 2007).

iii. Literature review – Phase 3: Selection and justification of research design, research methods and analysis tests

- Prior to and during the actual stage of data collecting, a literature review was carried out to justify the previously adopted research methodology. The review of past literature was also aimed to refine and improve the practicality of the research design in the relevant research area (Kumar, 2005; Naoum, 2007). Hence, this stage of literature search was focused on the research design, the adopted research methods, methods of analysis, sampling methods, sample size and so on.

iv. Literature review – Phase 4: Contextualise research findings

- At last, this final stage of literature review was to contextualise research findings into existing knowledge in the sub-chapters of discussion of research findings and implications (Kumar, 2005). This was done by identifying, confirming and comparing the similarities and differences between current research findings and existing research knowledge and theories.

A triangulation mixed research strategy (the combination of quantitative and qualitative research methods) was utilised in this study in which multiple research methods were used and focused on the same issue, that is the impact of organisational culture on international bidding decisions. The survey design employed in this study was questionnaire survey design on the basic of cross-sectional survey. This is due to the nature characteristic of the study's objectives and the limited research time frame. The unit analysis of this research was Malaysian international contractor organisations. The detailed justifications of the choice of research design (including research methods, analysis methods, type of sample, sample size and sampling methods) were further explained in Chapter 4.

A four-phase data collection was performed for the purpose of primary data collection. This four-phase data collection included questionnaire survey, interviews and expert validation survey. Figure 1.7 represents the sequence of the implementation of research methods and the objectives of each data collection technique. Primary data was collected as below:

i. Primary data collection phase 1: Preliminary case studies

- Preliminary case studies were performed by means of the semi-structured interviews with several experienced construction professionals from seven (7) international contractor organisations. The interviews were performed on the basis of face-to-face interviews. The purpose of the preliminary case studies was to gauge the opinions from the top management personnel about the suitability of conceptual model as a research tool by means of exploring the significance of each cultural variable in overseas venture and bidding decisions which were extracted from the past literture based on their organisations' point of views.

ii. Primary data collection phase 2: Questionnaire survey

- A draft structured questionnaire was developed and a pilot study was conducted before finalising the questionnaire to the population sample. Content validity and pilot study were carried out with several experienced academic professionals and construction professionals in the form of web survey and face-to-face semi-structured interview. The purpose of the content validity was to assess the validity of the content of questionnaire. The aims of the pilot study were to test the questions and the layout of the questionnaire to avoid ambiguous questions, statements and terms, and to improve the readability of the statements (Naoum, 2007).
- Questionnaire was sent to the entire populations of Malaysian international contractor firms. Hence, sampling method was not required in this study.
- Questionnaires were distributed by post, online or face-to-face interviews to the management staffs of each organisation who are involved in organisational decisions or participated in the bidding stage. Follow up reminder calls were made one (1) month after sending out the questionnaire

to increase the response rate of the questionnaire. Another reminder calls were made at the end of questionnaire submission deadline. A two-month extension of time was allowed to gain a better response rate of the study due to the tight schedule of the targeted respondents.

- The questionnaire was constructed based on two (2) types of measurement levels, namely ordinal and nominal scales. The Statistical Package for the Social Sciences Version 18 (SPSS Version 18) and SmartPLS were used to analyse the quantitative data. At first, reliability tests such as Cronbach's α and composite reliability were performed. Next, construct validity of the questionnaire was carried out based on the statistical tool. Frequency distribution was used to display nominal data. Mean, T-test and partial least square (PLS) - structural equation modeling (SEM) were used for ordinal data.

ii. Primary data collection Phase 3: Interviews

- Semi-structured interviews were carried out with decision makers or management personnel of the organisations. The purpose of the interviews was to further explain the findings from the questionnaire and to get additional and detail opinions from the industry practitioners. Each interview was performed between 30 to 120 minutes based on the preference and time of the interviewees.

iii. Primary data collection Phase 4: Experts' validation survey

- Semi-structured interviews with eleven (11) experienced construction professionals were carried out to validate the developed model and research findings. Comments from the experts were analysed.

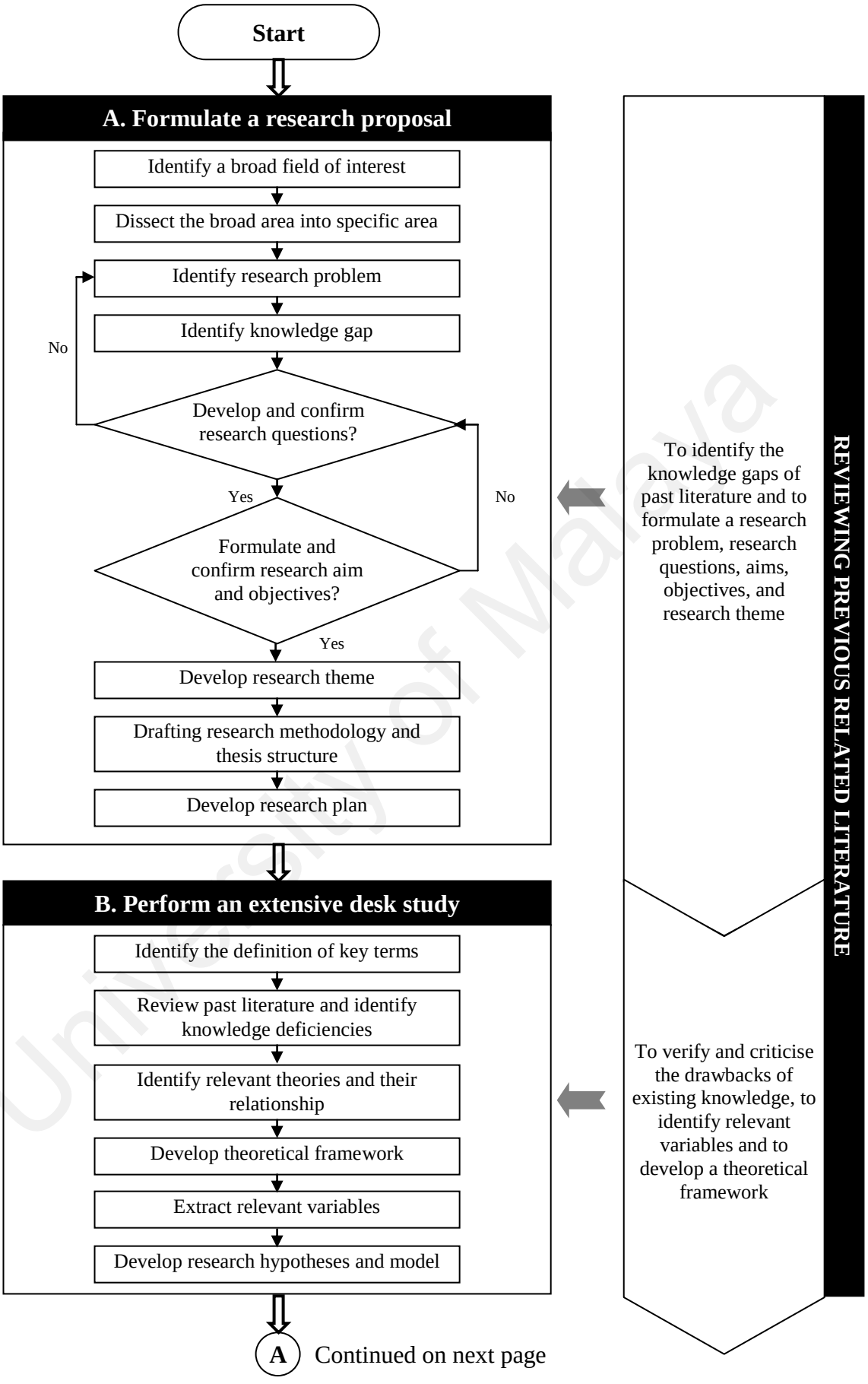


Figure 1.6: Research process and methodology
(adapted from Babbie, 2010; Boomsma, 2000; Kumar, 2005)

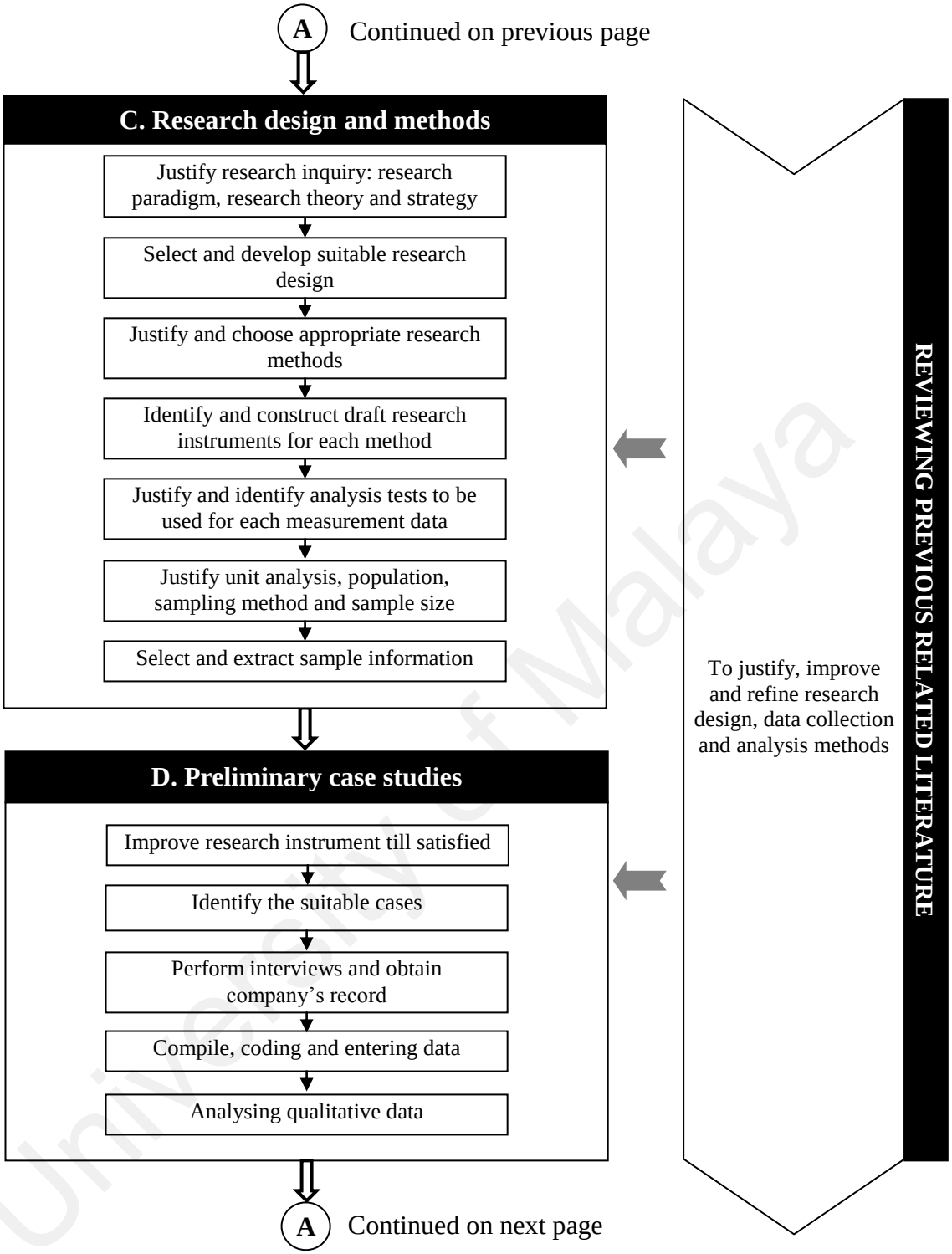


Figure 1.6, continued: Research process and methodology (adapted from Babbie, 2010; Boomsma, 2000; Kumar, 2005)

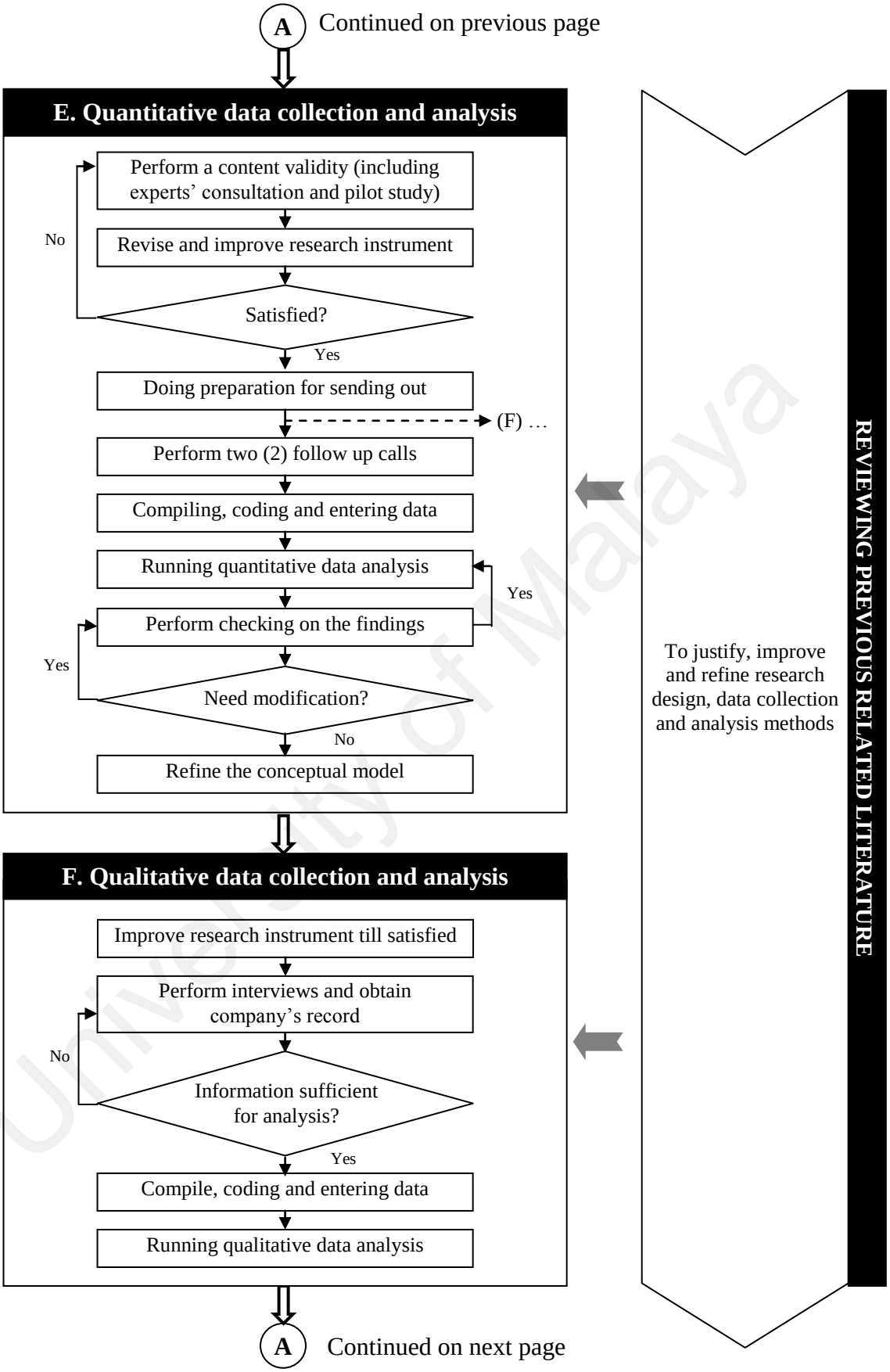


Figure 1.6,continued: Research process and methodology (adapted from Babbie, 2010; Boomsma, 2000; Kumar, 2005)

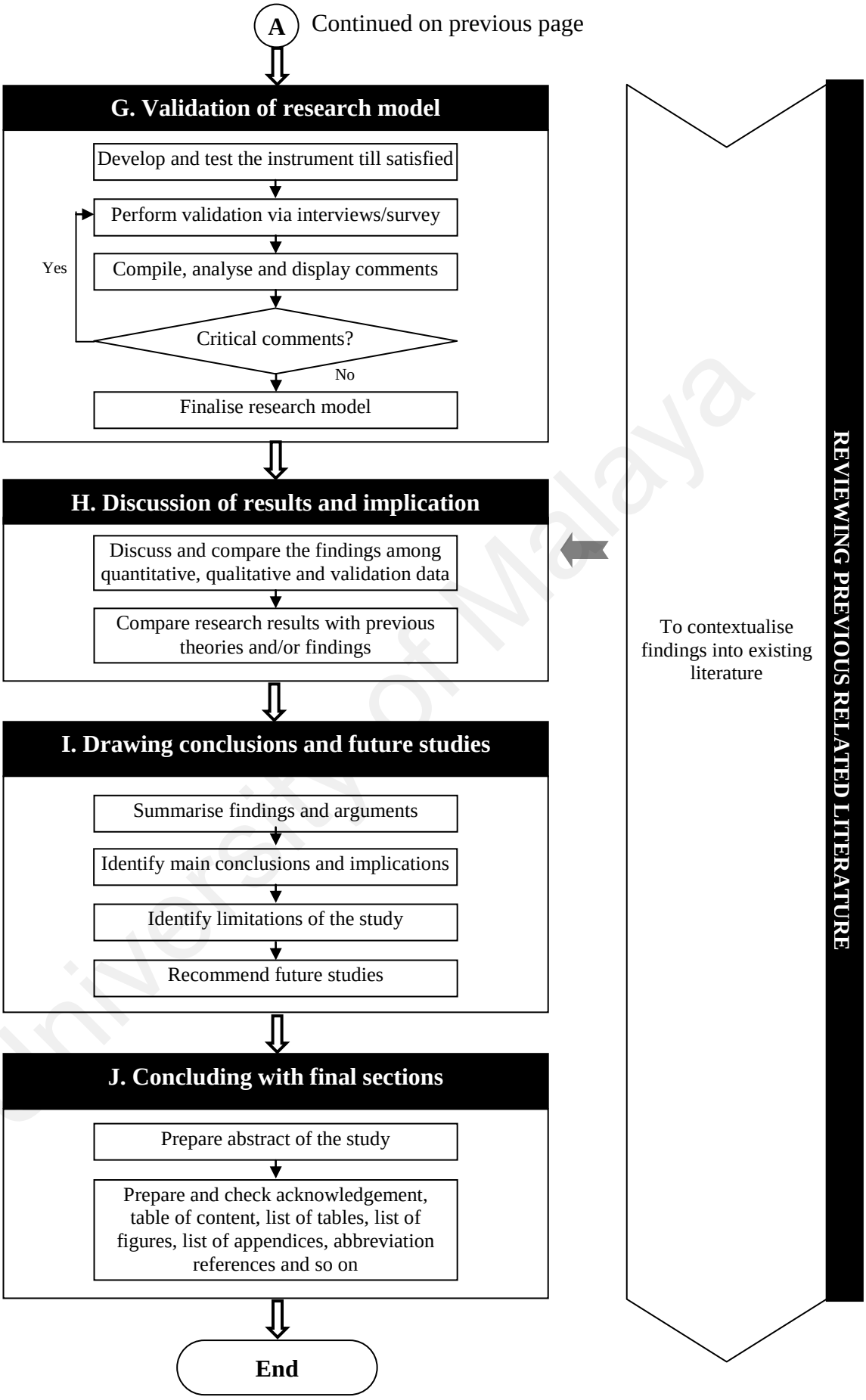


Figure 1.6, continued: Research process and methodology (adapted from Babbie, 2010; Boomsma, 2000; Kumar, 2005)

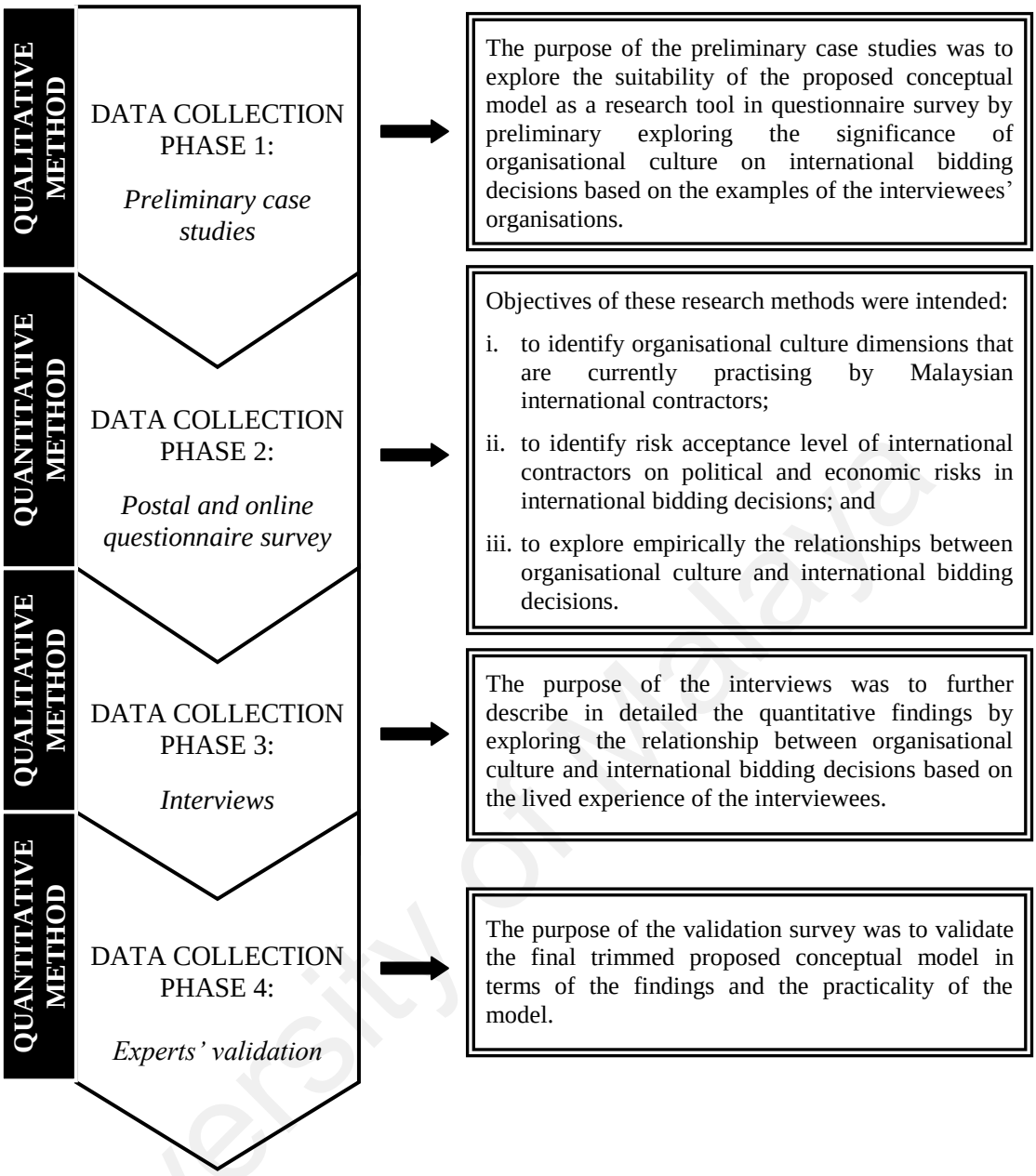


Figure 1.7: The sequence and purposes of each research methods

1.10 Structure of the thesis

This thesis consists of three (3) major sections, viz. theoretical section, empirical and processing section and output stage as displayed in Figure 1.8. Accordingly, the research was structured into six (6) major chapters as described in the following sections.

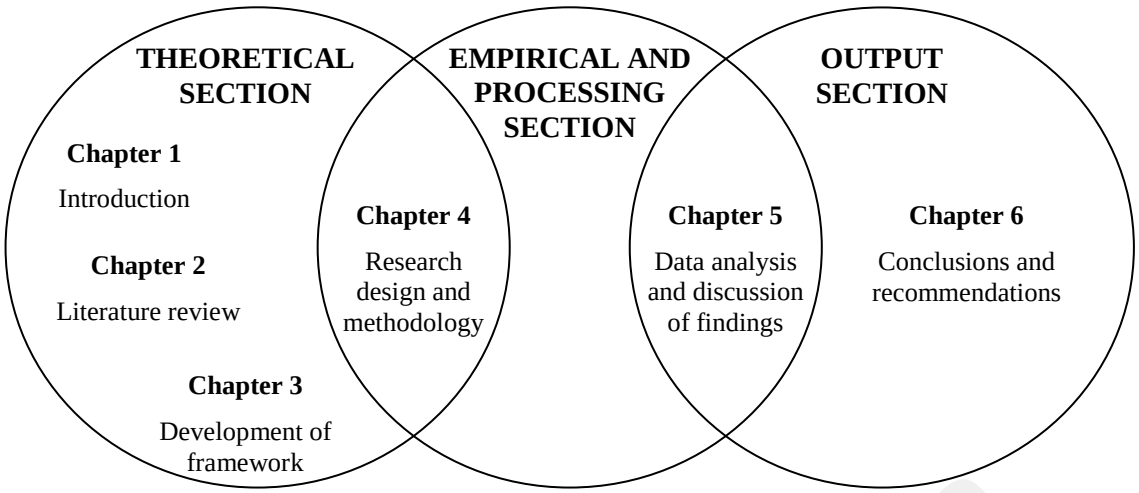


Figure 1.8: Structure of the thesis

Chapter One: Introduction

Chapter 1 provides a general introduction and overview of the entire research and thesis by addressing on the research background, research problem, research questions, research aim and objectives, research delimitations, research significance, research methodology, and thesis outline.

Chapter Two: Literature review

This section covers a general discussion, review and summarisation of current and past literature on culture, bidding decisions and international risks in construction and other sectors. The reviews include definition of key terms, discussions about the scope of previous studies, existing developed models, knowledge deficiencies of previous literature and future research suggested by previous literature.

Chapter Three: Development of research model and hypotheses

This chapter consists of the review and adoption of related theories, development of theoretical framework, discussion and extraction of

related research variables, formulation of research hypotheses, and development of conceptual model.

Chapter Four: Research methodology

The research methodology of this study was described and justified in detailed in this chapter such as research paradigm, research theory, research strategy, research design, research methods, development of research instruments and analysis methods.

Chapter Five: Data analysis, interpretation and discussions

In this chapter, data collected from preliminary case studies, questionnaire survey, interviews and validation survey were compiled, analysed and interpreted in text or in the tabulate forms. The developed research model was further refined based on the findings from the questionnaire survey and the quantitative findings were further described based on the experience from the experienced industry professionals. Thereafter, the results and comments of the final trimmed model by the experts through validation survey were presented in this chapter. A detailed discussion and comments about the similarities and differences between the survey findings and past literature were also included in this section.

Chapter Six: Conclusions, recommendations and future research

Chapter six comprises the major conclusions of theoretical and empirical results, summarisation of the research findings, research limitations, research implications and concluded with recommendations of future research.

References This section includes a list of past literature on culture, decision making, bidding decisions and international risks in construction and

non-construction sector in which the ideas, findings, research methodology and others information were used and stated in this doctoral thesis.

Bibliographies — It is a list of related references that are useful to understand better the research area of this study.

Appendices — It includes the samples of questionnaire survey, interviews and validation survey, a cover letter, lists of research strategy, research methods and response rate of previous studies, lists of references and measurement items for the variables of organisational culture and external risks in questionnaire survey and so on.

1.11 Summary of the chapter

As a summary of the chapter, this chapter serves as a general introduction of the entire study and thesis. Problem statement, research gaps, research aim and objectives, research scope, research methodology and the significance of the research were briefly discussed in this chapter. The main premise of this research is to verify the relationship between organisational culture and international bidding decisions in response to political (including legal risk) and economic risks. The following chapter is an overview of previous literature on culture, bidding decisions and international risks in construction.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Overall, this chapter is divided into five (5) main sections as illustrated Figure 2.1. The first section is the chapter introduction. This followed by the definitions and concepts of the key terms such as organisation, culture, organisational culture, risk response and decision making. The third section is a general review of existing cultural and risk decisions literature in construction and non-construction to identify the knowledge gaps of existing literature. This section also covers a discussion of future research suggested by past studies. Next, prominent and existing culture and risk decisions models are highlighted and reviewed. The last section is summary of chapter.

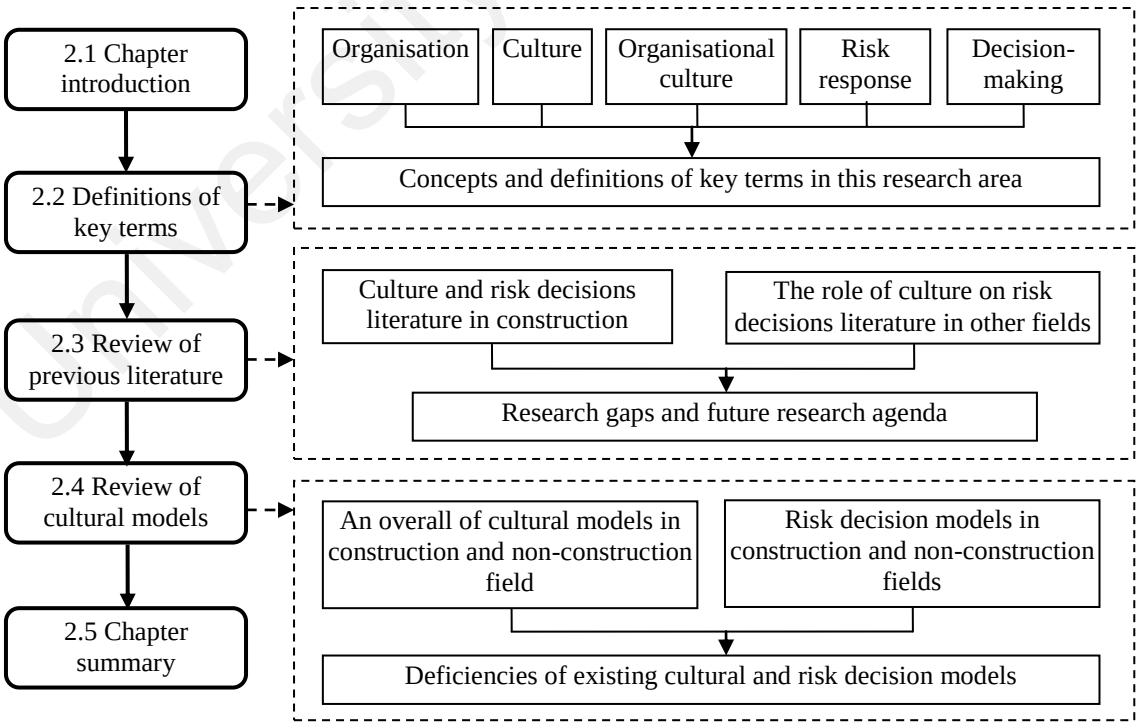


Figure 2.1: The framework for Chapter 2

2.2 Definition of key concepts of the research

The following sections represent the key concepts of this research. These include organisation, culture, organisational culture, decision making and risk response.

2.2.1 Organisation

The first use of term 'organisation' is in the mid of 15th century which is originated from Medieval Latin, organisationem, means 'act of organising' (Harper, 2001). According to Coffey (2010), it is important to understand the basic concept of 'organisation' through the study of the definitions of 'organisation' before studying the culture in an organisation.

2.2.1.1 Definitions of an organisation

According to Gabriel and Schwartz (1999), there is lack of standard and acceptable definitions of 'organisation'. Nonetheless, 'organisation' has been defined in different ways. Table 2.1 indicates some of the definitions of an organisation.

Table 2.1: Definitions of an organisation

References	Definitions of an organisation
Barnard (1938)	An organisation is "a system of consciously coordinated activities or forces of two or more persons" (p. 73).
Hall (1996)	An organisation "is a collectivity with a relatively identifiable boundary, a normative order, ranks of authority, communication systems, and membership coordinating systems…exists on a relatively continuous basis in an environment and engages in activities that are usually related to a set of goals; the activities have outcomes for organisational members, the organisation itself, and for society." (p. 30).

Table 2.1, continued: Definitions of an organisation

References	Definitions of an organisation
Daft (2001)	"Organisations are (1) social entities that (2) are goal directed, (3) are designed as deliberately structured and coordinated activity systems, and (4) are linked to the external environment" (p. 21).
As cited in Gabriel and Schwartz (1999, p. 58)	Weber defined an organisation as "a social relationship, which is either closed or limits the admission of outsiders by rules…its order is enforced by the action of specific individuals whose regular function this is, of a chief or 'head' and usually also of an administrative staff". Argyris characterised an organisation as "a plurality of parts", "maintaining themselves through their interrelatedness", "achieving specific objectives", "adapt to the external environment" and "maintaining their interrelated state of the parts". Vickers defined an organisation as "structures of mutual expectation, attached to roles which define what each of its members shall expect from others and from himself". Hall defined an organisation as "…collectivity with a relatively identifiable boundary, a normative order, ranks of authority, communications systems, and membership coordinating systems; this collectivity exists on a relatively continuous basis in an environment and engages in activities that are usually related to a set of goals; the activities have outcomes for organisational members, the organisation itself, and for society". Huczynski and Buchanan defined organisations as "social arrangements for the controlled performance of collective goals". Czarniawska-Joerges defined organisations as "nets of collective action, undertaken in an effort to shape the world and human lives. The contents of the action are meanings and things (artifacts). One net of collective action is distinguishable from another by the kind of meanings and products socially attributed to a given organisation". Robbins defined an organisation as "… a consciously coordinated social unit, composed of two or more people, that functions on a relatively continuous basis to achieve a common goal or set of goals".
Naoum (2001)	An organisation is "to achieve certain objectives through a collection of people and other resources…resources are co-ordinaated by a set of procedures and integrated by a form of organisational structure…objectives are planned and the manner in which people are coordinated and managed differ considerably among organisations" (p. 1).
As cited in Zhang (2004, p. 30)	Barnard defined an organisation as "a system of consciously coordinated activities or forces of two or more persons". Etzioni defined organisations as "social units (or human groupings) deliberately constructed and reconstructed to specific goals". Aldag and Stearns defined organisations as "a collectivity of people engaged in a systematic effort to produce a good or an activity". Hellriegel and Slocum defined an organisation as "any structured group of people brought together to achieve certain goals that the individual alone could not achieve". Dawson defined organisations as "collections of people joining together in some formal association in order to achieve group or individual objectives". Jones defined an organisation as "a tool used by people to coordinate their actions to obtain something they desire or value- that is, to achieve their goals". Robbins defined an organisation as "a consciously coordinated social unit, composed of two or more people, that functions on a relatively continuous basis to achieve a common goal or set of goals".

Generally, ‘organisation’ is always be seemed as social inventions (Greenfield, 1973; Simon, 1964; Thompson, 1967; Zhang, 2004). Based on the above definitions of an organisation, one can observe that some definitions of organisations are loose and some are more comprehensive than others. March and Simon (1958) argued that the definitions of an organisation do not achieve the main purpose of understanding an organisation precisely. In this regards, some scholars define ‘organisation’ by characterising an organisation into few dimensions or elements as discussed in the following sub-chapter.

2.2.1.2 Characteristics of an organisation

Based on the earlier theories, Hofstede (1981, p. 33) defined organisations as: (1) closed systems that “able to control all relevant variables inside themselves”; (2) open systems in which organisations “respond continuously to changes in their environment”; and (3) contingency models in which “the applicability of organisation principles depends on specific outside factors (‘contingencies’) that may or may not occur”. In contrast, Dawson (1992) addressed that organisations have six (6) key characteristics as below:

i. people: those with different attitudes and values, aspirations and experience of different types of work in an organisation share values, experience and objectives with varying degree and is reflected in the formation of a variety of interest groups;
ii. strategies and tactics: constitute the plans and policies for product range, price structure, personnel and technical innovation and change;
iii. technology or hardware: for production processes, plant, machinery, materials and products;

iv. environment: it constitutes individuals, groups, and most importantly other organisations, which have their own internal complexities, sources, stress and strength;
v. structure of roles and relationships: it is partially revealed in organisation charts and job descriptions, but extends to the content and form of control systems and administrative procedures; and
vi. culture of the organisation: consists of shared values and beliefs that create distinctive patterns of thinking and feeling within organisations.

On the other hand, Scott (1998, pp. 24-28) provided a general summary of the definition of organisations based on the three (3) dimensions as follows:

i. rational systems: organisations are collectivities oriented to the pursuit of relatively specific goals and exhibiting relatively highly formalised social structures;
ii. natural systems: organisations are collectivities whose participants are pursuing multiple interests, both disparate and common, but recognise the value of perpetuating the organisation as an important resource; the informal structure of relations that develops among participants provides a more informative and accurate guide to understanding organisational behaviour than the formal organisational structure; and
iii. open systems: organisations are systems of interdependent activities linking shifting coalitions of participants; the systems are embedded in (for example, dependent on) continuing exchanges with and constituted by the environments in which they operate.

On the other hand, Naoum (2001) highlighted that an organisation can be divided into two categories, namely, formal and informal organisations. A formal organisation

consists of six (6) common elements viz. "the operation (task and technology)", "objective (visible and invisible products)", "resources (human and non-human)", "structure (formal and informal)", "management (strategic and operational)" and "environment (internal and external)" (p. 1). Meanwhile, Daft (2001) located organisations into two (2) dimensions, namely, contextual (culture, environment, goals, size and technology) and structural (centralisation, formalisation, hierarchy, routinisation, specialisation and training). Based on the review of the definitions of 'organisation' from the past literature, Coffey (2010) observed that the diverse definitions of organisations consist of some common similarities in terms of the established boundaries, well defined social structures of employees' roles and coordinated actions, existence of communication system, goals and outcomes oriented, and operate within a large environment.

Furthermore, the development of organisations is guided by the interaction with the internal and external environment. Besides, the above definitions of 'organisation indicate that culture is one of the criteria to differentiate among organisations. This lends to support an assumption made by Allaire and Firsirotu (1984), an "organisation may have a culture that is different from the culture of the ambient society in which it operates" and the special features of an organisation in terms of its "birth and history, of its past and present leadership, of its modes of adaptation to specific technologies, industry characteristics and sociocultural ambience" (p. 210) may form a specific culture for a particular organisation.

2.2.2 Culture

In the mid of fifteen century, culture originates from the Latin word, cultura which means cultivation. In 1510, culture is attested as "cultivation through education", the meaning of "the intellectual side of civilisation" is used from 1805 and it is then defined as "collective customs and achievements of a people" from 1867 (Harper, 2001).

2.2.2.1 Definitions of culture

The definitions of culture is wide-ranged and well defined in the past literature by scholars from different fields of study (Ankrah & Proverbs, 2004; Hofstede, 1981; Oliveira, 2007; Weber & Hsee, 1998). Culture was first defined in a very broad and holistic manner (Kotter & Heskett, 1992; Naoum, 2001). Accordingly, culture is considered as a pluralistic concept and has been used in diverse application (Barthorpe, Duncan, & Miller, 1999). As such, it is difficult to find an agreed universal definition of culture (Baskerville, 2003) although variety of culture definitions can be found in literature.

Kroeber, Kluckhohn, Untereiner and Meyer (1952) have made a considerable effort by compiling a long list of more than 160 different culture definitions before 1950 from different scholars of different fields and categorised the compiled definitions into seven (7) categories. The seven (7) categories of definitions of culture are descriptive, historical, normative, psychological, structural, genetic and incomplete definitions as shown partially in Table 2.2.

Table 2.2: Some of the culture definitions before 1950 (Kroeber et al., 1952)

Categories	Definitions of culture from different scholars
Descriptive – emphasis on enumeration content	• Tylor defined that culture "includes knowledge, belief, art, law, morals, custom and any other capabilities and habits acquired by man as a member of society" (p. 81). • Wissler defined culture as social activities which involve "language, marriage, property system, etiquette, industries, art" and so on (p. 81). • Dixon defined culture as the whole of people's social, activities, products, custom, belief and religious. • Benedict defined that culture are habits of a man in a society. • Burkitt defined culture as activities in people's industry. • Bose defined culture as man's life activities.
Historical – emphasis on social heritage or tradition	• Park and Burgess defined culture in a group as the "total and organisation of the social heritages which have acquired a social meaning because of racial temperament and of the historical life of the group" (p. 89). • Sapir defined culture as "socially inherited assemblage of practices and beliefs that determines the texture of our lives" or "any socially inherited element in the life of man, material and spiritual" (p. 89). • Myres defined that culture is a state, condition and a process of men's past and present to shape their future. • Bose defined that culture includes common behaviour among a group of people.
Normative – emphasis on rule or way	• Wissler defined culture as the style of life which includes all standardised social procedures, beliefs and procedures and followed by community or tribe. • Bogardus defined culture as the methods of doing and thinking in the past and present of a social group. • Young defined that culture is the common and accepted thinking and acting methods. • Firth defined that culture is the acts and behaviour of individuals in a society.
Psychological – emphasis on adjustment or problem-solving device	• Small defined culture as the total of technique equipment, mechanical, mental, and moral which is used to promote individual or social ends. • Surnner and Keller defined culture as people's adjustments to their life-conditions through the combined variation action, selection, and transmission. • Dawson defined that culture is a common way of people life to their natural environment and economic needs.
Structural – emphasis on patterning or organisation culture	• Willey defined culture as "a system interrelated and interdependent habit patterns of response" (p. 118). • Dollard defined that culture includes abstracted "inter-correlated customs of a social group" (p. 118). • Ogburn and Nimkoff defined that culture consists of inventions, or culture traits, integrated into a system, with varying degrees of correlation between the parts...organised around the satisfaction of the basic human needs in a social institution to form a unique for each society. • Redfield defined that culture comprises conventional understandings discernable in act and artifact which is persisted through tradition to characterise a human group.

Table 2.2, continued: Some of the culture definitions before 1950 (Kroeber et al., 1952)

Categories	Definitions of culture from different scholars
Genetic – emphasis on product or artifact	• Wilky defined that culture constitutes part of the environment which is created and adjusted by people. • Folsom defined that culture is artificial as it includes complete outfit of tools, symbols, organisations, common activities, attitudes, beliefs, living habits and others physical and immaterial products that created by people and will pass on to next generations. • Winston defined that culture is social interaction product in which individual habit is patterned in adjustment to existing patterns.
Incomplete definitions	• Sapir defined culture "as what a society does and thinks" (p. 141). • Marett defined culture as "the language of social life, the sole medium for expressing the consciousness of our common humanity" (p. 141). • Rouse defined culture as behaviour standards. • Osgood defined that culture consists of actual artifacts, ideas and behaviour created by people. • Morris defined culture as a configuration of sign. • Bryson defined culture as patterns of repetitive human behaviour.

Table 2.3: Some of the culture definitions after 1950

References	Definitions of culture
Kluckhohn (as cited in Hofstede, 1981, p. 23)	"Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values." (p. 23)
Kroeber and Parsons (as cited in Hofstede, 1981, p. 23)	Culture involves "transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behaviour and the artifacts produced through behaviour." (p. 23)
Benedict (1959)	Culture consists of cannons of choice.
Kluckhohn and Strodbeck (1961)	Culture is related with value orientation.
Triandis (1972)	Culture is a social phenomenon in which people give definitions to incoming and unexpected stimulus and perform outgoing reactions that are guided by values within the shared-knowledge structures.
Geertz (1973)	Culture is a "historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and attitudes toward life" (p. 89).
Sapir (1977)	Culture is characterised as unconscious meanings system where people unconsciously share symbolic behaviour and formal pattern.
Kroeber and Kluckhohn (1978)	Culture is a way of thinking, feeling and reactions that exhibits different and uniqueness of achievement and artefacts of a group.

Table 2.3, continued: Some of the culture definitions after 1950

References	Definitions of culture
Hofstede (1981)	Everything is affected by culture and it is reflected in a person's behaviour. "Culture is a collective programming of the human mind that distinguishes the members of the one human group from those of another…is a system of collectivity held values…interactive aggregate of common characteristics that influence a human group's response to its environment... determines the identify of a human group" (p. 24).
Terpstra and David (1991)	Culture consists of learned, shared, compelling and interrelated set of symbols which provides a set of orientations to solves problems for members in a society.
Hall (1992)	Culture is a hidden dimension and it is about different perceptions of time, space, ownership, friendship and agreements.
Bodley (1994)	Culture is what people think, do and produce.
Trompenaars (1993, 1994)	Culture is created, customised and practiced by people which will be transmitted and learned by the younger and new comers. In addition, culture influences and guides people's belief and actions as the impact of culture will lead to different answers in all dilemmas and situations.
Duarte and Snyder (1999)	Culture is like learned mores, values, attitudes and definitions that are used by group members to guide their actions and decisions as it affects people's assumptions, behaviours, leardership, work habits, norms and so on.
Atkinson (as cited in Barthorpe et al., 1999, p. 536)	Culture reflects "the way in which work is performed; what is 'acceptable and what is not acceptable'; and what behaviour and actions and encouraged and discouraged" (p. 536).
Barthorpe, Duncan and Miller (2000)	Culture is about "what we are and what we do as a society" (p. 338).
Hofstede (2001)	Culture is a pattern of values, ideas and symbolic systems that will influence and shape behaviour and artefacts. It is a collective programming of mental that differentiates and categorised a group.
Ankrah and Proverbs (2004)	"Culture is considered as the values and system of meanings peculiar to a group of people that are learned and shared by all the individuals in the group through dealing with the basic problems of life and through their interaction with the contextual factors relating to the environment in which they live, and it is the mould in which their behaviour is defined" (p. 553).
Thompson (2008)	Culture comprises of "economic, social, political, and religious institutions…influences people's mental models of how things work, their behaviour, and their cause-and-effect relationships" (p. 247).
Cameron and Quinn (2011)	Culture is "reflected by unique language, symbols, rules, and ethnocentric feelings" (p. 21).

Based on the definitions of culture in Table 2.2 and Table 2.3, it can be observed that there is not much differences in culture definitions before and after 1950. Nonetheless, with the review of thirty-three (33) cultural definitions from 1871 until 2003, Coffey

(2010) found that there is little changes on the definition of culture in the twentieth century in which "the more current contemporary perspective of culture" is defined "as a set of values, traditions, beliefs and ideals that are learned from being a part of society" (p. 31). According to Ankrah and Proverbs (2004, p. 553), there are some common themes among existing culture definitions, namely: (1) it is about something that is "learned and shared" among people in a group or society; (2) it is conditioned by contextual factors that is specific to a particular group; (3) it is common and related to "authority, concept of masculinity and femininity, and ways of dealing with conflicts"; and (4) it affects behaviour and distinct "in the form of values and practices". Culture in construction industry is defined as the "characteristics of the industry, approaches to construction, competence of craftsmen and people who work in the industry, and the goals, values and strategies of the organisations they work in" (Abeysekera, as cited in Ankrah & Proverbs, 2004, p. 554).

Keesing (1974) highlighted that the definitions of culture are too much, diffuse and confusing. Additionally, Allaire and Firsirotu (1984) addressed that the effort to understand, explain and order out the different views of definitions of culture is pointless as the culture definitions can be selected according to one's needs. This lends support to the Keesing's (1974, p. 73) argument that "culture does not have some true and sacred and eternal meaning we are trying to discover". Likewise, Smircich (1983) comments that there is no general agreement on the meaning of culture although the concept of culture has been taken from anthropology perspective. As such, this study does not aim to identify the correct definitions of culture but to review and understand the concepts and meanings of culture.

2.2.2.2 Theories of culture

According to Allaire and Firsirotu (1984), culture definitions can be fallen very well into two (2) schools of thoughts, namely, ideational system and sociocultural system. Figure 2.2 shows the two typologies of schools of thought on the concept of culture adopted from Allaire and Firsirotu (1984) and aspired by Keesing (1974). According to the Figure 2.2, that there are inconsistencies points of views among the researchers in terms of the concept of culture. Some researchers advocate to a more holistic and comprehensive culture concept (for example, Allaire & Firsirotu, 1984) but some support the narrow concept of culture (for examples, Geertz, 1973; Hall & Neitz, 1993; Keesing, 1974). In the mean time, some scholars advocate that culture is an ideational system (for examples, Geertz, 1973; Goodenough, 2003; Levi-Strauss, 1971; Schneider, 1968) but some scholars disagree with this point of view and argue that culture is a sociocultural system (for examples, Harris, 1968; Vayda & Rappaport, 1968).

Based on the past and earlier anthropological cultural literature, organisations are considered as a sociocultural system which is the most prevailing and common point of view (Allaire & Firsirotu, 1984). According to Keesing (1974), effort to narrow the cultural system into the ideational system or excluded ideational system from cultural system is filled with danger in culture interpretation. As such, the better way to study culture in this study is to regard culture as sociocultural system. This is because in the sociocultural system, the ideational components of shared meanings, values, knowledge, beliefs and so on are integrated with social structure component and hence it forms a more comprehensive view of organisation concept (Allaire & Firsirotu, 1984).

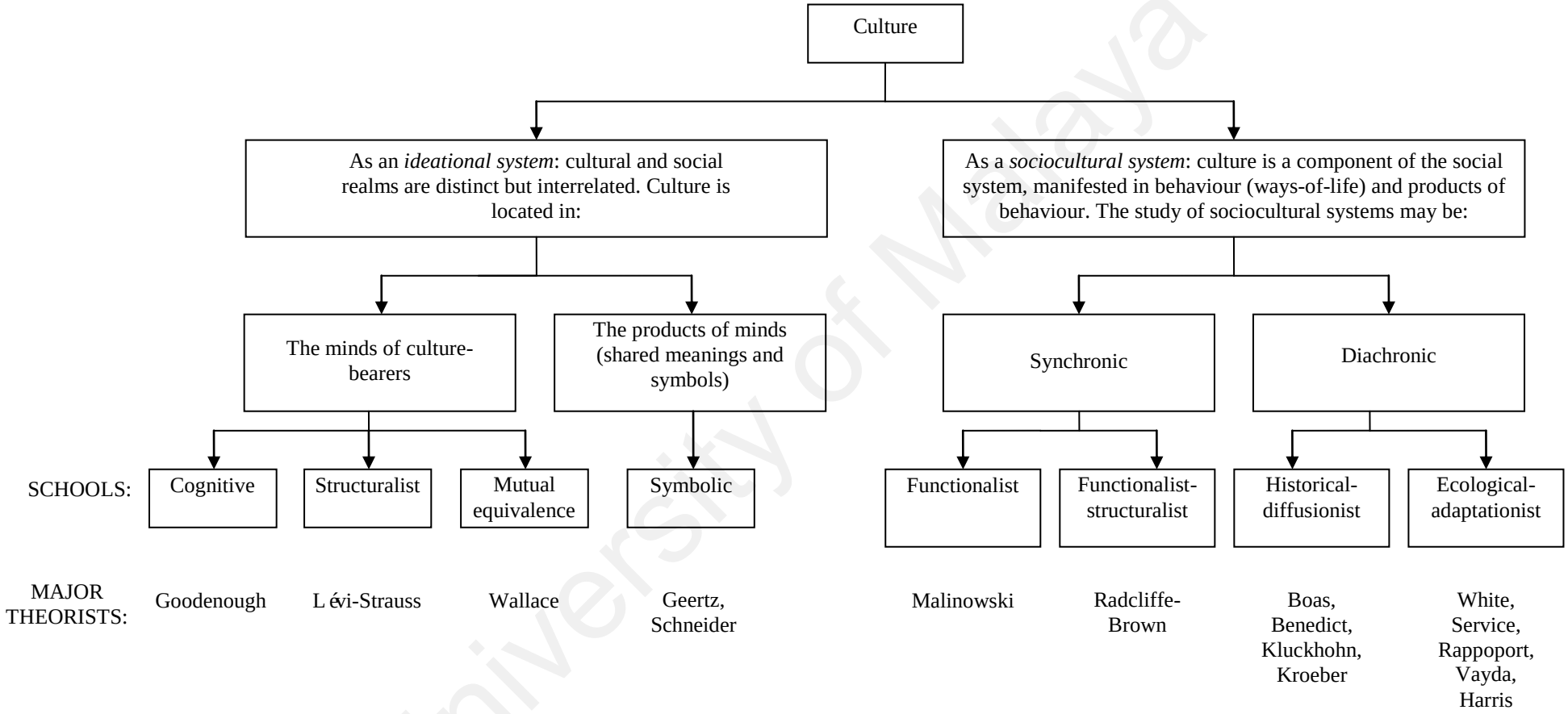


Figure 2.2: A typology of the concepts of culture
(adopted from Allaire & Firsirotu, 1984, p. 196)

2.2.2.3 Levels of culture

Beyond the theoretical and definitions of culture, culture is formed and occurs at different levels (Erez & Gati, 2004). This is because the holistic definitions of culture make it applicable at all levels. As such, culture can be divided and sorted into different levels (Cameron & Quinn, 2011; Schein, 2010). According to Hofstede (2001), culture can be applied to any levels such as an organisation, a profession, a particular age group, a family and so forth. Accordingly, some scholars divide culture into different levels as tabulated in Table 2.4. This indicates that culture can be observed and analysed at various levels in practice and there is no right or wrong ways of analysing culture at particular level(s). Based on the Table 2.4, one can observe that the levels of culture is based on the culture of different group levels. This confirms the assertion made by Hofstede (1981) and Seymour and Fellows (1999), culture is generally referred to groups of societies or human collectivities.

As commented by Martin (1992), one of the problems of culture is culture includes almost everything and hence it is depend on the researchers on how they want to conduct the cultural research. As such, it can be argued that the analysis of certain level of culture depends on the studied area, the interest of the researchers and so forth. In the context of construction management literature, numerous cultural studies have been performed at different levels, viz. national culture, organisational culture, industry culture, project culture, professional culture and so on. However, organisational culture is grabbed little attention by researchers compared to national culture in terms of decision making (as discussed in the sub-chapters of 2.3 and 2.4) although it can affect organisational decision (as discussed in the Chapter 1). Besides, organisational culture becomes the key focus of this research area as organisations play a key role in

controlling and reducing project risks to assure project success (Sharma & Gupta, 2012). In addition, cultural concept has been linked considerably with organisations (Smircich, 1983). As such, this study focuses on the culture at organisational level.

Table 2.4: Levels of culture from different scholars

References	Levels of culture
Hofstede (1981, p. 24)	• Nation level • Ethnic or regional level • Organisational level • Profession level • Family level
Trompenaars (1993, p. 7)	• National or regional society level • Corporate or organisational level • Professional level
Schein (2000, p. xxix)	• Regional level • National level • Industry or institutional level • Organisational level
Erez and Gati (2004, p. 588)	• Global level • National level • Organisational level • Group level • Individual level
Hofstede, Hofstede and Minkov (2010, p. 17)	• National level • Regional/ethnic/religious/linguistic level • Gender level • Generation level • Social class level • Organisational level
Schein (2010, p. 2)	• Macrocultures: Nations, ethnic and religious groups, occupations that exist globally • Organisational cultures: Private, public, nonprofit, government organisations • Subcultures: Occupational groups within organisations • Mirocultures: Microsystems within or outside organisations
Cameron and Quinn (2011, p. 21)	• Global level: National culture • Subgroups level: Gender-based culture, occupational culture, regional culture, industry cultures • Organisational level

2.2.3 Organisational culture

Although the definitions of culture can be applied at different levels. Yet, the concepts and definitions of culture is slightly different in terms of the level of culture. Since 1970s, organisational culture has attained considerable attention in the management

academia especially in the business field (Allaire & Firsirotu, 1984; Brown, 1998; Cameron, 1980; Harrison, 1972; Hofstede, 1981; Schein, 2010). Culture in an organisation is an important consideration (Allaire & Firsirotu, 1984; Ankrah & Proverbs, 2004) and each organisation has its own unique culture (Deal & Kennedy, 1982).

2.2.3.1 The concept of organisational culture

Generally, organisational culture can be defined into two (2) perspectives, namely, sociology and anthropological perspectives (Brown, 1998; Cameron & Quinn, 2011). According to Cameron and Quinn (2011), each perspective consists of functional and semiotic approaches. To better conceptualised the definitions of culture, Cameron and Quinn conceptualised both perspectives into four (4) components, namely, assumption, focus, observation and variable. The comprehensible explanations of organisational culture concept is illustrated in Figure 2.3 to assist researchers to differentiate and measure organisational culture based on different perspective and approach. It can be clearly observed that culture that fall under sociology perspective is regarded as an independent variable (culture that predicts other outcomes), whilst, organisational culture is measured as a dependent variable (understand culture by itself) under anthropological perspective irrespective the type of approaches (functional or semiotic approach).

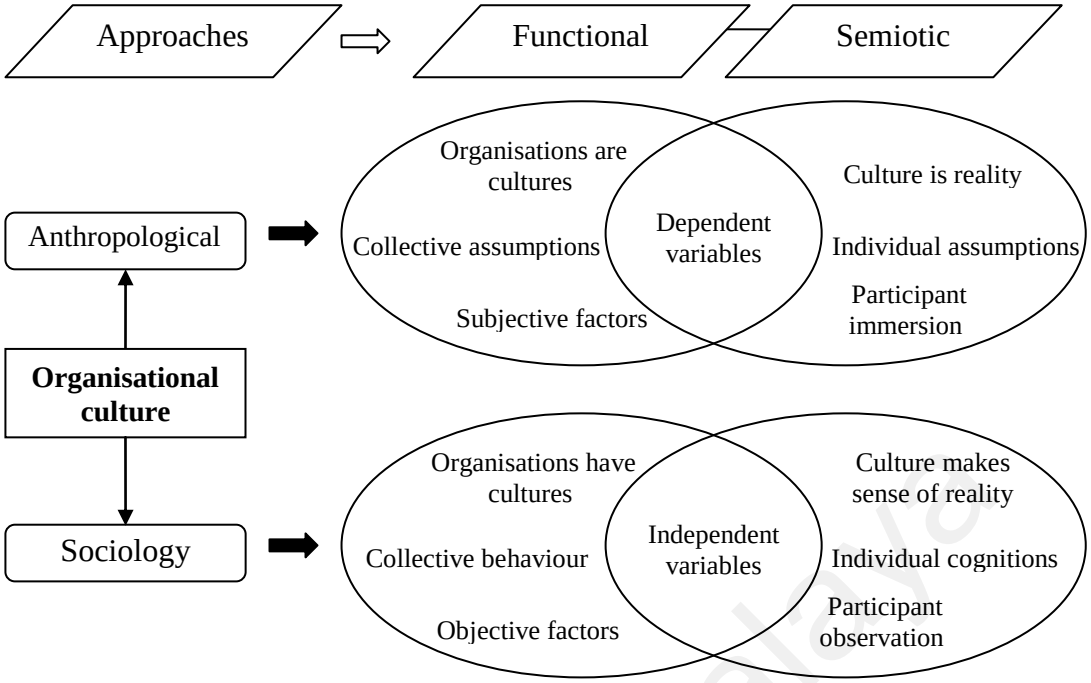


Figure 2.3: The concept of organisational culture
(adapted from Cameron & Quinn, 2011, p. 168)

According to Ouchi and Wilkins (1985), organisational culture should be studied from the sociology perspective. In this regards, most researchers refer organisational culture as what an organisation has (for examples, Deal & Kennedy, 1982; Peters & Waterman, 1982). Smircich (1983) explained in detailed that when culture is conceived as what an organisation has, one must focus on what an organisation accomplish and how an organisation can accomplish it more efficiently, whilst when culture is defined as what an organisation is, researchers should look into how an organisation is accomplished and what it means to be organised. Likewise, Williams, Dobson and Walters (1993) defined organisational culture as socio-technical system as illustrated in Figure 2.4. On the other hand, Naoum (2001) revealed four (4) main factors that influencing and determining the type of organisational culture. These are "organisational characteristics (size and age, founders' values, new managers' values, subordinates' values),

organisational management (strategy, structure, leadership and personnel), operation (task and technology) and environment (external and internal)" (p. 171).

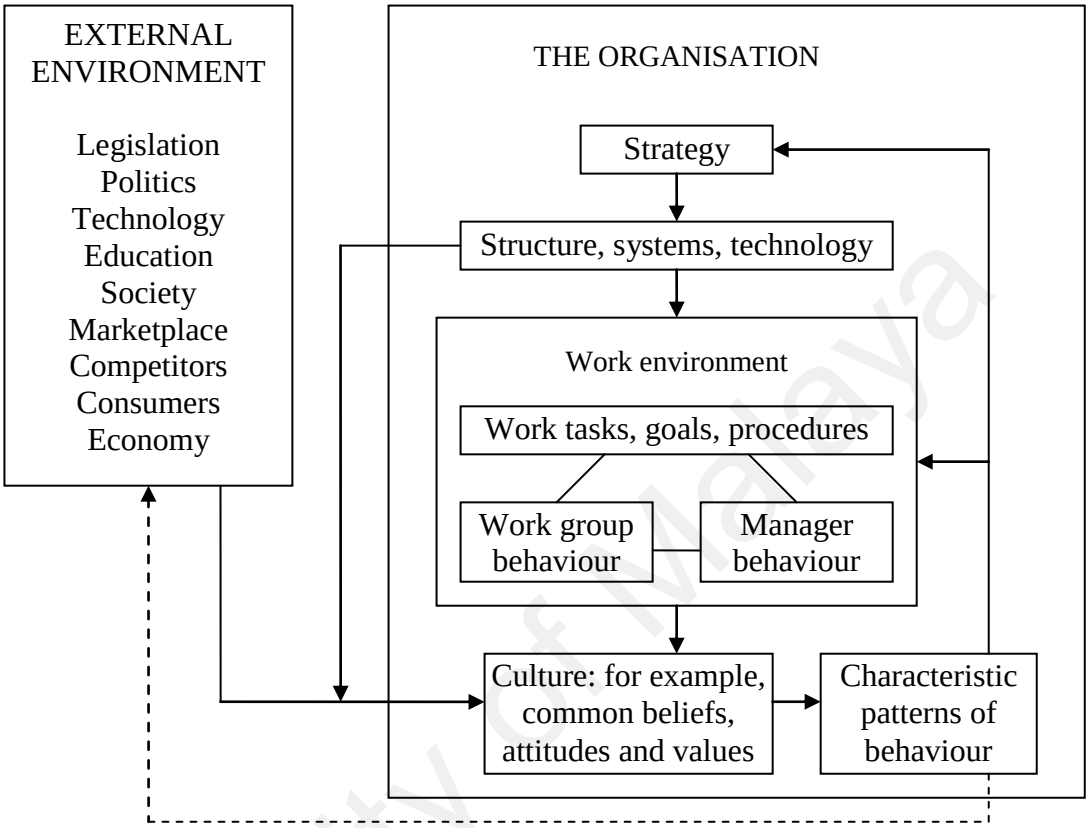


Figure 2.4: Culture as a socio-technical system
(adopted from Williams et al., 1993, p. 53)

According to Trompenaars (1993), organisational culture is shaped and developed by cultural preferences of leaders and employees, technologies and markets. This Dutch author and consultant explained that three (3) organisational structure aspects are critical in determining corporate culture. The three (3) aspects are the common relationship between employees and organisations, hierarchical authority system in defining superiors and subordinates and finally is the common views of employees about the organisation's goals, destiny and so on. In this regards, organisational culture in this research was studied from the sociological perspective in which organisational

culture is regarded as something an organisation has. Hence, culture in an organisation acts as an independent variable to predict the organisational outcomes such as the outcome of decision-making. .

2.2.3.2 Definitions of organisational culture

The definitions of organisational culture are varied. Table 2.5 indicates some of the general definitions of organisational culture. Based on the definitions below, there is a general agreement that organisational culture is something that held and shared by organisational members which in turn will affect organisational members' decision and behaviour in performing a task or solving a problem. Table 2.6 demonstrates the linkages between the definitions of culture and organisation/management literature.

Table 2.5: A brief review of the definitions of organisational culture

Scholars	Definitions of organisational culture
Eldridge and Crombie (1974)	Organisational culture is an "unique configuration of norms, values, beliefs, ways of behaving and so on that characterise the manner in which groups and individuals combine to get things done" (p. 89).
Schwartz and Davis (1981)	Organisational culture consists of a pattern of beliefs and expectations shared by members of the organisation.
Deal and Kennedy (1982)	Organisational culture is the way people do things in the organisation.
Robbins (1989)	Organisational culture is a shared meaning system held by organisation's members and it consists of a set of characteristics that the organisation values.
Denison (1990)	Organisational culture "refers to the underlying values, beliefs and principles that serve as a foundation for an organisation's management system as well as the set of management practices and behaviours that exemplify and reinforce those basic principles" (p. 2).
Williams et al. (1993)	Organisational culture consists of stable beliefs, attitudes and values commonly held by members of an organisation.
Thompson (1993)	Organisational culture is "reflected in the way that people in an organisation perform tasks, set objectives and administer resources to achieve them" (p. 78).

Table 2.5, continued: A brief review of the definitions of organisational culture

Scholars	Definitions of organisational culture
Brown (1998)	Organisational culture is the patterns of beliefs, values, learned experience that have developed during the course of an organisation's history, which tend to be demonstrated in material arrangements and in the members' behaviours.
Naoum (2001)	Organisational culture dominates organisational values and behaviour
Serpell and Rodriguez (2002)	Organisational culture consists of a set of elements that determines an organisation's ways of acting, being, decision-making, communication and so on.
Schein (2010)	Organisational culture is abstract and it is "a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (p. 18).
Murray-Webster and Hillson (2008)	Organisational culture is "the basic assumptions and values that operate subconsciously and are taken for granted within an organisation, and that shape collective beliefs and behaviour" (p. 49).
Thompson (2008)	Organisational culture is "personality of the organisation…includes the values, norms, and outwardly visible signs of organisational members and their behaviours…affects the behaviours and choices that individuals make" (p. 34).
Kefela (2010)	Organisational culture is "a system based on the company's value and norms, and organisational behaviours such as its technologies, strategies, products, services and appearance" (p. 3). In other words, organisational culture is "a system of shared beliefs that members of the organisation have, which determines how members in an organisation act when confronted with decision-making responsibilities … There are seven dimensions of an organisational culture, namely, attention to detail, innovation and risk taking, outcome orientation, stability, people orientation, aggressiveness, and team orientation" (p. 4).
Cameron and Quinn (2011)	Organisational culture is about "what is valued, the dominant leadership styles, the language and symbols, the procedures and routines, and the definitions of success that make an organisation unique" (p. 22).
McCarthy (2011)	Culture in an organisation is a behavioural phenomenon and long-term performance predictor and it defined as shared norms, belief and expectations that affect how people should behave, approach and conduct a task and interact with others within an organisation.
Khan, Usoro, Majewski and Kuofie (2010)	Organisational culture from the perspective of work practice can be defined as "a set of particular organisational functions that are carried out by organisational members in a specific way that makes it different from other organisations or from other units within an organisation" (p. 73).

Table 2.6: Definition of culture and linkages to organisation and management literature
(adopted from Allaire & Firsirotu, 1984, pp. 217-221)

Schools & theorists	Culture definitions	Links with organisation/management literature	Main theorists and researchers in organisation/management theory
Organisations as a sociocultural system			
Functionalist (Malinowski)	Culture is an instrumental apparatus that enables a person to deal with specific problems in the quest of need satisfaction. Main manifestations of culture (institutions, myths, etc.) are to be explained by reference to the basic needs of human being.	Organisations are stages for playing out participants' quests for need satisfaction through work and organisational participation. The sociocultural system of the organisation will therefore reflect this quest for need satisfaction.	• Human relations school (Mayo, Roethlisberger et al.) • Social man school (Homans; Zaleznik) • Self-actualising man (Maslow, Mcgregor; Likert; Argyris) • Entrepreneurial and managerial motivations (McClelland) • The business policy field (Andrews, Guth, Learned, Christensen, Henderson)
Structuralist-functionalist (Radcliffe-Brown)	Culture is created by mechanisms by which an individual acquires mental characteristics and habits that fit a person for participation in social life. It is also a component of a social system which includes social structures, to maintain an orderly social life, and adaptation mechanisms, to maintain society's equilibrium with its physical environment.	An organisation is a purposive social system with a value subsystem which implies acceptance of the generalised values of the superordinate system and which thus legitimises the place and role of the organisation in the larger social system. Organisations are functional enactments of society's legitimating values and myths.	• The structural-functionalist school (Parsons; Barnard; Crozier) • Complex man (Schein; Bennis)

Table 2.6, continued: Definition of culture and linkages to organisation and management literature
(adopted from Allaire & Firsirotu, 1984, pp. 217-221)

Schools & theorists	Culture definitions	Links with organisation/management literature	Main theorists and researchers in organisation/management theory
Organisations as a sociocultural system			
Ecological-adaptationist (White, Service, Rappaport, Vayda, Harris)	Culture is a system of socially transmitted behaviour patterns that serve to relate human communities with their ecological settings. The sociocultural system and the environment are involved in a process of feedback causality.	Organisations are social enactments of ideational designs-for-action in particular environments. organisations take on various forms through a continuous process of adaptation to, or selection by, critical environmental factors. Disparities in environments (perceived or real, present or future) result in different organisation forms and strategies in a never ending, and sometimes unsuccessful, quest for fit and equilibrium between the organisation and its environment.	• Open system theory (Katz and Kahn) • Contingency theorists (Thompson; Perrow; Lawrence and Lorsch; Burns and Stalker; Blau and Scott) • Organisationnal cross-cultural studies (Dore; Tracy and Azumi; Pascale; Hickson, Henning et al.; Tannenbaum et al.) • The socio-technical system perspective (Emery and Trist; Miller and Rice) • The Aston group (Pugh; Hickson) • The population ecology school (Hannan and Freeman; Aldrich) • The new school of organisation-environment relations (Pfeffer and Salancik; Meyer and Associates)
Historical-diffusionist (Boas, Benedict, Kluckhohn, Kroeber)	Culture consists of temporal, interactive, superorganic and autonomous forms which have been produced by historical processes	Organisational forms arise and vanish in the ebb and flow of historical circumstances. Specific patterns of organisational structures and strategies are characteristic of historical phases of the organisation. Organisations are social actualisations of their genesis and historical transformations.	• Chandler • Stinchcombe • Scott • Filley and House

Table 2.6, continued: Definition of culture and linkages to organisation and management literature
(adopted from Allaire & Firsirotu, 1984, pp. 217-221)

Schools & theorists	Culture definitions	Links with organisation/management literature	Main theorists and researchers in organisation/management theory
Organisations as an ideational system			
Cognitive (Goodenough)	A system of knowledge, of standards for perceiving, believing, evaluating and acting. Culture is the form of things people have in mind, their model for perceiving, relating and otherwise interpreting them. As a product of human learning, culture consists of the ways in which people have organised their experience of the real world so as to give it structure as a phenomenal world of forms that is their percepts and concepts.	• Organisational climate is defined as an enduring and widely shared perception of the essential attributes and character of an organisational system. Its primary function is to cue and shape individual behaviour toward the modes of behaviour dictated by organisational demands. • Organisations are social artefacts of members' shared cognitive maps. Organisations develop world views (Hedberg), codes (Arrow), or public maps (Argyris and Schon) that provide the framework for organisational actions.	• Oranisational climate (Tagiuri; Evan; Campbell et al. ; James and Jones; De Cotiis and Koys; Schneider; Payne and Pugh) • Organisational learning (Argyris and Schön; Hedberg; Arrow; Heirs and Pehrson)
Structuralist	Shared symbolic systems that are acumulative creations of mind; universal but unconscious principles of mind generate cultural elaborations and artefacts, the diversity of which results from the permutations and transformations of formally similar processes and latent structures. Since all cultures are the product of the human brain, there must be features that are common to all cultures.	Organisational structures and processes reflect the characteristics and limitations of human cognitive processes. The management literature on cognitive styles, on the hemispheres of the brain and their relationships to management, come close to this issue without ever tackling it explicitly.	• March and Simon's cognitive assumptions • Cognitive style research (McKenney and Keen; Kolb) • Left and right hemisphere of the brain (Mintzberg) • The managerial mind (Sumner, O'Connel and Perry; Ewing)

Table 2.6, continued: Definition of culture and linkages to organisation and management literature
(adopted from Allaire & Firsirotu, 1984, pp. 217-221)

Schools & theorists	Culture definitions	Links with organisation/management literature	Main theorists and researchers in organisation/management theory
Organisations as an ideational system			
Mutual-equivalence structure (Wallace)	Culture is a set of standardised cognitive processes which create the general framework that enables a capacity for mutual prediction and interlocked behaviour among individuals. It is an implicit contract that makes possible the maximal organisation of motivational and cognitive diversity with only partial inclusion and minimal sharing of beliefs and values on the part of culture bearers.	Organisations are the locus of intersection and synchronisation of individual utility functions, the somewhat fortuitous site where actors' micro-motive coalesce into organisational micro-behaviour. Coordination of behaviour occurs through the elaboration of mutually predictive cognitive structures. Members' decision to partially participate reflects their calculus of relative costs and inducements.	• The concepts of 'causal maps' and mutual equivalence (Weick et al.) • The 'calculus of participation' elements (Barnard; March and Silmon; Etzioni; Silverman; Selznick) • Type A organisation (Ouchi and Jaeger)
Symbolic (Geertz, Schneider)	Culture is the fabric of meaning in terms of which human beings interpret their experience and guide their action. It is an ordered system of shared and public symbols and meanings which give shape, direction and particularity to human experience.	• Organisations, as a result of their particular history and past or present leadership, create and sustain systems of symbols which serve to interpret and give meaning to members' subjective experience and individual actions, and to elicit or rationalise their commitment to the organisation. • Organisations are figments of participants' ascriptions of meaning to, and interpretation of, their organisational experience. They have no external reality as they are social creations and constructions emerging from actors' sense-making out of on-going streams of actions and interactions.	• Interpretive, actionalist sociology of organisations (Weber; Silverman) • Institutional school (Selznick; Clark; Rhenman; Pettigrew; Eldridge and Crombie; Wilkins; Harrison; Berg; Stymne; Handy) • Phenomenology, symbolic interactionism and ethnomethodology (Goffman; Turner; Brown; Garfinkel; Cicourel; Bittner; Burrell and Morgan; Smircich)

2.2.3.3 Differences between organisational culture and organisational climate

To fully understand the term organisational culture, some researchers argue that it is critical to make known about the differences between culture and climate at organisational level (Cameron & Quinn, 2011; Coffey, 2010; McCarthy, 2011; Trice & Beyer, 1993). This is because these two terms are used interchangeable by some researchers (for example, Katz & Kahn, 1978). The purpose of this discussion is aimed to clarify what was being studied in this research (Coffey, 2010). Table 2.7 shows the differences between organisation culture and climate addressed by different scholars.

Table 2.7: Differences between organisational culture and climate

References	Organisational culture	Organisational climate
Schein (1990)	• Deep rooted set of values and beliefs	• Surface manifestation of culture
Hofstede, Bond and Luk (1993)	• Longer-term • Answer the question, "what kind of people does this organisation employ?" (p. 489) • Concern about the top management level in an organisations • Strategic concerned • Difficult to change than climate	• Shorter-term • Answers the question "how does the organisation treat its people" (p. 489) • Concern about the lower and intermediate management levels in an organisations • Tactical concerned • Easier to change than culture
Trice and Beyer (1993)	• Some culture researchers also use surveys • No explanation on how culture can have an effect without individuals' sensing it	• Use survey measurement • Perceived and experienced individually
Coffey (2010)	• It "involves the analysis of typical organisational practices which produce measurable effects" (p. 38)	• It "examines the views which participants hold about their organisations at a particular point in time" (p. 38)
McCarthy (2011)	• Long-term performance predictor • "How people believe they should behave" (p. 2)	• Short-term predictor • Results of culture • "How people feel about being part of the organisation" (p. 2)
Cameron and Quinn (2011)	• Implicit in nature • Enduring, lasting, slow-to-chance • Core characteristic of an organisation	• Explicit in nature • Attitudes based and can change quickly and dramatically • Individualistic perspectives and changed frequently

Based on Table 2.7, it can be confirmed that there is lack of general and accepted set of definitions to distinguish between organisational culture and organisational climate (Denison, 1990). As such, Denison (1996) generated a general review of the perspectives of organisational culture and organisational climate as tabulated in Table 2.8. Instead of involved in a 'paradigm war' of organisational culture and climate, this researcher argues that organisational climate research provide a clearer picture of an overall organisational culture and hence it can be concluded that research on organisational culture and climate are different in terms of interpretation rather than different in phenomenon (Denison, 1996).

Table 2.8: Perspectives of organisational culture and organisational climate research (Denison, 1996, p. 625)

Differences	Culture literature	Climate literature
Epistemology	Contextualised and ideographic	Comparative and nomothetic
Point of view	Emic (native point of view)	Etic (researcher's viewpoint)
Methodology	Qualitative field observation	Quantitative survey data
Level of analysis	Underlying values and assumptions	Surface-level manifestations
Temporal orientation	Historical evolution	A historical snapshot
Theoretical foundations	Social construction: critical theory	Lewinian field theory
Discipline	Sociology and anthropology	Psychology

Schneider (1987) asserted that organisational climate and organisational culture are complementary. This is because culture is hard to form and sustain behaviour if the values are not there, and, conversely values are hard to sustain if there is lack of incentives and examples (Schein, 1990). Likewise, Hofstede et al. (1993) stated that organisational climate may be an older term for organisational culture and hence the differences between organisational culture and climate are negligible or none. In

addition, Payne (2000) claimed that organisational climate can be considered as a way to measure culture which can provide a useful generalised description of an organisation although it is less accurate and specific.

2.2.3.4 Subculture in an organisation

According to Cameron and Quinn (2011), each unit in an organisation consists of unique culture. Nevertheless, there are common and core elements of culture in an organisation although each subunit in an organisation has different culture (Albert & Whetten, 1985; Cameron & Quinn, 2011). This is because there is an underlying glue to unite people in an organisation together (O'Reilly, Chatman, & Caldwell, 1991; Schein, 2010). In addition, Schein (2010) commented that common culture does exist in large organisations with enough history of shared experience.

Hence, Cameron and Quinn (2011) commented that it is reasonable for a researcher to study organisational culture on the entire organisation or by assessing the culture of different subunit to identify the common dominant attributes of the subunits culture and to aggregate them. In this regards, this study does not focus on identifying the common dominant organisational culture of different subunits but instead to identify the general organisational culture of the entire organisation.

2.2.4 Decision-making

Decision-making study has been researched and evolved for more than three hundred (300) years in variety fields such as social science, bussiness and medicine (Oliveira, 2007). As such, decision-making under uncertainty in particular has received

considerable attention (Murray-Webster & Hillson, 2008). According to Howard (1988) and Thompson (2008), decision-making is an organisational base and critical activity and it is a center job of a manager. The definitions and theories of decision-making are discussed as below in the following sections.

2.2.4.1 Definitions of decision-making

Generally, decision-making is defined as:

> A process related to the existence of a problem, and it is often talked about in terms of problem solving. A problem, in simple terms, exists when an undesirable situation has risen which requires action to change it. In other words a problem exists for someone if the situation that they perceive exists is unsatisfactory for them. They would like to see something different or better happening and achieving different results (Thompson, 1993, p. 61).

Likewise, Kepner and Tregoe (1965) asserted that the importance of analysing problems in decision-making. In a simplest explanation, decision-making involved a process of selecting a preferred option or action among the available alternatives based on the accepted criteria or strategies (Wang, Wang, Patel, & Patel, 2006). The process of decision-making for all types of decisions can be implicit or explicit, simple or complex with two (2) critical elements to determine the quality of a decision, namely, the quality of decision-making process and the effectiveness of decision-making outcome in the achievement of the desired objectives (Murray-Webster & Hillson, 2008). On the other hand, Haag, Cummings and Phillips (2007) addressed that the process of decision-making is not necessary linear in common although decision-making generally involves

in four (4) general phases: (1) diagnosing phase – to identify problems or opportunities; (2) designing phase – to consider all potential solutions of the problems or take the advantages of the opportunities; (3) choosing phase – to weigh the merits and consequences of all solutions and select the best one; and (4) implementing phase – perform the selected solution, monitor the results and make adjustment if necessary.

Additionally, Murray-Webster and Hillson (2008) defined decision-making as a process of involving allocation of resources (such as time, money and goodwill) to achieve an objective in which each decision situation contains three (3) main features. These features are "articulation of the objective or decision to be made", "uncertainties that could affect the outcome" and "outcome" (p. 15). Nonetheless, Kleindorfer, Kunreuther and Schoemaker (1993) highlighted that decision-making is not limited to how a decision maker solves a problem but decision making should be extended to how a decision maker identify and accept a problem and finally learn from an action.

2.2.4.2 Theories of decision-making

According to Murray-Webster and Hillson (2008), decisions are made under two broad means, "either implicitly and automatically, influenced by hidden or assumed drivers; or explicitly and deliberately, influenced by drivers of which they are more consciously aware" (p. 15). No matter which decision route is followed, there are two (2) types of decision-making theories viz. descriptive and normative/prescriptive decision-making theories (Kleindorfer et al., 1993; Oliveira, 2007).

Descriptive theory adopts cognition to define decision-making and normative theory uses rational components to explain decision-making (Hastie & Dawes, 2001; Oliveira,

2007). Additionally, Kleindorfer et al. (1993) defined that descriptive theory is concerned on how a decision is actually made and normative/prescriptive theory is about a decision is made based on a set of well-defined criteria. Table 2.9 indicates the disciplinary roots of each decision theory.

Table 2.9: The disciplinary roots of decision theories
(Kleindorfer et al., 1993, p. 4)

Levels	Descriptive theories	Normative/prescriptive theories
Individual	• Psychology • Marketing • Psychiatry • Literature	• Decision theory • Economics • Operations research • Philosophy/logic
Group	• Social psychology • Organisational behaviour • Anthropology • Sociology	• Game theory • Organisation behaviour • Clinical psych/therapy • Finance/economics
Organisation	• Organisation theory • Sociology • Industrial organisation • Political science	• Planning-strategy • Control theory/ cybernetics • Organisation design • Team theory/economics
Society	• Sociology • Anthropology • Marcor economics	• Legal philosophy • Political science • Social choice

However, Kleindorfer et al. (1993) asserted that it is somehow difficult and complicated to categorise a theory as descriptive or prescriptive and researchers from distinct fields tend to study decision-making based on different theories. This indicates that there is no right or wrong to focus on a particular theory in decision-making research and there is a justification of leniency on the choice of decision theories.

No matter which theory of decision-making is adopted, it is worth to note that the complexity of decisions which consists of uncertainties, mix of rational information and less rational assumptions, guesses and so on has led to a situation that there is

impossible to judge and determine right and wrong decisions (Murray-Webster & Hillson, 2008). As such, a rational decision-making process does not guarantee a right decision to be made. Hence, the research model of this study is developed fundamentally based on descriptive theory.

2.2.4.3 Levels of decision-making and decisions domain

Consistent with culture, decision-making theory can be branched into different levels, namely, individual and a group of individuals or a group of groups (Doyle & Thomason, 1999). Murray-Webster and Hillson (2008) explained that decision-making happens at all levels, including families, society, organisations, business and so forth. Kleindorfer et al. (1993) highlighted that decision theories can be divided into four (4) levels, namely, individual, group, organisation and society.

On the other hand, Thompson (2008) addressed that decision-making can be generally divided into four (4) categories which including, intrapersonal decisions (individual decision-making), interpersonal decisions (two-party decision-making), group decisions (decisions made by a group or a team) and organisational-level decisions. Thompson further explained that organisational decision-making is an extension process of interpersonal and group decisions and it involved decisions made by a collective of individuals. Besides, Thompson (2008) stressed that there are three (3) main types of decisions that are made by people and organisations. These decisions domains included decision-making under certainty, uncertainty and risk. Under the decision-making under risk, this researcher pinpointed that decision maker has the benefits of understanding the exact odds and the outcomes of a risky decision is known as prospects.

2.2.5 Risk response

This section covers the discussions on the definitions of risk and risk response.

2.2.5.1 Definitions of risks

In general, risks present in every aspect of a project (Baker, Ponniah, & Smith, 1999; Seyedhoseini, Noori, & Hatefi, 2009). Different scholars define risks differently. According to Hillson (2002), risk is an umbrella and comprehensive term which should extended to be included opportunity (a risk with positive effect) and threats (a risk with negative effect) whilst uncertainty is an overarching term which included risk (an uncertainty – a threat with negative effect) and opportunity (an uncertainty with positive effect). Others define risk as "the chance of an adverse event depends on circumstances" (Godfrey, 1996, p. 9) or uncertain event and a set of events (Simon, Hillson, & Newland, 1997).

2.2.5.2 Definitions of risk response

Risk response is one of the phases in risk management process. This phase takes place after the stages of risk identification and risk analysis (Zou, Zhang, & Wang, 2007). Risk response is an important stage in risk management (Baker et al., 1999; Ben-David & Raz, 2001; Hillson, 1999; Pan & Chen, 2005; Panthi, Ahmed, & Azhar, 2007; Zhi, 1995) as it determines the success and effectiveness of risk management (Baker et al., 1999; Hillson, 1999; Panthi et al., 2007).

Risk response is defined as a decision making stage to decide what action should be taken on the identified risks (Seyedhoseini et al., 2009) and the chosen decision will affect the risk exposure of a project or an organisation (Hillson, 1999, 2001, 2002). While, Piney (2002) described risk response as a process that involved developing option and selecting actions to maximise opportunities and minimise threats to project objectives. On the other hand, Hilson (2002) argued that risk response is a phase to develop appropriate, reachable, realisable and affordable responses on identified risks. Risk response is sometime addressed as risk handling which is defined as action taken by project parties to avoid identified risks, to reduce the probability of risks occurrence or to reduce losses (Wang & Chou, 2003). In addition, Murray-Webster and Hillson (2008) addressed that risk response (such as risk response strategies and risk response actions) is associated with decision making in which risks will affect decision making and decisions will affect a risk process.

2.2.6 Adopted concept of organisational culture in this study

Based on the previous literature, culture is defined as a holistic concept. According to Bodley (1994), it is of paramount important for researchers to select a specific concept of culture as the adoption of culture concept can affect the research problems, research questions, research methods and the interpretation of the research results. In this regards, cultural studies must be supported by reliable principles to assure the validity of the research (Ankrah & Proverbs, 2004). To define culture, Jahoda (as cited in Hancock, 1999, p. 545) suggested that the definition of culture is vary depend on the purpose and interest of researchers. In addition, Allaire and Firsirotu (1984) addressed that the justification on the selection of culture definition(s) is needless as it depends on the needs and requirement of researchers.

After reviewing the definitions of culture and organisation culture, a particular concept of organisational culture is adopted in this study. Based on the definitions from Hofstede (1981), Duarte and Snyder (1999), Serpell and Rodriguez (2002), Thompson (2008) and Kefela (2010), organisational culture in this study is defined as values with a set of elements that are practiced and shared among the staff in an organisation to guide members in an organisation to act or behave to respond to the external environment which will in turn affect their decision making and choices.

2.3 A state of the art of culture, risk response and risk-related decision-making literature in construction and non-construction industries

This section consists of four (4) sub-sections. The first sub-section presents the review of empirical research of cultural literature in construction sector. The second section is about the risk response and risk-related decision-making literature in construction industry. The third section discusses the relevant and important cultural literature on decision-making. Lastly, future research agenda proposed by previous literature is presented in the fourth sub-section.

2.3.1 Cultural literature in construction industry

This section is divided into two (2) sub-sections. At first, empirical research of cultural literature in construction during the 20th century is discussed followed by the cultural literature in construction sector during the 21st century. Appendix A exhibits the chronologically development of some past empirical cultural research in construction sector.

2.3.1.1 Past cultural literature in construction during 20th century

Cultural issues in construction industry are started gaining attention during the 20th century. For example, Maloney and Federle (1990) performed a study to assess the validity of competing value framework developed by Quinn and Cameron by analysing the organisational culture in engineering and construction organisations. Lansley and Riddick (1991) explored the relationship between organisational culture and small group interactions among the construction and engineering contractors in United Kingdom and North America. Likewise, Maloney and Federle (1993) employed the competing values framework to analyse the organisational culture and managers' leadership and managerial skills in an owner organisation and a construction organisation.

Rowlinson and Root (1996) conducted a research on the impact of national culture differences on construction professionals' attitudes in United Kingdom and Hong Kong. Rowlinson and Root highlighted that cultural dimension can be applied as a moderator or environmental factor on management theory. Winch, Millar and Clifton (1997) analysed cultural differences in behaviour between French and British project participants in a Channel Tunnel project. They suggested that further research can examine the relationship between the values of national culture and organisational behaviour on different management context.

Hall (1999) studied the relationship between cultural diversity and international construction activity based on a sample of British construction firms. Hancock (1999) performed a research on the national cultural differences between Danish and British architects, civil engineers and building surveyors and their attitudes towards European

Union procurement directive. Liu (1999) carried out a study to determine the relationship between cultural dimensions, organisational culture's strength and real-estate professionals' perceived job satisfaction in Hong Kong. At the same year, Loosemore and Muslmani (1999) captured the effect of culture diversity on communication problems. Seymour and Fellows (1999) proposed a research by focusing on how belief, values and practices affect the development of a 'culture of quality' in construction firms. Low and Leong (2000) performed a case study to find out the impact of cross-cultural management on performance in international construction. On the other hand, Ngowi (2000) investigated the relationship between national and organisational cultures and the implementation of total quality management.

2.3.1.2 Past cultural literature in construction during 21st century

During the 21st century, the topics on cultural research in the construction sector are increasingly well-developed and expanded in a variety of areas and directions. The most prominent areas of studies are the cultural profiles and cultural differences in construction-related organisations. For example, Lindahl and Josephson (2003) carried out a study to identify the organisational culture in partnering projects. Ankrah and Langford (2005) compared the organisational culture differences between architect and contractor firms in Scotland. Igo and Skitmore (2006) studied the organisational culture of an Australian Engineering, procurement and construction management consultancy based on the competing values framework.

In the same veins, Liu, Zhang and Leung (2006) carried out a preliminary study to identify the organisational culture profiles of five (5) selected construction enterprises from different geographical locations in China with the similarity in size, number of

employees, general reputation, business type and tax bracket. Zhang and Liu (2006) examined the organisational culture profiles on 110 Chinese civil enterprises. Lorenz and Marosszeky (2007) identified the organisational culture differences between Austrian and Australian designers, contractors and subcontractors and the specific organisational and technical differences in the aspects of trade union, safety, bureaucracy and employment in Germany, Austria and Australia. These researchers concluded that the significant cultural differences are critical for the successful management of global construction projects as the understanding of collaborators' organisational cultural differences will assist managers in decision making. Oney-Yazıcı et al. (2007) focused on the organisational culture in contracting and architectural firms in Turkish construction. Jaeger and Adair (2013) focused on identifying the perceived common organisational culture among the construction project managers working in the Gulf Cooperation Council countries.

Other researchers focus on the impact of culture on organisational and project performance. Coffey (2003), Coffey and Willar (2010) and Coffey (2010) investigated the relationship between organisational culture and construction quality performance of contractors in public sector housing construction in Hong Kong based on the Denison Organisational Culture Model (DOCM). Horii et al. (2004) studied the impact of cultural differences between Japanese and American on team performance in international joint venture. Zhang (2004) studied the relationship between organisational culture and performance effectiveness of Chinese construction enterprises with reference to the two (2) organisational culture instruments developed by Cooke and Lafftery and Cameron and Quinn. This researcher argues that organisational culture is a stimulus to affect employees' behaviour which in turn will exerts impact on the outcome of organisational effectiveness.

Cheung, Rowlinson and Jefferies (2005) investigated the impact of organisational structure (developmental versus systematised), organisational culture (task culture versus role culture) and commitment (affective, normative and continuance) in a large public sector organisation in Queensland, Australia and critical issues affecting project were identified. Ankrah (2007) conducted a doctoral research to determine the relationship between organisational project culture and construction project performance in terms of cost, time, quality, health and safety, disputes, and productivity outcomes. Kuo and Kuo (2010) examined the relationship between corporate culture and project performance in construction companies in northern and central of Taiwan. They discovered that there is a positive and direct relationship between corporate culture and project performance. Kuo and Kuo addressed that construction companies need to apply and implement appropriate organisational missions, values and strategies in order to succeed in the customer-oriented market.

Other than the above mentioned literature, the topic of culture is studied and linked to the different aspects of management such as total quality management, innovation and knowledge management. Ang and Ofori (2001) studied the impact of Chinese culture on the successful partnering implementation in Singapore. Fisher and Ranasinghe (2001) investigated the relationship between culture and foreign building and construction firms' choice of foreign investment venture structure based on the Hofstede's four (4) cultural dimensions. They believed that national culture differences influence organisational decision-making such as the choice of foreign investment venture. This study concluded that organisations are likely affected by particular types of cultural characteristics instead of cultural differences. Rowlinson (2001) studied the influence of organisational culture and commitment on organisational change. Low and Shi (2001) utilised Hofstede's four (4) cultural dimensions to find out the impact of cross-cultural

on international project management based on qualitative research approach. While, Low and Shi (2002) adopted the same cultural dimensions on the same research area through quantitative research approach.

Hall (2002) examined the relationship between national culture differences and international construction marketing. Loosemore and Lee (2002) focused on the language differences in the multi-cultural workforce environment. Tran and Skitmore (2002) conducted an exploratory study to determine the impact of national culture, organisational culture and personal characteristics on the efficacy of project communication. Chan and Tse (2003) solicited opinions from the construction professionals about the influence of culture on dispute and the selection of dispute resolution methods in international construction. This study discovered that construction professionals who agree that cultural differences contribute to international dispute, also believe that cultural differences will lead to the differences in dispute resolution methods. Rahman, Kumaraswamy, Rowlinson and Sze (2003) identified the relationship between flexible construction project culture and project success based on the proposition that the practice of flexible project culture in an integrated project team can foster a positive project culture that will lead to the achievement of project success by means of enhancing the profitability, effectiveness, improve competitiveness and future success of the respective organisations.

Chen and Partington (2004) investigated national culture differences between Chinese and Western in construction project management work. Liu, Fellows and Ng (2004) identified the relationship between organisational culture and surveyors' ethics in construction. Phua and Rowlinson (2004) examined the relationship between national culture and social identity perspective based on the argument that culture is an

important concept in construction partnering to enhance project performance. They emphasised that more comprehensive framework is required to measure the culture in construction. Fung, Tam, Tung and Man (2005) examined the culture divergences among construction personnel (top management, supervisory staff and workers) on safety issue. Mahalingam et al. (2005) looked into the cultural clashes in international infrastructure developments projects. Tukiainen, Tainio, Nummelin, Ainamo and Koivu (2005) identified the impact of cultural dynamics on global engineering projects.

Anumba, Dainty, Ison and Sergeant (2006) explored the impact of structural and cultural factors on the success of information and communication technology implementation. Brockmann and Birkholz (2006) performed a research on professional culture between civil engineers from construction and mechanical engineers from automobile industry. Hartmann (2006) was interested in identifying the influence of organisational culture on innovative behaviour. While, Akiner and Tijhuis (2007) interested in the relationship between national culture and work goal orientation among architects and civil engineers in Turkey. Wong, Wong and Li (2007) explored the relationship between leadership styles and relationship cultures of Chinese and expatriate managers in Hong Kong multinational construction companies.

Issa and Haddad (2008) investigated the impact of organisational culture on knowledge sharing in contractor organisations in United States. Koh and Low (2008) shed light on the relationship between organisational culture and total quality management (TQM) implementation in Singaporean contractor firms. They highlighted that contractors need to reconsider and reassess the current organisational culture practice to face the increasingly intensive competitive and changing construction environment. Liu and

Fellows (2008) identified the relationship between individualism-collectivism and organisational citizenship.

Ankrah, Proverbs and Debrah (2009) looked for empirical evidence by determining the relationship between the cultures of construction project organisations and the structure, profile and characteristics of construction projects. These researchers further argued that the distinctive characteristics of construction projects will lead to different cultural orientation which will influence project delivery and hence affect project performance outcomes. Fong and Kwok (2009) studied the knowledge management practices and organisational culture of contracting organisations in Hong Kong. Jia, Rowlinson, Kvan, Lingard and Yip (2009) investigated the relationship between Confucian conformity values and architecture students' burnout level. Kivrak, Ross and Arslan (2009) focused on the impact of culture differences on knowledge management practice. Mohamed, Ali and Tam (2009) focused on the relationship between national culture and construction workers' working safety behaviour in Pakistan. Tone, Skitmore and Wong (2009) determined the impact of cross-cultural communication on international construction management.

Chandra and Loosemore (2010) studied the cultural learning between clients in the healthcare sector and the representatives of construction project team and key concepts of project success during briefing stage. Ochieng and Price (2010) identified the key cultural dimensions that influence communication in multicultural project teams. Wang and Abdul-Rahman (2010) identified the current organisational culture, leadership styles and enterprise axiology of Malaysian construction firms. Styhre (2010) studied the culture of complaint in construction industry. Chandra and Loosemore (2011) looked into the research area between the exchanged of organisational cultural

knowledge process between project members and hospital stakeholders during briefing stage, the types of cultural knowledge exchanged and the barriers of it. Cheung et al. (2011) developed an organisational culture framework in construction context based on the nine (9) prominent culture frameworks from previous studies and contended that organisational culture in construction project management should be explored under general context rather than specific context. Liu and Low (2011) studied the impact of different types of culture (Chinese culture, industry culture and enterprise culture) on the balance and conflict of work and family life of project managers.

Phua (2012) examined the impact of national culture on human resource management practices especially on remuneration and job autonomy. Wong, Ng and Shahidi (2013) studied the relationship between the drivers of carbon reduction and contractors' carbon reduction strategies in the organisational culture perspective based on the past ten (10) cultural-related studies. Giritli, Öney-Yazıcı, Topçu-Oraz and Acar (2013) examined the relationship between organisational culture and leadership in Turkish construction based on the Cameron and Quinn's Organisational Culture Assessment Instrument and Hofstede's Values Survey Module. Rees-Caldwell and Pinnington (2013) determined the effect of national culture on the aspect of project planning. Wong and Zapantis (2013) conductd a more detailed research to examine the relationship among the carbon reduction drivers (tightening building regulations and carbon tax), organisational culture and contractors' adoption of carbon reduction strategies in which organisational culture is taken as a moderating variable of the relationship between the drivers and carbon reduction strategies. The results suggested that carbon tax and the strategies of carbon reduction can be enhanced by organisational culture such as goal clarity, rewards and innovation.

2.3.2 Risk response and risk-related decision-making literature in construction industry

Little research has focused on decision making in risk response in construction. For example, Zhi (1995) performed a case study on a development of a residential-commercial complex construction project in China to examine the practice of risk management. This study reviews some important risk response techniques adopted in this overseas construction projects. Baker et al. (1999) studied and compared the selection of risk response choices and the most successful risk response techniques employed between oil and gas industry and construction industry.

In addition, Aleshin (2001) proposed a risk management support system which consists of Computer Based Training (CBT) System and Decision Support System with the aim to provide risk-related information in Russian market and to guide decision makers in making risk response decisions. Wang and Chou (2003) investigated the impact of risk event and risk allocation on contractors' risk handling decisions based on the multiple case studies of highway projects. Ahmed and Azhar (2004) examined the current practices of risk analysis and risk response techniques practicing by contractors in Florida compared with medium- to large-sized contractor firms in Georgia, North Carolina, Illinois and New York who are considered to have high profit and modern construction industry.

Ling and Hoi (2006) conducted an international construction research with an objective to find out the type of risk response techniques adopted by architecture, engineering and construction organisations in Singapore in managing the risks found in India. On the other hand, Panthi et al. (2007) conducted a research to formulate appropriate risk

response strategies to deal with the risks that are identified in a construction project and a risk matrix tool was proposed to manage the identified risks. Thuyet, Ogunlana and Dey (2007) derived few strategies to mitigate the ten (10) major identified risks in oil and gas construction project in Vietnam through the interviews with industry professionals. Zou et al. (2007) recommended some risk management strategies on the key identified risks in China. Seyedhoseini, Noori and Hatefi (2009) introduced an integrated methodology to support the selection of risk response actions and this proposed methodology has been validated in a construction project. Abdul-Rahman, Loo and Wang (2012) identified the types of risk response adopted by international architectural, engineering and construction firms in dealing with the risks in Gulf region.

Other than the general decision issues on risk response strategic during the project period, other researchers look into a more specific context of decision-making in particular during the bidding or tendering stage to assist construction personnel such as contractors to make better decisions. For example, de Neufville, Lesage and Hani (1977) studied contractors' risk decision behaviour and proposed an optimum bidding model in a revised version. Ahmad (1990) focused on proposing a structured methodology of bidding decision-making system to quantify bidder's subjective evaluation and the level of aspiration. Seydel and Olson (1990) aimed to construct a tender selection model based on an analytic hierarchy process method to deal with the problems of competitive bidding.

Han and Diekmann (2001a) introduced a more reliable risk analysis and decision-making model to assist construction firms especially American contractors to make better strategic international market entry decisions. Based on the theories and

arguments made by Han and Diekmann (2001a), Han and Diekmann (2001b) further developed a more comprehensive cause-and-effect relationship decision making approach to assist contractors to make a stable and systematic go/no-go decisions in international markets.

Zarkada-Fraser and Fraser (2002) investigated United Kingdom construction firms' perception of the impact of political risk on decisions to enter into foreign construction markets. Dikmen and Birgonul (2004) proposed a neuronet go/no-go decision support model in overseas markets based on the experiences of Turkish international contractors. Fang, Fong and Li (2004) developed a risk assessment model to assist Chinese and international contractors in tendering decisions within the Chinese construction market. Han et al. (2005) examined contractors' risk attitude in making international bidding decision through experimental tests. The researchers proposed that more in depth further research should be done and focused on the variables, such as different types of risk profiles, the background of decision makers, firms' size, diversity of nationality and so on.

Oo et al. (2008) compared contractors' bid decisions in public sector building contracting between Hong Kong and Singapore under two (2) market environments, namely, booming and recession conditions and the different numbers of bidders. According to Oo et al. (2008), to compete successfully in international market, the understanding of contractors' bidding behaviour under different market environments is important. This also implies that understanding of contractors' behaviour under different risk conditions in host country is critical in a competitive international market. Ballesteros-Pérez, González-Cruz and Cañavate-Grimal (2013) proposed a bid tender forecasting model based on the scoring and position probability graphs to assist

manager who intend to bid a project or need to gain their bidding competitiveness. However, this model was created without the consideration of risk issues. While, Shafahi and Haghani (2014) proposed a mathematical model with the consideration on both monetary and non-monetary criteria as well as the decisions on project selection and markup selection to assist contractors to make better bid/no bid decisions and to choose better markup percentage.

2.3.3 A state of the art of culture on decision-making and risk decisions literature in non-construction field

Studies on culture and risk-related decision making are well-developed in non-construction fields compared with construction sector in terms of quality and quantity. As such, only related literature is included and discussed in this section. Appendix B shows a summary of related literature on culture and risk decisions in non-construction fields. Kogut and Singh (1988) investigated the impact of national culture on the selection of entry mode into United States by foreign organisations from diverse industries. The entry choice was tested based on three (3) variables, namely, cultural characteristics, firm variables and industry variables. Kogut and Singh (1988) concluded that future research can focus on the effect of cultural determinant on managerial decision making. Agarwal (1994) examined the moderating roles of firm-specific and country-specific characteristics on the choice of joint ventures decision in response to the risk of socio-cultural distance. Sitkin and Weingart (1995) conducted a research to find out the relationship among the outcome history, problem framing, risk propensity and risk perception on risky decision-making behaviour. These researchers proposed that future studies can look into other variables such as organisational culture orientation toward risk.

Weber and Hsee (1998) focused on the national culture differences from United States, Chinese, Polish and German in the perception of risk preference on financial issue rather than attitude towards perceived risk. Weber and Hsee further suggested that more research needs to be done to confirm the relationship between culture differences in risk preference and risk perception, particularly in different culture, different groups of people like managers and different research context. These researchers also highlighted that research on cultural differences in decision-making on risk or uncertainty can provide useful information on negotiation at international level. Meanwhile, Hsee and Weber (1999) studied and compared the cross-national risk preference between Chinese and American students on three (3) types of decisions, namely, financial, essay and medicine. This study found that people from different nation are risk seeking on different types of decisions.

Martinsons and Davison (2007) interested in examining strategic decision-making style in information systems issues among United States, Japanese and Chinese managers. They discovered that national culture differences will lead to different decision-making style and highlighted that decision-making is critical in international market. Murray-Webster and Hillson (2008) identified the importance and influence of a list of factors (such as people with high power, people with lower power, group dynamics, organisation culture, societal norms, national culture) on decision-making and its outcome. According to them, culture in an organisation that encourages risk-taking or a leader who is risk seeking, the decision that to be made is more risky unless it is intervened by someone.

On the other hand, Griffin et al. (2009) examined the relationship between national culture (three cultural dimensions, namely, harmony, individualism and uncertainty

avoidance) and corporate risk taking from thirty-five (35) countries. This study confirmed the significance of culture in corporate risk taking and concluded that more future studies are essential to explore the importance of cultural values in corporate decisions. Demirbag, Tatoglu, Glaister and Zaim (2010) studied strategic decision-making efficiency in two (2) different countries, namely, large-sized British and Turkish firms.

Moreover, Dimitratos et al. (2011) investigated the impact of national culture among internationalised firms on strategic decision-making. The findings of this study supported that culture has considerable impact on strategic decision-making in internationalisation. These researchers commented that Hofstede's cultural dimensions are suitable to be used in the research of decision-making in organisational internationalisation. They further proposed a few future research as below:

i. firms from the same nation will make decisions and behave differently due to organisational culture differences;
ii. a more comprehensive studies need to be done and other factors like decision-specific variables, firm-related characteristics, external environment and so on are worth to be considered; and
iii. large international firms are worthwhile to be studied in the fields of culture and decision-making.

Nielsen and Nielsen (2011) examined the impact of nationality diversity and international experience of top management team on international entry mode. They addressed the importance of international strategic decision making and called for further research on this research area. Tjemkes, Furrer, Adolfs and Aydinlik (2012) performed a scenario-based experiment to examine the impact of national culture on the

preferences of response strategy in an international strategic alliance under different types of adverse situation. This paper suggested that future research can be performed on the basic of survey methodology on a sample of actual managers across different countries and variables such as managers' working experience in the related industry could be considered in the research.

2.3.4 Future research agenda and the significance of culture and risk decisions in construction industry

The review of the cultural and risk decisions literature in construction in this study lends support to the assertion made by many researchers (for examples, Ankrah & Langford, 2005; Cheung et al., 2011; Oney-Yazıcı et al., 2007) that both topics are not fully explored and studied in breadth and depth in construction sector as compared with other sectors like manufacturing and business fields. Based on the cultural perspective, many researchers argued that cultural literature in construction is deficient although it has become a mainstream topic of interest and discussion in the construction literature (Ang & Ofori, 2001; Fellows, 2010) in the 20th century which provides rich and interesting contribution in academic and industry practices. For example, Oney-Yazıcı et al. (2007) concluded that research on organisational culture in construction is still at the embryonic stage. In line with this, Cheung et al. (2011) commented that organisational cultural issue in construction context is less emphasised compare in business context.

Review of the extant literature (as discussed in previous sections) showed that cultural issues in construction have been studied in variety directions ranging from the culture profiles, cultural differences, development of cultural framework and the impact of culture on different performance and management aspects. The areas in the aspects of

performance and management consist of organisational effectiveness, project performance, innovation, total quality management, knowledge management, ethics, communication, leaderships, decision-making on the selection of foreign investment venture structure and so forth as tabulated in Appendix A. The review of the past literature shows that national culture is captured more attention than organisational culture and this gap becomes more significant in the area of decision-making in construction sector.

The study of culture is significant in construction literature as culture imposes intense effects on business activities of project-oriented organisations in construction industry at both national and international levels (Ankrah & Langford, 2005; Kivrak et al., 2009) in terms of work attitudes, conflicts, management practices, inter-firm collaboration and so on (Ankrah & Langford, 2005). Seymour and Fellows (1999) argued that the appreciation of culture is critical to the success of management if management is concerned of making and implementing decisions of human activity. In this regards, researchers such as Ankrah and Proverbs (2004) suggested that more research needs to be carried out to reveal organisation culture especially in construction organisations. In addition, Shore and Cross (2005) emphasis that more research needs to be done to answer the question of how culture affects management in an organisation.

In addition, culture and cultural differences become critical issues in all types of organisations and industries especially in international markets (Kivrak et al., 2009). In this vein, organisational culture is gaining importance especially in the internationalised construction market (Low & Shi, 2001). The research area in this topic has been proposed by some researchers as future research. Tijhuis (2003) suggested the need to put cultural issues on the research agenda in construction industry especially at

international level. Similarity, Oney-Yazıcı et al. (2007) advocated the study on cultural issue in international construction as future research. Lorenz and Marosszeky (2007) highlighted that there is lack of detail research focus on organisational culture in global construction sector and thus recommended that this research area is worthwhile for future exploration.

In terms of the risk-related decisions literature, the importance of decision making in international context is often passed over in business literature (Buckley, 1993; Dimitratos et al., 2011; Herrmann & Datta, 2002). This issue becomes more apparent in construction field. Decision-making in risk response is critical to international contractors as decision making can significantly affect an organisation (Martinsons & Davison, 2007). Nielsen and Nielsen (2011) commented that international strategic decision making is gaining importance due to the effect of globalisation and decisions from top management. Some researchers encourage more future on international risk decisions. For example, Han et al. (2005) addressed that more in depth further research on risk attitude and bid decisions is essential. Brouthers and Hennart (2007) highlighted that many research questions on international strategic decision making are remaining unanswered especially questions about how decisions are made. Dikmen and Birgonul (2006) proposed that international construction is a worthwhile research topic as there are plenty of research questions pending to be discovered, explored, and answered in future studies.

Based on the literature review, it was found that majority of risk-related decision making studies are focused on normative perspective instead of descriptive decision theory. In other words, most literature is focused on how to assist contractors to make better or optimal decisions in a rational manner. Furthermore, there is plethora research

on culture and risk decisions in Western countries but little research is known in Asian countries in particular. Another is the population knowledge gap in assessing the cultural profile of the construction-related organisations. With reference to the previous published research papers and books, the studied samples were focused at owner and construction organisations in United States (Maloney & Federle, 1993), architect and contractor firms in Scotland (Ankrah & Langford, 2005), engineering, procurement and construction management consultancy in Australia (Igo & Skitmore, 2006), construction organisations in China (Liu et al., 2006; Zhang & Liu, 2006), German and Austrian contractors and designers in Australia (Lorenz & Marosszeky, 2007), contracting and architectural firms in Turkish (Oney-Yazıcı et al., 2007) and so on. Little or nothing has been done to empirically explore the organisational culture of international contractors in their respective country. Thus, the significant knowledge gaps of the extant studies on culture and risk decisions and their importance in international construction have provided a good platform of future research agenda for this study.

2.4 Existing culture and risk response models

The existing and prominent organisational culture and risk decisions models are discussed in detail in following sections. Generally, there are varieties of different cultural models. Cameron and Quinn (2011) addressed that there is no one cultural framework or model is comprehensive and holistic and no one is right or wrong as well. With reference to the past studies, most of the existing models are generated from business management literature and little from construction literature. Hence, the adoption of cultural model depends on the researchers' own justification based on the research area and scope of this study.

2.4.1 Cultural models in construction industry

Little cultural models are proposed specifically in construction context. Table 2.10 presents a summary of cultural models adapted and proposed in construction literature. Liu (1999) suggested a list of cultural dimensions to describe organisational culture orientation on real-estate professionals' perceived job satisfaction. The list consists of power orientation (hierarchy of authority and participation in decision making), rule and procedure orientation, team orientation, people orientation, communication orientation, customer orientation, innovation orientation, external focus and result orientation. This study found that team orientation, people orientation and communication orientation have significant positive relationship with real-estate professionals' job satisfaction.

Tran and Skitmore (2002) explored the impact of national culture and organisational culture on project communication and few cultural dimensions have been elicited from previous literature. The dimensions of national culture includes uncertainty avoidance,

individualism/collectivism, power distance and masculinity/feminity whilst the dimensions of organisational culture comprise external/internal emphasis, task/social focus, individuality/conformity, risk/safety and adhockery/planning.

Ankrah and Langford (2005) proposed sixteen (16) organisational culture orientations to compare the similarities and differences between architects and contractors who are the key players in a construction project. These sixteen (16) organisational culture orientations are degree of formality, degree of centralisation, primacy of human resources, caliber of employees, tolerance of ambiguity, need for recognition, nature of tasks, organisation of tasks within departments, organisation of tasks on a team basis, organisation of tasks around individual, administrative task importance, skill and expertise as a source of power, control and influence, formal position as a source of power, control and influence, relationship with managers as a source of power, control and influence, methods for achieving control and coordination and readiness to adopt technology.

Mahalingam et al. (2005) investigated the cultural orientation differences in international infrastructure development projects. They found that the differences in professional institutions and work practice have greater impact than national culture on global projects. Based on their research findings and observations, two (2) cultural orientations are identified and these are rules versus results orientations and dictatorial versus partner-oriented behaviours. Ankrah et al. (2009) identified five (5) organisational project cultural dimensions and these including workforce orientation, performance orientation, team orientation, client orientation and project orientation.

Cheung et al. (2011) pinpointed that majority of the exisiting organisational culture models are based on the general business context and no organisational culture model is proposed in construction industry. After reviewing a long-list artifacts from previous studies, twenty-six (26) organisational culture artifacts were extracted and grouped under seven (7) major cultural factors based on the point of views from different construction professionals in Hong Kong. These seven (7) major cultural factors are 'goal settings and accomplishment', 'team orientation', 'coordination and integration', 'performance emphasis', 'innovation orientation', 'members participation' and 'reward orientation'. This organisational culture model is claimed to be general and comprehensive as it is not profession-specific and organisation type-specific. On the other hand, Wong et al. (2013) identified eight (8) organisational culture dimenstions towards carbon reduction. These researchers concluded that organisational culture is a robust start to direct different decisions and behavioural change in carbon emissions of organisations.

Table 2.10: A summary of cultural models from construction literature

References	Name of culture model	Cultural dimensions/typology	Concept of the model
Liu (1999)	-	*Cultural dimensions:* • Power orientation (Hierarchy of authority and participation in decision making) • Rule and procedure orientation • Team orientation • People orientation • Communication orientation • Customer orientation • Innovation orientation • External focus • Result orientation	Organisational culture and job satisfaction

Table 2.10, continued: A summary of cultural models from construction literature

References	Name of culture model	Cultural dimensions/typology	Concept of the model
Tran and Skitmore (2002)	-	*Cultural dimensions:* • Uncertainty avoidance • Individualism and collectivism • Power distance • Masculinity and feminity • External and internal emphasis • Task and social focus • Individuality and conformity • Risk and safety • Adhockery and planning	Culture on project communication
Ankrah and Langford (2005)	-	*Cultural dimensions:* • Degree of formality • Degree of centralisation • Primacy of human resources • Caliber of employees • Tolerance of ambiguity • Need for recognition • Nature of tasks • Organisation of tasks within departments • Organisation of tasks on a team basis • Organisation of tasks around individual • Administrative task importance • Skill and expertise as a source of power, control and influence • Formal position as a source of power, control and influence • Relationship with managers as a source of power, control and influence • Methods for achieving control and coordination • Readiness to adopt technology	Organisatinal culture profile in construction between architects and contractors
Mahalingam et al. (2005)	-	*Cultural dimensions:* • Rules and results orientations • Dictatorial and partner-oriented behaviours	Culture differences on international infrastructure development projects
Ankrah et al. (2009)	-	*Cultural dimensions:* • Workforce orientation • Performance orientation • Team orientation • Client orientation • Project orientation	Organisational project culture

Table 2.10, continued: A summary of cultural models from construction literature

References	Name of culture model	Cultural dimensions/typology	Concept of the model
Cheung et al. (2011)	-	*Cultural dimensions:* • Goal settings and accomplishment • Team orientation • Coordination and integration • Performance emphasis • Innovation orientation • Members participation • Reward orientation	Organisational culture framework in construction
Wong et al. (2013)	-	*Cultural dimensions:* • Goal clarity • Coordination and integration • Conflict resolution • Employee participation • Innovation orientation • Performance emphasis • Reward orientation • Team orientation	Carbon reduction behaviour
Wong and Zapantis (2013)	-	*Cultural dimensions:* • Goal clarity • Coordination and integration • Conflict resolution • Employee participation • Innovation orientation • Performance emphasis • Reward orientation • Team orientation	Carbon reduction drivers and strategies

2.4.2 Cultural models in non-construction fields

In the fields of business and operation management, one can discover that plenty of cultural models are proposed and developed in past literature. Hence, only prominent and related culture models are discussed in this section and Table 2.11 indicates a summary of the extracted cultural models from past literature.

Table 2.11: A summary of cultural models from business and operation management literature

References	Name of organisational culture model	Cultural dimensions/typology	Concept of the model
Harrison (1972)	Organisational culture model	*Cultural typologies:* • Power culture • Role culture • Task culture • Person culture	Organisational culture that affect organisational behaviours and change efforts
Cameron and Quinn (2011)	Competing Values Framework	*Cultural dimensions:* • Flexibility and discretion versus stability and control • Internal focus and integration versus external focus and differentiation *Cultural typologies:* • Clan culture • Adhocracy culture • Hierarchy culture • Market cultures	Organisatinal effectiveness
Deal and Kennedy (1982)	Corporate culture model	*Cultural dimensions:* • Speed of feedback • Degree of risk *Cultural typologies:* • Work hard/play hard • Tough-guy/Macho • Bet-you-company • Process	Focus on the entire organisational culture
Hofstede (2001)	Value Survey Module (VSM)	*Cultural dimensions:* • Power distance index • Uncertainty avoidance index • Individualism • Masculinity • Long-term orientation	Basic problems of national societies
Bate (1984)	Organisational culture dimensions on problem-solving	*Cultural dimensions:* • Unemotionally (affective orientation) • Depersonalisation (animate-inanimate orientation to causality) • Subordination (hierarchical orientation) • Conservatism (change orientation) • Isolationism (individualist-collectivist orientation) • Antipathy (unitary-pluralistic orientation)	Organisational problem-solving and organisational change

Table 2.11, continued: A summary of cultural models from business and operation management literature

References	Name of organisational culture model	Cultural dimensions/typology	Concept of the model
Cooke and Lafftery (1987)	Organisational Culture Inventory (OCI)	*Behaviour norms:* • Achievement • Self-actualising • Humanistic-encouraging • Affiliative • Approval • Conventional • Dependent • Avoidance • Perfectionistic • Competitive • Power • Oppositional *Cultural typologies:* • Constructive culture • Passive/defensive culture • Aggressive/defensive culture	To measure the current organisational culture in terms of behaviour norms and expectations
Hofstede, Neuijen, Ohayv and Sanders (1990)	Organisational culture model	*Cultural dimensions:* • Process-oriented versus results-oriented • Employee-oriented versus job-oriented • Parochial versus professional • Open system versus closed system • Loose control versus tight control • Normative versus pragmatic	Organisational culture differences
House, Hanges, Javidan, Dorfman and Gupta (2004)	GLOBE framework	*Cultural dimensions:* • Power distance • Uncertainty avoidance • Humane orientation • Collectivism I (institutional) • Collectivism II (in-group) • Assertiveness • Gender egalitarianism • Future orientation • Performance orientation	Culture and leader effectiveness
O'Reilly et al. (1991)	-	*Cultural dimensions:* • Innovation • Stability • Respect for people • Outcome orientation • Detail orientation • Team orientation • Aggressiveness	Person-culture fit

Table 2.11, continued: A summary of cultural models from business and operation management literature

References	Name of organisational culture model	Cultural dimensions/typology	Concept of the model
Gordon and DiTomaso (1992)	-	*Cultural dimensions:* • Cultural strength • Adaptability (action orientation, innovation/risk taking) • Stability (Integration/ communication, fairness of rewards, development and promotion from within) *Cultural factors:* • Clarity of strategy/shared goals • Systematic decision-making • Integration/communication • Innovation/risk taking • Accountability • Action orientation • Fairness of rewards • Development and promotion from within	Organisational culture and corporate performance
Trompenaars (1993)	Seven dimensions of cultural model	*Cultural dimensions:* • Universalism/particularism (rules versus relationships) • Individualism/collectivism (group versus individual) • Neutral/emotional (the range of feelings expressed) • Specific/diffuse (the range of involvement) • Achievement/ascription (how status is accorded) • Internal/external (Attitudes to the environment) • Time orientation (attitudes to the time)	National culture differences in business management especially at international level
	Corporate culture model	*Cultural dimensions* • Egalitarian versus hierarchical • Person versus task *Cultural typologies:* • Incubator (fulfillment-oriented culture) • Guided missile (project-oriented culture) • Eiffel tower (role-oriented culture) • Family (power-oriented culture)	To explore how employees learn, change, resolve conflicts, reward, motivate and so on.

Table 2.11, continued: A summary of cultural models from business and operation management literature

References	Name of organisational culture model	Cultural dimensions/typology	Concept of the model
Denison and Mishra (1995)	Organisational culture model	*Cultural dimensions:* • External orientation versus internal integration • Change and flexibility versus stability and direction *Cultural typologies:* • Involvement • Consistency • Adaptability • mission	Organisational culture and effectiveness
Van Muijen et al. (1999)	-	*Cultural dimensions:* • Support orientation • Innovation orientation • Rules orientation • Goal orientation	Organisational culture across nations
Cunha and Cooper (2002)	-	*Cultural dimensions:* • Organisational integration • Performance orientation • People orientation • Market orientation	Privatisation change
Plewa and Rao (2007)	-	*Cultural dimensions:* • Autonomy • External orientation • Inter-departmental coordination • Human resource orientation • Improvement orientation • Relationship orientation • Social atmosphere/team spirit	Organisational culture and relationship performance
Khan et al. (2010)	-	*Cultural dimensions:* • Support orientation • Innovation orientation • Rules orientation • Coordination orientation	Generic practice-based organisational culture model

2.4.2.1 Harrison's types of organisational culture

Harrison (1972) identified four (4) major types of organisational culture that has an effect on organisational behaviours and change efforts and these are power culture, role culture, task culture and person culture as indicated in Table 2.12. Cartwright and

Cooper (1992) commented that the proposed cultural typologies are high in face validity and can be easily understood by managers and employees.

Table 2.12: Types of organisational culture by Harrison (adopted from Cunha & Cooper, 2002, pp. 23-24)

Types of culture	Characteristics
Power culture	Organisations are controlled and managed by a single central power source, very competitive and responsive to environmental changes
Role culture	Organisations are highly bureaucratic, emphasis more on hierarchy and status, logic and rational, works are controlled by rules and procedures
Task culture	Organisations are value goal achievement, flexible, team performance oriented and response rapidly to changeable market conditions
Person culture	Organisations emphasis on consensus decision-making and authority and power are used when necessary

2.4.2.2 Competing Values Framework (CVF)

The Competing Values Framework (CVF) is originated by Quinn and Rohrbaugh (1981). This is a prominent and useful theoretical framework among the forty most important models in business history in assessing organisational culture. This framework is developed based on an empirical research on organisational effectiveness. It consists of four (4) major types of cultures, namely, clan, adhocracy, hierarchy and market cultures. These types of culture are measured based on the six (6) dimensions and these are dominant characteristics, organisational leadership, management of employees, organisational glue, strategic emphases and criteria of success in the Organisational Culture Assessment Instrument (OCAI). The Competing value framework has been used and applied extensively in academic and industry fields as this framework is empirically derived and hence it is claimed to have face and empirical validity (Cameron & Quinn, 2011).

The Competing Values Framework is found to be suitable in organising the way of people think, people's values, assumptions and the ways of information processing. This framework comprises of two (2) major dimensions, one drawn vertically (flexibility versus stability) and another drawn horizontally (internal versus external) to form four-quadrant diagram as shown in Figure 2.5. These four (4) quadrants are claimed to match the core organisational forms, key management theories such as organisational success, approaches to organisational quality, leadership roles and management skills (Cameron & Quinn, 2011). The details of each quadrant are tabulated in Figure 2.5.

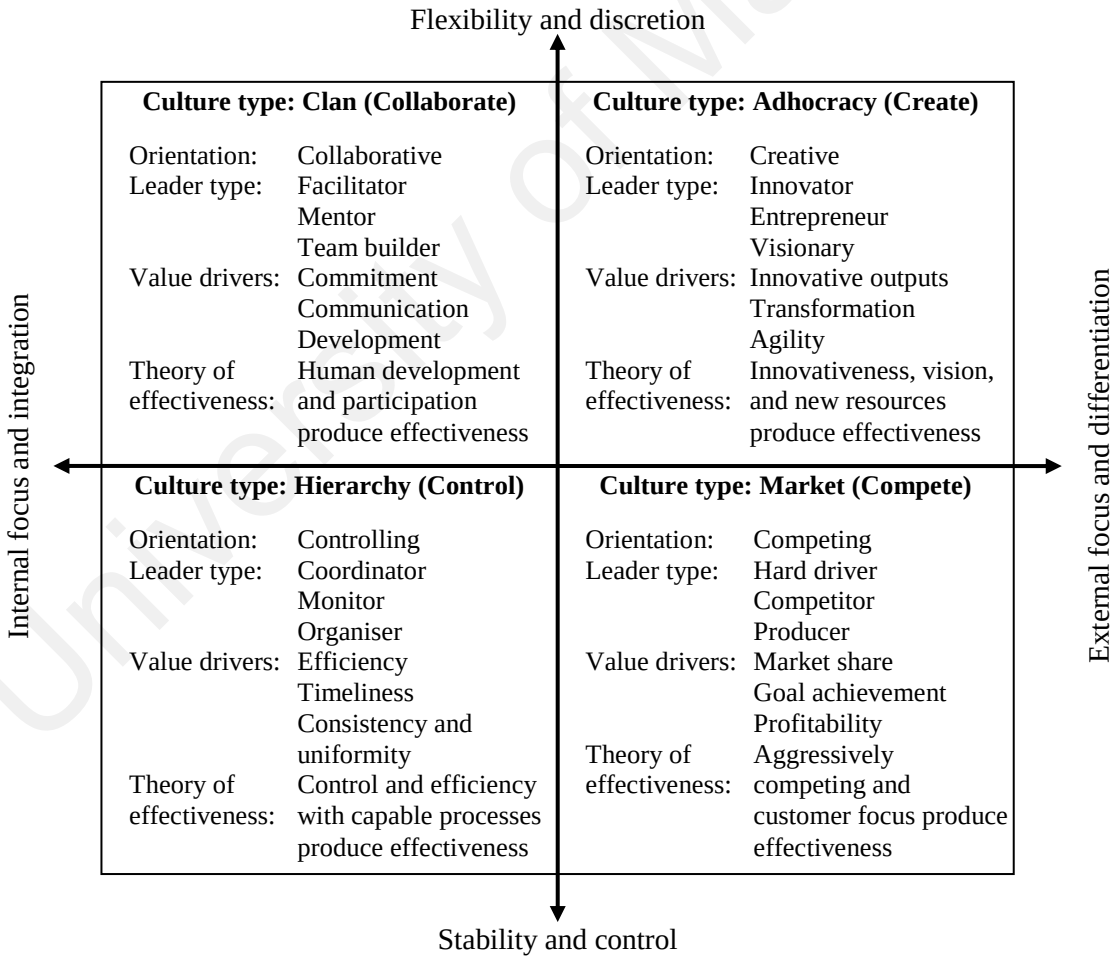


Figure 2.5: The Competing Values Framework
(adopted from Cameron & Quinn, 2011, p. 53)

2.4.2.3 Deal and Kennedy's cultural model

Deal and Kennedy (1982) developed a two-by-two matrix of cultural typologies based on two (2) factors, namely, the degree of risk and the feedback of speed and come out with a four (4) major types of cultures. The four (4) cultural types are work hard/play hard, tough-guy/Macho, bet-you-company and process as shown in Figure 2.6. The cultural model reflects the culture of different types of industry. Deal and his fellow also contended that each type of culture is not only appeared in one single type of industries but there is a mix of different cultural types in majority of organisations. Besides, the researchers argued that there is no comprehensive and best cultural model as each model is developed based on different adopted underlying situations, elements and concepts.

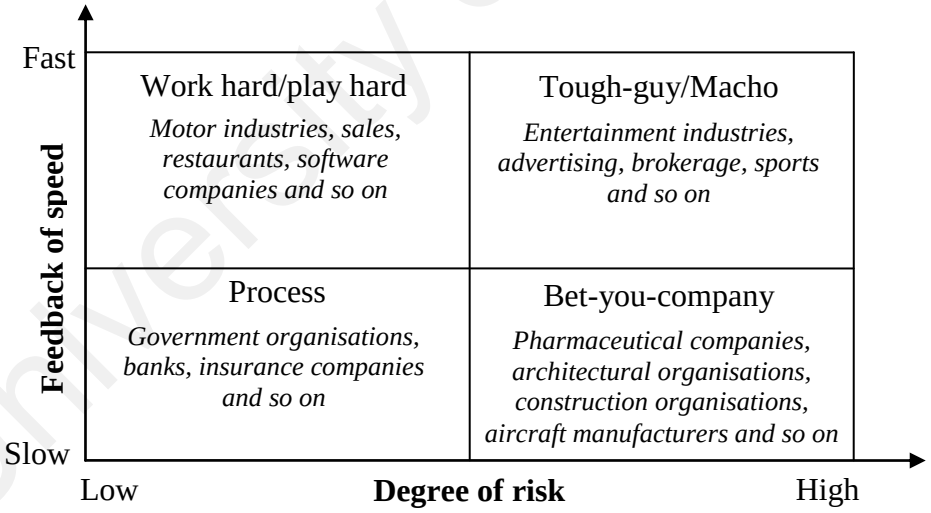


Figure 2.6: Deal and Kennedy's cultural model
(adopted from Deal & Kennedy, 1982)

2.4.2.4 Value Survey Module (VSM) By Hofstede

Hofstede (1984) who is the pioneer and well-known researcher in national studies, has proposed a 'Value Survey Module' (VSM) with four (4) cultural dimensions of power distance, uncertainty avoidance, masculinity/femininity, and individualism/collectivism. However, these four (4) dimensions are claimed to be bias towards western values and this has lead to the creation of long-term/short-term orientation which is referred to Confucian dynamism dimension in Asian societies (Barthorpe et al., 2000). In this regards, a total of five (5) cultural dimensions has been developed as shown in Table 2.13.

Hofstede's work is considered as the most theoretical framework as this model is created based on a survey conducted in one large multinational business organisation (IBM) with wide coverage geographical areas of 72 countries in 1968 and 1972 which produced more than 116,000 questionnaires, with variety culture aspects that are not only affect business field (Hofstede, 2001). Although the cultural dimensions in this framework are developed on the basic of national culture, those cultural dimensions are considered appropriate to be used on for analysing the impact of culture differences on management and organisation (Low & Shi, 2001; adapted from Low & Shi, 2002, p. 63). For example, conceptions of an organisation, mechanisms that are utilised to control and coordinate activities within an organisation, the roles of organisation's members and so forth (Hoecklin, 1996).

Table 2.13: Descriptions of Hofstede's five cultural dimensions (adopted from Hofstede, 2001, p. 29)

Cultural dimensions	Descriptions of each cultural dimension
Power distance	Different solutions to the basic problems of human inequality
Uncertainty avoidance	The level of stress in a society in unknown future situation
Masculinity and femininity	Integration of individuals into primary groups
Individualism and collectivism	Division of emotional roles between men and women
Long- versus short-term orientation	The choice of focus for people's efforts – the future or the present

2.4.2.5 Bate's six cultural dimensions

Based on three (3) large organisations as case studies, Bate (1984) identified six (6) major types of cultural orientations on organisational problem-solving and organisational change, namely, unemotionally (affective orientation), depersonalisation (animate-inanimate orientation to causality), subordination (hierarchical orientation), conservatism (change orientation), isolationism (individualist-collectivist orientation) and antipathy (unitary-pluralistic orientation). In the meanwhile, the researcher proposed six (6) general organisational issues in relation to the identified cultural orientations as shown in Table 2.14.

Table 2.14: Bate's six cultural dimensions on organisational problem-solving (adapted from Bate, 1984, p. 63)

Cultural dimensions	Basic organisational issues
Unemotionally (affective orientation)	How emotionally bound up do people become with others in the work setting?
Depersonalisation (animate-inanimate orientation to causality)	How far do people attribute responsibility for personal problems to others, or to the system?
Subordination (hierarchical orientation)	How do people respond to differences in position, role, power and responsibility?
Conservatism (change orientation)	How far are people willing to embark with others on new ventures?
Isolationism (individualist-collectivist orientation)	How far do people choose to work alone or with and through others?
Antipathy (unitary-pluralistic orientation)	How do people in different interest groups relate to each other?

2.4.2.6 Cooke and Laffertys' organisational culture model

Cooke and Lafftery (1987) proposed an Organisational Culture Inventory (OCI) instrument to measure the current organisational culture in terms of the behaviour norms and expectations to maximise performance and long-term effectiveness. This instrument consists of twelve (12) behaviour norms under three (3) types of cultures as shown in Table 2.15.

Some of the advantages of using this instrument are it provides a reliable and valid measurement to assess culture in an organisation, it able to produce results that meet rigorous academic and psychometric standards and hence it is widely used by consultants and practitioners (Cooke & Lafftery, 1987). Nevertheless, this model is critised by some researchers. Khan et al. (2010) highlighted that some of the behaviour norms are alike and this will lead to redundant information. Besides, these researchers further emphasised that it is not the best way to measure each type of organisational

culture individually as it will cause difficulty in data interpretation and important data will eventually may be lost. The Organisational Culture Inventory (OCI) is also critiqued by Scott, Mannion, Davies and Marshall (2003) and Zhang (2004) as this instrument is too complex and lengthy.

Table 2.15: Types of cultures in Organisational Culture Inventory (OCI) (adapted from Cooke & Lafftery, 1987)

Types of cultures	Behaviour norms
Constructive culture	Achievement, self-actualising, humanistic-encouraging and affiliative
Passive/defensive culture	Approval, conventional, dependent and avoidance
Aggressive/defensive culture	Perfectionistic, competitive, power and oppositional

2.4.2.7 Hofstede and his fellows' six-dimensional model of organisational culture

Hofstede et al. (1990) carried out a research on five (5) organisations in Denmark and five (5) organisations in Netherlands. A six-dimensional organisational culture model was derived and the identified cultural dimensions are process-oriented versus results-oriented, employee-oriented versus job-oriented, parochial versus professional, open system versus closed system, loose control versus tight control and normative versus pragmatic as indicated in Table 2.16. However, this model is seldom adopted by other researchers to analyse organisational culture compared to the five popular cultural dimensions as discussed in the section 2.4.2.4.

Table 2.16: Six-dimensional organisational culture model by Hofstede and his fellows (adopted from Hofstede et al., 1990, pp. 303-304)

Organisational culture dimensions	Characteristics
Process-oriented versus results-oriented	Process-oriented is concerned with means and results-oriented is concerned with goals
Employee-oriented versus job-oriented	Employee-oriented is concerned with people and job-oriented is concerned with getting the job done
Parochial versus professional	Parochial is about employees derive their identity largely from organisation and professional is about employees identify with their type of job
Open system versus closed system	Open system and closed system are related with communication, human resources and public relations
Loose control versus tight control	Loose control and tight control are related with management control
Normative versus pragmatic	Normative and pragmatic are concerned about customer orientation in which pragmatic is market-driven whilst normative is concerned about employees perceive their task toward the outside world as the implementation of inviolable rules

2.4.2.8 GLOBE organisational culture model

In 1991, a research program named Global Leadership and Organisational Behaviour Effectiveness (GLOBE) was formed and led by Robert J. House and with the involvement of 170 international research investigators from 62 different societies. The purpose of this extensive and broad research program was to identify and predict the relationship between culture and leader effectiveness. The research findings are claimed to be updated, comprehensive and generalised empirical results as it has adopted different quantitative and qualitative approaches in different countries and different organisations. The GLOBE study uncovered six (6) types of leader styles based on the responses from about 17,300 middle managers from 951 organisations (including food processing, financial services, and telecommunications services industries). These six (6) leader styles are derived from nine (9) cultural dimensions from past literature

(House et al., 2004). Table 2.17 indicates a brief description of each cultural dimension and some of the cultural dimensions are quite similar with the Hofstede's five cultural dimensions as indicated in the section 2.4.2.4.

Table 2.17: Nine (9) cultural dimensions from GLOBE study (adopted from House et al., 2004)

Cultural dimensions	Characteristics
Power distance	The degree to which members of a collective expect power to be distributed equally
Uncertainty avoidance	The extent to which a society, organisation, or group relies on social norms, rules, and procedures to alleviate unpredictability of future events
Humane orientation	The degree to which a collective encourages and rewards individuals for being fair, altruistic, generous, caring, and kind to others
Collectivism I (institutional)	The degree to which organisational and societal institutional practices encourage and reward collective distribution of resources and collective action
Collectivism II (in-group)	The degree to which individuals express pride, loyalty, and cohesiveness in their organisations or families
Assertiveness	The degree to which individuals are assertive, confrontational, and aggressive in their relationships with others
Gender egalitarianism	The degree to which a collective minimises gender inequality
Future orientation	The extent to which individuals engage in future-oriented behaviours such as delaying gratification, planning, and investing in the future
Performance orientation	The degree to which a collective encourages and rewards group members for performance improvement and excellence

2.4.2.9 O'Reilly, Chatman and Caldwells' profile of organisational culture

O'Reilly et al. (1991) developed an instrument called Organisational Culture Profile (OCP) to assess the person-organisation fit with fifty-four (54) value statements. Based on the results from the respondents in the government agencies and accounting firms, seven (7) organisational culture dimensions have emerged as shown in Table 2.18.

These organisational cultural dimensions are innovation, stability, respect for people, outcome orientation, detail orientation, team orientation and aggressiveness.

Table 2.18: Seven (7) organisational culture dimensions
(adopted from O'Reilly et al., 1991, p. 505)

Organisational cultural dimensions	Organisational culture profile items
Innovation	Innovation, opportunities, experimenting, risk taking, careful and rule oriented
Stability	Stability, predictability, security and no rules
Respect for people	Respect for individual, fairness, tolerance
Outcome orientation	Achievement oriented, action oriented, high expectations, result oriented
Detail orientation	Precise, attention to detail, analytical
Team orientation	Team oriented, collaboration, people oriented
Aggressiveness	Aggressive, competitive, socially responsible

2.4.2.10 Gordon and DiTomasos' model of organisational culture

Gordon and DiTomaso (1992) studied the relationships of cultural strength, adaptability and stability with corporate performance based on a sample of eleven (11) insurance companies in United States of America in 1981. These three (3) cultural dimensions are measured based on eight (8) cultural factors, namely, clarity of strategy/shared goals, systematic decision-making, integration/communication, innovation/risk taking, accountability, action orientation, fairness of rewards and development and promotion from within.

These three (3) cultural dimensions are measured based on different meansurement scale factors. Cultural strength is measured based on the eight (8) cultural scales,

adaptability is measured based on two (2) scales (action orientation, innovation/risk taking) whilst stability is measured according to three (3) scale factors (integration/ communication, fairness of rewards, development and promotion from within). According to Gordon and DiTomaso (1992), organisational culture imposes complex and complicated effects in an organisation, and hence more research needs to be done, particularly looking into relationship issue.

2.4.2.11 Trompenaars's seven dimensions of culture model and corporate culture model

Trompenaars (1993) developed a seven (7) value-based national cultural dimensions model known as 'Seven dimensions of culture' model. These cultural dimensions are derived from an extensive questionnaire survey result of 14,993 respondents from forty-seven (47) national cultures. These seven (7) cultural dimensions are universalism/particularism, individualism/collectivism, affective/neutral, specific/diffuse, achievement/ascription, external/internal and time orientation as tabulated in Table 2.19. The model is developed based on the concept of differences in solutions and it is associated with people, time and nature. It is argued that these seven (7) dimensions of culture will guide people's belief and actions on the way of people doing and managing business as well as people's responses on moral dilemma (Trompenaars, 1993).

Table 2.19: The seven dimensions of culture
(adopted from Trompenaars, 1993)

Cultural dimensions	Characteristics of each cultural dimensions	
Universalism/particularism (rules versus relationships)	*Universalism:* • Emphasis on rules, contracts, agreements, codes, values and standards which should not be changed and should be applied to everyone • Use contracts and agreements to manage and conduct a business • Examples are Germany and United States	*Particularism (Pluralist):* • Emphasis more on relationship like human friendships and personal relationship • Contracts and agreements are readily modified to satisfy specific situations • Allow local variations of company and human resource policies to adapt to different requirements • Relationships evolve • Examples are China and Russia
Individualism/collectivism (group versus individual)	*Individualism:* • Frequent use of 'I' term • Decisions are made on the spot by representative • Individual achievement and personal responsibility • Give people freedom to take individual initiatives • An example is US	*Collectivism (communitarian):* • Frequent use of 'We' term • Decisions are referred back to organisation by representative • Group objectives achievement and joint responsibility • Hold up superordinate goals for all to meet • An example is Japan
Achievement/ascription (how status is accorded)	*Achievement:* • Title is used when related to task competency • Respect superiors in hierarchy is based on the superiors' knowledge and job effectiveness • Majority of senior managers are of different ages and genders and promoted based on specific task accomplishment and proficiency abilities • Decisions are challenged on technical and functional grounds • An example is US	*Ascription:* • Extensive use of titles especially when these clarify your status in the organisation • Respect superiors in hierarchy is a measure of commitment to the organisation and its mission • Majority of senior managers are male, middle-age with qualified background and promoted based on seniority • Decisions are challenged by people with higher authority • Examples are China and Russia
Specific/diffuse (the range of involvement)	*Specific:* • Separate personal and working lives • Direct, to the point, purposeful in relating • Precise, blunt, definitive and transparent • Principles and consistent moral stands independent of the person being addressed • An example is US	*Diffuse:* • No clear distinction between personal and working lives • Indirect, circuitous, seemingly 'aimless' forms of relating • Evasive, tactful, ambiguous, even opaque • Highly situational morality depending upon the person and context encountered • An example is China

Table 2.19, continued: The seven dimensions of culture (adopted from Trompenaars, 1993)

Cultural dimensions	Characteristics of each cultural dimensions	
Internal/external (Attitudes to the environment)	*Internal (inner-directed):* • Mechanic view of nature • Believe that nature is complex and can be controlled by people who have appropriate knowledge and expertise • Dominating attitude bordering on aggressiveness towards environment • Conflict and resistance means that you have convictions • Focus is on self, function, own group and own organisation • Uncomfortable when environment seems out of control or changeable	*External (outer-directed):* • Organic view of nature • People learn how to live in harmony with nature and adapt in external environment • More flexible and comfortable with change and more willing to compromise to achieve harmony • Harmony and responsiveness, that is, sensibility • Focus is on 'other', that is customer, partner, colleague • Comfort with waves, shifts, cycles if these are 'natural'
Neutral/emotional (the range of feelings expressed)	*Neutral:* • People do not overtly display their thoughts and feelings • May reveal tension in face and posture accidentally • Controlled emotions may occasionally explode out • Cool and self-possessed conduct is admired • Lack of physical contact, gesturing or strong facial expressions • Monotone oral delivery of written materials • An example is Japan	*Emotional (Affective):* • Use nonverbal and verbal to display thoughts and feelings • Transparency and expressiveness in release of tensions • Emotions flow easily, effusively, vehemently and without inhibition • Heated, vital, animated expressions admired • Touching, gesturing and strong facial expressions are common • Fluent and dramatic delivery of statements • An example is Mexico
Time orientation (attitudes to the time)	*Sequential:* • Perform one task at a time • Time is seizable and measurable • Follow plan and schedules strictly • Relationships are generally subordinate to schedule	*Synchronic:* • Perform different tasks at a time • Time is flexible and intangible • Follow schedules and agendas loosely • Schedules are generally subordinate to relationships

Table 2.19, continued: The seven dimensions of culture (adopted from Trompenaars, 1993)

Cultural dimensions	Characteristics of each cultural dimensions	
Time orientation (attitudes to the time)	*Past-oriented:* • Talk about history, origin of family, business and nation • See future as a repetition of past events and experiences • Motivated to recreate golden age • Respect ancestors, predecessors and older people • Everything is viewed in relation to tradition or history *Future-oriented:* • Focus on future prospects, potentials, aspirations, future achievements • The past does not have significant influence in determining what is to come • Enthusiasm in planning and strategising • Use and exploit present and past for future advantage	*Present-oriented:* • Do not assign much weight to past and future • Sharp focus on current activities • Good planning but poor execution • Intense interest in present relationship • Evaluate everything in terms of its contemporary impact and style

In addition, with reference to the seven (7) dimensions of culture, Trompenaars (1993) formed a corporate culture model based on two (2) main dimensions, namely, egalitarian-hierarchical and person-task dimensions to generate four (4) different quadrants of cultural types. These four (4) types of cultures are defined as family, Eiffel Tower, guided missile and incubator cultures as illustrated in Figure 2.7.

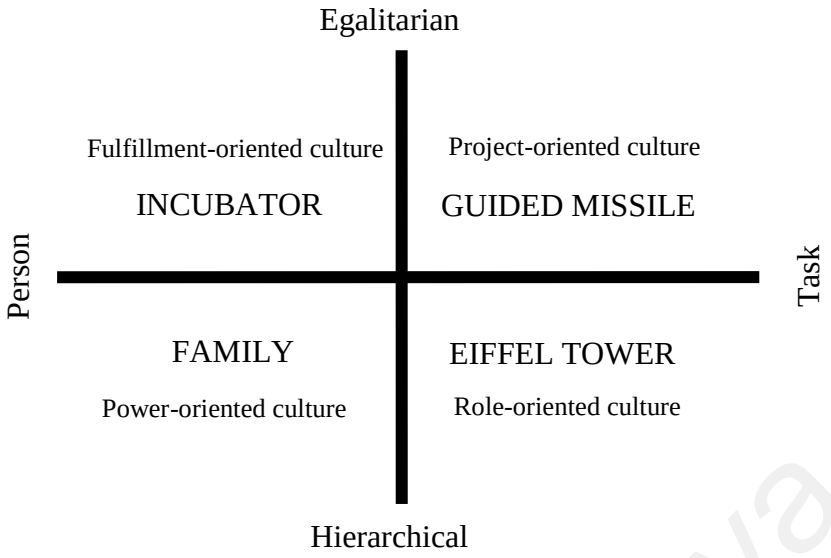


Figure 2.7: Trompenaars's corporate culture model (adopted from Trompenaars, 1993, p. 140)

2.4.2.12 Denison and Mishas' organisational culture model

Denison and Mishra (1995) discovered four (4) types of cultural components which are related to organisational effectiveness, namely, involvement, consistency, adaptability and mission through the use of data from case studies and quantitative survey as shown in Figure 2.8. Among these four (4) cultural traits, involvement and adaptability are associated with organisations' ability to change, whilst consistency and mission are associated with organisations' ability to remain stable and predictable. In the meanwhile, involvement and consistency are grouped under internal integration which is concerned about the internal dynamics and structure of an organisation. External orientation includes adaptability and mission which is about the interaction of an organisation with external environment.

These researchers argued that culture is an integral part of organisational adaptation process and it is useful to predict the performance and effectiveness in an organisation. In this regards, they found that mission and consistency culture traits are an appropriate

predictor of profitability whereas involvement and adaptability culture traits are an appropriate predictor of growth.

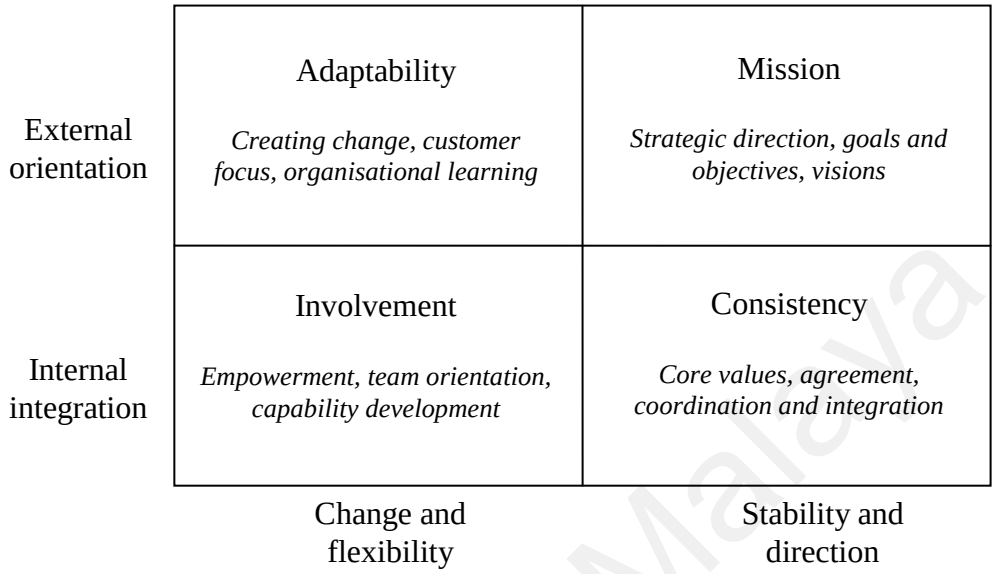


Figure 2.8: Denison and Mishra's cultural model (adapted from Denison & Mishra, 1995, p. 216)

2.4.2.13 Van Muijen et al.'s model of organisational culture

On the basic of work done by Quinn's (1988) and De Witte and De Cock (1986), Van Muijen et al. (1999) proposed four (4) types of cultural orientations which are associated with organisational culture across nations. These are support orientation, innovation orientation, rules orientation and goal orientation as tabulated in Table 2.20. These four (4) types of cultural orientations were derived from a FOCUS questionnaire which was developed by a team of international research members from twelve (12) different countries such as Netherlands, Belgium, Croatia, France, Greece, Hungary, Italy, Portugal, Rumania, Slovenia, Spain and USA.

Table 2.20: Four (4) cultural orientations by Van Muijen and his fellows (adopted from Van Muijen et al., 1999, pp. 555-556)

Organisational culture dimensions	Characteristics
Support orientation	Participation, cooperation, people-based, mutual trust, team spirit, verbal and informal communication, individual growth, encouragement of ideas and feeling expression and informal contacts in decision making
Innovation orientation	Search for new information, creativity, openness to change, anticipation, experimentation, commitment and involvement of employees and less control from top management
Rules orientation	Authority, hierarchy, rationality of procedures, division of work and written and top-down communication
Goal orientation	Rationality, performance indicators, accomplishment, accountability and contingent reward

2.4.2.14 Cunha and Coopers' organisational culture dimensions

With reference to the organisational culture framework by Harrison (1972) and Cooper (1988), Cunha and Cooper (2002) suggested four (4) types of cultural dimensions which are associated with the impact of privatisation change in an organisation. The suggested organisational culture dimensions are organisational integration, performance orientation, people orientation and market orientation. Based on Cunha and Coopers' (2002) research context, each cultural dimension represents different characteristics as indicated in Table 2.21.

Table 2.21: Cunha and Coopers' organisational cultural dimensions (adopted from Cunha & Cooper, 2002, p. 25)

Cultural dimensions	Characteristics
Organisational integration	Openness of internal communication and co-operation between individuals and units
Performance orientation	Responsibility for meeting objectives and results and merit rewards
People orientation	The extent of concern the organisation shows for its members and their development, as well as the individual feeling of belonging to a team
Market orientation	Company responsiveness to market opportunities and benchmarking

2.4.2.15 Plewa and Raos' organisational culture model

Plewa and Rao (2007) proposed a conceptual model about the relationship between organisational culture and relationship performance. Based on the work done by Van den Berg and Wilderom (2004), seven (7) cultural dimensions are found to be related with relationship performance. These are autonomy, external orientation, inter-departmental coordination, human resource orientation, improvement orientation, relationship orientation and social atmosphere/team spirit.

2.4.2.16 Khan, Usoro, Majewski and Kuofies' organisational culture model

Khan et al. (2010) disagreed with a specific context of organisational culture model and contended that organisational culture model must be generic in nature, so that the model can be applied and used in any types of organisations in the world and in different context. In this regards, a practice-based organisational culture model was proposed with four (4) major dimensions and each dimension consists of several operational components as shown in Figure 2.9.

Support orientation	Rules orientation
Personal problems *Training* *Work related problems*	*Openness to criticism* *Sharing of knowledge* *Sharing information freely* *Encouragement of new ideas* *Risk taking*
Innovation orientation	Coordination orientation
Inter-departmental coordination *Teamwork* *Organisational structure*	*Following procedures* *Following with standards* *Following rules by managers*

Figure 2.9: Work-based organisational cultural model (adopted from Khan et al., 2010, pp. 66, 70-71)

2.4.3 Models of risk response in construction and non-construction fields

According to Wang and Yuan (2011), the most commonly applied risk-based decision-making methods to identify, analyse or response the identified risks are expected profit and loss value decision method, decision diagram or decision tree method, matrix decision method, marginal decision method, Bayesian decision method and Markov decision method. These methods are concerned about how to make an optimum choice.

Other than these methods to deal with risks on decision-making, there are other mechanisms specifically for risk response. The common methods are two-dimensional matrix like probability-impact matrix which consists of risk probability and risk impact dimensions (Project Management Institute, 2004) and influence-predictability matrix with the dimensions of influence degree and prediction of risk occurrence degree (Charette, 1989). The probability-impact matrix is adopted by Panthi et al. (2007) to better understand a risk source and to propose the suitable risk response strategic to deal with the respective risk source for construction organisations in Florida.

In addition, most of the risk response models are developed and proposed in engineering context. For instance, the early work by Chapman (1979) who developed a methodology called Synergistic Contingency Evaluation and Review Technique (SCERT) by relating risks into project activities. However, this technique does not include implementation impact and tools to support the selection of risk response actions (Seyedhoseini et al., 2009). In addition, Ben-David and Raz (2001) introduced an integrated risk response model in project planning that comprises of few components and these are project work contents, risk events, risk reduction actions and the effects of risks in which work breakdown structure is used to identify risks of a project and cost is the only objective function.component.

Furthermore, Kujawski (2002) adopted Monte Carlo simulation to simulate and develop the risk profile for the purpose of risk response actions. Meanwhile, Piney (2002) developed two (2) risk response planning action decision-making charts for the selection of an appropriate strategy, one for dealing with threats and another to manage opportunities. Seyedhoseini et al. (2009) proposed an integrated methodology to assess and select project risk response actions, called project risk response planning (P2RP) with the objective function components on time, cost and quality and is structured into three (3) important parts, that is project, risk and response.

On the other hand, other researchers focused on the specific context of risk response decision making by proposing tendering decision-making models in response to the risks in construction projects. For example, Han and Diekmann (2001a) proposed a risk-based go/no-go decision-making model on international construction market entry decision; Han and Diekmann (2001b) developed and validated a comprehensive cause-effect relationships go/no go decision-making model in international markets; Ahmad

(1990) and Seydel and Olson (1990) proposed tender decision-making models in construction, just to name few.

2.4.4 Deficiencies of existing culture and decision making models

Based on the review of the existing culture and risk decision making models, the deficiencies of the existing culture and risk decision making models are summarised as below.

i. majority of cultural models are Western-based and little is Eastern-based;
ii. cultural studies in construction of many regions like Malaysia is relatively under-studied;
iii. there is lack of exploration of organisational culture in international organisations;
iv. organisational culture is captured little attention by previous literature compared to national culture in relation to its impact on decision making;
v. there is no cultural model focuses on risk bidding decision-making although some of the cultural dimensions can be adopted on this research area;
vi. little cultural models are in construction industry specific;
vii. majority of decision making models are normative-based rather than descriptive-based; and
viii. there is lack of research models that relate organisational culture with risk bidding decisions in construction sector.

Hence, the author calls for future research to be focused on the development of risk bidding decision model in construction from the organisational culture perspective.

2.5 Summary of the chapter

In summary, this chapter reviews the research scope and knowledge gaps of existing literature, discusses the suggestion of future research proposed by previous studies and highlights the significance of organisational culture and international bidding decisions. The next chapter is about the development of the theoretical framework, research hypotheses, and conceptual model of this study.

CHAPTER 3

RESEARCH MODEL AND HYPOTHESES

3.1 Introduction

This chapter includes discussions on the development of a theoretical research framework, the rationale of the culture measurement on each cultural construct, the identification of related independent and dependent variables, formulation of research hypotheses and finally is the development of a proposed conceptual model of this study. The conceptual model in this study was developed and structured into few sub-chapters in accordance with the argument made by Hofstede (1981) in cultural research, in which attention needs to be paid on few criteria, namely, a general theory of culture components, the impact of culture on organisations and the formation of hypotheses as shown in Figure 3.1. Research theories was identified and discussed prior to the identification of relevant components.

In addition, although construction industry is always perceived as distinct compare with other industries, it is applicable for construction management researchers to adopt and apply the management principles of non-construction fields in construction sector as there are plenty of common grounds exit between construction and non-construction fields (Edum-Fotwe, Thorpe, McCaffer, & Price, 1997). Hence, literature in construction and non-construction fields are referred and applied in the model development.

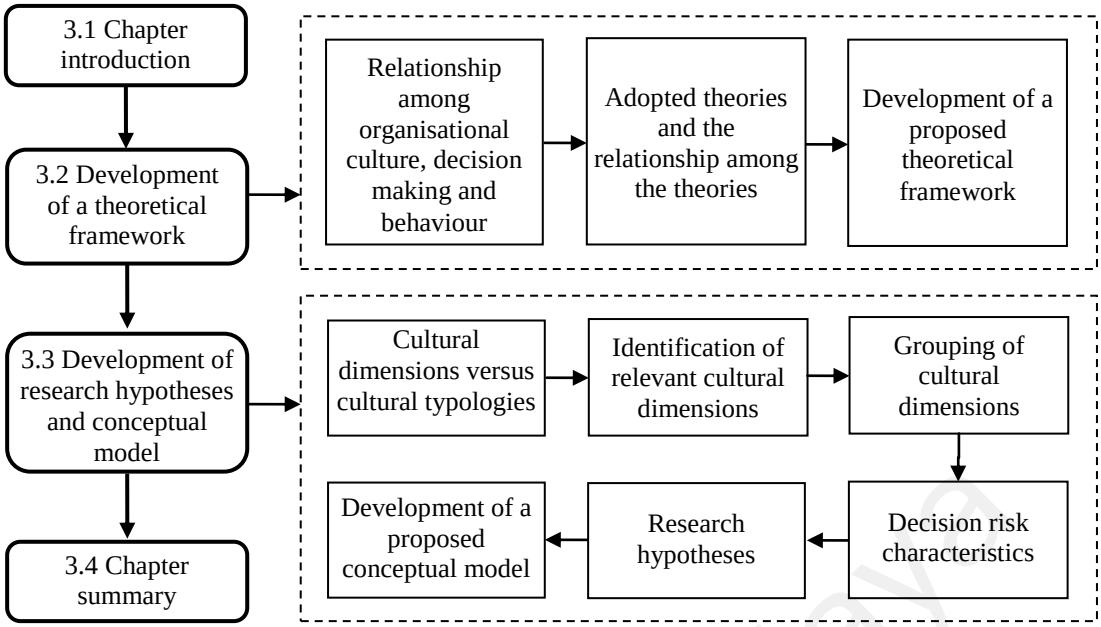


Figure 3.1: The framework for Chapter 3

3.2 Development of a theoretical framework

This section of work consists of the discussions on the relationship among culture, decision making and behaviour as shown in Figure 3.2, adopted theories in this study, relationship among the theories and the development of a proposed theoretical framework. Figure 3.3 represents a theoretical framework of this study. This theoretical framework consists of two (2) levels. The first level is concerned about the three (3) major components which are based on the context of risk response and problem statement and the respective theory of each component. The second level is about the concept of each theory and the relationship among the theories. The theoretical framework in Figure 3.3 also serves as a basic for the development of conceptual model by highlighting the relationship of organisational culture and international risk decisions in response to the risks in foreign countries.

3.2.1 Risk response as a research context in the development of theoretical framework

As discussed earlier, foreign country's risk is one of the decision criteria during the bidding stage. In this regards, risk response serves as the context of the research rather than the object of investigation. Based on the definitions of risk response in previous studies (as discussed in the section 2.2.5.2), risk response is not merely an important phase in the risk management process but it is critical in decision making process. According to the definitions of international construction (Section 1.2.5) and risk response (Section 2.2.5.2), risk response in international construction in this study can be defined as a decision making process in which decision makers decide what decisions or actions should be taken towards the risks in another country and at the same time, it indicates the extent of risk exposure an organisation willing to absorb when venturing into foreign markets or bidding an international project. In line with this, two (2) major components are identified and adopted in the theoretical framework. Those components are decision making and behaviour. The third component is organisational culture which is the focus in this study to identify its impact on international bidding decisions.

3.2.2 Relationship among culture, decision making, and behaviour

The relationship among culture, decision-making and behaviour are discussed in detailed in the following sections.

3.2.2.1 Relationship between culture and decision making

The impact of organisational culture on decision making is well-known and recognised by many researchers. This can be seen that culture is always related with problem solving (Kroeber et al., 1952; Schein, 2010; Terpstra & David, 1991) or decision guide (Duarte & Snyder, 1999; Serpell & Rodriguez, 2002). According to Oliveira (2007), the broadness concept of cultural has made culture imposes influence on the thinking-and-taking-action process. Higgins and Bargh (2004) contended that culture plays an important role as a filter and simplifying information mechanism to assist people in a group or an organisation to process and interpret information. In other words, culture assists people to make decisions for an invidual, a group or an organisation through interpreting available information. Through processing and interpretation of information, a decision or action will be taken to perform an action or to solve a problem.

Schein (2010) highlighted that culture contributes critical influence on organisational decision making and strategy. Martinsons and Davison (2007) advocated the importance of cultural factors in producing different work-related decision-making. Consistently, Braunscheidel and Suresh (2009) commented that organisational culture contributes significant impact on operational decisions. A research done by Murray-Webster and Hillson (2008) discovered that majority of respondents who are interested in risk management and organisational culture opined that organisational culture is one of the key factors having greatest influence on decision-making and decision outcome especially on risk-related issues. These researchers further commented that it is critical to understand and manage organisational culture as culture in an organisation may lead to inappropriate risk response due to the habitual and never challenged decision-making.

According to Chapman (2006), decision-making on risk response strategies is basically based on the culture and others conditions in the business environment. In addition, Tran and Skitmore (2002) addressed that risk response in an organisation is a significant organisational culture dimension. This is because culture influences people on decision making in response to the opportunities and threats that affecting an organisation (Morgan, 1986; Thompson, 1993). Based on the aforementioned arguments and findings, it can be postulated that organisational culture contributes influence on decision-making.

3.2.2.2 Relationship between decision making and behaviour

Risk behaviour is an important decision making element under uncertainty condition (Han et al., 2005). Choice of behaviour is regarded as a response to stimulus situation (Zhang & Liu, 2006). Stimulus situation can be risks or uncertainty generated from internal and external environments. Oliveira (2007) addressed that decision and behaviour may be the main elements of decision-making in which decisions are responses to a particular feature of a situation which may include three (3) aspects, namely, "more than one possible course of action under consideration", "decision makers can form expectations concerning future events that are often described in terms of probabilities or degrees of confidence" and "consequences associated with possible outcomes can be assessed in terms of reflecting personal values and current goals" (p. 12).

According to Weick (1995), behaviour is generally conceptualised as the result of a sense making process. On the other hand, a few scholars (Hastie & Dawes, 2001; Stein & Welch, 1997; Zhou & Pham, 2004) have mentioned the importance of behaviour in

decision-making process. Based on definitions of culture (section 2.2.2) and organisational culture (section 2.2.3) in Chapter 2, it can be clearly noticed that behaviour is one of the most common elements appear on defining the terms of culture and organisational culture.

3.2.2.3 Relationship among culture, decision making and behaviour

According to Christensen and Gordon (1980), an existing culture tends to constrain and direct management behaviour by means of affecting decision-making, problem solving, strategy formulation and so on. Cooper (1988) highlighted that corporate culture can be evaluated and assessed through decision-making which is reflected in organisational behaviour and management practices. In addition, Hofstede (1981) addressed that the history of an organisation imposes influence on an organisation culture and this in turn will restrict the decisions for organisational behaviour. Likewise, Robbins (1989) stated that organisational culture acts as a sense making and control mechanism to shape and guide attitudes and behaviour of members in an organisation.

In addition, Hofstede (1997, p. 89) highlighted that "culture is a construct…not directly accessible to observation but inferable from verbal statements and other behaviours and useful in predicting still other observable and measurable verbal and nonverbal behaviour". In line with this, Markus and Kitayama (2004) pinpointed that culture is critical in shaping individuals' perception, disposition and behaviour. Moreover, Zhang and Liu (2006) commented that culture influences people's choices of actions and behaviour is a core and observable element to be used in understanding culture. In this regards, we can interpret that culture influences and shapes behaviour (Hofstede, 1981,

2001; Kefela, 2010; McCarthy, 2011; Murray-Webster & Hillson, 2008; Naoum, 2001; Sapir, 1977; Thompson, 2008).

3.2.2.4 Condition-process-outcome (C-P-O)

Based on the previous discussion of the review and exploration of relationship among culture, decision making and behaviour in previous section, Figure 3.2 illustrates a generic relationship among culture, decision making and behaviour. As manifested in Figure 3.2, in responding to the different types and levels of risks in host environment, organisational culture constitutes a condition element (cause) that impose impact on decision making (a process) and produce different forms of decision behaviours (an outcome). These decision behaviours are then practiced, shared and learned which form part of the culture in an organisation. This relationship of condition-process-outcome (C-P-O) forms a linkage among the three (3) components of risk response. Although attitude is often linked with risk and culture, it is excluded from this study as people's behaviour do not always act according to their attitude and hence attitude and behaviour will be different in which behaviour is influenced by situational variables (Chan & Au, 2007) like culture, risk characteristics and so on.

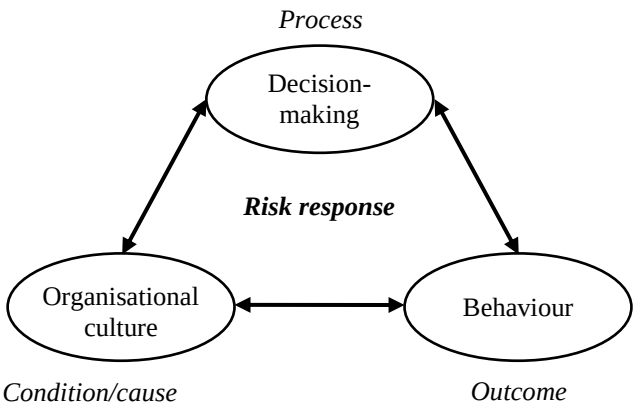


Figure 3.2: Relationship among organisational culture, decision-making and behaviour on risk response

3.2.3 Adopted theories of this study

According to Fellows and Liu (2008), the use of theory in a research is important as it helps to clarify research ideas and limitations about what to be focused on and tested which will directly facilitate the building of research model through the prediction of hypotheses and the relationship of variables. Babbie (2010, p. 59) highlighted that the use of theories in research assists researchers obtain appropriate empirical findings in three (3) ways "(1) helping to avoid flukes, (2) making sense of observed patterns, and (3) shaping and directing research efforts". With reference to the three (3) key components on risk response in this study, three (3) theories are adopted to describe and strengthen the relationship among organisational culture, decision making and behaviour and to develop a organisational culture and international bidding decisions (OC-IBDs) conceptual model. The three (3) theories are cultural theory, descriptive decision theory and stimulus-organism-response (SOR) theory. Each component is represented by one theory in which cultural theory reprents organisational culture component, descriptive decision theory represents decision making component and SOR theory reprents behaviour component. The relationship among the three (3) theories is illustrated as in Figure 3.3.

SOR theory (introduced by Woodworth, R. S.) is a prominent and fundamental of behavioural paradigm. The SOR theory has been utilised in past construction literature (for example, Liu & Fang, 2006) to explain behavioural aspect. Hence, it is utilised to represent the behavioural component in this study. This SOR theory suggests a linear relationship among stimulus, organism and response in a condition that stimulus (S) in the environment stimulate an organism (O) and cause the organism (O) to react which will lead to different types of responses (R) (Mehrabian & Russell, 1974). According to

Atkinson and Birch (as cited in Zhang & Liu, 2006, p. 819), the effect of immediate environment or stimulus condition on behaviour imposes influence on individual's tendencies to involve or not to involve in certain activities or tasks. In this regards, the existing traditional SOR paradigm by Naylor, Pritchard and Ilgen (1980) is a fundamental paradigm to understand the relationship between risk response and behaviour. Based on the concept of the behavioural paradigm of stimulus-organism-response (S-O-R), three (3) main features are formed in the theoretical framework. They are: (1) external risks in the host countries which will cause organisations to react and response (stimuli); (2) international organisations as responding entities to respond on stimulus (organisms); and (3) organisational decisions which are results of the respond to stimuli (R). Accordingly, the interest of this study is to depict how the political and economic risks in the host countries (stimuli) stirs up the international contractor organisations (organisms) with different and unique organisational culture to react by making judgement in international bidding decisions and taking appropriate action accordingly (response).

As responding entities, the unique organisational culture of international contractors will affect the way an organisation responds to environmental stimuli (Schein, 2010) such as risks and uncertainties and hence to make different organisational decisions. Cultural theory is concerned about how people perceived risks and it is argued that risk perception is mainly determined by cultural adherence and social learning (Douglas & Wildavsky, 1982). The reason is "different social principles that guide behaviour affect the judgment of what dangers should be most feared, what risks are worth taking, and who should be allowed to take them" (Douglas & Wildavsky, 1982, p. 7). As such, this will result in different decisions and actions to be taken. Consistently, Kwak and LaPlace (2005) reinforced that culture determines risk taking in an organisation.

While, descriptive theory in this study represents the decision making component to explain the behaviour of international contractors in making international bidding decisions (response) from the organisational culture perspective. According to the concept of descriptive theory, this theory is concerned about "how a decision is actually made" (Kleindorfer et al., 1993). In other words, it seeks to "explain and predict how people actually make decisions" (Peterson, 2009, p. 3). This theory is contrast with normative theory which is concerned with identifying the optimal and best decisions in a rational manner (Peterson, 2012). Based on the decision theory, risk is an important consideration in decision making (Allais & Arrow as cited in March & Shapira, 1987, p. 1404) which will ultimately influence organisational behaviour (Shan, 1991). Thus, based on the concept of descriptive theory, the main concern of this study is to focus on predicting the effect of different type of organisational culture variables on international bidding decisions specifically in political and economic risk-related issues. As such, organisational cultural variables are extracted and derived from past literature to determine its influence on international bidding decisions. Hence, the independent latent variables in this study is organisational culture constructs and the dependent latent variables is international bidding decisions in response to the political and economic risk-related issues.

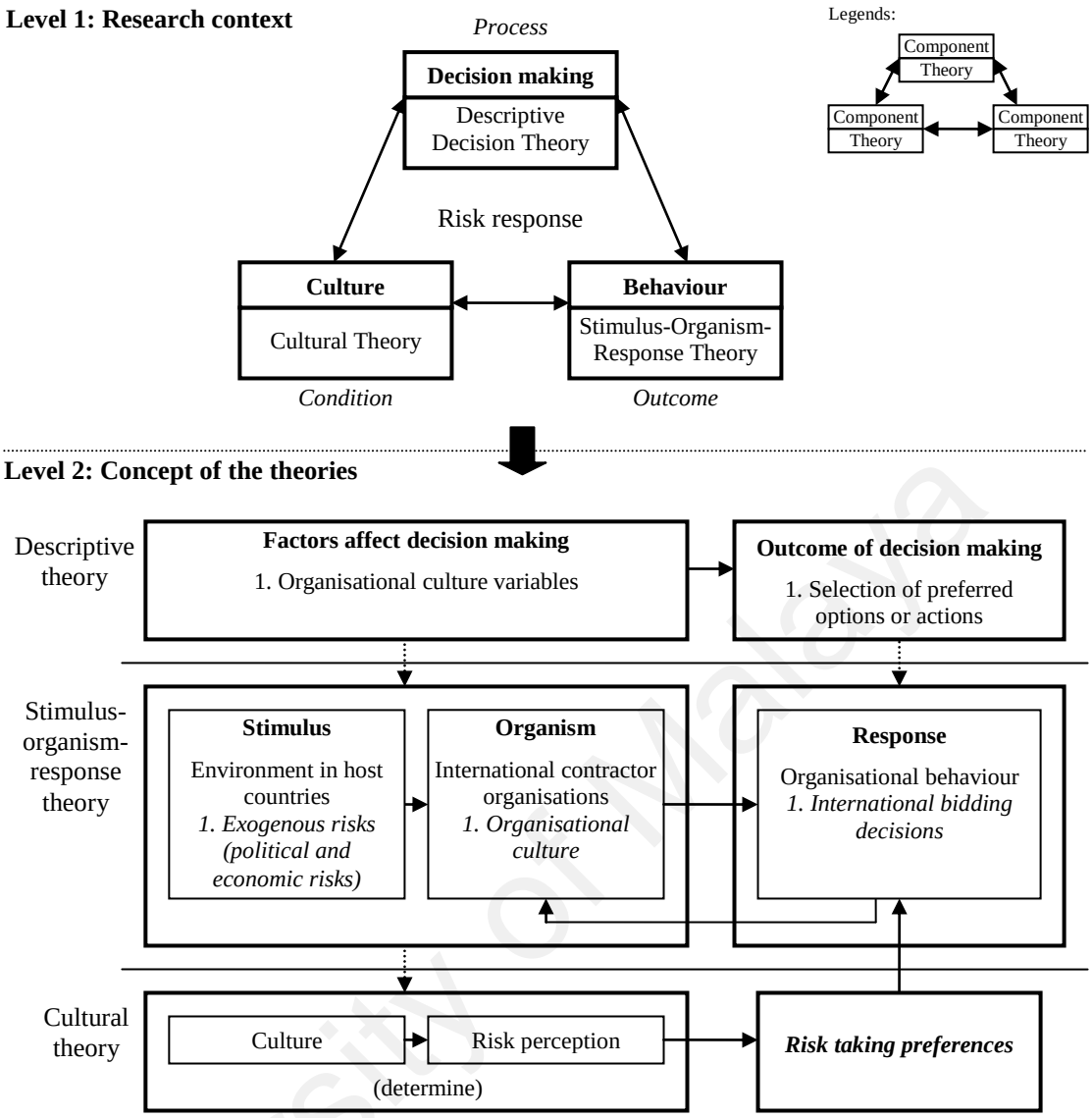


Figure 3.3: Research context and theories of the study

3.3 Development of research hypotheses and conceptual model

Prior to the development of the proposed conceptual model and research hypotheses, methods of cultural measurement, adopted cultural contructs of this study, classification of the adopted cultural contructs and decision risk characteristics were discussed in the subsequent sub-sections.

3.3.1 Measurement of culture: Dimensions versus typologies

There is no comprehensive and thorough organisational culture framework that can capture every aspect of culture (Linnenluecke & Griffiths, 2010). Model development is a lower-level system to better understand social system and to substitute for what one is not clear about (Hofstede, 1981). Culture can be assessed by two (2) ways and these are cultural dimensions (trait approach) and typologies (cultural types) (Hofstede, 2001; Liu, 1999). To develop a conceptual cultural framework, it is critical to justify method to be used in developing a cultural model.

Typologies and dimensional models are practically complementing each other (Hofstede, 2001). Hofstede, a prominent Dutch researcher argued that although the use of dimensional models is difficult to determine the type of cultures, dimensional model is preferable for research as each case can be empirically scored and rated evidently. According to Triandis, Bontempo, Villareal, Asai and Lucca (1988), cultural dimension is a better way to understand and analysed fuzzy construct of culture in social psychological aspect. Ankrah and Proverbs (2004) held the identical point of view and emphasised that the identification of cultural dimension is important in the assessment of cultural constructs. Besides, dimensional model is a suitable approach to describe the orientation of organisational culture (Liu, 1999). In addition, Low and Shi (2001) asserted that cultural dimensions are appropriate way to analyse and study the behaviours, actions and values of the members in an organisation.

The use of cultural dimensions is not only claimed to be value-laden, Ankrah and Langford (2005) contended that cultural dimensions are still the most realistic manner to assess culture provided that the dimensions reflect the values of the research area being

studied and they are able to differentiate and compare culture of the organisations being studied in a research. In line with this, Hofstede (1984) argued that although the value-based cultural assessment is a weakness in cultural studies but it is the most realistic manner especially in cross-cultural studies. Besides, dimensional model can also be used as a basic to develop typological model (Hofstede, 2001).

In contrast, typologies are adopted to deal with a multitude culture dimensions (Ankrah & Proverbs, 2004). Hofstede (2001) explained in detailed that typologies are problematic in empirical research as cases are seldom refer to single type of culture and majority of cases are hybrids and hence rules are required to classify each type of culture. Schein (2010) also addressed that the use of cultural typologies can be very misleading as different organisations can have different pattern of assumptions. Hence, with reference to the terms used by Hofstede (2001), cultural dimensions are adopted in this study as a method to measure organisational culture of international contractors and develop a research model.

3.3.2 Cultural dimensions

Varieties of cultural dimensions have been developed and suggested in the past cultural literature (Oney-Yazıcı et al., 2007) as indicated in Chapter 2. However, too many cultural dimensions in assessing culture will lead to lose of actual meaning and difficulty to comprehend the findings (Hofstede, 2001) and lead to fatigue of response (Rees-Caldwell & Pinnington, 2013). To solve this problem, Ankrah and Langford (2005) recommended that the identification of cultural dimensions can be done arbitrary and it should be based on the research scope and area of a study. In this regards, relevant cultural dimensions are adopted and studied in formulating the research model

of this study. This method of assessing culture is in line with some cultural literature (Ankrah, 2007; Ankrah & Langford, 2005; Liu, 1999) in construction industry. Table 3.1 indicates a summary of cultural dimensions of the study. Based on the arguments from the previous literature, seventeen (17) cultural constructs are presumed as the relevant constructs that might affect organisational international risk decisions. These seventeen (17) major cultural variables were then splited into twenty-three (23) cultural variables in the model development. Recognising the importance of national culture in organisational level, some national cutlure dimensions were adopted and modified which was consistent with previous studies. Some of the Hofstede's cultural dimensions were adopted and modified, so that they are suitable to be used at organisational level. For example, collectivism was considered in teamwork orientation and power distance considered in power and rules orientation.

Table 3.1: A summary of references for cultural dimensions of the study

Code nos.	Culture variables	References
C	Teamwork orientation/ collectivism	Fisher and Ranasinghe (2001); Griffin et al. (2009); Hofstede (2001); Hsee and Weber (1999); Liu (1999); Low and Shi (2002); Sigler and Pearson (2000); Tjemkes et al. (2012); Weber and Hsee (1998)
P	Power and rules orientation	Hofstede (2001); Liu (1999); Low and Shi (2002); Murray-Webster and Hillson (2008); Sigler and Pearson (2000); Tjemkes et al. (2012)
U	Uncertainty avoidance	Fisher and Ranasinghe (2001); Griffin et al. (2009); Hofstede (2001); Low and Shi (2002); Murray-Webster and Hillson (2008); Rowlinson and Root (1996); Tjemkes et al. (2012)
L	Long-term orientation	Buck, Liu and Ott (2010); Cannon, Doney, Mullen and Petersen (2010); Ganesan (1994); Harris and Carr (2008); Hofstede (2001)
M	Market orientation *(clients, competitors and interdepartmental coordination)*	Chung (2011); Narver and Slater (1990); Slater and Narver (1995)
Le	Learning orientation	Boulding, Staelin, Ehret and Johnston (2005); Calantone, Cavusgil and Zhao (2002); Nasution, Mavondo, Matanda and Ndubisi (2011); Sinkula, Baker and Noordeweir (1997); Slater and Narver (1995)
Ty	Technology orientation	Ankrah and Langford (2005); Gatignon and Xuereb (1997); Zhou and Li (2010)
F	Future orientation	Buck et al. (2010); George, Wiklund and Zahra (2005); Johnson, Martin and Saini (2012); Shipp, Edwards and Lambert (2009); Trompenaars (1993)

Table 3.1, continued: A summary of references for cultural dimensions of the study

Code nos.	Culture variables	References
Fx	Flexibility orientation	Lim et al. (2011); Palanisamy (2005)
G	Goals orientation *(common and international goals)*	Button, Mathieu and Zajac (1996); Han and Diekmann (2001a, 2001b); Kraimer (1997)
Gx	Guanxi/relationship orientation *(Political and business guanxi)*	Chung (2011); Li and Tiong (1999); Luo, Hsu and Liu (2008); Park and Luo (2001); Peng and Luo (2000); Tsang (1998)
I	Innovation orientation	Damanpour (1991); Hurley and Hult (1998); Nasution et al. (2011)
E	Entrepreneurial orientation	Abbey and Dickson (1983); Engelen (2010); Hughes and Morgan (2007); Lumpkin and Dess (1996); McDougall and Oviatt (2000); Miller (1983); Nasution et al. (2011); Schendel (1990); Slater and Narver (1995); Valacich, Sarker, Pratt and Grroomer (2009); Liu, Luo and Shi (2002)
Mf	Marketing formalisation orientation	Johnson et al. (2012); Slater, Olson and Hult (2006)
Et	Ethical orientation *(Formal and informal orientation)*	Bucar, Glas and Hisrich (2003); Drew, Kelley and Kendrick (2006); Moodley, Smith and Preece (2008); Robertson, Gilley and Street (2003); Suen et al. (2007); Vanem (2012); Watson and Weaver (2003); Weaver, Trevino and Cochran (1999)
Rw	Reward orientation	Anderson and Fraser (2000); Balkin and Gomez-Mejia (1987); Brickley, Smith and Zimmerman (2002); Diaz and Gomez-Mejia (1997); Kwak and LaPlace (2005); Simth (2011); Wei and Atuahene-Gima (2009); Wong et al. (2013); Yanadori and Marler (2006); Zhou and Pham (2004)
V	Value orientation *(relationship and strategic)*	Fong and Kwok (2009); Kluckhohn and Strodtbeck (1961)

3.3.2.1 Teamwork orientation (collectivism)

Individualism and collectivism are regarded to have a significant effect on international management within various countries especially in the areas of negotiations, decision-making and so on (Trompenaars, 1993). According to Tjemkes et al. (2012), individualism-collectivism dimension represents obligations and relationship in individual-group. In other words, this type of orientation refers to team orientation in which low team orientation represents individualism and high team orientation represents collectivism. Generally, modern Western and democratic societies and organisations are inclined towards individualistic culture (Drechsler, 1995). In contrast,

Eastern and Asian communities are inclined toward collectivistic cultures (Thompson, 2008).

In individualistic culture, the words 'I', 'me' and 'mine' are used and people regarded themselves as free and independent actors, while, in collectivistic culture, the words 'we', 'us' and 'ours' are utilised, individuals regarded themselves as group members and people are focused on social interaction (Thompson, 2008). Thus, the ties between individuals are loose in individualistic culture and tight in collectivistic culture (Hofstede, 2001). This also indicated that people tend to treat their group members differently in collectivistic culture than in individualistic culture (Hsee & Weber, 1999).

Besides, the key attributes in individualism orientation are self-interest, competitive achievement (Fisher & Ranasinghe, 2001), individual freedom and achievement (Griffin et al., 2009). Furthermore, organisations of individualism orientation are task-orientted and thus they have a higher adaptation to imported technology (Kedia & Bhagat, 1988). However, people in individualistic culture tend to be overconfident about the precision of the information that they have and overestimate their abilities (Chui, Titman, & Wei, 2010). This indicated that these attributes are more likely to encourage individual in individualistic culture to make higher risk decisions than people in collectivistic culture. A study by Griffin et al. (2009) confirmed that there is a positive relationship between individualism and corporate risk taking.

Nonetheless, according to some researchers (Hsee & Weber, 1999; Weber & Hsee, 1998), the impact of an adverse outcome of an risky option tends to be reduced in collectivism orientation as members in a collectivist community will more likely to get help from others and hence this will induce members in the collectivist society perceive

the riskiness of an option to be smaller and incline to take risky option. This may due to the reason that people in the collectivist culture is more social interaction and hence more likely to show organisational citizenship than individualist culture (Panina & Aiello, 2005). Meanwhile, Hajirasouliha et al. (2014) showed that there is a association between organisational citizenship and risk taking. However, Hsee and Weber (1999) discovered that this cushion hypothesis in collectivist culture is merely applied on financial aspect but not on other aspects like medicine.

Besides, although the time taken by collectivist decision-making is longer than individualist decision-making, individualism culture tends to suffer implementation problems whilst in collectivism culture, the final result will take longer to achieve but in a more stability mode (Trompenaars, 1993). Tjemkes et al. (2012) found that passive responses are more favourable in collectivistic society as decisions and responses to adversity are made by consensus.

3.3.2.2 Power and rules orientation

According to Hofstede (2001), power distance is defined as the exercise of power in a hierarchy value system between a boss and a subordinate. In this regard, Hofstede argued that inequality of power distribution is an essence in an organisation. In this case, power distance has an influence on risk attitude and decision-making as decisions are made by authority and powerful person in a hierarchical structure in which key stakeholders with high power in a group or organisation have greatest influence on decision-making process and decision outcome (Murray-Webster & Hillson, 2008).

In egalitarian culture, people of different status communicate frequently and hence status differences are permeable. In contrast, people of different status and classes do not communicate frequently and members at the highest levels have a deep sense of obligation and responsibility to protect those at the lowest status who need to defer to their superiors in hierarchical culture (Thompson, 2008). Moreover, high power distance encourages centralised decision structures (Hofstede, 2001) in which high degree of centralisation will lead to lower risk-taking (Pelham & Wilson, 1996).

On the other hand, a research done by Tjemkes et al. (2012) showed that power distance affects managerial response strategies in international strategic alliance in which destructive response strategies (exit, opportunism, aggressive voice, neglect) are more preferable in large power distance and constructive response strategies (creative and considerate voices, patience) are more preferable in small power distance societies in international strategic alliance. These researchers also highlighted that harmony between powerful and powerless personnel is critical in small power distance orientation which will likely influence organisational international market entry decisions. This is because the harmony between powerful and powerless personnel in small power distance may encourage flexibility in strategic risk decisions and reduce the rigidness in decision making.

Bureaucratic orientation refers to specified statements in organisations of what should and should not be done and the correct and usual ways in performing organisation-related tasks. In other words, bureaucratic-oriented organisations are organisations that rely heavy on rules and procedures on running and managing their business process (Winch et al., 1997). According to Douglas and Wildavsky (1982), the standard

operating procedures in hierarchical and bureaucratic culture are more careful oriented and hence this type of culture is more likely to encourage risk aversion in decisions.

3.3.2.3 Uncertainty avoidance

Uncertainty avoidance is about the degree of comfort and acceptance of uncertainties and ambiguities (Hofstede, 2001). According to Murray-Webster and Hillson (2008), uncertainty avoidance has an influence on risk attitude and decision-making as decision with lesser risks is usually more preferable especially in an uncertain situation. In addition, Fisher and Ranasinghe (2001) concluded that uncertainty avoidance is an important cultural dimension on the choice of foreign firms' entry mode and hence they argued that uncertainty avoidance is likely to be a dominant cultural determinant on foreign investment.

It is generally accepted that organisations or societies with high uncertainty avoidance score intend to reduce uncertainty and risks (Rowlinson & Root, 1996) and with a higher tendency to make less risky decisions. In contrast, low uncertainty avoidance reflects that people are more willing to take risks and less sensitive to economic satisfaction changes as they may "trade off short-term performance losses for long term benefits" (Tjemkes et al., 2012, p. 72). As such, people are attracted to make higher risky decisions. Meanwhile, Griffin et al. (2009) highlighted that people in high uncertainty avoidance culture are more concerned about risks and prefer stability as they are more conformity and rule following than people in low uncertainty avoidance who are more willing to accept change and risks. In relation to that, Griffin and his research fellows proved that uncertainty avoidance is negatively associated with corporate risk

taking. Hence, low uncertainty avoidance is more likely to encourage the selection of more risk seeking bidding decisions in international market.

3.3.2.4 Long-term orientation

Buck et al. (2010) addressed that long-term orientations is a time dimension and it is important on organisational strategies. Based on the concept of time orientation adopted by Harris and Carr (2008), long-term orientation in this study is referred to the timeframes within which companies intend to be involved in the business activities in order to attain organisational goals. Long-term orientation is defined as firms' willingness to commit to long term goals in which organisations are willing to scarify short-term benefits in order to attain long-term benefits (Anderson & Weitz as cited in Ryu, Park, & Min, 2007, p. 1226). Long-term oriented organisations emphasis on future goals and concerned about current and future outcomes which can be achieved by, for example, building a long term relationship with related parties whilst short-term oriented firms are focus on current outcomes (Ganesan, 1994). Besides, Harris and Carr (2008) highlighted that managers in long-term oriented companies tend to develop companies' capabilities and strengths on the basic of long-term success. Panina and Aiello (2005) asserted that managers who emphasis on long-term perspective are more concerned on improving processes and decisions are made based on a grander scale using past accumulated knowledge and experience.

According to Hofstede (2001), long- and short-term orientations impose influence on organisations' behaviours whereby organisations with long-term orientation are accustomed to building up a strong position in their respective market, do not expect quick results and let the time and resources to make their own contributions. In contrast,

organisations with short-term culture are emphasised on the results of monthly, quarterly or yearly profit and loss and focus on control systems. Furthermore, long-term planning in long-term oriented organisations is more toward performance management which consists of goals setting, training and development, identification and expelling organisational performance obstracles and so forth (Kedia & Bhagat, 1988). Some studies (Ryu et al., 2007) showed that environment uncertainties are related with the implementation of long term orientation. Hence, it can be postulated that long-term orientation is likely to influence organisations to make less risky decisions.

3.3.2.5 Market orientation

Market orientation is considered as an organisational culture dimension (Huang & Wang, 2011; Hurley & Hult, 1998) and it is defined as organisations' response to the current needs in the respective markets (Chung, 2011). It is a cultural dimension that concerned about (1) "profitable creation and maintenance of superior customer value while considering the interests of other key stakeholders; and (2) provides norms for behaviour regarding the organisational development of and responsiveness to market information" (Slater & Narver, 1995, p. 67). According to them, market orientation enables organisations to respond quickly and effectively to opportunities and threats, however, it may not induce organisations to take risks as some organisations tend to focus narrowly on their current markets and competitors and hence overlook or ignore the new and emerging markets and competitors. This orientation is central to the ability of a company to compete and acquire superior rewards in business and consumer markets (Johnson et al., 2012). Furthermore, Kohli and Jaworski (1990) described market orientation as collection of information from customers and market environment,

responds to the customer needs and disseminate the information across functions in the organisation.

As such, market orientation is a critical profitability determinant and it is commonly agreed of comprising three (3) major elements viz. customer orientation, competitor orientation and interfunctional coordination (Narver & Slater, 1990). Ankrah and Langford (2005) highlighted that market orientation or client focus is highly related in construction industry as focusing on clients' needs is an important consideration in construction. According to Douglas and Wildavsky (1982), people in individualistic market orientation regarded uncertainties as opportunities which will lead to the adoption of more risk taking decisions. Hence, organisations with high market orientation is more likely to encourage risky decisions to be made in organisational decision making.

3.3.2.6 Learning orientation

Learning orientation is a dimension of organisation (Hurley & Hult, 1998) and has often been thought of as being in analogous to organisational learning (Sinkula et al., 1997; Slater & Narver, 1995). Differences and changes in organisational learning will lead to differences in culture (Naoum, 2001). According to Sinkula et al. (1997), learning orientation is more related with cultural aspect than organisational learning with a set of knowledge-questioning values which consists of three (3) main componenets viz. commitment to learning, open-mindedness and shared vision. They further concluded that learning orientation will improve the generation and dissemination of market information which will influence organisational marketing strategies. Other than these

three (3) components, Calantone et al. (2002) argued that intraorganisational knowledge sharing is an important component in learning orientation.

In relation to that, learning orientation is also defined as "a cultural aspect that emphasises the process of improving insights, knowledge, and understanding to improve organisational performance and customer value" (Nasution et al., 2011, p. 338). Murray-Webster and Hillson (2008) pinpointed that learning process by regular intentional examination and corrective and development actions are necessary especially when decision is made in an uncertain situation in which outcome is matter to an organisation. Moreover, learning orientation also involves organisational activities in creating and using knowledge to increase organisations' competitive advantage by processing and utilising the information obtained from customers, channels and competitors to generate resources and skills to form core competence like "foresee environmental and market changes and make adjustments" (Calantone et al., 2002, p. 518).

The development of new knowledge, information or insight has the potential impact to affect organisational behaviour (Liu et al., 2002). This is because learning is likely to induce organisations to question their long-held assumptions and behaviours to enhance competency (Senge as cited in Liu et al., 2002, p. 371). Besides, organisations' customers relationship will be enhanced as this cultural dimension assists organisations to develop a good information processing process and improve their capabilities to better understand customers' needs (Boulding et al., 2005). In this regards, it can be postulated that organisations with high learning orientation are more likely to encourage organisations to make more risky international bidding decisions.

3.3.2.7 Technology orientation

According to Gatignon and Xuereb (1997), technology orientation is defined as a firm's ability and willingness to adopt and acquire technology in the development of new products and solutions of technical matters to meet new users' needs. In line with this, Ankrah and Langford (2005) measured organisations' readiness to technology adoption as a cultural dimension in which it is defined as "the extent to which technology is applied and how quickly and readily the organisation adopts improved technologies and work methods" (Taylor & Bowers as cited in Ankrah & Langford, 2005, p. 600). In general, technology can be classified into two (2) major and common types, namely, hardware (such as machinery and equipment) and software technologies (Takim, Omar, & Nawawi, 2008).

Previous research demonstrated that organisations with higher level of technology orientation has better ability and knowledge to manage risk by adopting more different risk taking response strategies. For example, Ahmed and Azhar (2004) discovered that contractors organisations who are using computer-based techniques of risk management has a better ability in managing risks as these contractors are inclined towards risk retention and risk reduction in response to the identified risks. In contrast, contractors with less use of computational risk management tools are more preferred to adopt risk elimination and risk transfer as their risk response strategies. In addition, Zhou and Li (2010) highlighted that technology-oriented companies tend to capitalise on advanced and new technology to adapt actively in the competitive market. Hence, it implied that organisations with higher technology orientation is more likely to have better capabity to manage risks and thus they are more capable to make risky decisions.

3.3.2.8 Future orientation

According to Buck et al. (2010), time orientation encompasses long- and short term and past, present and future orientations. Beisdes, Trompenaars (1993) highlighted that the idea of future orientation could be in the form of short-term basis. As such, the time orientation of past, present and future are also considered in this study. However, future orientation is focused in this study as it is considered to be more related in this study compared to past and present element. According to Trompenaars (1993), organisations are structured based on the time conception in which differences in time orientation will lead to different culture in organisations. He further addressed that time orientation has an effect on people judgement and decision-making as these three time zones (past, present and future) unite people's actions. Furthermore, Shipp et al. (2009) commented that the allocation of attention on the past, present and future is important as it reflects individuals and organisations perceptions of the past, present and future which will affect their current attitudes, decisions, and behaviours. In this regards, time orientation (past, present and future) also refers to thoughts and behaviours directed toward the past, present or future (Nuttin as cited in Shipp et al., 2009, p. 3).

In terms of future orientation, companies are persistence, patience and committed to invest resource over a longer period of time (George et al., 2005). This is because companies understand the limitations of current asset and resource and hence it is critical to look beyond immediate and focus on future orientation (Tellis, Prabhu, & Chandy, 2009). Accordingly, future oriented companies focus on, for example, products and markets, to establish sustainable competitive advantage over a time period and look beyond existing markets (Johnson et al., 2012). Besides, future oriented companies are enthusiastic in planning and strategising (Trompenaars, 1993). In relation to the context

of risk taking, it entails the consideration of future outcomes along with current behaviour in which risk taking is found to be positively related with current and future temporal focus whereby current focus is related more than future temporal focus (Shipp et al., 2009). Thus, it can be argued that future-oriented organisations are more likely to make less risky decisions.

3.3.2.9 Flexibility orientation

According to Phillips and Wright (2009), although the terms agility and flexibility are defined differently and synonymously by some researchers, both terms refer to the ability of organisations to adjust and respond (Sherehiy, Karwowski, & Layer, 2007). In this regards, this study uses the term flexibility as adopted by Phillips and Wright (2009). Flexibility is critical in today's business world as it "improves firms' adaptive maneuvering capacity and enables them to improvise and reconfigure their existing systems and processes in a timely manner in response to environmental changes" (Lim et al., 2011, p. 225). Palanisamy (2005) defined organisational flexibility as the extent to which an organisation utilises and applies different procedures to improve the controllability of the organisation and environment.

In construction industry, Lim et al. (2011) defined organisational flexibility as an organisation's ability "to effectively utilise its resources and capabilities to respond or adapt, in a timely and reversible manner, to environmental changes through a continuous learning process" (p. 226). Additionally, these researchers argued that organisational flexibility should be regarded as multidimensional concept in construction context which generally consists of three (3) types of flexibilities viz. operational flexibility, tactical flexibilities and strategic flexibility. Hence, it can be

postulated that organisations with high degree of flexibility orientation tend to be more capable to respond and adapt to the external environment and therefore they are more likely to make risky decisions than those with lower flexibility orientation.

3.3.2.10 Goals orientation

In an organisation, goals control and restrict decision-making and action processes (Liu & Fellows, 1999). Liu and Fellows also commented that goal determination is affected by cultural factors of authority, individualism and uncertainty. Additionally, Button et al. (1996, p. 28) argued that "dispositional goal orientations will predispose individuals to adopt particular response patterns across situations". As such, organisational goals are important in organisational decision making as it predicts "individuals' attitudes and behaviours and to the overall functioning of the organisation" (Chatman as cited in Kraimer, 1997, p. 427).

According to Han and Diekmann (2001a, 2001b), the entry decision into international market is guided by few goals, namely, profit-oriented, gaining future markets, need for work, developing new relationship, developing market share and so on. Han and Diekmann further reinforced that these goals will influence an organisational strategic decision-making. However, Han et al. (2005) highlighted that the main reason of firms from majority countries venturing into overseas construction is to increase an organisation's volume of international construction. In this regards, it can be postulated that some organisational goals such profit making and gaining more future work are likely to induce organisations to made more risky international bidding decisions.

3.3.2.11 Guanxi orientation

Literally, guanxi "means relationship or connection" (Tsang, 1998, p. 64). Park and Luo (2001) highlighted that guanxi is a key cultural dimension in Chinese society which "refers to the concept of drawing on a web of connections to secure favours in personal and organisational relations" (p. 455). Yet, establishment of guanxi/relationship is required and critical in every form of business interactions in Western and Eastern countries. Some researchers commented that guanxi is critical in business survival (Chung, 2011) and some argued that guanxi is more useful and beneficial to new entrants in a market (Park & Luo, 2001).

Generally, there are two (2) types of guanxi in interorganisational networks viz business guanxi and political guanxi in which both have impact on firm performance (Chung, 2011; Park & Luo, 2001). Business guanxi enables organisations access market intelligence (Tsang, 1998) which assists organisations to respond timely to market needs by attaining financial objectives in terms of profit and market share (Narver & Slater, 1990). Organisations with an established long-term business guanxi are more able to expand their business in foreign countries like China (Tsang, 1998).

On the other hand, maintaining and building a good and continuous political relationship with host entities such as government and local authorities will reduce hostile attitude, can gain trust and support and able to obtain useful information about the host countries (Li & Tiong, 1999). However, a high level of political guanxi is harmful to organisations in terms of lack of time and energy in formulating organisation's strategic direction (Chung, 2011), involvement in unethical behaviour,

affect organisation's capability to develop strategic decisions (Luo et al., 2008) and vulnerable to government officials changes (Yeung & Tung, 1996).

In addition, firms with high political guanxi also tend to undergo backdoor policy (Luo et al., 2008) which can affect an organisations' credibility in other guanxi networks and their respective industry and this unethical record may induce clients avoid conducting business with such organisations (Tsang, 1998). This situation may eventually prevent organisations from gaining future business. Besides, high political guanxi tends to impose difficulty for organisations to hold a position in the market and to expand into other industrial sectors (Chung, 2011) due to complicated and unpredictable political issues. In this regards, it can be postulated that business guanxi and political guanxi are likely to encourage organisations to bid for higher risks foreign countries.

3.3.2.12 Innovation orientation

Organisational innovativeness is a cultural dimension (Hurley & Hult, 1998) which is defined as a latent capability of firms to develop, adopt and implement new ideas, processes and products (Nasution et al., 2011). In this regards, these researchers focused on three (3) types of innovations, namely product, process and administrative innovations. They further highlighted the differences between organisational entrepreneurship and innovation as both terms tend to be overlapped in their definitions. Entrepreneurship is related with new entry such as new market with either new or existing process, products or services and innovation is concerned with the implementation of new ideas, process, products or services in new or existing market but not new entry (Hurley & Hult, 1998). In relation to that, innovation and entrepreneurship orientations are measured separately and differently in this study.

Organisational innovation can also be defined as "generation, development, and implementation of new ideas or behaviours…a new product or service, a new production process technology, a new structure or administrative system, or a new plan or program…a means of changing an organisation, whether as a response to changes in its internal or external environment or as a pre-emptive action taken to influence an environment" (Damanpour, 1991, p. 556). Simpson, Siguaw and Enz (2006) stressed that the focus on adoption and implementation of new ideas, process, products and services will make innovation-oriented companies to success in the respective marketplace due to the increased of market advantages. In this regards, innovated organisations are more willing to absorb higher risks in developing, adopting and implementing new products and methods (Prajogo & Sohal, 2001). Yet, some researcher claimed that innovations are to be practiced in stable environment change (Hage as cited in Damanpour, 1991, p. 556). Hence, it can be argued that innovation-oriented culture is likely to encourage firms to make novel and risky decisions.

3.3.2.13 Entrepreneurial orientation

Entrepreneurial orientation is an organisational culture dimension (Huang & Wang, 2011) and it is applicable to any types and sizes of companies (Perks & Hughes, 2008). According to Abbey and Dickson (1983), entrepreneurial orientation is determined by culture in an organisation. Corporate entrepreneurship is concerned about the establishment of new business within the existing business and the revival or transformation of stagnant and on-going business (Schendel, 1990). Lumpkin and Dess (1996) defined entrepreneurship as the act of company on new market entry in which company need to decide what market to be entered, when and how to enter the respective market.

Accordingly, Miller (1983) proposed that organisational entrepreneurial orientation refers to innovation, proactiveness and willingness to take risks. On the other hand, Slater and Narver (1995) cited that entrepreneurial culture is characterised as "high tolerance for risks", "proactiveness", "receptivity to innovation" and "active resistance to bureaucracy". At the international level, entrepreneurship is defined and characterised as the combined features of innovativeness, proactiveness and risk seeking across national borders by entering into international market (McDougall & Oviatt, 2000). The three (3) entrepreneurship items, namely, innovativeness, proactiveness and risk taking are the most commonly used and accepted items in measuring entrepreneurial orientation (Hughes & Morgan, 2007).

Entrepreneurship orientation is commonly associated with risk ability of organisations. Organisations that are entrepreneurship-oriented might be more risk-seekers than others (Valacich et al., 2009). This is because entrepreneurship is likely to facilitate organisations to engage in market learning activities by recognising the need to mitigate undue uncertainty and to take more calculated risks (Matsuno, Mentzer, & Ozsomer, 2002). Meanwhile, Liu et al. (2002) highlighted that entrepreneurship-oriented organisations are more likely to understand associated risks and form risk management strategies to deal with the relevant risks. Therefore, it can be postulated that high entrepreneurship-orientated organisations are more likely to make risky decisions.

3.3.2.14 Marketing formalisation orientation

Different with market orientation, marketing formalisation is an organisation's "orientation toward a deep and purposive approach to marketing strategy and marketing activities" (Johnson et al., 2012, p. 718). Johnson and his fellows commented that this

type of companies tend to demonstrate a conscious search or problem solving behaviour and align their resources toward the achievement of specific objectives which will induce to markets expansion and more shares claimant in an intense competitive context. In other words, marketing in a company is valued in a systematic manner, received explicit attention and treated purposively (Slater et al., 2006). As such, organisations may likely to make higher risk decisions.

3.3.2.15 Ethical orientation

Ethics is a cultural component that can affect business decision and behaviour (Hood & Logsdon, 2002). It is critical in every business especially at international market (Bucar et al., 2003; Suen et al., 2007). Ethics are related with the justification about what actions are 'right' and 'wrong', 'good' and 'bad' and so on (Vanem, 2012). The influence of ethics is broad and it is a critical element in bidding and tendering processes (Vee & Skitmore, 2003).

One of the most common ethics is business ethics. Business ethics is concerned about the right and wrong actions and decisions in business activities (Abdullah & Valentine, 2009). More importantly, the main role of ethical responsibility is the firms' willingness to be accountable for its decisions and behaviours (Moodley et al., 2008). Furthermore, business ethics is related with decisions which can affect the business success, for examples, in term of financial and business relationship aspects (Bowen, Pearl, & Akintoye, 2007).

Accordingly, Vanem (2012) stressed that attention should be paid on the duty to protect individuals (such as public, organisations, environment and so on) when considering the

relationship between risk management and ethics. Watson and Weaver (2003) discovered that top management in higher degree of internationalised organisations is more concern on ethical issues than lower degree of internationalised organisations. This finding implied that organisations with higher exposure of risks are more sensitive to ethical issue and hence increase the likelihood towards higher level of ethical orientation.

In addition, Drew et al. (2006) argued that ethical corporate culture is important as it will lead to a reasonable level of risk taking behaviour. This is because ethic-oriented organisations are likely to behave risk averse to protect the organisations by evading themselves from unethical issues as such organisations are more likely to strongly believe that unethical behaviour can affect organisations' reputation, business credibility and opportunity of gaining future market in their respective industry market. Besides, ethic-oriented organisations may be worried about others hidden and unforeseen adverse loss from the unethical behaviour. Hence, it can be postulated that different degree of ethical orientation will affect organisations' risk preferences which in turn will produce different risk taking behaviours.

Other than business ethics, professional ethics is another element of concerned in ethic orientation of this study. As commented by Legault and Chasserio (2012), instead of referring to a particular group with specific skill and knowledge, professionalism is more accurately referred to a kind of work ethic which is focused on clients. According to Bowen et al. (2007, p. 193), professional ethics is about the "morality and behaviour of professionals in their day-to-day practice, and ascribes moral responsibility to all professionals practising in a particular profession rather than to an individual".

3.3.2.16 Reward orientation

Reward orientation is the use of pay system to guide and motivate the behaviour and performance of individuals and departments from different levels towards the achievement and further of organisational goals (Balkin & Gomez-Mejia, 1987). It is a critical dimension in organisational strategy implementation (Yanadori & Marler, 2006). In support of that, Wong et al. (2013) discovered that reward has a significant effect on the adoption of strategies.

The structure of incentive will affect employees' behaviour (Brickley et al., 2002). Based on Bisel principles (as cited in Smith, 2011, p. 34), incentive is structured in the way to enhance long term corporate value. In a reward structure, outcome based remuneration is critical and it is commonly comprised of fixed salary and other variable components like bonuses, shares and options (Smith, 2011). This is because lack of outcome based remuneration will limit the focus of risk averse managers to make less risky decision for the sake of keeping an organisation running (Smith, 2011). Kwak and LaPlace (2005) held the identical view and argued that a compensation structure will influences a decision maker's risk taking behaviour either to be risk seeking or risk averse. As advocated by Anderson and Fraser (2000), incentive alignment is likely to induce and encourage agents (mangers) to make higher risk taking decisions

In the study by Wei and Atuahene-Gima (2009), the risk-based reward is about the sharing of organisational risk between employees and organisation (Diaz & Gomez-Mejia, 1997). It is a firm performance-based reward that links employees reward with organisational performance such as organisational profit (Wei & Atuahene-Gima, 2009). According to Zhou and Pham (2004), different types of financial products or

situation will lead to the focus on either promotion or prevention. Wei and Atuahene-Gima (2009) further asserted that high risk-based reward is more likely to make employees to pay attention on prevention to avoid risk taking failure as employees are tend to be more sensitive to negative outcomes than in low risk-based reward. Moreover, the chances of high risk-based reward that direct employees to failure and setback are higher than low risk-based reward system. Employees are less likely to counteract the high risk bearing opportunities which will affect their personal financial setbacks (Wei & Atuahene-Gima, 2009). In consequences, risk-based reward system can affect decision making and thus lead to the limitation on risk taking behaviour. Hence, it can be postulated that low risk-based reward is more likely to induce more risky decisions than high risk-based reward.

3.3.2.17 Values orientation

It is generally accepted that organisational value affects strategic decisions (Enz, 1989; Johnson & Scholes, 1993; March & Simon, 1958). Besides, organisational values is critical in organisational culture in influencing organisational behaviour (Hofstede, 1983). According to Enz, Dollinger and Daily (1990), organisational values are desired and selected beliefs, held by a group or individual for the organisational goals and actions. In simplest words, organisational values are shared by organisational members and it will influence managers' behaviour towards organisational goals (Schein, 1984).

According to the value orientation proposed by Kluckhohn and Strodtbeck (1961), there are five (5) types of basic problems that need to be solved by every society, namely, time (future-present-past), humanity-natural environment, individuals-others, motivation of behaviour and human nature. The three (3) aspects of society values,

namely, humanity-natural environment, motivation of behaviour and human nature are used as a guide in this study. The humanity-natural environment of this study is focus on the ethical values in business and the society. The human nature of this study is concerned about the relationship values in business. Whilst, motivation of behaviour of this study is focused on the values on organisational performance and strategy. Value orientation on time and individuals-others are exclueded in this study as both of them have been included and discussed in the previous section. For instance, time orientation emphasises on the past, present and future elements which is similar with future orientation (section 3.3.2.8). While, individuals-others is concerned about hierarchical and individualistic which are similar with power and rules orientation (section 3.3.2.2) and teamwork orientation (section 3.3.2.1).

3.3.3 The grouping of the cultural variables

To avoid the problems of lose of actual meaning and difficulty in analysing the findings (Hofstede, 2001), the twenty-three (23) cultural variables are then grouped into eight (8) major cultural dimensions. The grouping of cultural constructs is based on two (2) prominent organisational cultural frameworks, namely, Denison Organisational Culture Model (DOCM) (Denison & Mishra, 1995) and The Competing Values Framework (CVF) (Quinn & Rohrbaugh, 1981). Other than their prominence in cultural field, both frameworks divide culture into two (2) major dimensions viz. external and internal which are related with the research area of this study. The internal dimension is concerned about internal cohesion, unity and structure of the organisations. In contrast, external dimension is about the strategy towards external environment and interaction between the organisations and external markets. Table 3.2 indicates the grouping of the cultural variables and the reference model of each cultural trait. In this study, a slightly

different set of organisational culture groupings is offered and suggested compared to the models of DOCM and CVF. The internal cultural dimensions in this study consists of hierarchy, involvement and values orientations. While, the external cultural dimensions include goals, guanxi, strategy, adaptability and capability orientations.

Table 3.2: The classification of cultural constructs

Nos.	Name of the new cultural variables	Reference models	Cultural variables extracted from the past literature
1.	Hierarchy	• CVF model – Hierarchy quadrant (control)	• Power and rules orientation • Ethical orientation (*formal)*
2.	Involvement	• DOCM model – Involvement • CVF model – clan quadrant (collaborate)	• Teamwork orientation • Reward orientation
3	Values	• DOCM model – consistency	• Values orientation *(relationship and strategic)* • Ethical orientation (*informal)*
4.	Goals	• DOCM model – mission	• Goals orientation *(common and international goals)*
5.	Guanxi	• CVF model – market quadrant (compete)	• Guanxi orientation *(political and business guanxi)*
6.	Strategy	• CVF model – market quadrant (compete) • DOCM model – mission	• Long- term orientation • Future orientation • Market orientation *(customers, competitors, interdepartmental coordination)* • Marketing formalisation • Uncertainty avoidance
7.	Adaptability	• DOCM model – adaptability	• Flexibility orientation • Learning orientation • Entrepreneurial orientation
8.	Capability	• CVF model – adhocracy quadrant (create)	• Innovation orientation • Technology orientation

(a) Hierarchy trait

Based on the CVF model, Cameron and Quinn (2011) argued that hierarchy characteristic presents in the case that organisations have a clear lines of decision making in terms of authority, standardised rules, policies and procedures. They believed that "formal rules and policies hold the organisation together" (p. 42). In line with this,

hierarchy trait of this study includes power and rules orientation and formal ethical structure.

(b) Involvement trait

Based on the CVF model, the unique features of clan quadrant consists of teamwork, employees involvement and commitment of organisations to employees with the purpose to facilitate employees' participation, commitment and loyalty to the organisation (Cameron & Quinn, 2011). Whilst, under the DOCM model, involvement trait is defined as the alignment, engagement and cooperation of employees in an organisation (Denison & Mishra, 1995). They believed that this trait will develop a sense of ownership and responsibility which will improve implementation and the quality of decisions. To achieve this characteristic, teamwork orientation and reward orientation are grouped under involvement trait.

(c) Values trait

With reference to DOCM model, consistency represents shared meaning and internalised values that control and guide the way an organisation doing business (Denison & Mishra, 1995). In this regards, value orientation and ethical orientation (informal) are included in this trait.

(d) Goals trait

According to Denison and Mishra (1995), mission provides purpose and meaning to employees on the importance of organisation's work and hence it defines the appropriate course of actions to be taken by the organisation. Examples of mission in DOCM are strategic directions, goals and objectives and visions. Hence, goal orientation is focused in this trait.

(e) Guanxi trait

According to Cameron and Quinn (2011), market quadrant in CVF is concerned about an orientation toward the external environment in terms of external positioning and control and it is also focused on the interaction with external communities such as "suppliers, customers, contractors, licensees, unions, and regulators" (p. 44) and how to conduct business transaction. In line with this, this trait is focused on the relationship of organisations with the external related communities. Hence, guanxi orientation is included in this trait.

(f) Strategy trait

This trait is the integration of mission trait in DOCM and market quadrant in CVF. This trait is concerned about the organisations' strategic direction in DOCM and the external positioning and control in CVF. The strategy trait of this study focuses on the strategy and marketing direction of the organisations. In line with this, long-term orientation, future orientation, market orientation, marketing formalisation orientation and uncertainty avoidance are grouped under the same trait.

(g) Adaptability trait

Adaptability cultural trait is defined as the capacity of the organisations to adapt, change, and amplify in response to the external environment. Examples of adaptability in DOCM are creating change, customer focus and organisational learning (Denison & Mishra, 1995). Hence, learning orientation, flexibility orientation and entrepreneurship orientation are grouped under the adaptability trait.

(h) Capability trait

Under the adhocracy quadrant in CVF model, one of the characteristic of adhocracy culture is creativity and innovation (Cameron & Quinn, 2011). Taking this characteristic into account, the capability trait in this study consists of two (2) major features viz. innovation and technology.

3.3.4 Decision risk characteristics

As discussed earlier, risk is an important factor in decision theory (Allais & Arrow as cited in March & Shapira, 1987, p. 1404) which will influence organisational behaviour (Shan, 1991). In the aspect of classical decision theory, risk consists of possible outcomes, likelihoods and subjective values (March & Shapira, 1987). These elements can be applied to time, cost, performance and other performance factors of a project (Kwak & LaPlace, 2005). According to Sitkin and Weingart (1995), decision risk is defined as "a construct used to characterise the alternatives confronting a decision maker; it can, for example, describe how undesirable the likely effects of an alternative are and the likelihood of their occurrence" (p. 1575).

Some researchers (for examples, Kartam & Kartam, 2001; Khattab, Anchor, & Davies, 2007) argued that risks are not differentiated based on types as it is more about the integration of two (2) main elements and these are probability of its occurrence and its consequences. In addition, El-Sayegh (2008) and Zhi (1995) asserted that different types of risks in international construction are appropriate to be judged and evaluated based on two (2) main criteria, namely, probability and impact. Williams (1996) reiterated that risks in construction projects should be analysed on both probability and impact.

On the other hand, Hillson (1999) highlighted that the type and nature of risks, the probability and the impact of risks are parts of the important criteria in decision-making on risk response strategy. Wang and Chou (2003) commented that the identified occurred construction risk types should be appropriately defined as the combination of risk source, risk event and risk outcome in the study of the relationship between risk identification and risk handling. Panthi et al. (2007) reinforced that the criteria of probability and impact are widely adopted in assessing different types of risks. Hence, it can be summarised that majority scholars (for examples, El-Sayegh, 2008; Thuyet et al., 2007; Zhi, 1995; Zou et al., 2007) from the construction risk management field assess different types of risks based on two (2) main aspects, namely, probability and impact. Hence, decision risk characteristics on international bidding decisions in this research are studied based on the basic of three (3) aspects, namely, risk types, risk impact and risk probability as shown in Figure 3.4.

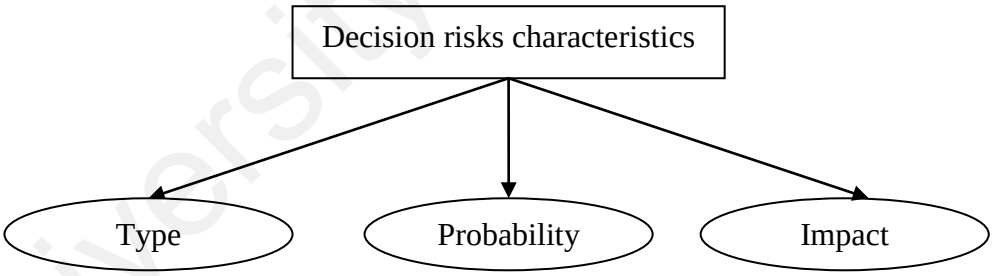


Figure 3.4: The breakdown of decision risks characteristics of this study (adapted from Hillson, 1999; Khattab et al., 2007)

3.3.4.1 Types of risks

Risks can be categorised into different types or levels (for examples, Aleshin, 2001; El-Sayegh, 2008; Fang, Li, Fong, & Shen, 2004; Wang & Chou, 2003; Zhi, 1995). Flanagan and Norman (1993) classified risks into source level, such as environment,

market or industry, company and project levels; and outcome level, like time-related, cost-related and quality related risks. Edwards and Bowen (Edwards & Bowen, 1998) divided construction projects risks into two (2) main categories, namely, natural risks which are out of human control (includes weather systems and geological systems) and human risks which are caused and can be controlled by human (includes social, political, economic, financial, legal, health, managerial, technical and cultural). However, risks are most preferable and commonly categorised by most academic researchers into external and internal risks at national and international levels (for examples, Aleshin, 2001; El-Sayegh, 2008; Fang, Li et al., 2004; Wang & Chou, 2003).

There are plenty of published research reviewed and discussed risks in international construction (for examples, El-Sayegh, 2008; Jha & Devaya, 2008; Zhi, 1995). According to Nawaz and Hood (as cited in Khattab et al., 2007, p. 735), there is no universally accepted risks categories at international level. Hence, there are no right and wrong risks typologies. The rationale of classifying risks into different typologies is based on the research purpose (Zou et al., 2007). Table 3.3 indicates some of the risk typologies and categories in international construction.

Table 3.3: Risks typologies in international construction

References	Risks categories
Zhi (1995)	• Nation/Region: Political situation, economical and financial situation, social environment • Construction industry: Market fluctuations, law regulations, standards and codes, contract system • Company: Employer, architect, labor and subcontractors, materials and equipments, internal • Project: Defective physical works, schedule delay, cost overrun

Table 3.3, continued: Risks typologies in international construction

References	Risks categories
Li et al. (1999)	• Internal risk factors: partner's financial resources and managerial competence, disagreement on profit/loss, accounts, and work allocation, policy of parent companies towards joint venture, distrust, technology transfer dispute • Project-specific: client's problems, project relationship, subcontractors and suppliers, contractual risk • External risks factors: political risk, economic risk, environmental risk, social risk
Hastak and Shaked (2000)	• Macro/country level: operational risk, political risk, financial risk • Market level: technology, contracts and legal requirements, resources, financing, business cultural differences, market potential • Project level: technology, contracts and legal issues, resources, design, quality, financial, construction and cultural indicators and others
Han and Diekmann (2001a, 2001b)	• External: Political risk, economic risk, cultural/legal • Others: Technology/construction, other risk
Wang and Chou (2003)	• External: Political and economic factors, natural environment factors and third party factors • Internal: owner, design consultant and supervisor factors, contractor factors, labour factors, subcontractor factors and material and equipment factors
Fang, Li et al. (2004)	• External: Project external environment • Internal: Preproject factors, owners factors, subcontractors factors, suppliers factors, post-project factors and others risk events
Ling and Hoi (2006)	• Unique risks: political and social risks, economic and financial risks, cultural risk • General risks: regulatory risks, design risks, construction risks (natural risks, managerial risks, plant and equipment risks)
Thuyet et al. (2007)	• Internal risks: financial, design, contractual, construction, personal, involved parties and operational risks • External risks: economical, social, political, legal, public, logistical and environmental risks
Zou et al. (2007)	• Cost-related risks, time-related risks, quality-related risks, environment-related risks, safety-related risks
El-Sayegh (2008)	• Internal risks: Owners, designers, contractors, subcontractors, suppliers • External risks: Political, social and cultural, economic, natural, others
Isik, Arditi, Dilmen and Birgonul (2010)	• Exogenous factors: Market conditions (macro economic, political, socio-cultural, legal, competitiveness, supply power, client power, demand) and strategic alliances with other parties (relations with clients, relations with government, relations with labour unions)
Loo (2011)	• Internal risks: Financial, managerial, construction, design, operational, safety and health risks • External risks: Political, social, cultural, economic, legal, logistics, natural

In the context of general business management, Miller (1992) highlighted that international firms are facing five (5) types of uncertainties and among those are political, government policy, macroeconomic, social and natural uncertainties. Daniell (2000) classified global risks into four (4) categories: political, financial, legal and cultural risks. Khattab et al. (2007) defined risks in international business into political (including societal and legal), financial, cultural and nature risks.

In the construction context, Flanagan and Norman (1993) emphasised that international construction is suffering external risks in addition to internal risks. Zhi (1995) contended that the major risk factors in international construction are nation-related which consist of economic and financial, political and social environment risks. In addition, based on a critical review of construction and project risk management literature from 1960 until 1997, Edwards and Bowen (1998) proposed that external risks such as political, economic, financial and cultural risks should be taken into more consideration in construction research field either at national or international levels. They also discovered that political and cultural risks are risks that are most related at international level. Besides, Li et al. (1999) emphasised that construction professionals need to pay attention on political and legal risks, economical and industrial risks, society risk and physical environment risks when engaging in international construction.

Moreover, Han and Diekmann (2001a) stressed that international construction is suffering and sensitive to the complicated and unobvious link of political, economic and cultural risks. Wang, Dulaimi and Aguria (2004) reiterated that international construction projects are significantly influenced by external risks which consist of social, economic, political and governmental and regulation related risks. Ling and Hoi (2006) highlighted that international construction is subjected to two (2) types of risks,

namely, typical risks and unique risks in which unique risks are associated with risks in host country which are completely distinct in home countries. The unique risks in host country can be represented by the combination of economical, environmental, cultural and political (Zou et al., 2007).

Meanwhile, Han and Diekmann (2001a, 2001b) stressed that each country is unique in terms of few conditions, namely, geography, climate, economic, political, cultural, legal, environmental conditions. Among these conditions, Han and Diekmann further argued that political, economic and cultural conditions are changeable and thus these three (3) conditions should be treated as uncertainties elements. As commented by El-Sayegh (2008), every country has different and specific construction risks and those are economic, political, social and cultural risks. Jha and Devaya (2008) provided a remark that risks in international construction are greater due to political, financial, legal and cultural complexities of a country.

The above arguments manifest the importance of external risks in international construction which commonly consist of political, economic and financial, cultural, and legal risks. This can be attributed to few reasons. First, external risks have significant negative effects on a project itself and project parties as external risks are less manageable and the possibility to reduce the probability is lower compared with internal risks (Aleshin, 2001). Second, external risks are beyond the control of managerial personnel in a construction project (Fang, Li et al., 2004) which is not originated by project parties but caused by project environment (Aleshin, 2001). Third, international construction involved international cooperation among multinational construction professionals from different and unique background in terms of political, economic,

legal, social and culture aspects (Chan & Tse, 2003). Table 3.4 summarises a list of external risk factors which are compiled based on the findings of previous studies.

Table 3.4: Examples of external risk factors in international construction

References	Types of risks	Risks factors
Kangari (1995)	Risks in United States	Permit and ordinances, site access/right of way, labour, equipment, and material availability, labour and equipment productivity, defective design, changes in work, differing site conditions (lump sum contract), acts of God, defective materials, changes in government regulations, labour disputes, safety, inflation, contractor competence, change-order negotiations, third-party delays, contract-delay resolution, delayed payment on contract, quality of work, indemnification and hold harmless, financial failure of any party, actual quantities of work and defensive engineering.
Zhi (1995)	Political situation	War, revolution, civil disorders and inconsistency of government policies.
	Economical and financial situation	GNP decreases, incompatible GNP per capita, interest rate fluctuation, inflation rate increasing, currency exchange rate fluctuation and tax rate increasing.
	Social environment	Language barrier, religious inconsistency, culture tradition differences, insecurity and crime, pestilence, bribe and corruption, informal relationships and brotherhood.
Jaselskis and Talukhaba (1998)	Risks in Kenya	Laws and regulatory requirements, import restrictions on materials, equipment and labour, economic risk (unstable material prices), contractual risk, climate risk, availability and cost of construction materials, characteristics of subcontractors, availability of construction material facilities, prequalification requirements, client information, political stability, quality of equipment and materials, craft worker wage rates, availability and cost of heavy construction equipment, contacts, transportation logistics and craft worker productivity rates.
Ahmed et al. (1999)	Risks in Hong Kong	Acts of God (force majeure), change in work, change order negotiations, changes in government regulations, contractor competence, cost of legal processes, defective design, defective materials, deficiencies in specifications and drawings, delayed payment on contracts, delays in resolving contractual issues, delays in resolving litigation/arbitration disputes, environmental hazards of the project, financial failure-any party, inflation (lump-sum and unit price contracts), labour and equipment productivity, labour disputes, labour, equipment and material availability, permits and ordinances, political uncertainty after July 1997 handover, quality of work, safety, site access/right of way, suppliers/subcontractors poor performance, third party delays and unforeseen site conditions.

Table 3.4, continued: Examples of external risk factors in international construction

References	Types of risks	Risks factors
Li and Tiong (1999)	Risks in international construction joint ventures	Client's cash flow problems, partner's parent company in financial problems, inconsistency in government policies, laws, and regulations, economy fluctuation, poor relationship, exchange rate fluctuation, incompetence of local subcontractors and suppliers, force majeure and social disorder, inflation, disagreement on accounting of profits and loss, employees from each partner distrust each other, restrictions on fund repatriation, excessive demands and variation from client, policy changes in your partner's parent company toward international joint ventures, partner's lack of management competence and resourcefulness, disagree on some conditions, labor, material, and equipment import restriction, security problems at project site, overinterference by parent company of either partner, language barrier, disagreement on allocation of staff positions in international joint ventures, different social, culture, and religious, disagreement on allocation of works, pollution and technology transfer dispute.
Li et al. (1999)	External risks	Inconsistency in policies, laws, and regulations, economy fluctuation, exchange rate, force majeure and social disorder, inflation, restrictions on fund repatriation, import restriction, security problems, language barrier, different social, culture, and religious and pollution.
Hastak and Shaked (2000)	Operational risk	Political continuity, attitude toward foreign investors and profit, nationalisation/expropriation, enforceability of contracts, government incentives, monetary inflation, economic growth, bureaucratic delays, communication and transportation and professional services other than construction.
	Political risk	Hostilities with neighboring country or region, dependence on or importance of major power, fragmented political structure, fractionalisation by language, ethnic, and regional groups, restraints to retaining power, mentality, including nationalism, corruption, and dishonesty, social conditions (e.g., population density & wealth distribution), societal conflicts (e.g., demonstrations, strikes, & street violence) and instability because of nonconstitutional changes.
	Financial risk	Actual laws versus practices for repatriation of capital, current account balance, capital flow, foreign exchange reserves, gold and other reserves, debt as GDP converted to U.S. dollars, capacity service debt, extent of deficity/surplus, sources of revenue and major spending.
Han and Diekmann (2001a, 2001b)	Political risks	Expropriation, war/riot, government control, repudiation, government subsidy, government relations and government rules.
	Economic risks	Currency exchange, restricted currency, inflation, burden of financing and tax issues.
	Cultural/legal	Cultural differences, language barrier, different laws, dispute resolution, force majeure and protection of information.
Kapila and Hendrickson (2001)	Political and economical risks	Fluctuations in currency exchange rates, inconsistency in policies, changes in law and regulations, restriction on fund repatriations, import restrictions. increased tax rates and inflation.

Table 3.4, continued: Examples of external risk factors in international construction

References	Types of risks	Risks factors
Kartam and Kartam (2001)	Risks in Kuwaiti construction industry	Permit and regulations, scope of work definition, site access, labour, material and equipment availability, productivity of labour and equipment, defective design, changes in work, differing site conditions, adverse weather conditions, acts of God, defective materials, government acts, accuracy of project program, labour disputes, accidents/safety, inflation, contractor competence, change order negotiations, third party delays, coordination with subcontractors, delayed dispute resolutions, delayed payment on contract, quality of work, financial failure, actual quantities of work and war threats.
Zarkada-Fraser and Fraser (2002)	Political risks	Political environment, unfavourable host country's government attitude towards foreign investments, economy condition, legislative framework of land ownership investment and repatriation of profits for foreign, law concerning joint ventures with local partners, business infrastructure, bureaucratic attitudes, time and effort consuming to identify and contact related personnel, language barrier and cultural differences.
Wang and Chou (2003)	Political and economic factors	Legislative changes (like labour safety laws and regulations), political or policy factors (like political pressure) and inflation.
	Natural environment	Adverse weather conditions such as typhoons or rainstorms, earthquakes and uncertain subsurface conditions.
	Third party factors	Public relationships, security of material and equipment, entrance guard of site, public security (like threats from gang) and neighbourhood relationships.
Fang, Li et al. (2004)	External project factors	Low efficiency of construction administration departments and late approvals by relevant departments, government's improper intervention during construction, influence of unpredictably inclement weather on construction, personal corruption and bribes in construction management departments, sudden changes of government laws and regulations concerning construction, inflation and sudden changes of prices, import and export restrictions on imported goods needed in construction and social disorder (demonstration, strike, turmoil, etc.).
	Preproject factors	Unfairness in tendering, inadequate and inaccurate information obtained by contractors prior to tendering, quotation errors in tendering or construction time prediction errors made by contractors.
	Owner's units	Owners' delayed payment, owners' unreasonable upfront capital demand, owners' unreasonably tight project, duration, Owners' improper intervention in construction phase, unexpected change of design required by owners, Owners' breach of contracts and disputes with contractors and owners' sudden bankruptcy.
	Other factors	Local protectionism, absence of sound, effective, and fair arbitration means and conflicts resulting from cultural differences (behaviour patterns) between cooperating enterprises.

Table 3.4, continued: Examples of external risk factors in international construction

References	Types of risks	Risks factors
Wang et al. (2004)	Country level	Approval and permit, change in law, justice reinforcement, government influence on disputes, corruption, expropriation, quota allocation, political instability, government policies, cultural differences, environmental protection, public image and force majeure.
	Market level	Human resource, local partner's creditworthiness, corporate fraud, termination of joint venture, foreign exchange and convertibility, inflation and interest rates, market demand, and competition.
Andi (2006)	Risks in Indonesia	Changes in work, defective design, delayed payment on contract, financial failure of owner, permits and ordinances, delays in resolving contractual disputes, delays in resolving litigation/arbitration disputes, productivity of labour, productivity of equipment, labour disputes, poor performance of suppliers/subcontractors, defective materials, labour, equipment and material availability, contractor competence, third party delays, poor quality of work, safety, financial failure of contractor, environmental hazards of the project, unforeseen site conditions, political uncertainty, changes in government regulation, inflation, cost of legal process, acts of god, site access/right of way and deficiencies in specifications and drawings.
Ling and Hoi (2006)	Political and social risks	Business practices and laws are not in accordance with established international standards, political instability – elections and changes in political leadership and changes in laws.
	Economic and financial risks	Uncertain policy towards economic liberalisation, supply of resources, currency fluctuation exchange rates, repatriation of profits, difficulty in raising funds and high cost of financing and cash flow problem of client.
	Cultural risk	Local culture, practice of religious, caste solidarities, different ways in discussions, communication, working methods and etc.
Ling and Lim (2007)	Financial and economic risks	Fluctuation in foreign exchange rates, inflation, interest rate fluctuation, default by contractors/subcontractors, labour and material price fluctuations, import/export restrictions, delayed or non-receipt of payment, financial failures and restriction on repatriation of funds.
Panthi et al. (2007)	Financial and economic risks	Inflation, availability of funds from clients, financial default of prime/sub-contractors, exchange rate fluctuations and cost underestimation.
	Political and environmental risks	Changes in laws and regulations, permits and approval, pollution and safety rules, political pressure/disturbances and bureaucratic problems.
	Physical	Damage to structure, damage to equipment, labour injuries and material and equipment – fire and theft.

Table 3.4, continued: Examples of external risk factors in international construction

References	Types of risks	Risks factors
Thuyet et al. (2007)	Risks in Vietnam	Bureaucratic government system and long project approval procedure, increase of resettlement cost, exchange rate changes, increase of material cost, economic and financial crisis, increase of equipment cost, inflation rate fluctuation, interest rate fluctuation, increase of labor cost, low credibility of lenders, increase of tax rate, changes of policies, corruption and bribery, difference of standards and codes in jv, change in laws and regulations, government interference, lack of cooperation from government and change in laws and regulations.
Zou et al. (2007)	Cost related risks	Variations by the client, price inflation of construction materials, design variations, tight project schedule, project funding problems, contractors' difficulty in reimbursement, incomplete or inaccurate cost estimate, contractors' poor management ability, inadequate site information (soil test and survey report), inadequate program scheduling, bureaucracy of government and excessive procedures of government approvals.
	Time related risks	Project funding problems, variations by the client, inadequate program scheduling, contractor's difficulty in reimbursement, design variations, tight project schedule, contractors' poor management ability, excessive procedures of government approvals, price inflation of construction materials and suppliers' incompetency to delivery materials on time.
Zou et al. (2007)	Quality related risks	Tight project schedule, contractors' poor management ability, unavailability of sufficient amount of skilled labour, unavailability of sufficient professionals and managers, poor competency of labour, contractors' difficulty in reimbursement, variations by the client, project funding problems, low management competency of subcontractors, design variations and inadequate site information (soil test and survey report).
	Environment related risks	Serious noise pollution caused by construction, water pollution caused by construction, tight project schedule, project funding problems, variations by the client, serious air pollution due to construction activities, contractors' poor management ability, contractors' difficulty in reimbursement, prosecution due to unlawful disposal of construction waste and bureaucracy of government.
	Safety related risks	Employees did not buy safety insurance, tight project schedule, project funding problems, inadequate safety measures or unsafe operations, contractors' poor management ability, did not buy insurance for major equipment, unavailability of sufficient professionals and managers, contractors' difficulty in reimbursement, lack of readily available utilities on site and poor competency of labour.

Table 3.4, continued: Examples of external risk factors in international construction

References	Types of risks	Risks factors
El-Sayegh (2008)	Political risk	War threats, labour strikes, changes in laws, corruption and bribes and delay in approvals.
	Social and cultural risks	Criminal acts, substance abuse and conflicts due to differences in culture.
	Economic risk	Inflation, currency fluctuation, shortage in material availability, shortage in manpower availability and shortage in equipment availability.
	Natural risks	Unexpected inclement weather and unforeseen site conditions.
	Other risks	Delays in resolving contractual issues, delays in resolving litigation, unfairness in tendering, local protectionism and difficulty in claiming insurance.
Jha and Devaya (2008)	Risks in international construction	Poor government responsiveness, weak legal system, political instability, cultural differences, force majeure, poor financial capability of the local partner, foreign exchange risk (forex), inaccurate assessment of market demand, low project team cohesion, ambiguous project scope definition, poor cost management and control and poor project management.
Ling and Hoang (2010)	Political risk	Corruption, risk of termination of government funded project due to political changes and complicated and bureaucratic administrative system for approvals and permits.
	Legal risk	Inadequate legal framework and ineffective legal system.
	Economic risk	Fluctuation in foreign exchange rates, fluctuation in interest rate and inflation, import restrictions and restriction on repatriation of funds.
Loo (2011)	Political risks	War threats, riots or terrorism, industrial relations actions, expropriation, delay in approval or permit requirements, corruptions and bribe, changes in legislation, government control, repudiation, public opinion and unstable politic.
	Social risks	Criminal acts, civil torts, substance abuse and labour strikes.
	Cultural risks	Cultural differences, language barrier, level of cooperation, need detailed procedures, need for micro-management, level of initiative, willingness of mid-management to take additional responsibility, level of trust for project managers, compliance with written contract, propensity to make claims, ease of settling disputes, safety awareness, quality performance and prevalence of networking.
	Economic risks	Material, equipment and manpower price fluctuation, restriction on repatriation of funds, import or export restrictions, inflation rate volatility, tariff, taxation and local royalty, fiscal policies, fluctuation in foreign exchange rate, currency convertibility, economic recessions and other influential economic events.
	Legal risks	Laws and regulations, liability for acts of others, constraints on employment of expatriates, customs and import restrictions and use of local firms and agents.
	Logistics risks	Loss and damage in transportation of materials and equipments, availability of specialised resources, access and communications, organisational interfaces, availability of resources and embargo.
	Natural	Act of God, unexpected inclement weather and unforeseen ground conditions.

In the event of overseas venture, organisations need to face, assess and absorb host countries' risks (Agarwal, 1994; Khattab et al., 2007). Based on the past literature (for examples, Bageis & Fortune, 2009; Shash, 1993), contractors' bidding decisions are affected by numerous factors and one of the major factors is risks in construction projects. As such, unique risks in a host country have been the highest focus by many researchers (Dikmen & Birgonul, 2006).

As mentioned earlier, risks in international construction are significant as it can spook contractors who intend to enter into international market (Han & Diekmann, 2001b). According to Perks and Hughes (2008), external environment factors are critical determinants of international market entry decision. Cheng et al. (2011) highlighted that external risks associated with country-related risks are initial consideration of international entry decisions for construction firms. Previous literature has shown the importance of country risks on decision making at international level, for examples: Agarwal (1994) tested country-specific characteristics (the characteristics of the country of investment) on the choice of joint venture; Kogut and Singh (1988) examined country-level variables on the choice of entry mode. In line with these, it can be argued that risks in the host countries becomes a prior consideration in overseas venture decisions by contractor organisations.

Country conditions such as political, economic and cultural conditions are early determination on bidding process (Han & Diekmann, 2001a). While, according to Dikmen and Birgonul (2006), external risks associated with socio-cultural, economic and political are important aspects to be considered in making foreign market entry decisions. Furthermore, Han et al. (2005) asserted that political, economic, cultural and legal are risks that important on firm's strategic goal of bidding decisions in

international construction. Others like Zarkada-Fraser and Fraser (2002) concluded that political risk which consists of governmental and societal aspects is an important risk in decision-making process during tendering or bidding stage.

Nonetheless, some studies discovered that social and cultural risks are not the most critical risks in international construction as compared to other types of external risks such as economic, political and legal risks. For example, Li et al. (1999) found that social risk like security problems and differences in culture, religion, customs and language are not critical factors in international construction joint venture. Kapila and Hendrickson (2001) argued that political and economical risks in foreign countries are important consideration of foreign investment opportunity and these two (2) risks are more related with cost related issues which will affect project profit.

Besides, Wang et al. (2004) discovered that the top eleven (11) critical risks in international construction projects in developing countries are fall under the categories of political, economical and legal risks. A study by Jha and Devaya (2008), found that cultural and social risks are not the major risks in international construction compared to other risks. A similar finding was found in the study by Cheng et al. (2011) in which cultural and social risks are excluded in a list of the twenty-four (24) key factors in international entry decisions. As such, country-related risks such as political and economic risks received a great deal of attention from academic researchers (Dikmen & Birgonul, 2006). For example, Ling and Hoang (2010) investigated political, economic and legal risks in international projects.

Accordingly, external risks which are considered unique, important and more associated with international construction are studied in this research. Economic, political and legal

risks were focused in this study because of few reasons, namely: (1) they are more country specific; (2) these risks play a more significant role in international construction as indicated in the extant literature; and (3) to narrow down the research scope as it is an efficient manner to collect and analyse data from the large amount of risks variables in international construction.

As highlighted by Fitzpatrick (1983), political environment is distinct with economic environment when studying the impacts of political and economic aspects on international firms. In this regards, political risk is separated with economic risk in this study. According to Kapila and Hendrickson (2001), political risk consists of risks with "political forces…cause drastic changes in a country's business environment…hurt the profit and other goals of a business enterprise". On the other hand, economic risk is related with "economic events or mismanagement…cause drastic changes in a country's business environment…hurt the profit and other goals of a business enterprise". Meanwhile, legal risk is about the legal issues of the country which can lead to cost related issues (Ling & Hoang, 2010). However, political risk provides a broader definition and it is generally consists of legal risks (law and regulations of host government) (Khattab et al., 2007). Thus, both political and legal risk are combined into single risk and is named as political risk. Financial risk is excluded in this research as this risk is less country specific. Although it is commonly integrated with economic risk, however, most of the financial risk factors are client-related problems such as financial failure of owner, difficulty in raising funds and cash flow problem of clients which are the common risk factors that occurred in any type of construction projects. In summary, this study focused on two (2) risks, namely, political (including legal risk) and economic risks.

3.3.4.2 Probability and impact of risks

According to Williams (1993), probability means chances or possibilities of the occurrence of an undesirable event (risk event) in a project, while, impact of risks indicates the extent of seriousness of the consequences of an undesirable event on an activity or a project. Taroun (2014) highlighted that probability-impact is the most common method of to evaluate risks. These two (2) aspects are also commonly used by construction researchers in evaluating the risks in different countries of construction industry, such as Florida (Panthi et al., 2007), Gulf region (Abdul-Rahman et al., 2012), United Arab Emirates (UAE) (El-Sayegh, 2008), China (Fang, Li et al., 2004; Ling & Lim, 2007; Zhi, 1995) and Indonesia (Andi, 2006). Hence, it is evident that probability and impact are applicable in judging and assessing the different types of risks in western and eastern countries.

The impact of risks, for example, the cost element, is depends on the extent of exposure (Oetzel, 2005). This statement implies that the higher the exposure, the greater the impact. In addition, with the increase of probability level, the greater the impact of a risk. In general, the impact of risks on construction projects consists of three (3) common elements, those are cost, quality and time (Akintoye & MacLeod, 1997; Charoenngam & Yeh, 1999). However, some scholars highlighted that the impact of risks is vary and should not be limited to the elements of time, cost and quality. Kangari (1995) commented that risks can influence the levels of productivity, performance, quality and project cost. Ahmed et al. (1999) reinforced that in the field of project management, the most serious impact of risks in construction projects are cost, time, quality and operational elements. Consistently, Zou et al. (2007) reviewed that the

impacts of risks are vary and it consists of time, cost, quality, safety and environmental sustainability.

However, other scholars indicated different point of views. Some scholars (for examples, Ling & Hoi, 2006; Thuyet et al., 2007; Wang & Chou, 2003) argued that risks associated with national or international construction projects will lead to considerable impact on time and cost elements. In relation to this, Han and Diekmann (2001a) argued that project profitability is a combination of successor variables of cost, schedule and organisation's ability to perform. This is because profit making is one of the common goals of managing risks in international construction (Li et al., 1999; Wang et al., 2004). Also, Shash (1993) addressed that financial consequences are critical in bidding decision. Considering the importance of profitability impact in construction, Panthi et al. (2007) proposed risk response strategies from the perspective of cost impact. Meanwhile, Taroun (2014) suggested future studies to be focus on cost impact in risk literature. Consequently, cost impact (related with profitability) was focused in this study.

The consideration of geographical locations of international projects are excluded in the research framework although geographical locations is a critical criterion in international decision making. This is because different levels and types of risks tend to exist in a particular geographical location and the same geographical locations will suffer different types and levels of risks as well (Ling & Hoi, 2006; Shan, 1991). This implied that exogenous risk factors in different geographical locations can be represented by different degree of impact and probability of risks.

3.3.5 A proposed conceptual model and research hypotheses

Figure 3.5 represents the proposed organisational culture and international bidding decisions (OC-IBDs) conceptual model of this study. As depicted in Figure 3.5, the key inputs (independent variables) in the development of conceptual model are organisational culture variables and the dependent variables are contractors' international bidding decisions in response to the political (including legal risk) and economic risks. Both risks are measured based on two (2) aspects, namely, the impact and probabilities of risks. The independent variables of the conceptual model involve a second order constructs whereby each latent cultural variable is represented by a combination of two or more latent variables. The second order approach is recommended by Hair, Black, Babin and Anderson (2009) as it maximises the interpretability of both the measurement and the structural models and simplify the model. The detailed of the second order approach is discussed in the Chapter 4.

Based on the arguments from the past literature as discussed in the previous sections, it is hypothesised that: international bidding decisions in response to the political (including legal risk) and economic risks are associated with hierarchy, involvement, goals, values, guanxi, strategy, capability and adaptability orientations.

3.4 Summary of the chapter

A detailed discussion on the theoretical framework and conceptual model are presented in this chapter. The preliminary conceptual research model and research hypotheses is developed as a foundation of data analysis which were tested, verifies and discussed in

the subsequent chapter. Justification and rational of the research design and methodology of the study are discussed in the next chapter.

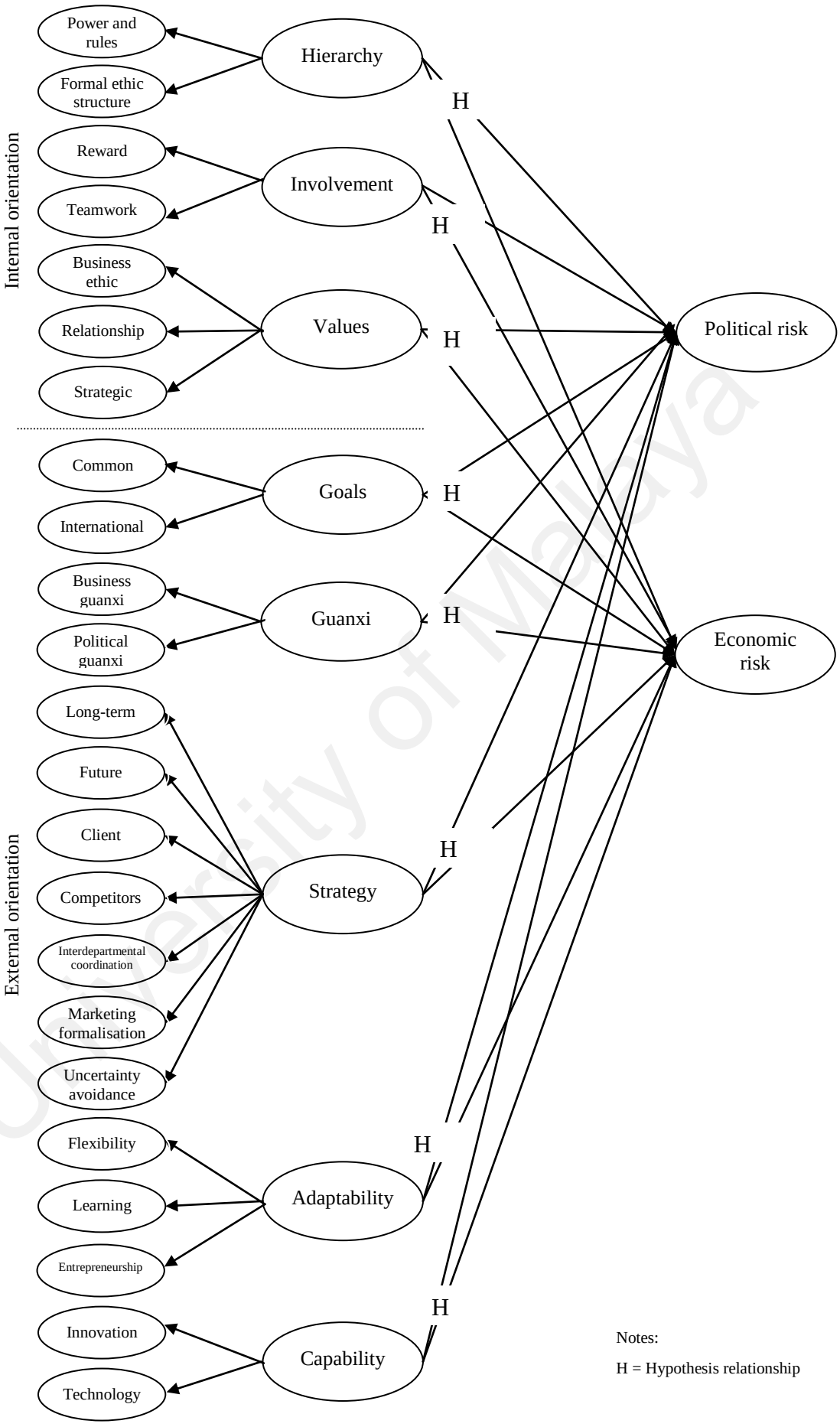


Figure 3.5: The proposed OC-IBDs conceptual model and research hypotheses

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

Chapter 4 covers the rationale on the research design and methodology. The main sections in this chapter compose of an introduction of the chapter, discussions of the research process in terms of the nature of the research inquiry, research design and methods, data analysis methods and validation method and concluded with a summary of the chapter as shown in Figure 4.1.

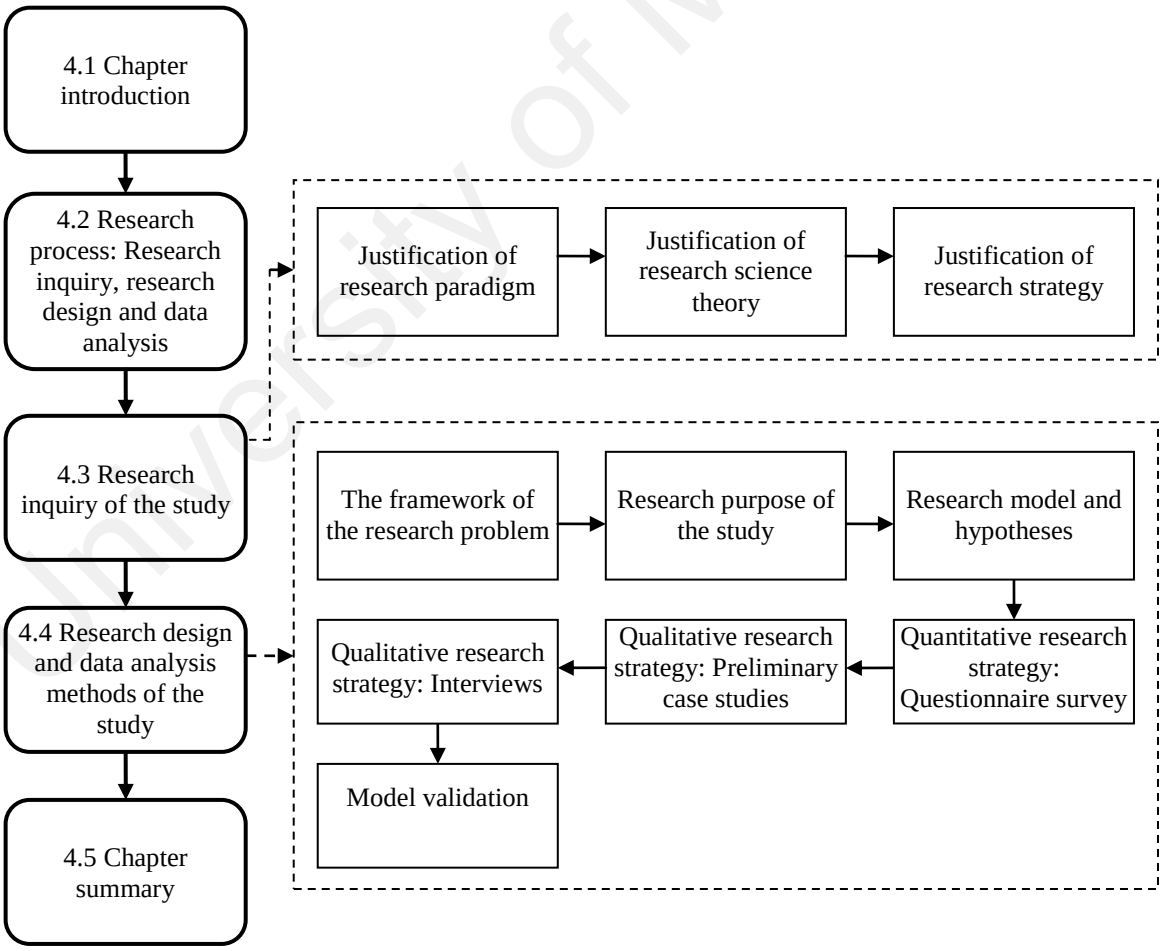


Figure 4.1: The framework for Chapter 4

4.2 Research process : Research inquiry, research design and data analysis

Figure 4.2 delineates four (4) major step-by-step research processes, namely, research inquiry, research design, data analysis and research model validation. First, three (3) main elements of research inquiry are identified and discussed. The elements are research paradigm, research science theory and research strategy. The second stage is about the detail discussion of the research design in terms of the justification of research purpose, selection of research methods, design of research instrument, population identification, sample selection, sample size determination and sampling method, pilot study and data collection process. While, data collection process involves the process of collecting quantitative and qualitative data from the respective respondents, data codification, data compilation and data entry.

The third stage is the analysis stage which includes the identification, justification, design and selection of data analysis process, data analysis methods and counter-check of the research findings. In this stage, research findings are counter-check to assure the reliability of the research and to conclude the entire study. The final stage is about the finalisation of research model. This stage consists of the modification of the proposed research model, validation of the conceptual model from some experienced construction professionals and finalisation of research model. Research results are rechecked or reanalysed if mistakes are found in the research model or if the model requires substantial modification.

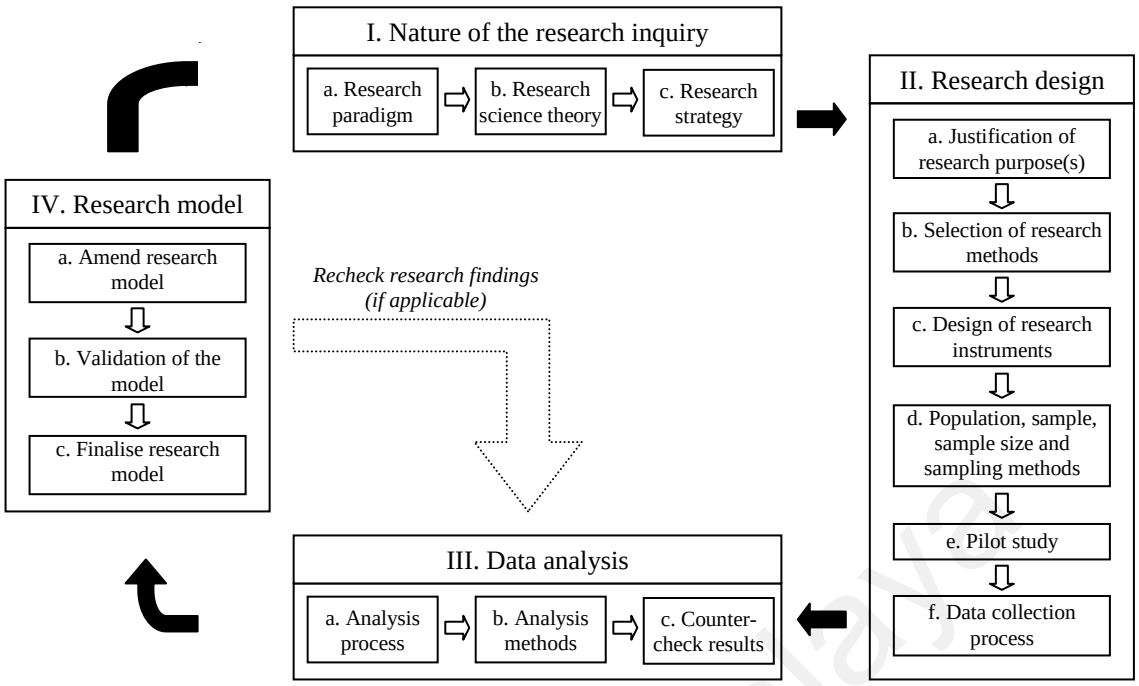


Figure 4.2: Research process of the study: Research inquiry, research design and data analysis

4.3 Nature of the research inquiry

The nature of the research inquiry in this study is divided into three (3) elements, namely, research paradigm, research science theory and research strategy. Justification and selection of each element are discussed in the following sections.

4.3.1 Research paradigm of the study

Research paradigm is important as it assists researchers to determine methodology of their research (Chen, 2006). It is described as a set of basic beliefs that guide an action or disciplined inquiry in which it is "the starting points or givens that determine what inquiry is and how it is to be practiced" (Guba, 1990, p. 18). In other words, paradigm is regarded as "a theoretical framework which includes a system by which people view

events (a lens)…to determine not only what views are adopted, but also the approach to questioning and discovery" (Fellows & Liu, 2008, p. 17). Babbie (2010, p. 33) defined paradigm as "a model or frame of reference" that assists researchers to guide and organise their observations and understanding. In short, research paradigm guides researchers on how and what they will learn from the research inquiry (Creswell, 2003).

Generally, there are few types of research paradigms viz. positivism, postpositivism, critical theory, constructivism, advocacy/participatory and pragmatism (Creswell, 2003; Guba, 1990) and so on. Guba (1990) highlighted that there is no comprehensive and best research paradigm even with the existence of new paradigm. This is because each paradigm has its own advantages and disadvantages which need to be weighted and considered by researchers in performing a research.

Recognising the importance of research paradigm at the outset of the study, postpositivism is adopted as a research paradigm in this study which is a modified version of positivism paradigm whereby reality exists and is seen objectively but approximately and driven by natural law which cannot be fully understood or recognised (Guba, 1990). According to Guba (1990), qualitative approach is suitable to be used in postpositivism paradigm. Nonetheless, Guba commented that the use of different sources of data, theories and methods is important as it will reduce the chances of falsifying interpretation of research findings. In relation to that, the option of postpositivism approaches can be performed in a more flexible manner, that is research under postpositivism can be performed in qualitative, quantitative or both qualitative and quantitative approaches (Chen, 2006).

However, Creswell (2003) asserted that postpositivism is more appropriate to be conducted on quantitative approach as postpositivism is a quantitative research or scientific method. According to Creswell (2003), the scientific method of a standard postpositivism paradigm is started with a theory followed by data collection process to verify the theory and making the necessary revisions of the theory based on the empirical findings before performing any further tests. Table 4.1 indicates postpositivism criteria of the study in responding to the Creswell's criteria of postpositivism paradigm. In fulling the requirements of postpositivism, quantitative approach was adopted as a dominant research strategy and qualitative approach was performed as a complementary research approach in this study. The rationale of mixed research approach is discussed in detail in the following section.

Table 4.1: Creswell's criteria of postpositivism paradigm

Nos.	Postpositivism criteria Creswell (2003)	Postpositivism criteria of this research
1.	Deterministic in which problem is studied to examine causes that may influence effects or outcomes	• To investigate the impact of organisational culture on international bidding decisions in response to political and economic (problem). • Organisational culture (causes/factors) ➡ international bidding decisions (effect/outcome).
2.	Reductionistic in which ideas are reduced into a small set of ideas such as variables that constitute hypotheses and research questions	• Relevant organisational culture variables (as discussed in the section 3.3.2) are extracted and utilised in this study to form research questions and hypotheses of the study.
3.	Empirical observation and numeric measurement	• Quantitative approach was the dominant approach in this study with qualitative approach as a complementary approach.
4.	Theories or laws are tested, verified or refined	• The interaction among SOR theory, descriptive decision theory and cultural theories was formed, tested, verified and refined if possible based on the findings of the empirical methods.

4.3.2 Research science theory of the study

Generally, there are four (4) major types of social research dialectics, namely idiographic, nomothetic, inductive and deductive theories (Babbie, 2010). In this study, an integration of nomothetic and deductive was adopted. According to Babbie (2010), nomothetic explanation provides partial explanation of the relationship between variables on a class of conditions or situations by focusing on one or a few key factors.

On the other hand, the logical model of deduction theory starts with "the general to the specific… (1) a pattern that might be logically or theoretically expected to (2) observations that test whether the expected pattern actually occurs…begins with 'why' and moves to 'whether'…" (Babbie, 2010, p. 23). Babbie highlighted that although both idiographic and nomothetic explanations and deductive and inductive reasoning are distinct, yet, they are powerful and valid tools in research science. According to Naoum (1998), deductive explanation is adopted in quantitative studies. Table 4.2 tabulates a summary of the adopted science theory corresponding to the criteria of the selected explanation approaches.

Table 4.2: Research science theories of the study

Nos.	Criteria of nomothetic and deductive explanations (Babbie, 2010)	Nomothetic and deductive explanations of this research
1.	Nomothetic explanation: • Focus on a few explanatory factors • Implicit relationship between variables	• The study was focused on one (1) major factor in investigating their impacts on international bidding decisions in response to the political (including legal risk) and economic risks, namely, organisational culture • This study highlighted the relationship between organisational culture variables and international bidding decisions in response to the political (including legal risk) and economic risks.

Table 4.2, continued: Research science theories of the study

Nos.	Criteria of nomothetic and deductive explanations (Babbie, 2010)	Nomothetic and deductive explanations of this research
2.	Deductive explanation: i. Theory ↗ ↘ iv. Empricial Generalisations/ Confirmation ii. Hypotheses development ↖ ↙ iii. Observations	• Main theory: cultural theory Sub-theories: SOR and descriptive decision theories. • Hypotheses development: a theoretical framework and a conceptual model were developed which consists of some important variables that were extracted from the extant literature and research hypotheses were formed as discussed in Chapter 3. • Observations: A mixed research strategy was performed with a dominant quantitative approach and supplemented with qualitative approach. • Empirical generalisations/ confirmation: The final results of the study are to confirm the impact of organisational culture on international bidding decisions in response to the political (including legal risk) and economic risks based on the interaction among cultural, SOR and descriptive decision theories.

4.3.3 Research strategy of the study

There are three (3) major and common types of research strategies, namely quantitative approach, qualitative approach and mixed approach (combination of quantitative and qualitative approaches) (Amaratunga, Baldry, Sarshar, & Newton, 2002; Creswell, 2003). Among the two (2) studied areas, namely, organisational culture/culture and risk decisions in this study, the application of research strategy in culture literature is captured more attention and it is a debatable issues among cultural researchers in construction and non-construction fields.

According to Lorenz and Marosszeky (2007), qualitative research strategy is widely supported and preferred in traditional cultural studies whereas quantitative research

strategy is gaining popular and favourable in current cultural research although the latter is criticised by some researchers on its ability to assess culture in an organisation. In contrast, Barthorpe et al. (2000) highlighted that quantitative-based approach is preferable in traditional research and qualitative-based approach is gaining momentum in current studies.

No matter which research strategy is popular in traditional and current studies, in fact, some researchers (for examples, Bate, 1984; Schwartz & Davis, 1981; Trice & Beyer, 1993) advocate strongly on the adoption of qualitative approach in organisational culture studies, some (Liu, 1999; Van Muijen et al., 1999) support the use of quantitative research approach and others support the use of mixed methods (Ankrah et al., 2009; Denison & Mishra, 1995; Hofstede, 2001; Hofstede et al., 1990).

For example, Schein (2010) argued that qualitative research strategy which allows researchers to perform an in-depth investigation on a phenomenon made it as an appropriate research orientation in cultural studies which is vague and abstract in nature. In line with this, Denison (1996) asserted that cultural literature should be conducted on qualitative approach and quantitative research approach should be carried out in organisational climate literature.

However, some researchers disagree with the use of qualitative approach as the most appropriate research strategy in organisational culture studies. For instance, Tucker, McCoy and Evans (1990) carried out a two years qualitative study to identify organisational culture and performed a quantitative study to assess the reliability and validity of quantitative approach in assessing organisational culture. They found that quantitative strategy able to produce reliability, validity and useful research results.

Chang and Wiebe (1996) argued that qualitative approach has limited benefits on organisational culture studies as this approach is more towards social scientists' product than participants' opinions and judgments. Lorenz and Marosszeky (2007) supported the use of quantitative research strategy in terms of the generalisability and comparability purposes.

Whilst, Cameron and Sine (as cited in Lorenz & Marosszeky, 2007, p. 188) addressed that the use of any single research approach is inappropriate in measuring the organisational culture and highlighted that quantitative approach must be applied in the comparisons of multiple cultures. In addition, the existence of cultural dimensions in the extant literature has made quantitative research strategy as a prerequisite to compare organisational culture across organisations (Liu, 1999). Other researchers debate in a neutral manner, for instance, Van Muijen et al. (1999) opined that culture can be studied in both qualitative and quantitative approaches in which qualitative approach is appropriate for a deeper and comprehensive view of culture and quantitative approach is suitable for a superficial view of culture.

Nonetheless, it is worth to take note that each approach has their strengths and weaknesses and none of the approach can be held better than the others. In this study, a combination of qualitative and quantitative research approach was adopted based on the selected research paradigm, adopted research science theory and the three (3) conditions addressed by Naoum (1998), namely, the purpose of the study, the type and availability of the information required and the reference to previous researches. Table 4.3 shows the rationale of the mixed research approach in this study.

Table 4.3: Rationale of selecting mixed research strategy

Criteria	Rationale
i. Research paradigm	• Based on the arguments made by Chen (2006) and Creswell (2003) on postpositivism paradigm, quantitative approach was adopted as a dominant research approach and qualitative approach was a complementary approach. • Quantitative approach was selected as dominant approach as data is easy to interpret, more specific and explicit (Shamsuri, 2004). The complementary qualitative approach was adopted due to few reasons as below: - To better explore the complicated impact of organisational culture on international bidding decisions; - To obtain more data to explain the real situation of the research area; and - To support and confirm the results from quantitative approach.
ii. Research science theory	• The nomothetic and deductive explanation approaches in this study are appropriate to be performed in quantitative approach (Naoum, 2007). However, mixed method is used to show a strong theoretical tie in deductive research.
iii. Purpose of the study	• This research was focused on exploration and description research purposes. The exploration purpose of this study was pursued in qualitative approach as this approach is suitable for exploratory research and the description purpose was achieved in quantitative approach (Babbie, 2010; Brown & Suter, 2012). • As discussed in Chapter 2, the topics of organisational culture and bidding decisions are not well developed in construction management literature. Hence, exploratory research was selected to assist the researcher to explore the impact of organisational culture on international bidding decisions in construction on the grounds that: (1) it is appropriate to be used in the research area with a limited amount of existing knowledge (Naoum, 2007); (2) it provides a better understanding about the phenomenon of the impact of organisational culture on international bidding decisions; (3) it helps to define the research problem of this study; and (4) it increases the researcher's familiarity about the problem to be studied (Brown & Suter, 2012). • Description purpose was performed in this study as this research purpose serves to: (1) focus on describing the characteristics of a specific population (Babbie, 2010; Brown & Suter, 2012); and (2) to determine the relationship between variables (Brown & Suter, 2012).
iv. Types of information required	• Quantitative approach is a suitable research strategy to study the relationship between organisational culture and international bidding decisions and to confirm this relationship based on the theories (Naoum, 2007). • For the generalisation purpose, facts finding in the form of quantitative data are necessary. Hence, quantitative research is a suitable approach to collect factual evidence and to study the relationship between these facts (Naoum, 2007) and to generalise the findings (Creswell, 2003). • Qualitative research strategy is a best method to understand a particular phenomenon better (Babbie, 2010; Brown & Suter, 2012) such as the impact of organisational culture on international bidding decisions, as this approach emphasises on meanings, experiences and description (Naoum, 2007).
v. Availability of information required	• For the quantitative research strategy, relevant cultural and external risks (political and economic risks) variables were extracted from existing literature especially from the non-construction literature. Whilst, information about the organisational culture and organisational maximum risk tolerance level were obtained from the top management of the contractor organisations. • For the qualitative research strategy, information about the concepts of organisational culture, international risks, decision making, the significance of organisational culture on international bidding decisions and the related theories between culture and risk decisions were obtained from previous literature. While, the impact of organisational culture on international bidding decisions were described in detailed through the interviews with managerial people who have managerial experience in international construction projects and are involved in organisational decision making.

Table 4.3, continued: Rationale of selecting mixed research strategy

Criteria	Rationale
vi. Previous research	• The credibility of mixed research strategy has been proven by the extant literature of culture and risk decisions studies in the construction and non-construction industries as shown in Appendix C. • Based on Appendix C, quantitative approach was adopted by majority of previous research compared with qualitative approach. Hence, quantitative approach was taken as a dominant research strategy in this study and with a complementary qualitative approach.

Other than the criteria highlighted in Table 4.3, the benefits of mixed methods have also lead to its adoption in this study. Generally, it is believed that the use of mixed research strategy can neutralise the biases or shortcoming of each research strategy (Creswell, 2003). This is because quantitative strategy allows researchers to collect factual information about a concept, a theory or a relationship between variables through quantitative data whereas qualitative strategy allows researchers to explore, describe and compare ideas, views and perceptions from relevant parties on a single phenomenon (Creswell, 2003). Besides, this strategy allows researchers to obtain statistical quantitative data from a selected sample and followed by qualitative approach to explore the quantitative results in detail. In addition, a mixed strategy is flexible in term of problem addressing as a research problem can be addressed in either the qualitative, quantitative or combination approach (Creswell, 2003).

Moreover, Babbie (2010) argued that the best way to design a study is through the adoption of different types of research methods by applying the strengths of each method into the research in which utilisation of single research method will impose danger to the research findings. Finally, the adoption of mixed research approach is also supported by some researchers (Amaratunga et al., 2002; Chan & Yu, 2005) in

enhancing research in built environment as both quantitative data and qualitative data complement each other.

Nonetheless, Mason (1996) condemned that the use of different research approach is likely to give different explanations of a phenomenon and is unlikely to verify each other unless different dimensions of research questions are addressed under a phenomenon. Two (2) problems are highlighted in mixed-method approach, namely, large amount of data and the combination of data from different sources to pursue and achieve the same research aim (Dainty, Bagilhole, & Neale, 1997). In this regards, both issues are reduced with the limitation on the number of questions to be addressed on research instrument and the setting of symmetrical questions on both research approaches.

Generally, mixed research approach can be performed in three (3) different procedures, namely, sequential procedures, concurrent procedures and transformative procedures (Creswell, 2003). In this study, a combination of sequential and concurrent procedure was conducted in which this study was started with a qualitative approach (preliminary case studies). Then, a dominant quantitative approach was conducted to test the relationship between independent and dependent variables as illustrated in the proposed research model (in Chapter 3). While waiting the response of the questionnaire(second round of follow up stage, for non-responses), a supplementary qualitative approach was carried out to further explore the relationship of the variables with construction professionals at management level. Qualitative strategy was taken as supplementary approach due to the issues of time limitation and difficulty in information access. Finally, a validation survey with mix open- and closed-ended questions was conducted with industry experts to validate research findings and model.

4.4 Research design and data analysis

The research design and data analysis of this study consist of six (6) major steps, namely research problem, research purpose, development of research model and hypotheses, quantitative process of the study, qualitative process of the study and validation stage of the research model as shown in Figure 4.3. Both quantitative and qualitative approaches composed of the justification and selection of research methods, the nature of the study (time dimension), population identification, sample selection, sample size determination, sampling method, design of research instruments, pilot study and data collection process. Each step is discussed in detailed in the following sections.

At the outset of the research, an in-depth desk study was performed to produce a model of researchable research problem for the purpose of setting up the research questions, aim and objectives. Thereafter, a second round of desk study was carried out to study in detailed the concept of key terms and the knowledge gaps of previous studies. Next, a third round of desk study was performed to identify relevant theories and variables for the development of a theoretical framework, a preliminary conceptual model and research hypotheses. Prior to the commencement of the data collection of quantitative and qualitative methods, research design is critical as it assures researchers to perform data collection and analysis in an ordered and justified manner. This was achieved through a review of the research design and data analysis of previous studies.

In the process of quantitative approach, characteristics of the sample were determined in terms of the geographical location, size, type of sample and sampling frame. A questionnaire was drafted in which relevant questions were picked out from the extant literature and the selected questions were organised so that it flows naturally. A pilot

study was carried out with two (2) groups of people, namely, industry professionals and academic professionals to comment on the draft questionnaire form. Feedbacks from the pilot study were evaluated and amendments were made accordingly. Thereafter, questionnaires were sent to the selected respondents. Two (2) follow-up calls were performed to assure sufficient response rate of the study. Data were then coded and compiled for the purpose of data analysis. Subsequently, reliability and validity tests were conducted before the start of the descriptive and inferential analysis. Results from the statistical tests were rechecked to eliminate errors on the research findings.

In the qualitative approach, preliminary case studies were performed by means of interviews with few industry professional prior to the quantitative stage of data collection. Thereafter, more detailed interviews were performed with industry professionals at the managerial level to explore further the relationship between organisational culture and international bidding decisions. After that, interview data were processed and analysed accordingly. Findings from the qualitative method were then checked for errors to prevent misinterpretation.

The preliminary research model was amended based on the findings from the quantitative method. The research model was further validated by a few experienced industry professionals to strengthen, support and justify the research model. Research findings were rechecked or data was reanalysed in the case that all experienced industry professionals are strongly disagreed with the trimmed research model. Further desk study was performed to interpret and compare the research findings with the findings and arguments from the existing literature. At last, conclusions, future studies and implications of the study were drawn out.

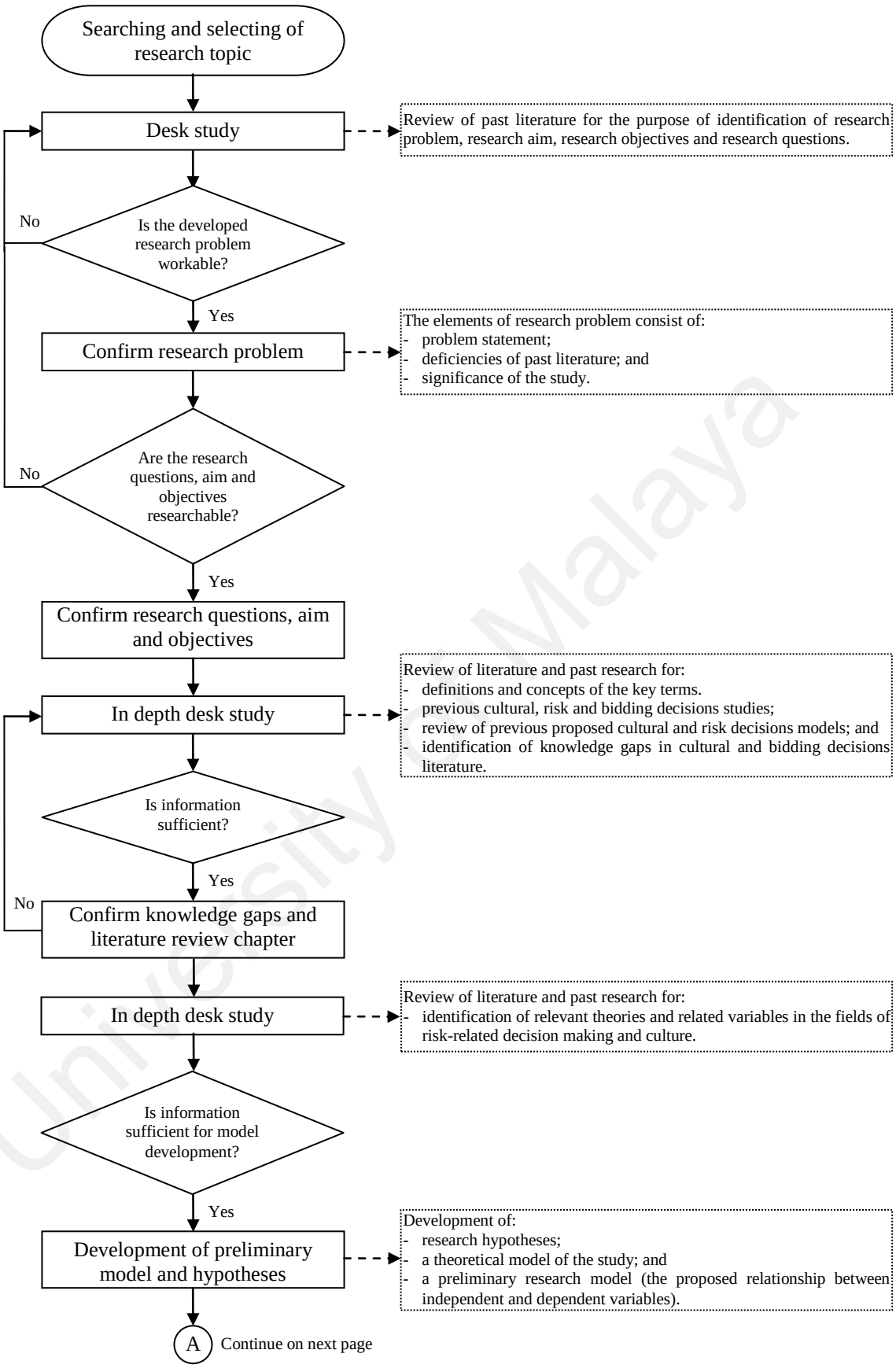


Figure 4.3: Research design and data analysis of the study

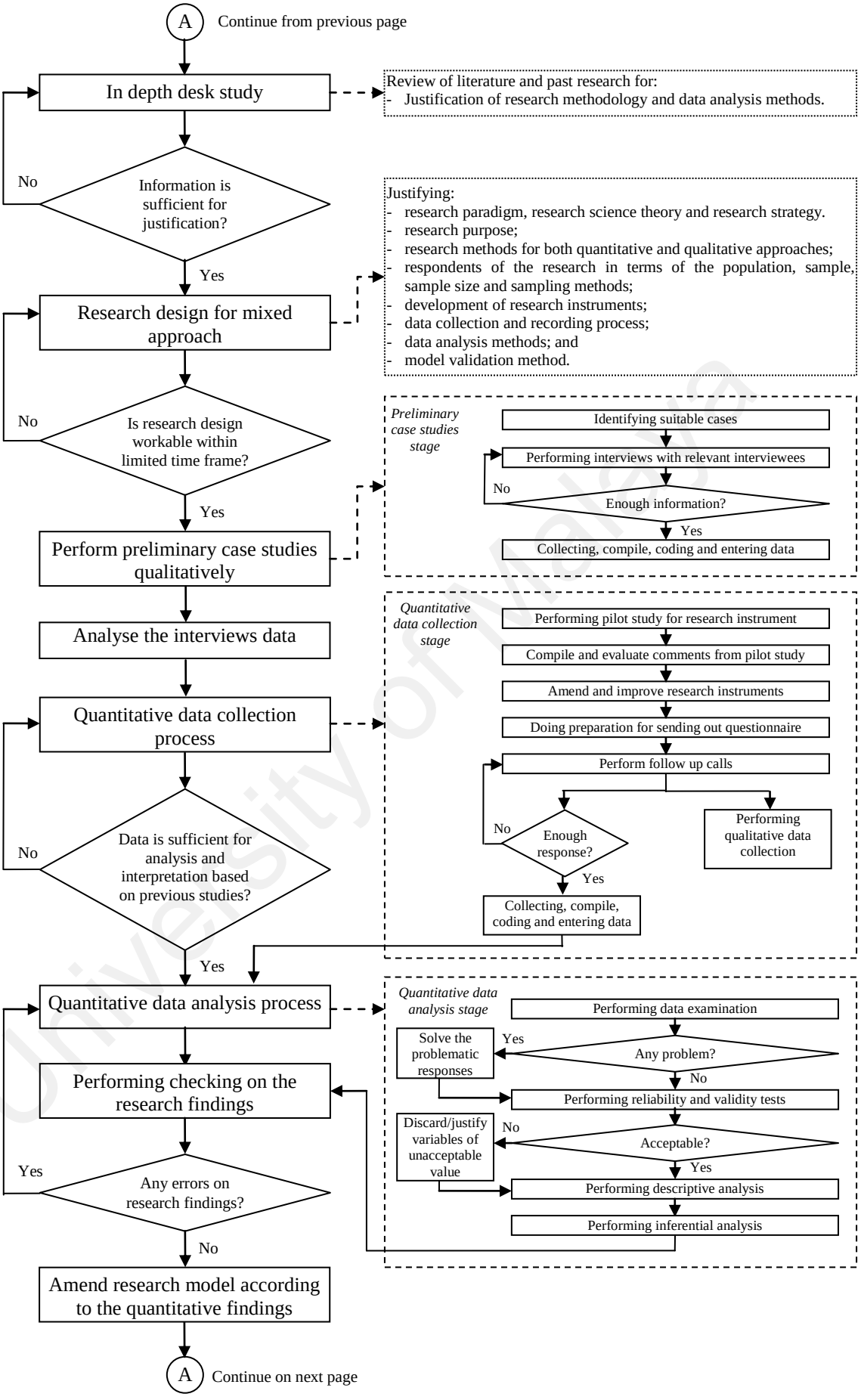


Figure 4.3, continued: Research design and data analysis of the study

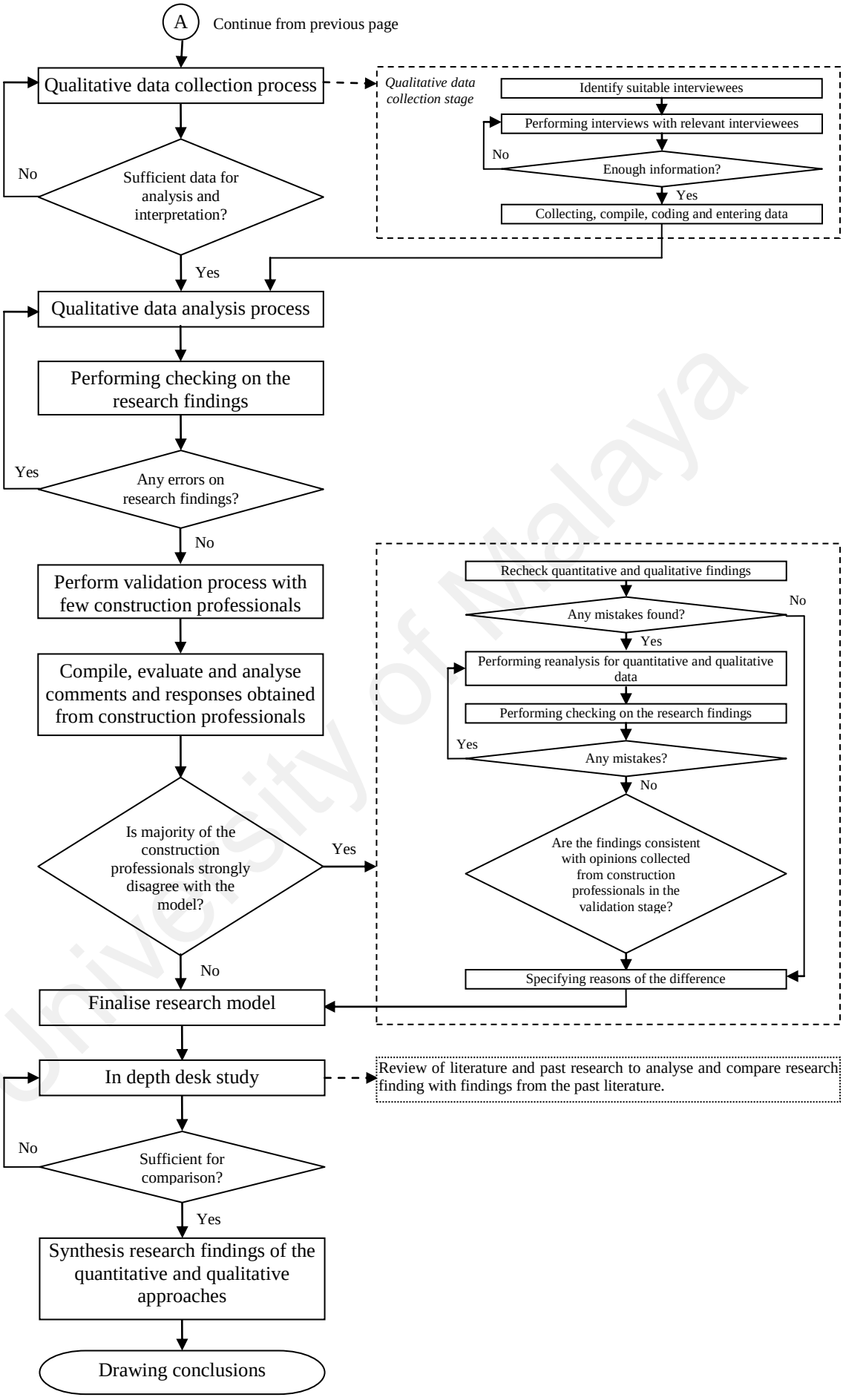


Figure 4.3, continued: Research design and data analysis of the study

4.4.1 The framework of research problem

The framework of the research problem in this study included three (3) major components, namely, problem statement, deficiencies of past studies and the significance of the study (as discussed in Chapter 1). Based on the framework of the research problem, research questions, aim and objectives were derived in this study. Table 4.4 indicates a summary of the framework of research problem.

Table 4.4: Framework of the research problem

FRAMEWORK OF RESEARCH PROBLEM
i. Problem statement *(Sub-chapter 1.3):* - International construction is fraught with higher risks. This phenomenon makes constractors show risk aversion on international bidding decisions and some of them tend to make biased international bidding decisions. - Decisions tend to suffer deviation from rationality and it could be caused by cultural factor. - Previous studies highlighted the influence and importance of culture on decision making. - Hence, this study focus on the impact of organisational culture on international bidding decisions. ii. Deficiencies of previous studies *(Chapter 2):* - There is relative handful of studies especially in the construction management literature focus on the impact of organisational culture on international bidding decisions. - Little or none cultural model focuses on international bidding decisions in construction sector. iii. Significance of the study *(Sub-chapter 1.8):* - This study proposes an empirical OC-IBDs conceptual model that can be used as a preliminary guidance to managers on international bidding decisions.
RESEARCH AIM
- To develop a international bidding decisions model from the organisational culture perspective.
RESEARCH QUESTIONS
i. To what extent do the international contractors practise different organisational cultural dimensions in their organisations? ii. What is the maximum risk tolerance level among the international contractors in international bidding decisions in response to the political (including legal risk) and economic risks? iii. Is organisational culture a determinant on international bidding decisions in response to the political (including legal risk) and economic risks? iv. What is the relationship between organisational culture and international biddings decisions in response to the political (including legal risk) and economic risks?
RESEARCH OBJECTIVES
i. to identify organisational culture dimensions that are currently practising by the international contractors; ii. to identify the maximum risk tolerance level of the international contractors in international bidding decisions in response to political (including legal risk) and economic risks; iii. to explore empirically the relationships between organisational culture and international bidding decisions in response to political (including legal risk) and economic risks; and iv. to develop an international bidding decision model with the inclusion of organisational culture variables.

4.4.2 Research purpose of the study

Threre are three (3) common and useful types of research purposes, namely, exploration, description and explanation (Babbie, 2010; Brown & Suter, 2012). Babbie (2010) further commented that the combination of more than one purpose is common in research studies. The research purpose of this study is a combination between exploration and description to test and describe the relationship between organisational culture and international bidding decisions. Exploratory research was adopted under a few circumstances: (1) the knowledge of the research topic is relatively limited (Naoum, 2007), (2) researchers examine a new interest or new subject, (3) when a persistent phenomenon is studied, (4) researchers intend to satisfy their curiosity and desire for better understanding of a research topic, (5) to investigate relationship among two or more variables, (6) to test the feasibility of performing an extensive study on a research topic, (7) to develop methods for further study (Babbie, 2010), and (8) to gain insight into a situation and phenomenon (Sekaran, 2000).

In this regards, this study adopted exploration research: (1) as the research areas of the relationship between organisational culture and international bidding decisions are not well developed in the construction management literature (in local and international contexts) compared to other fields of management although both topics are captured considerable attention in the past decades, (2) to gauge the perceptions of the industry professionals from the management level about the significance of organisational culture on international bidding decisions, and (3) to assist the author to gain better insight and understanding about the impact of organisational culture on international bidding decisions in construction. Exploratory research formed the main part in both quantitative and qualitative approaches.

On the other hand, the aim of the descriptive research is to describe a situation, event or phenomena (Sekaran, 2000). Descriptive studies are aimed at finding out "what is," so observational and survey methods are frequently used to collect descriptive data (Borg & Gall, 1989). This type of research purpose involves “precise measurement and reporting of the characteristics of some population or phenomenon” of a study (Babbie, 2010, p. 121). Descriptive research also involves gathering data that describe events and then organises, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). In this study, description based research was adopted to gather data from an identified sample by describing the characteristics of organisational culture in international contractor organisations, their international risk tolerance level in response to the political and economic risks and the relationship between organisational culture and international bidding decisions in Malaysia. Descriptive research of this study was performed in quantitative approach.

4.4.3 Development of research model and hypotheses

Based on extant literature and adopted theories, a theoretical framework and a conceptual model were proposed and the conceptual model was tested through a mixed research strategy. Table 4.5 indicates a summary of research model and hypotheses (refer the Chapter 3 for a detailed discussion).

Table 4.5: The framework of the development of research model and hypotheses

ADOPTED THEORIES OF THE RESEARCH MODEL		
- Cultural theory, descriptive decision theory and stimulus-organism-response (SOR) theory		
EXTRACTED VARIABLES FROM PAST LITERATURE		
Independent variables		
Organisational culture dimensions:		
- Hierarchy: Power and rules orientation, ethical orientation (*formal)* - Involvement: Teamwork orientation, reward orientation - Values: Values orientation, ethical orientation (*informal)* - Goals: Goals orientation - Guanxi: Guanxi orientation - Strategy: Long- term orientation, future orientation, market orientation, marketing formalisation, uncertainty avoidance - Adaptability: Flexibility orientation, learning orientation, entrepreneurial orientation - Capability: Innovation orientation, technology orientation		
Dependant variables		
Risk tolerance level (Probability of risks and impact of cost)		
Political and legal risks:		
- Political instability - Inconsistency in government policies and regulations related to construction	- Absence of sound, effective and fair legal system - Local protectionism - Expropriation/ confiscation	- Repudiation - Bribe and corruption - Bureaucratic
Economic risk:		
- Currency crisis - Inflation crisis - Interest rate crisis - Uncertain policy towards economic liberalisation	- Unfavourable repatriation of profits - Foreign country's debt crisis - Shortage in resources supply - Fluctuation in prices	- Custom restrictions on import and export - Insurance-related issues
MAIN RESEARCH HYPOTHESES		
- International bidding decisions in response to the political (including legal risk) and economic risks are associated with hierarchy, involvement, values, goals, guanxi, strategy, adaptability and capability orientations.		

4.4.4 Quantitative approach of the study: Questionnaire survey

The following sections describe the quantitative approach of this study based on six (6) aspects, namely, justification of quantitative research method, nature of the research method (time dimension), identification of population, sample, sample size and sampling method, development of research instrument, pilot study and quantitative data analysis method.

4.4.4.1 Justification of quantitative research method

In this study, the justification for the selection of quantitative research methods are adapted based on the criteria suggested by Yin (1994) and Eliufoo (2005) as below. Table 4.6 presents the detailed for the rationale of adopting questionnaire survey as the quantitative research method of this study.

i. the natures of investigation include the type of research question posed, the extent of control an investigator has over actual behavioural events and the degree of focus on contemporary as opposed to historical events (Yin, 1994);

ii. previous empirical studies in the pertinent field (Eliufoo, 2005);

iii. advantages of the respective research method; and

iv. deficiencies of the research strategy.

Table 4.6: The rationale of adopting questionnaire survey

Criteria	Rationale
i. Nature investigation of the study	• Survey is an appropriate quantitative research method of this study as it concerned on research question of "what", focus on contemporary events, the exempt from control over behavioural events (Yin, 1994) and establish relationship between the attributes of the questionnaire (Naoum, 2007). • Besides, through a survey method, researchers are able to present numeric description of "trends, attitudes, or opinions" of the respective sample of the population (Creswell, 2003, p. 153).
ii. Previous empirical studies	• The practicality of questionnaire survey is proven and supported by few academic researches from different disciplines, for examples, the cultural and risk decisions literature in the construction and non-construction industries as tabulated in Appendix D.
iii. Nature advantages of the research method	• Among the different types of survey methods, a self-administered questionnaire was chosen as a dominant research method due to few reasons: (1) it is the most common approach for collecting data (Shamsuri, 2004); (2) it is a more cheaper and quicker survey method compared with other survey methods for local and national surveys purpose (Babbie, 2010; Naoum, 2007); (3) it allows generalisation from a sample to a finite population (Hammersley & Gomm, 2000); (4) it is not too demanding on the professionals' time (Fong & Yip, 2006); (5) it is the most common selected research method in different types of research areas; and (6) it is suitable for sensitive issues as respondents are more willing to respond controversial or deviant behaviours or attitudes through anonymous questionnaires (Babbie, 2010). Furthermore, Maloney and Federle (1990) pinpointed that questionnaire allows organisational culture of a large number of organisations to be studied in a relatively short duration.

Table 4.6, continued: The rationale of adopting questionnaire survey

Criteria	Rationale
iii. Nature advantages of the research method (continued)	• Questionnaire survey is also perceived as suitable approach in offering relatively high validity of results due to the wide geographic coverage (Frankfort-Nachmias & Nachmias, 1996; Naoum, 2007; Sekaran, 2000). Hence, questionnaire survey is able to deal with the deficiency of case study that yield narrow result (Fellows & Liu, 2008). • All these criteria demonstrate that questionnaire survey enable researchers to obtain breathe information in a relatively short time. • Delphi method is opted out in this study as it involves a number of rounds (Mullen, 2003) which are time consuming and it may reduce the response rate of the survey as the targeted respondents of this study are top management personnel. • Experimental study is not considered in this study as it focuses on the research questions of "how" and "why" and it requires control over behavioural events (Yin, 1994) by means of controlling all other factors that may affect research outcome (Creswell, 2003). Thus, experiment is ruled out in this study as it is difficult to control over the behavioural events. Moreover, experimental study may involve a longer time frame than questionnaire survey. Murray-Webster and Hillson (2008) argued that artificial laboratory setting fails to produce meaningful results compare to social enquiry method when come to testing on a large number of variables. • Although some researchers adopted experiment method to examine contractors' bid decisions (Oo et al., 2008) and contractors' risk attitudes on bidding behaviour (Han et al., 2005). However, this method is very difficult to perform in terms of controlling and capturing all other related variables as many factors affect bid decisions (Oo et al., 2008). For example, in the study by Oo et al. (2008), only a few related variables are controlled in the research and other factors like firms characteristics, types of risks and so on are not controlled in the experiment tests. Besides, it was found that respondents in the experiment method tend to provide more risk seeking answers (Oo et al., 2008).
iv. Deficiency of questionnaire survey	• Questionnaire survey also provides limitation on the achievement of objectives as there is no guarantee that the right person will complete the questionnaire (Naoum, 2007) and fails to provide depth information to the study. • Therefore, results of the study may not reflect the real fact in the local construction industry. Thus, qualitative research methods were performed to offset these drawbacks.

4.4.4.2 The nature of the quantitative research method: The time dimension

In general, there are two (2) basic types of survey design based on time horizon, namely, cross-sectional and longitudinal-based survey designs (Babbie, 2010; Sekaran, 2000). Cross-sectional survey design is defined as the collection of information or observation at one point in time whereas longitudinal study means data collection at different points in time (Babbie, 2010; Hackett, 1981).

According to Babbie (2010), exploratory and descriptive studies are often cross-sectional based study. Although longitudinal studies allow researchers to collect information and describe a phenomenon over time, this time dimension studies offer heavy time, cost and human resource issues especially on quantitative studies like large-scale survey (Babbie, 2010). Besides, Babbie highlighted an interesting point that longitudinal studies do not always allow a practical way of studying a phenomenon over time and data from cross-sectional can sometime convey processes over time based on the basis of simple logic. In this regards, the survey design of the quantitative and qualitative research strategies in this study is cross-sectional based.

4.4.4.3 Population and research sample of the study

This section covers the discussion on unit analysis, research population and sample, sample size, sampling method, sampling frame, the type of respondents and the number of respondents to be targeted in each unit analysis.

(a) Unit of analysis

Unit of analysis refers to what or whom being researched in a study (Babbie, 2010, p. 98). According to Babbie (2010), it is important in research design and it is an element/criteria that will be examined by researchers with the intention to create summary descriptions of all such units and to explain differences among the units. Typically, individual, groups, organisations, social interactions and social artifacts are the common types of units of analysis in social research. This American sociologist also highlighted that the understanding of the unit analysis of the research is critical or else the researchers may draw invalid conclusions.

Babbie (2010) further commented that there are several ways to identify unit analysis of a study, namely, conclusion that the researchers intend to draw, in the description of the sampling methods, through a discussion of the classification methods and so forth. Among all these methods, this sociologist proposed an easiest way to identify the unit analysis, that is by looking into "a statement regarding the variables under a study" (p. 104) as shown in Figure 4.4. Thus, the unit analysis of this study is contractor organisations that have involved or are involving in international construction projects.

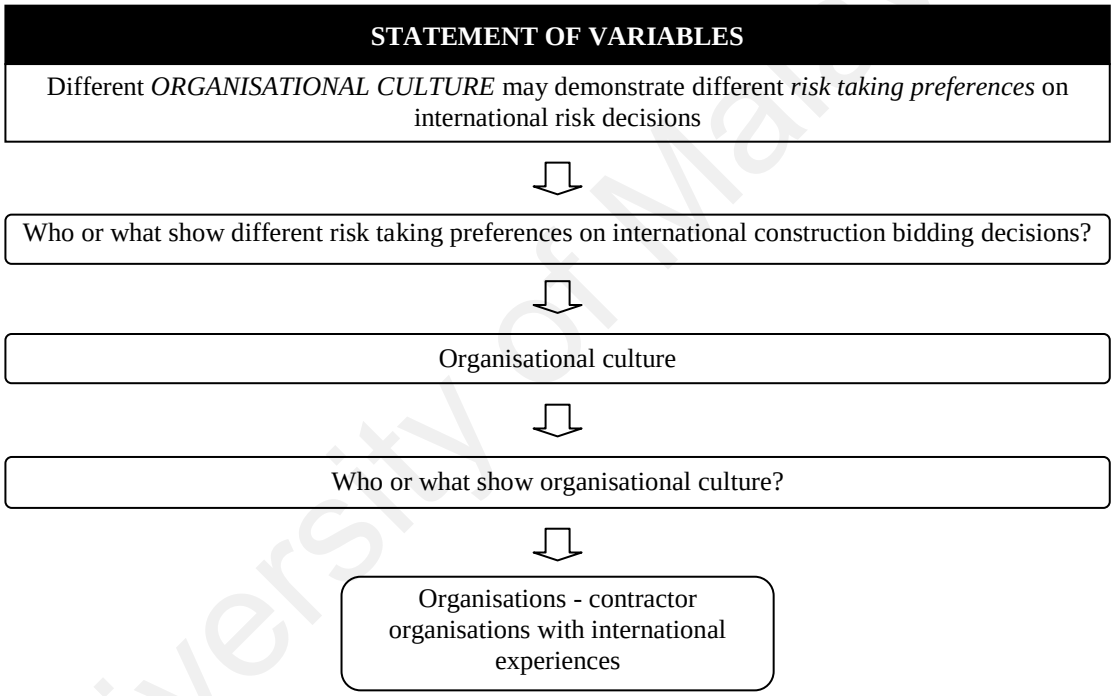


Figure 4.4: The variable statement of the unit analysis of the study

(b) Population and research sample

The unit analysis in this study is contractor organisations with international construction experiences. Population is defined as "the theoretically specified aggregation of the elements in a study" (Babbie, 2010). Hence, the population of the study is contractor

organisations that have involved or involving in international construction projects. According to the CIDB's registration requirements and regulations, there are differences in definitions among local contractors, international contractors and foreign contractors as elucidated in Table 4.7. The significant difference between international and foreign contractors is international contractors are Malaysian contractors who have international construction project experience whereas foreign contractors are contractors from other nations/countries operate a company in Malaysia and involve in construction projects that are located in Malaysia. Whilst, local contractors are contractor organisations that operate business in Malaysia. In addition, the international and global contractors from ENR database are contractor organisations from different nations/countries with international experience.

Table 4.7: Contractors categorisation in Malaysia
(Construction Industry Development Board, n.d.a)

Types of contractors	Definitions
1. Local contractors	• Companies incorporated in Malaysia which has a local equity holding of not less than seventy percent (70%). • Foreign equity from citizens of ASEAN countries are permitted but shall not exceed fifty-one per cent (51%) of the total paid up capital or accumulated capital.
2. International contractors	• Local contractors registered with CIDB which will undertake or has undertaken construction work overseas.
3. Foreign contractors	• Companies incorporated in Malaysia or in a foreign country which has a foreigners' equity holding of thirty-one percent (31%) or more.

Local contractors from CIBD are excluded from the study as they are lack of international construction project experience. Besides, to eliminate the problem of imposed etic that could affect "the uniformity in the cultural background of responses for analysis" (Koh & Low, 2008, p. 240), foreign contractors from CIDB and contractors from the ENR records are not considered in this study. The purpose of the

exclusion of these groups of contractors is to reduce the effect of cross national culture on the research findings. The same precaution was advocated and implemented by other researchers (Chan & Tse, 2003; Koh & Low, 2008) with the argument that organisational culture in different countries are different and this will significantly affect research findings. Furthermore, previous studies have shown that national culture contributes effect on different aspects of decision making (Agarwal, 1994; Dimitratos et al., 2011; Fisher & Ranasinghe, 2001; Kogut & Singh, 1988; Tjemkes et al., 2012). In addition, Berry (1999) addressed that the focus on local culture context is a common and accepted approach in the research of relationship between culture and behaviour.

In line with this, the population definition in this study is Malaysian international contractors registered under CIDB that have been involved or are involving in international construction markets. The target population of this study is international contractor organisations that provide part of or the whole spectrum of construction services in terms of the buildings and/or engineering works to the international clients as shown in Figure 4.5.

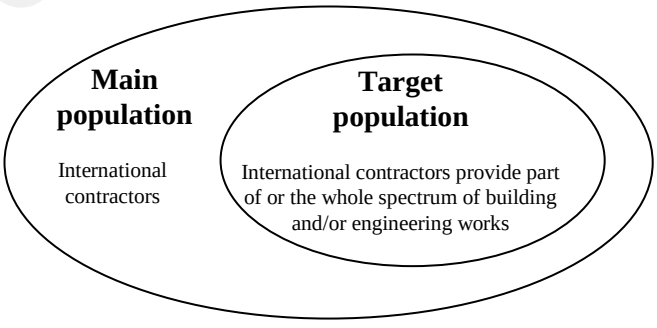


Figure 4.5: Population and research sample of the study

(c) Targeted sample size

Sample is defined as "a specimen or part of a whole (population) which is drawn" "representative of the population" (Naoum, 2007, p. 58). Sample size is critical in research due to the constraint of time, cost and human resources (Babbie, 2010). This is because it is impractical to focus, send a survey and collect data from a big population such as population of more hundred thousand. Hence, size of sampling is critical in making a research survey possible to be completed within the stipulated time frame and the limited cost and human resource. According to Israel (1992), there are four (4) types of methods to determine the sample size of a population. These are utilising a census for small population, refer to a published sample size table, using the same sample size as previous similar study and using formulas as a guide to calculate sample size of the respective population. Nonetheless, Israel highlighted that these methods are suitable to be used for simple random sampling. In this section, all approaches are discussed and compared.

Based on the database that was obtained from the International Unit of CIDB, the total population of international contractors in Malaysia is less than 100, that is 90 numbers which is relatively small. As addressed by Israel (1992), a wise method to deal with small population (200 and below) is to take the entire population as the sample size. This census method was applied on the previous studies (for examples, Coffey, 2003; Coffey & Willar, 2010; Koh & Low, 2008; Zarkada-Fraser & Fraser, 2002) with relatively small population. This is because taking the entire population will reduce the sampling error and the findings of the study will be more likely to represent the entire population. Besides, this method is more workable in small population study as researchers have no or less issues of the cost of survey and human resources.

Furthermore, it is believed that the smaller the sample, the greater the error of the research findings (Black, 2002).

In terms of the existing published sample size table, there are plenty of published sample size table proposed by previous literature. The sample size table developed by Krejcie and Morgan (as cited by Sekaran, 2000, p. 295) is one of the popular sample size tables. According to the Krejcie and Morgans' sample size table, a suitable sample size for population of 90 is 73.

By comparing with previous studies, it was discovered that the total sample drawn out by previous studies was varied ranging from 1 to 4000 and above. Appendix E presents the sample size of the past pertinent studies. According to Israel (1992), researchers tend to expose themselves to the risk of errors if the same sample size is taken as previous studies due to the reason that there is lack of enough information to validate the proper procedure of determining the sample size of past studies. Nonetheless, the sample sizes that were taken by previous research is used as a sampling size decision guideline in this study. It can be noticed that big sample size was taken by past studies in the event of large population for the purpose to reduce the change of low respose rate and to represent the large population which can affect the research results. In this regards, taking the whole population as the sample size for the studies with small population is consider acceptable and reasonable.

On the other hand, many formulas are developed to assist researchers to determine an appropriate size of sample with different consideration criteria. Among all the sample size formulas, Yamane's (1967, p. 886) and Kish (1995) formulas are utilised in this study as they are the more simplified and user friendly formulas as shown in Table 4.8.

Furthermore, Kish's (1995) formula has been used by some studies (Ali, Al-Sulaihi, & Al-Gahtani, 2013) with small population. Although 95% confidence level is the most commonly assumed confidence (Ankrah, 2007), it is critical to obtain a balance among the precision level, the available resource and the usefulness of the research finding (Maisel & Persell, 1996). Hence, this study follows Ankrah's (2007) method by considering the sample size at 90% and 95% confidence levels as indicated in Table 4.8. The 90% confidence level is selected as it is the maximum standard error used in the research field (Ali et al., 2013). Other formulas such as Cochran's (1963) formula is not considered in this study as this formula is more complicated and is not suitable for small population although there is an additional adjustion formula to reduce the sample size in the case of small population.

Table 4.8: Assumptions of the sample size

Sample size formulas	**Yamane (1967)**	**Kish (1995)**
Formula	$n = \frac{N}{1 + Ne^2}$ where, n = sample size N = population size e = level of precision	$n = \frac{n'}{[1 + (n'/N)]}$ $n' = \frac{(pxq)}{V^2}$ where, n = sample size n' = first estimate of sample size N = population size p = the proportion of the characteristic being measured in the population q = 1-p V = standard error of sampling population
Case 1: 90% confidence level, p=0.5, q=0.5, V and e = 0.1	47.368 ≈ 47	19.565 ≈ 20
Case 2: 95% confidence level, p=0.5, q=0.5, V and e = 0.05	73.469 ≈ 73	47.368 ≈ 47

Furthermore, Israel (1992) concluded that researchers usually add 10 to 30 percent to the sample size to take account into the non-response issue. In this regards, the sample

size for the published sample size table and formula are adjusted with an increment of 20 percent as indicated as below. Table 4.9 provides a summary of the suggested (n) and adjusted sample size (n_o) for each sample size determination method. Based on Table 4.9, it is decided that taking all the population as the sample size is the most appropriate for this study.

Table 4.9: Suggested sample size for each sample size determination method

Sample size methods	Suggested sample size, n	Adjusted sample size, n_o
A census for small population	90	90
Based on previous similar study	90	90
Published sample size table	73	88
Sample size formulas by: Yamane (1967) Kish (1995)	 47 - 73 20 - 47	 56 – 88 24 - 56

(d) Sampling methods

Sampling method referes to the method of selecting a portion of the population (sample) to be studied in a research (Babbie, 2010). There are two (2) common types of sampling methods in social science research, namely random sampling and non-random sampling (Shamsuri, 2004). The examples of random sampling methods are simple random sampling, systematic random sampling, stratified random sampling and cluster random sampling. Convenience non-random sampling and purposive non-random sampling are classified as non-random sampling methods (Shamsuri, 2004). As the whole population was taken as the targeted sample size in this research, no sampling method is required to be selected and justified in this section.

(e) Sampling frame

Sampling frame refers to a "list or quasi list of units composing a population from which a sample is selected … include all (or nearly all) members of the population." (Babbie, 2010, p. 208). The sampling frame of this study included database was obtained from the International Unit of CIDB and the website of CIDB (http://www.cidb.gov.my). The sample of the contractor firms was drawn from CIDB as it is the Malaysian government agency in promoting the development, improvement and expansion of the construction industry in which one of its responsibilities is the accreditation and registration of contractors.

(f) The type of respondents of the study

According to Geertz (1973), culture studies should be focused on the native's perspective. Based on this point of view, Khan et al. (2010) argued that it is appropriate organisational culture to be studied from the perspective of members of an organisation. According to Schein (1990, p. 111), "cultural origins and dynamics can sometimes be observed only in the power centers where elements of the culture are created and changed by founders, leaders, and powerful persons". For example, Koh and Low (2008) measured organisational culture by solicitating data from managerial, professional and executive personnel. Kivrak et al. (2009) focused on managerial personnel about the impact of culture on knowledge management practice. The main target groups in Coffey's (2010) study were senior executives, middle managers and contract managers.

In contrast, organisational culture were measured and evaluated by organisational members at management level and/or non-management level in some existing literature. For instances, Ankrah and Langford (2005), Igo and Skitmore (2006), Liu et al. (2006), Lorenz and Marosszeky (2007), Maloney and Federle (1993), Oney-Yazici et al. (2007) and Zhang and Liu (2006) evaluated organisational culture from different levels of organisational members, those are managerial and non-managerial personnel.

In terms of the organisational international risk decisions, it is well-known that organisational decisions are made by managers (Brickley et al., 2002). Howard (1988) measured and assessed the risk preferences of organisations in accordance with the organisations' top management risk preference. Based on the research area of this study, managerial personnel are targeted as the respondents. This is because questions about organisational cultural and organisational risk tolerance level on bidding stage are related to the organisational strategic policy in which managerial personnel are the most suitable and appropriate people in this study. In addition, managerial personnel are respondents with sufficient seniority level or higher post who are able to provide more reliable information than people with less seniority level (Phillips, 1981). This is because managers especially those with sufficient seniority are better informed with companies' upstream and downstream conditions (Frohlich & Westbrook, 2002). For example, the top management personnel are those who understand better the general organisational culture of the entire organisation and organisational risk tolerance level.

Furthermore, people with enough experience and high management level are critical criteria in determining the usefulness of the survey results in the case of low response rate of (<10%) especially in the questionnaire survey (Wang et al., 2004). Besides, these people are having enough experience in their designation and their respective field and

they are those who run and manage the organisation and make decisions on behalf of their organisation. Nonetheless, in certain circumstance, the management in an organisation is more positive about the organisation than lower level of organisation's members (Yankelovich Clancy Shulman & Hay Group, 1986). However, this issue is only applicable to some people.

(g) The number of respondents to be targeted in each organisation

In term of the number of targeted respondents in each organisation, more than one respondent was invited to participate in the survey. The questionnaire was sent to about three (3) to eight (8) managerial personnel of each organisation to increase the response rate and to improve the reliability of the response. This method has been practiced by many previous cultural studies where more than one respondent in an organisation were took part in the research (Ankrah & Langford, 2005; Coffey, 2010; Giritli et al., 2013; Igo & Skitmore, 2006; Koh & Low, 2008; Liu et al., 2006; Maloney & Federle, 1993; Oney-Yazıcı et al., 2007; Zhang & Liu, 2006).

For instance, Ankrah and Langford (2005) sent five (5) questionnaires to each organisation; Zhang and Liu (2006) requested twenty (20) respondents from each organisation; and Lorenz and Marosszeky (2007) targeted a mimimun of six (6) employees from different department in each organisation. Nonetheless, some researchers like Oo et al. (2008) limited to one (1) decision maker from each firm although there are more than one decision makers involved in decision making in practice. It is argued that the accuracy of the response from one (1) decision maker that reflect the actual condition in the organisation is reduced compared to the average mean from more than one decision maker.

4.4.4.4 The development of questionnaire survey

The following sub-sections cover the discussion on the design of a survey instrument, contextual variables, reliability and validity of the survey instrument, and the administration of the survey instrument.

(a) Design of the instrument

Although some researchers (Cherry, 2000; Kimbrough & Componation, 2009; Quinn & Spreitzer, 1991; Zhang, 2004) advocated the use of existing culture measurement instrument to assess and identify cultural dimensions in cultural research, a new survey instrument was developed in this study instead of adopting previous measurement instrument. This is because the assessment of cultural dimensions instrument is appropriate to be adopted on the similar research area as what have been done by previous research. Two (2) sets of questionnaire were developed in this study.

The first set of questionnaire was designed and filled in by managerial personnel. The purpose of this questionnaire is to gauge the managerial perceptions about their organisations' international performance, intention to bid for oversea projects in future, organisational culture and organisational maksimum risk tolerance level in response to the political and economic risks. The first set of questionnaire survey (Set A) was designed and limited to five (5) pages and divided into four (4) sections with all closed-ended questions as shown in Appendix F. Each section in the first set of questionnaire survey (Set A) was designed for a specific purpose. Section A sought to obtain a general background of the respondents. Section B was designed to seek for the information about organisational characterisicts. Section C was designed to determine the

organisational culture of the company. Section D was developed to gain information about the firm's maximum risk acceptable level on international bidding decisions in response to political (including economic risk) and economic risks based on two (2) major aspects, namely "cost impact" and "probability of occurrence". In the Section D, respondents were asked to answer the questions based on the perspective from their organisational. This is because organisational risk taking behaviour should be referred to risk preference of organisations but not risk preference of individual decision-maker (Sitkin & Pablo, 1992). Respondents were requested to tick (√) in an appropriate box for each multiple choice formatted question. Closed-ended question was adopted in the setting up of the survey questions as this type of question format is easy to ask and quick to answer by respondents (Frankfort-Nachmias & Nachmias, 1996).

The second set of questionnaire (Set B) was developed and filled in by either managerial personnel, company secretary or other related party. The purpose of this set of questionnaire is to obtain the general information about the companies' profile in terms of the firm's type, firm age, total numbers of permanenet employees, total assets of the firm, total turnover (including domestic and oversea turnovers), the year that the firm started to get involved in oversea projects, firm's international experience, the name of foreign countries that the firm has involved or is involving, total numbers of completed overseas projects, total numbers on-going overseas projects, the maximum amount of overseas project value that the firm has been involved, firm's intenational project portfolio, firm's listing status and firm's listing age. This set of survey instrument was constrained into two (2) pages and consisted of seventeen (17) questions in which three (3) closed-ended questions and twelve (12) open-ended questions as shown in Appendix G. Respondents were requested to tick (√) in an appropriate box for the closed-ended questions and fill in the blank for the open-ended questions.

In designing the questionnaire surveys, questions that were under the same response category were grouped together rather than separate them with the purpose to simplify the questionnaire. Furthermore, questions and answers were arranged in the vertical alignment and right sided to ensure that the respondents are easiest to read and answer. To minimise the limitation of closed-ended questions in which bias may occur when the respondents are requested to choose the answers from the given alternatives (Naoum, 2007), a choice of an option "others (please specify)" was provided in some questions.

Two (2) types of measurement scale were used in measuring the closed-ended questions, namely nominal and interval scales. Table 4.10 illustrates the types of measurement scale levels in each section of the survey instrument. A 5-point likert scale was used in the development of instrument. This is because the 5-point scale is the most common and simple scale point than others (Dawes, 2008). Dawes (2008) found that 5- and 7-point scales produce the same mean value but higher mean value than 10-point scale. Besides, these three types of scale points have very little difference on the other data characteristics, such as the variation on mean, skewness and kurtosis. Dawes further highlighted that the use of 5- and 7-point scales can improve the scale reliability and validity as compared to lower scale points and more finely graded scale.

Different types of 5-point-scale has been used by previous cultural studies for the purpose of scaling response (for examples, Abdul-Rashid, Sambasivan, & Johari, 2003; Akiner & Tijhuis, 2007; Ankrah & Langford, 2005; Ayoun & Moreo, 2008; Fung et al., 2005; Giritli et al., 2013; Hofstede et al., 1990; Liu & Low, 2011; Oney-Yazıcı et al., 2007; Rees-Caldwell & Pinnington, 2013; Wong et al., 2007). Consistent with previous literature (for examples, Ankrah & Langford, 2005; Oney-Yazıcı et al., 2007), the 5-point Likert scale of (1) strongly disagree, (2) disagree, (3) neither agree nor disagree,

(4) agree and (5) strongly agree was used in the survey to measure the organisational culture of the organisations. This 5-point agreement scale is considered symmetric and equidistant as interval scale and can be used in Partial Least Square Structural Equation Modeling (PLS-SEM) (Hair, Hult, Ringle, & Sarstedt, 2013).

On the other hand, organisational international risk tolerance level in terms of its probability and impact of risk was measured based on the 5-point Likert scale of (1) very low (<10%), (2) low (10-25%), (3) medium (>25-50%), (4) high (>50-75%) and (5) very high (>75%). This type of 5-point Likert scale was adopted from Young and LaPlace (2005). This type of scale was used by Ling and Lim (2007) whereby the probability and impact of risk were measured in 3-point Likert scale as "low", "medium" and "high". In general, there is no standardised and objective method to classify risk with different degree of severity and probability (Cox, 2008). Hence, there is no right or wrong way to measure organisational risk preference decisions.

Table 4.10: Measurement scale level in each section of the survey instrument

Sections in the instrucment	Types of questions	Measurement levels
Survey instrument: Set A		
i. Section A: Respondent background Closed-ended questions:	Multiple choice questions	Nominal scale
ii. Section B: Organisational characteristics Closed-ended questions:	Matrix of choice Multiple choice questions	Interval scale (5-point likert scale) Nominal scale
iii. Section C: Organisational culture Closed-ended questions:	Matrix of choice	Interval scale (5-point likert scale)
iv. Section D: Organisation's risk tolerance level on international bidding Closed-ended questions:	Matrix of choice	Interval scale (5-point likert scale)

Table 4.10, continued: Measurement scale level in each section of the survey instrument

Sections in the instrucment	Types of questions	Measurement levels
Survey instrument: Set B		
i. Firms' profile Closed-ended questions: Open-ended questions:	 Multiple choice questions Text box	 Nominal scale -

(b) Contextual variables – Organisational culture and international risk

To enhance the reliability of the survey measurement, each cultural dimension consists of more than one question/item (Ankrah & Langford, 2005). This method is widely practiced in cultural research (for examples, Beugelsdijk, Koen, & Noorderhaven, 2009; Cunha & Cooper, 2002; Hofstede, 2001; Khan et al., 2010; Liu, 1999; Van Muijen et al., 1999; Wong et al., 2013). This multi-item approach was also adopted in the international risks variables in measuring the international risk tolerance level in bidding decisions.

The samples of the questionnaires in the past cultural and international risk decisions studies were referred in developing the measurement items of organisational culture and international risks variables. The items of organisational culture and international risks variables were selected based on the three (3) criteria specified by Cherry (2000) and Nunnally's (1994), namely, (a) have been used in the similar previous studies either in the construction field or other disciplines; (b) the reliability and validity are confirmed in journal papers or books; (Cherry, 2000) and (c) the reliability coefficient is equal to 0.7 or above (Nunnally & Bernstein, 1994). The reliability of the adopted cultural items in the past studies are shown in Appendix I. Whilst, the items of the political and economic risks were extracted from previous studies as indicated in Appendix J.

(c) Validity and reliability of the survey instrument

Validity and reliability are critical elements in social science research especially in the study of more complex construct (Rubio, Berg-Weger, Tebb, Lee, & Rauch, 2003). The validity and reliability of the survey instrument are discussed as below:

i. Validity of the survey instrument

Validity is a critical element in the construction of survey instrument to improve research findings as it assures the success of a research in the achievement of research aim and objectives (Hussin, Wang, & Hipnie, 2012). In general, there are three (3) types of validity in social science research viz. content validity, criterion validity and construct validity (Rubio et al., 2003).

Content validity

Content validity is concerned about "the extent to which the items on a measure assess the same content or how well the content material was sampled in the measure…can be characterised as face validity or logical validity…Face validity indicates that the measure appears to be valid, "on its face." Logical validity indicates a more rigorous process, such as using a panel of experts to evaluate the content validity of a measure" (Rubio et al., 2003, p. 94). Hence, Rubio and his fellows asserted that researchers can obtain invaluable information through content validity.

According to Rubio et al. (2003), through a content validity, more resources are required initially but fewer resouces in the subsequent revisions. For example,

reseachers do not need to perform more than one pilot study to evaluate the instrument and no data are required to be analysed to improve the instrument at the initial stage. Hence, the revised instrument in a content validity can be used in a pilot study. Nonetheless, there is no rigorous way to measure and perform content analysis (Bohmstedt as cited in Dunn, Seaker, & Waller, 1994, p. 157). In addition, content validity is subjective in nature (Fernandez-Muniz, Montes-Peon, & Vazquez-Ordas, 2007; Love & Irani, 2004) as it is subjectively judged by the researcher and experts' opinions in which results from the content validity may prone to bias (Rubio et al., 2003). In line with this, it cannot be tested using statistical tools (Isik, Arditi, Dikmen, & Birgonul, 2009; Ozorhon, Arditi, Dikmen, & Birgonul, 2007).

Based on the extant survey-based literature, content validity of the instrument can be established based on four (4) different manners, namely, (a) an extensive review of past related literature (Ahuja, Yang, & Shankar, 2009; Behm, 2005; Braunscheidel & Suresh, 2009; Isik et al., 2009; Love & Irani, 2004; Ozorhon et al., 2007); (b) the use of multi-item scale for research variables (Chang, Yen, Chiang, & Parolia, 2013; Dunn et al., 1994; Narver & Slater, 1990); (c) experts' consultation either from academic field or industry or both (Ahuja et al., 2009; Behm, 2005; Braunscheidel & Suresh, 2009; Chang et al., 2013); (d) pilot study/pre-test (Ahuja et al., 2009; Ayoun & Moreo, 2008; Isik et al., 2009; Jin, Doloi, & Gao, 2007; Love & Irani, 2004; Narver & Slater, 1990; Ozorhon et al., 2007).

In consistent with previous survey-based research, an extensive review of past related literature was performed in which relevant research variables, measurement items of each variable and measurement scale were reviewed, adopted and modified in the study. In relation to multi-item scale, cultural and international risks (political and economic

risks) variables consist of more than one constructs. Furthermore, each cultural and international risks (political and economic risks) construct composed of more than one item in the development of the survey instrument as discussed in the previous section. The search of previous literature is important in content validity as it guides researchers on how to measure a research variable with reference to the concepts used in past studies (Dunn et al., 1994). Besides, the survey instrument was developed on the basis of three (3) theories, those are cultural theory, descriptive decision theory and SOR theory.

Next, a two-round of experts consultation was performed in this study. Generally, there is no standard rule applies on the appropriate number of experts in a content validity. Nonetheless, Rubio et al. (2003) highlighted that the selection of experts in content validity is critical in providing useful and constructive information to the research and thus the panel of experts should be included content experts and lay experts with a minimum of three (3) to ten (10) experts in each group. Content experts are those with publication or working experience in the related field; and lay experts are those for whom the research area is the most salient in which they will address issues on phrasing, ambiguous terms and recommendation of other important items (Rubio et al., 2003). In line with this, Lynn (as cited in Rubio et al., 2003, p. 96) suggested a minimum of three (3) experts. Others like Gable and Wolf (as cited in Rubio et al., 2003, p. 96) recommend a range of two (2) to twenty (20) expets.

With reference to the past literature, the number of experts in a content validity was within the range of 3 to 10 experts or more. For examples, Narver and Slater (1990) performed a two-round content validity in which three academicians were involved in each round; six senior students were contributed in the Silva, Lima and Baptistas'

(2004) study; four (4) academic experts were involved in Behm's (2005) study; ten (10) experts (four academic experts and six industry practitioners) were partiticpated in Braunscheidel and Sureshs' (2009) study; and three (3) experts (one academic and two practitioners) in the research by Chang et al. (2013). In this regards, the number of experts in the content validity of this study was at a minimum of three (3) experts which was fall within the acceptable range and consistent with previous studies.

The two-round expert consultation session was conducted from the end of December 2012 until mid of February 2013. Upon the completion of the first draft of survey instruments (Set A and Set B), the survey instruments were reviewed by six lay experts that composed of four (4) academicians at senior and professor levels through face to face discussions and two (2) industry professionals at managerial level. This review was focused on the issues of the importance of items/elements in the specific subject area (based on the construction professionals' points of views), the phrasing of each statement, and ambiguous terms. Thereafter, the first draft of the survey instruments (Set A and Set B) were amended accordingly based on the comments from the academicians and industry practitioners in terms of the reword some unclear and ambiguous statements, the change of measurement scale (from 7-point likert scale to 5-point likert scale), modification of instrument layout and the cancellation of some redundant, superfluous and repeated items (items with the same meaning).

After that, a second review was performed on the second draft of the survey instrument (Set A). The purpose of the second review is to perform a content validity assessment on the Set A survey instrument. Set B survey instrument was excluded in the second review as this instrument was about the general profile of the companies. In this second round of review, the Set A survey instrument was assessed by another three (3) content

experts in the academic field through web survey. These experts were thoese at high seniority level in the academic field (such as professors and senior lecturer) and having sufficient knowledge and experience in the fields of cultural and/or international risk decisions in terms of the teaching and supervising experience and publication background on the cultural and/or international risk decisions articles in prominent academic journals.

The academic experts were asked to evaluate the relevancy of the items in each cultural dimensions and international risk variables including their opinions on any omissions, addition or inappropriate items. Based on the experts' opinions, the questionnaire was further refined in which some ambiguous statements were reworded or a short explanation statements were provided and some unimportant items were cancelled (for example, the exclusion of cultural and social risks from this study due to their insigficance in international bidding decisions compared to political and economic risks).

Thereafter, a pilot study was administered with few industry practitioners at managerial level and one (1) academician (Isik et al., 2009; Ozorhon et al., 2007). There is no general accepted rule on the number of respondents in a pilot study in the social science research. Nonetheless, questionnaire has to be piloted on a small number of respondents that would criticise the whole questionnaire from every aspect, suggest ways for improvement through deletions, additions, modifications and/or amendments (Shamsuri, 2004). Based on the previous studies, the numbers of respondents in a pilot study is ranging from five (5) and more. For examples, Zhang (2004) selected five (5) organisations in their pilot study; Rees-Caldwell and Pinnington (2013) and Narver and Slater (1990) invited six (6) managers; Zu, Robbins and Fredendall (2010) selected

seven (7) managers as their pilot study's respondents; Lai and Lee (2007) invited five (5) doctoral students and three (3) professors to perform their pre-testing; Loosemore and Muslmani (1999) chose eight (8) respondents in their pilot study; and Love and Irani (2004) involved twenty-five (25) organisations in their pilot study. Yet, the number of respondents was not specifically highlighted in some journal articles in cultural field (for examples, Ayoun & Moreo, 2008; Beugelsdijk et al., 2009; Naor, Linderman, & Schroeder, 2010; Wong et al., 2007).

Generally, pilot study is perceived as a way to improve the drafted questionnaire and filling in gaps (Fellows & Liu, 2008) which might influence the difficulty in data collection and data analysis. It is "a trial run for the questionnaire, which involves testing the wording of the question, identifying ambiguous questions, testing the technique that you use to collect the data, measuring the effectiveness of your standard invitation to respondents, etc" (Naoum, 2007, p. 85). Hence, pilot study is a best practice and a critical process in a research as it is not merely allow researchers to test the validity, reliability and acceptability of the developed instrument but also the feasibility of the research process for researchers to assess the practicality of their proposed research design especially the issue of response rate (Van Teijlingen, Rennie, Hundley, & Graham, 2001). Thus, Van Teijlingen and his research fellows highlighted that pilot study brings a full range of benefits to researchers (as indicated in page 293). Yet, some researchers (Shamsuri, 2004) addressed that it is not a compulsory process in research.

The purpose of the pretest in this study was to perform a final review and test on the refined instruments which were refined based on the comments and recommendations from the experts. The pilot study was conducted either in the semi-structured face-to-

face interviews, postal survey or electronice survey based on the preference and convenient of the respondents. The period of the pilot study was between the mid of February 2013 till the mid of April 2013. Respondents in the pilot study were asked to fill in the questionnaire and to answer one open-ended question. The open-ended question was "Are there any unclear, biased or sensitive questions? If so, please comment." The purpose of this open-ended question was to assure accuracy of the data in which respondents answer the questions within the scope of the research objectives.

Based on the comments specified by the respondents, further amendments were made accordingly on the draft questionnaire. The comments made by the respondents included the clarification of the meaning of some ambiguous terms such as operating system, construction services, effectively, good of society, right thing, people, expropriation, repudiation and so on, reword of some unclear statements and questions and the improvement of the questionnaire layout.

Criterion validity

Criterion validity is about the "statistically significant relationship between a measure and a criterion" (Nunnally & Bernstein as cited in Rubio et al., 2003, p. 95). However, Babbie (2010) highlighted that:

> There is no scientific answer to the question of whether a given association between two variables is significant, strong, important, interesting, or worth reporting… parametric statistics are those that make certain assumptions about the parameters describingthe population from which the sample is selected. They allow us to determine the **statistical significance** of associations. "Statistical significance" does

not imply “importance” or “significance” in any general sense. It refers simply to the likelihood that relationships observed in a sample could be attributed to sampling error alone. (p. 478).

In line with this, the statistically significant relationship between independent (organisational culture) and dependent (international risk decisions – political and economic risks) variables was achieved through the use of alpha value (Noymer, 2008). According to Noymer (2008), 0.01 (α=1%), 0.05 (α=5%) and 0.1 (α=10%) are the most common used of alpha value in practice. Tan (2005) asserted that these three (3) levels of significance are commonly practiced in the academic research for the purpose of hypothesis testing. Due to the exploratory nature of this study, a significance level of 10% was focused in this study (Hair et al., 2013).

Construct validity

The third type of validity is construct validity. Construct validity is defined as the "extent to which a set of measured variables actually represent the theoretical latent construct they are designed to measure" (Hair, Black, Babin, Anderson, & Tatham, 2006, p. 707). According to Braunscheidel and Suresh (2009), construct validity consists of three (3) sub-components, namely, content validity, convergent validity and discriminant validity. The content validity of this study was supported and achieved through a thorough literature review, the use of existing theories to explain and support the research assumption, the use of multiple-item scale, reviewed by some senior academic experts and experienced industry practitioners and pilot-testing.

Convergent validity is about the "the ability of items in a scale to converge or load together as a single construct…was assessed by examining the individual loadings of each scale item onto its latent variable…" (Braunscheidel & Suresh, 2009, p. 129). On the other hand, discriminate validity is about "the extent to which items from one construct discriminate from items representing another construct" (Braunscheidel & Suresh, 2009, p. 129). Both convergent and discriminant validity were measured in the assessment of measurement model using the analysis method of Partial Least Square Structural Equation Modeling (PLS-SEM). The detailed and the threshold values of both convergent and discriminant validity tests were discussed in further in the section 5.3.8.2 (the section of the evaluation of measurement model).

ii. Reliability of the survey instrument

Reliability is a fundamental issue in social sience research (Babbie, 2010). It is a "measure of the degree to which a set of indicators of a latent construct is internally consistent in their measurement" (Hair et al., 2006, p. 710). In other words, it refers to the degree of consistent results from the same objects (Babbie, 2010). According to Babbie (2010), one of the methods to prove and achieve reliability is through the use of established measures in the related field of previous studies.

Cronbach α coefficient is the most common test used in social science to measure reliability of the survey instrument (Bollen, 1989; Jonker & Pennink, 2010). It is a means to measure the internal consistency between multiple variables (Jonker & Pennink, 2010). Other than the use of Cronbach α coefficient (Braunscheidel & Suresh, 2009; Isik et al., 2009) to test the reliability of the survey instrument, other reliability tests such as item-to-total correlation, composite reliability index and average variance

extracted (AVE) (Braunscheidel & Suresh, 2009) were used in this study. The detailed of the reliability tests in this study was further discussed in the evaluation of measurement model. With reference to the past studies in the cultural area, reliability of the survey instrument was tested based on the use of a statiscal tool, The Statistical Package for the Social Science Version 18 (SPSS 18.0) and SmartPLS 2.0.

(d) Administration of the instrument

Questionnaire can be distributed in three (3) different common methods, namely, by post, websurvey and face-to-face interviews. The major advantages of mailed questionnaires are that one can reach large numbers of people from wide geographic areas, the respondents have time to reflect on their answers or even check information prior to responding, and the relatively low cost of administration that results from the distribution method, as well as the need for only a small staff of people and minimal facilities (Fowler, 1993). However, questionnaire by postal method usually can attain an initial response of less than 50 per cent and thus the researcher has to perform pre-notification, follow-up enquiries and provide incentives or rewards to the respondents to minise the rate of non-response (Shamsuri, 2004).

While, web survey is generally a more environmental friendly, cost effective and efficient manner in delivering and reminding respondents (Braunscheidel & Suresh, 2009; Fong & Kwok, 2009; Igo & Skitmore, 2006). However, this method tends to produce a relatively lower response rate as compare to other modes (Manfreda, Bosnjak, Berzelak, Haas, & Vehovar, 2008). In contrast, the responses are usually perfect with no questions or statements unanswered through questionnaire by one-to-one interview (Shamsuri, 2004). Hence, interviews generally can produce a better return rate than

mailed questionnaires (Fowler, 1993) and web survey but it is resource and time consuming.

As such, these three (3) methods were adopted in this study with the purposes to offset the disadvantages of one another and to coordinate the time and preference of the respondents. The questionnaire was sent and directed to the top management personnel of the organisations who is responsible for the management of organisational actitvities or involved in the organisational decision making process. The administration methods of postal questionnaire survey (Abdul-Rashid et al., 2003; Ang & Ofori, 2001; Ankrah & Langford, 2005; Ankrah et al., 2009; Coffey, 2010; Issa & Haddad, 2008; Phua, 2012), web survey (Coffey, 2010; Fong & Kwok, 2009; Igo & Skitmore, 2006; Issa & Haddad, 2008) and face-to-face interviews (Isik et al., 2009) have been used by researchers in the fields of culture and risk management in the construction industry for the purpose of data collection. The reliability and validity of the questionnaire survey administered by post (Beugelsdijk et al., 2009) or by websurvey (Braunscheidel & Suresh, 2009) can also be found in the past literature on other disciplines.

A cover letter (Appendix H) was prepared to make sure that the respondents have sufficient knowledge about the issue, objectives and scope of the study (Ayoun & Moreo, 2008; Beugelsdijk et al., 2009). Besides, anonymous assurance was highlighted in the cover letter. This is because the claim of anonymity is more likely to assure unbiased responses (Heneman, 1974). For the postal questionnaire survey, each packet of envelope was supplemented with a cover letter and a self-stamped addressed ready-strip envelope for the convenience of the respondents (Ayoun & Moreo, 2008). For the web survey, a cover letter was attached and a survey web link was provided to the respondents' personal email account or the organisations' general email account. During

the course of the interviews, the cover letter was showed to the respondents to assure that they were informed about the objectives of this survey.

To ensure a high response rate, a token of appreciation and a summary of the survey results (Beugelsdijk et al., 2009) (which was upon the request of the respondents) were sent to the respondents after the completion of the research. This approach has been done and supported by Fong and Chu (2006) to increase the survey response rate. In addition, two (2) follow up reminders were made to non-response organisations one (1) month after sending out the questionnaire to increase the response rate of the questionnaire survey. This method is critical and has been practised by previous studies (for example, Phua, 2012). Phone call reminder was chosen as this is a direct and effective means to contact with the respondents than the e-mail reminder where the respondents may ignore the reminder e-mail or having technological problem.

An additional two (2) months period were allotted to the respondents under few circumstances, namely upon the request by the respondents for an extension of time to complete the survey due to their tight working schedule, delivery errors in which some respondents do not receive the questionnaire form and the lost of questionnaire by some respondents. Ultimately, questionnaire survey were posted to all the international contractor firms, web survey was also sent to eighty (80) international contractor firms and face-to-face interviews were performed with twelve (12) international contractor firms. The questionnaire survey was performed in the nation-wide manner and administrated in May 2013 till July 2013.

4.4.4.5 Analaysis methods for quantitative data

(a) Quantitative data analysis methods

i. Data examination tests

Before applying any multivariate data analysis technique(s), it is critical for researchers to examine the data in terms of the missing data, outliers and the assessment of assumption normality (Hair et al., 2006). Missing data means values on one or more variables are leave blank and not available for analysis (Hair et al., 2006). To deal with missing data, Hair et al. (2006) proposed a four-step process of identifying and remedying missing data for researchers: (1) determine the type of missing data; (2) determine the extent of missing data; (3) diagnose the randomness of the missing data processes; and finally (4) select the imputation method.

The next data examination stage is the identification of outlier. Outlier occurs when the case(s) or variable(s) has extreme or unique value(s) from others such as "unusually high or low value on a variable, or a unique combination of values across several variables" (Hair et al., 2006, p. 73). Although outliers different from majority of the responses, Hair and his fellows highlighted that outliers can be either beneficial or problematic in a research and it is depend on the type of outliers. Outliers are beneficial as they may indicate the special characteristics of the population that could not be discovered in the normal analysis. Outliers are problematic as they could not represent the population and thus they could not be utilised for the generalisation of the population as they will affect the analysis results. There are four (4) sources of outliers and those are (1) procedural error due to error in data entry or coding; (2) an

extraordinary event with uniqueness of the observation; (3) an extraordinary event with no explanation; and (4) ordinary event with unique in their combination of variables' values (Hair et al., 2006, p. 74).

According to Hair et al. (2006), there are three (3) ways to identify outliers, namely, univariate, bivariate and multivariate. Hair and his fellow addressed that the method(s) to detect outliers is depend on the number of variables considered. Nonetheless, they encourage that researchers should use as many methods as possible to identify outliers. In this study, univariate and multivariate were used to examine the distribution of the collected data. Bivariate was excluded from this study due to few reasons. The first reason is bivariate is much more related to examination of the relationship between two (2) variables. The second reason is due to the focus on two variables relationship, this method requires a significant large amount of plots and the amount is increasing if the research consists of many variables.

Univariate detection focuses on the distribution of each variable and those cases at the outer ranges (high or low) of the distribution are outliers. The data values are converted to standard scores. For small samples (80 or less cases), cases with a standard scores of 2.5 and greater are outliers and the threshold value is increased to 4 for large sample size (Hair et al., 2006). On the other hand, multivariate detection involves more than two (2) variables compared with bivariate detection and it is best for examining a complete set of variables. This is done by Mahalanobis D^2 measure. The value of D^2/df exceeding 2.5 at conservative significance level (0.005 or 0.001) in small samples can be considered as outliers and 3 or 4 in larger samples (Hair et al., 2006).

Finally, data was examined in terms of the assumption of normality. As PLS-SEM was chosen as the main multivariate analysis test in this study which is a nonparametric statistical method that can tolerate well with non-normality data (Hair et al., 2013), the test of normality assumption was not performed and discussed in detailed. Nonetheless, Hair and his fellows highlighted that researchers should examine data distribution to assure that the data is not extremely non-normal. Among the measures of data distributions, Hair et al. (2013) suggested the use of skewness and kurtosis instead of Kolmogorov-Smirnov and Shapiro-Wilks tests as the measures of skewness and kurtosis provide more accurate information to decide whether the data are too far from being normally distributed. According to Hair et al. (2013), the acceptable values of skewness and kurtosis should be within the -1 and +1 acceptable range. However, this acceptable range is robust if a contruct consists of more than one indicator and only one or two indicators with the values of skewness and kurtosis beyond the acceptable range.

ii. Descriptive analysis

Frequency distribution, percentage distribution and mean were adopted to present the nominal and interval data in an understandable manner by providing data on the common patterns of responses. Frequency distribution in the study were presented in the forms of number of frequency, percentage, valid percentage and cumulative percentage. The measurement of central tendency in mean was used to obtain an average value of a set of organisational culture and international bidding decisions (political and economic risks) variables. An overall average score for each organisation was calculated by finding the cumulative score of all the respondents from the organisation and dividing the cumulative score by the number of respondents from a particular firm. This score

provides an indication of the cultural orientation of the organisation (Ankrah & Langford, 2005).

iii. T-Test

A one sample T-test of mean was performed on the organisational culture constructs. The purpose of the T-Test was to test whether the cultural practices are significantly practiced in the international contractor organisations. The one sample T-test was used with the same purpose in the previous studies (Aibinu & Al-Lawati, 2010; Ling, Li, Low, & Ofori, 2012). In this study, significant items ($p<0.10$, test value=3) were retained and used for the further analysis in PLS-SEM.

iv. Partial Least Square Structural Equation Modeling (PLS-SEM)

Structural equation modeling (SEM) is a second generation of multivariate statistical techniques and extension to other multivariate analysis techniques such as factor analysis, multiple regression analysis, ANOVA and so on (Hair et al., 2006). The characteristics of SEM are: (1) it combines both econometric and psychometric perspective in modeling; (2) it able to provide parameter estimates for the relationships among unobserved variables; (3) it allows maximum efficient fit between data and a structural model (Hair et al., 2006); and (4) it is a popular statistical analysis technique to examine the relationships among latent variables in social science research (Hair et al., 2013).

Generally, SEM consists of two (2) approaches, namely, covariance-based SEM and partial least squares path modeling (PLS-PM) (Hair et al., 2006). Partial least square

(PLS) is an alternative to the structural equation modeling (SEM). SEM is suitable for theory testing while PLS is used to predict the relationships among latent variables such as the relationship between organisational culture and bidding decisions in international construction in response to political and economic risks. PLS contains two (2) types, namely, PLS regression (PLS-R) and PLS to SEM (PLS path modeling – PLS-PM) (Tenenhausa, Vinzia, Chatelin, & Lauro, 2005). This study focused on the PLS-PM.

Nonetheless, PLS has the similiar function as SEM, that is to test the theories with multiple relationships of independent and dependent variables in a system of linear equations (Hair et al., 2006). However, Hair et al. (2006, p. 878) highlighted that there are some differences between PLS and SEM. The following differences make PLS suitables to be adopted as a main data analysis test in this study due to its robustness in many aspects, such as:

- PLS treats the factors as individual composite score;
- the degree of freedom does not significant in PLS;
- PLS does not depend on optimisation procedures;
- PLS models have fewer issues with statistical identification and fatal errors;
- PLS solves the solutions based on minimising the variance in endogeneous constructs but SEM attempts to reproduce observed covariance between measured items and this make SEM as a more appropriate method for theory testing and PLS is more suitable on prediction;
- PLS is much more on relationship prediction as it generates parameter estimates that maximise the explained variance like ordinary least square (OLS) multiple regression;
- PLS cannot distinguish formative and reflective indicators;
- PLS does not require a good measurement to produce results;

- PLS is less sensitive to sample size compared to SEM;
- PLS is a useful alternative to give a more reliable estimate of the relationship between the constructs if the constructs consist of one-item measure or a mix of several one- and two-items measure;
- PLS is a suitable choice if a model fails to meet the requirements of confirmatory factor analysis (CFA);
- PLS is useful to explore a large number of variables to identify sets of variables that can predict some outcome variable(s); and
- PLS is an alternative to SEM when the measures are problematic.

Other than the above characteristics, PLS is the most appropriate statistical technique in exploratory studies (Joreskog and Wold as cited by Lim et al., 2011, p. 228). Besides, it can accomodate small sample size (30-100 data sets) (Fornell & Brookstein, 1982) and it does not require a multivariate normal distribution of the data (Chin & Newsted, 1999; Fornell & Brookstein, 1982) although PLS is not as efficient as SEM in theory testing. The reliability of PLS-SEM technique in producing reliable findings has been proven by previous studies in construction field (Aibinu & Al-Lawati, 2010; Lim et al., 2011; Ling et al., 2012).

Hair et al. (2013) proposed a multistage procedure as a blueprint when conducting PLS-SEM analyses. This blueprint consists of eight (8) major stages. Based on the procedure suggested by Hair et al. (2013), a more simplified procedure for applying PLS-SEM in this study was formed as discussed below: (1) specifying the path model of structural model; (2) specifying the path model of measurement model; (3) assessing PLS-SEM results of the reflective measurement model; (4) assessing PLS-SEM results of the structural model; and (5) interpretation of results. Before applying the PLS-SEM, an

important and first stage in PLS-SEM is the developing of path model. Path model consists of two (2) elements, namely measurement model (outer model) and structural model (inner model). In this regards, the first two (2) stages of conducting PLS-SEM analyse are specifying the structural and measurement models.

Stage 1: Specifying the path model of structural model

According to Hair et al. (2006), structural model is a "set of one or more dependence relationships linking the hypothesised model's constructs" and it is "useful in representing the interrelationsip of variables between constructs" (p. 710). Two (2) issues need to be considered in developing a structural model, namely, the sequence of the constructs and the relationship between them (Hair et al., 2013). The sequence of the constructs is based on the theory, logic or experiences of the researchers. The relationship is about the direction of the arrows. In other words, it can be argued that the sequence and relationship of the constructs can be modeled in different sequences and directions based on the adopted theory and logic assumption.

Figure 4.6 indicates an example of the structural model of this study. The structural model of this study is drawn from left to right. Based on the concepts of the three (3) adopted theories and the relationship among the theories as discussed in section 3.2, it is assumed that organisational culture determines international bidding decisions in response to the political (including legal risk) and economic risks in host countries. Hence, organisational culture variables are modeled as predicting constructs (independent variables or exogenous latent variables) on the left side. It is taken as the predictor to the international bidding decision constructs. Whilst, the international risk tolerance level on political (including legal risk) and economic risks are taken as

outcome constructs (dependent variables or endogenous latent variables) on the right side which is predicted by organisational culture constructs. In addition, the research problem and the adopted theories suggest that the interest of this study is to explore the linear relationship between organisational culture and international bidding decisions in response to the risks (political and economic risks) in host countries. Hence, there is no mediation or moderation relationship in the path model. Organisational culture variables are taken as exogenous latent variables in the structural model and hence, the arrows are pointed out of them and directed to the right.

As discussed in the Chapter 3, seventeen (17) major organisational culture variables were identified which formed a total of twenty-three (23) cultural variables. To reduce the model complexity, the structural path model was modeled on the basic of parsimonious approach with the aim to test the second-order structure that contains two layers of constructs (Hair et al., 2013). This kind of parsimonious approach in the structural path model in PLS-SEM can be addressed as higher-order model or hierarchical component model (HCM). According to Falk and Miller (1992), "a parsimonious approach to theoretical specification is far more powerful than the broad application of a shotgun" (p. 24). Hair et al. (2013) highlighted that the benefits for the inclusion of an hierarchical component model in PLS-SEM are: (1) to simplify the model by reducing the number of relationships in the structural model; (2) to reduce the collinearity issue and may solve the discriminant validity problem; and (3) it can prove more valuable if the formative indicators are highly collinearity.

The hierarchy component model has two (2) major elements, namely, higher (second) order components which capture the more abstract entity, and the lower (first) order components which capture the subdimensions of the abstract entity (Hair et al., 2013).

The inclusion of hierarchical component model in the structural model is applied to the organisational culture constructs. The higher (second) order components are the eight (8) organisational culture traits which are based on the two (2) prominent organisational culture frameworks, namely, Denison Organisational Culture Model (DOCM) (Denison & Mishra, 1995) and The Competing Values Framework (CVF) (Quinn & Rohrbaugh, 1981) as discussed in detailed in Chapter 3. On the other hand, the lower (first) order components are the twenty-three (23) cultural variables extracted from the previous studies.

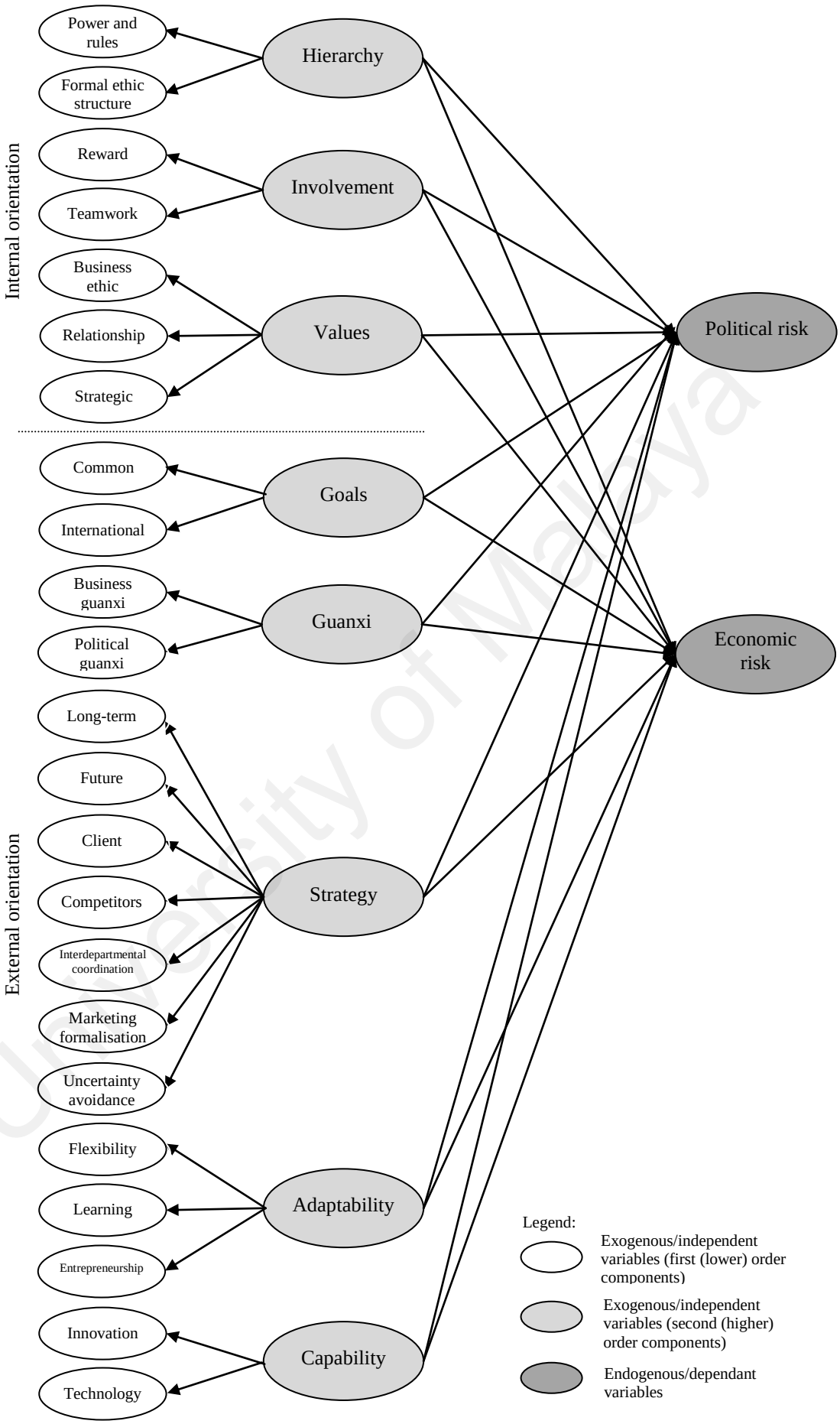


Figure 4.6: The structural model of the PLS-SEM path model

Stage 2: Specifying the path model of measurement model

Measurement model is a model "specifies the indicators for each construct" and allow "an assessment of construct validity" (Hair et al., 2006, p. 709). According to Hair et al. (2013), researchers have several ways to develop the measurement model and one of the most common method is to use the measurement approaches adopted and published in previous relevant studies for the development of measurement model. In this study, the measurement model was developed with the reference to the previous studies which was discussed in previous section of 4.4.4.4.

Figure 4.7 illustrates the measurement model of PLS-SEM of this study. As shown in Figure 4.7, each higher-order construct is represented by multiple subdimensions, whilst, each lower-order construct is measured by multiple indicators. For example, involvement trait is represented by two subdimensions, namely, reward and teamwork. Reward (Rw) has three (3) indicators and teamwork (C) has four (4) indicators. For the endogenous latent variables, political risk decision is measured by eight (8) indicators and economic risk decision is measured by ten (10) indicators. Multiple items were used to measure both exogenous and endogenous constructs as this method is more reliable and less risky from a validity perspective compared to single item measure. However, the use of multiple items may lead to the issue of nonresponse. Nonetheless, the issue of nonresponse can be reduced through follow up session. In addition, the use of several variables to measure a concept is more likely to improve the accuracy of the assumptions as it covers different aspects of a concept (Hair et al., 2013).

Measurement model can be reflective or formative and the correct way to identify a measurement model whether reflective or formative is critical in validating the research

results. Identification of formative and reflective constructs is important as a poorly defined construct will lead to the following problems (MacKenzie, Podsakoff, & Podsakoff, 2011, p. 295):

> (1) confusion about what the construct does and does not refer to, and the similarities and differences between it and other constructs that already exist in the field; (2) indicators that may either be deficient because the definition of the focal construct is not adequately fleshed out, or contaminated because the definition overlaps with other constructs that already exist in the field; and (3) invalid conclusions about relationships with other constructs that later have to be rejected because the indicators of the focal construct are not really capturing what they are intended to capture.

Furthermore, Jarvis, MacKenzie and Podsakoff (2003) addressed that misspecification of measurement model will lead to bias estimate on the measurement and structural models and this will affect the conclusion of the research. Consequently, the interpretation of the research findings will be affected in a survey as well. Although the identification of formative and reflective constructs is important in social science research, MacKenzie et al. (2011) pinpointed an interesting focal point by arguing that the judgement of a construct whether it is formative or reflective depends on how a researcher relates, defines and conceptualised the constructs as no constructs are inherently formative or reflective in nature. Hair et al. (2013) indicated the same view that constructs are not inherently reflective or formative and the determination depends on the conceptualisation of the construct and the objectives of the research. Hence, a construct can be defined as either formative or reflective in a research based on the justification of researchers.

According to the explanation from Hair et al. (2006, p. 786), a "reflective measurement theory is based on the idea that latent constructs cause the measured variables and that the error results in an inability to fully explain these measures". In contrast, "a formative measurement theory is modeled based on the assumption that the measured variablees cause the construct. The error in formative measurement models is an inability to fully explain the construct. A key assmuption is that formative constructs are not considered latent. Instead, they are viewed as indices where each indicator is a cause of the construct." In addition, Hair et al. (2013) highlighted that reflective measurement is more appropriate to be used when a researcher wants to test the theories with respect to a certain construct and formative measurement is more suitable to be used when the researcher wants to identify the most important drivers of the impact of a construct. Table 4.11 indicates a set of decision making guidelines for the determination of reflective and formative measurement models.

Table 4.11: Guidelines for the determination of reflective and formative measurement models
(adapted from Hair et al., 2013, p. 47)

Criterion	Decisions	
	Reflective	**Formative**
i. Causal priority between the indicator and the construct	From the construct to the indicators	From the indicators to the construct
ii. Is the construct a trait explaining the indicators or rather a combination of the indicators?	Trait	Combination
iii. Do the indicators represent consequences or causes of the construct?	Consequences	Causes
iv. Is it necessarily true that if the assessment of the trait changes, all items will change in a similar manner (assuming they are equally coded)?	Yes	No
v. Are the items mutually interchangeable?	Yes	No

In the hierarchical components model, there are four (4) types of combinations second-order factor models (Jarvis et al., 2003). The Type I consists of reflective indicators in

both first- and second-order factor models. The Type II model has first-order factors as formative indicators and second-order factors as reflective indicators. Whilst, the Type III has first-order factors as reflective indicators and second-order factors as formative indicators. Finally, the Type IV has formative indicators in both first- and second-order factors.

In this study, the reflective-reflective type of hierarchical components model (Type I) was adopted in the measurement model. In the reflective-reflective type of hierarchical components model, all the constructs in the higher (second) order and lower (first) components are measured by reflective indicators. Besides, the endogenous latent constructs are measured by reflective indicators. This type of measurement model is called reflective measurement model whereby the direction of the arrows goes from the construct to the indicators.

The reasons of the selection of reflective measurement model are: (1) the objective of this research is to verify the theories with respect to the impact of organisational culture on international bidding decisions in response to the political and economic risks; (2) the measures represent the manifestations of the underlying organisational culture and international risk bidding decisions constructs; (3) the indicators associated with a particular organisational culture and international risk bidding decisions constructs are correlated with each others; (4) individual items are interchangeable whereby the remove of any single item in the organisational culture and international risk bidding decisions constructs can be performed without changing the meaning of the particular construct if the construct has sufficient reliability; and (5) if the evaluation of the latent organisational culture and international risk bidding decisions change, all their indicators will change simultaneously.

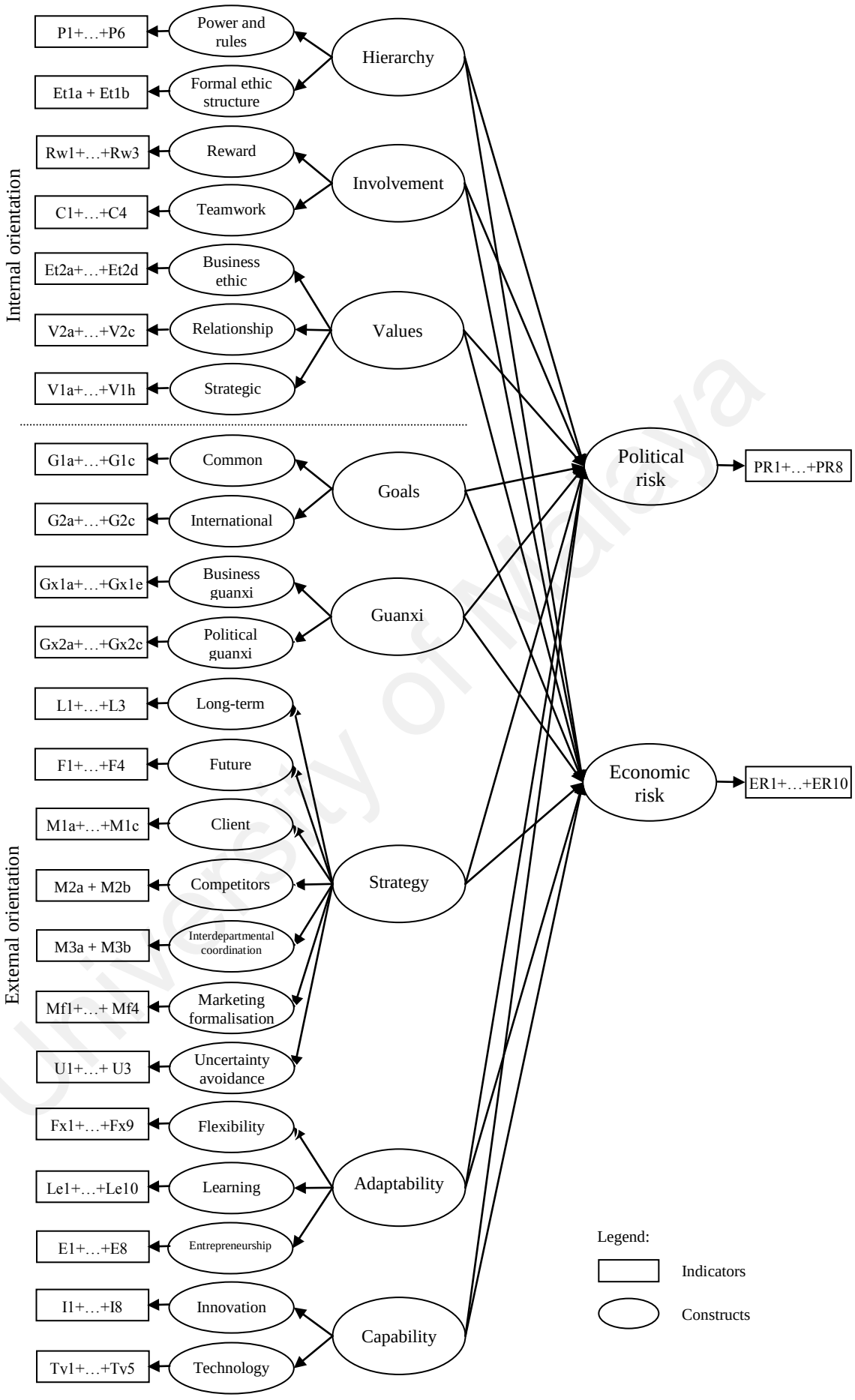


Figure 4.7: The measurement model of the PLS-SEM path model

Stage 3: Assessing PLS-SEM results of the reflective measurement model

The assessment of PLS-SEM path model began with the assessment of measurement model in terms of the reliability and validity of the construct measures (Hair et al., 2013). According to Hair et al. (2013), hierarchical component model with reflective-reflective measurement model should be tested on all relevant reliability and validity criteria with the exception for discriminant validity between higher-order constructs and lower-order constructs and between lower-order constructs. To evaluate the reflective measurement model, internal consistency reliability (item-to-total correction, Cronbach's alpha and composite reliability), convergent validity (indicator reliability and average variance extracted) and discriminant validity of lower-order constructs (Fornell-Larcker criterion and cross loading) were assessed. The purposes are to assure that the items of each latent variable truly measure their respective latent variable and all latent variables are different from others. In other words, these tests imply that whether the measurement model can be used to test the relationship among the latent independent and dependent variables. Table 4.12 shows the evaluation criteria of the reflective measurement model of this study and the acceptable threshold value of each test. Any indicator tha does not meet the threshold value of one of the evaluation criteria would be removed from its construct.

The first evaluation criterion is the internal consistency reliability. Internal consistency reliability is "a form of reliability used to jude the consistency of results across items on the same test…whether the items measuring a construct are similar in their score…" (Hair et al., 2013, p. 116). Item-to total correlation was first adopted in the evaluation of measurement model. This test has been adopted by some previous studies (Lim et al., 2011; Ling et al., 2012) in performing PLS-SEM. Cronbach's alpha is a traditional

criterion of the internal consistency and it should be considered as a conservative measure of internal consistency reliability as Cronbach's alpha assumes all indicators are equally reliable in which all indicators have equal outer loadings and it is sensitive to the number of items, whilst, composite reliability assumes all indicators have different outer loadings (Hair et al., 2013). In this regards, some researchers (Hair et al., 2013; Henseler, Ringle, & Sinkovics, 2009) suggested the use of composite reliability in PLS modelling as Cronbach's alpha tends to underestimate the internal consistency reliability of latent variables. Hence, this study used both Cronbach's alpha and composite reliability as internal consistency reliability tests.

The second evaluation criterion is convergent validity. Convergent validity indicates "the extent to which a measure correlates positively with alternative measures of the same construct" (Hair et al., 2013, p. 102). According to Hair et al. (2013), high outer loadings on a construct means that the indicators have much contribution to its construct. However, lower outer loadings is a common issue when a newly developed scales is used especially in social science research (Hulland, 1999). Hence, indicators with lower outer loadings, between 0.40-0.70 are retained for their contribution to the content validity if the deletion of the indicator does not increase the value(s) of AVE and composite reliability (Hair et al., 2013). On the other hand, AVE is equal to the communality of a construct and the higher value of AVE indicates that the construct explains more than half of the variance of its indicators (Hair et al., 2013).

The third evaluation criterion is discriminant validity. Discriminant validity is about the "extent to which a construct is truly distinct from other constructs, in terms of how much it correlates with other constructs…how much indicators represent only a single construct" by empirical standards (Hair et al., 2013, p. 115). Although cross loadings is

a method to examine discriminant validity, this method is rather liberal as it is very likely that two or more constructs show discriminant validity. The Fornell-Larcker criterion is a more conservative method to assess discriminant validity and it is not applicable for single-item measure (Hair et al., 2013). To evaluate the measurement model, the PLS-SEM algorithm was run with the following setting based on the suggestion from Hair et al. (2013):

i. Missing value: <not configured> (doubleclick the datafile for configuration)
ii. Weighting scheme: Path weighting scheme
iii. Data metric: Mean 0, Var 1
iv. Maximum iterations: 300
v. Abort criterion: 1.0E-5
vi. Initial weights: 1.0

Before analysing the reliability and validity of the measurement model, it is compulsory for the researchers to check that whether the algorithm converged or not. To do so, the number of iterations of the PLS-SEM should be lower than the 'maximum iterations' that a researcher defined in the PLS-SEM algorithm parameter settings. If this criterion does not occur, the causes may be due to the: (1) the selected abort criterion is very small; or (2) the data are abnormal due to very small sample size or an indicator has many identical values (Hair et al., 2013).

Stage 4: Assessing PLS-SEM results of the structural model

The purpose of the assessment of structural model is to determine how well the empirical data confirm the theory/concept empirically (Hair et al., 2013). There are five

(5) steps of assessing structural model, namely: (1) assess the collinearity issue; (2) assess the significance and path coefficient of the structural model relationship; (3) assess the values of R^2; (4) assess the effect sizes f^2; and (5) assess the predictive relevance Q^2 and the effect sizes q^2 (Hair et al., 2013, p. 169). In addition, Hair et al. (2013) suggested not to use the global goodness-of-fit (GoF) as this measure cannot separate valid model from invalide one. Nonetheless, Wetzels, Odekerken-Schroder and Van Oppen (2009) addressed that the global goodness-of-fit (GoF) is suitable to be used as a diagnostic measure instead of a formal test. Table 4.13 shows the evaluation criteria of the structural model and the threshold values of each test.

Collinearity occurs when two indicators are highly correlated and when more than two indicators are highly correlated, it is referred as multicollinearity (Hair et al., 2013). Hair et al. (2013) highlighted that the issue of collinearity in PLS-SEM is critical as this path modeling is based on the OLS regression in which the results of the path coefficient might be biased if the data involves a significance level of collinearity.

The next stage is the evaluation of the path coefficient and it significance level. This was performed by means of bootstrapping to compute the empirical t-value. In this study, the bootstrapping was run with 500 resamples. According to Hair et al. (2013), the choice of the significance level depends on the field of study and the research's objective in which a significance level of 10% ($\alpha = 0.1$) is suitable for the exploratory research. The test of each hypothesis was achieved by the value of path coefficient, t-value and significance level (Hair et al., 2013). The p-value for each path was calculated by using the TDIST function in the Microsoft Excel with the degree of freedom (*df*), 43.

Thereafter, it is important to evaluate the predictive accuracy and relevance of the model. The coefficient of determination (R^2) is the most common method to measure the predictive accuracy of the model (Hair et al., 2013). The significance of the R^2 value was further evaluated by F test of significance recommended by Falk and Miller (1992) and this method was adopted by Aibinu and Al-Lawati (2010). However, Chin (1998) highlighted that a single goodness of fit based on R^2 and factor loadings may still considered poor. This is because an excellent goodness of fit can still present if a model with low R^2 and/or low factor loadings (Aibinu & Al-Lawati, 2010). In addition, the value of R^2 is depend on the model complexity and research discipline (Hair et al., 2013).

In this regards, some scholars recommended the use of additional measures to strengthen the assessment of structural model. For example, Hair et al. (2013) introduced the measure of Stone-Geisser's Q^2 value (Geisser, 1974; Stone, 1974) and the effect size of f^2 and q^2 to evaluate the predictive relevance of the path model. The Q^2 value can be obtained via the blindfolding function with an assigned omission distance D value and can be calculated through cross-validated redundancy (cv-red) and cross-validated communality (cv-com) in which the value of the omission distance D must be between the number 5 and 10 and the number of observation of the study must be divided by D which is not an integer (Hair et al., 2013). On the other hand, Tenenhausa et al. (2005) suggested the use of global goodness of fit (GoF).

Stage 5: Interpretation of results

At last, results of the PLS-SEM were interpretated and discussed in detailed in Chapter 5.

Table 4.12: Evaluation criteria of the reflective measurement model

Evaluation criteria	Type of Tests	Definitions	Adopted threshold value	References
1. Internal consistency	Item-to total correlation	the item correlated with the total score excluding that item (Kline, 1993)	Item-to total correlation ≥ 0.30; or Item-to total correlation ≥ 0.20	Nunnally (1978); Pallant (2001); Kline (1993); Kline (1986)
	Cronbach's alpha	"a measure of internal consistency reliability that assumes equal indicators loadings" (Hair et al., 2013, p. 115)	Cronbach's alpha ≥ 0.70 (0.6-0.7 is acceptable in exploratory study)	Hair et al. (2006)
	Composite reliability	"a measure of internal consistency reliability…does not assume equal indicator loadings" (Hair et al., 2013, p. 115)	Composite reliability ≥ 0.708 (0.6-0.7 is acceptable in explorartory study)	Hair et al. (2013)
2. Convergent validity	Indicator reliability	"is the square of a standardised indicator's outer loading. It represents how much of the variance in an item is explained by the construct and is referred to as the variance extracted from the item" (Hair et al., 2013, pp. 115-116)	Outer loadings ≥ 0.55 (We opted 0.55 as the cut-off value in this study instead of 0.700 which is widely accepted and adopted as a lower cut-off level is appropriate if the scales of the instrument is adapted from other context and applied in the new context (Chin, 1998))	Falk and Miller (1992)
	Average variance extracted (AVE)	"the degree to which a latent construct explains the variance of its indicators" (Hair et al., 2013, p. 114)	AVE ≥ 0.5 (AVE = communality of a construct)	Hair et al. (2013)
3. Discriminant validity	Fornell-Larcker criterion	"a measure of discriminant validity that compares the square root of each construct's average variance extracted with its correlations with all other constructs in the model" (Hair et al., 2013, p. 115)	The square root of the AVE of each construct (bold numbers on the diagonal) > its correlation coefficients between the construct and other constructs (off-diagonal values); or The AVE of each construct (bold numbers on the diagonal) > squared correlations coefficients between the construct and other constructs (off-diagonal values)	Fornell and Larcker (1981); Hair et al. (2013)
	Cross loading	"an indicator's correlation with other constructs in the model" (Hair et al., 2013, p. 115)	Each indicator's outer loading on a construct > all its cross loadings with other constructs	Chin (1998); Hair et al. (2013)

Table 4.13: Evaluation criteria of the structural model

Evaluation criteria	Type of Tests	Definitions	Adopted threshold value	References
1. Collinearity	Variance inflation factor (VIF)	"quantifies the severity of collinearity among the indicators" (Hair et al., 2013, p. 165)	VIF < 5	Hair et al. (2013)
2. Structural model relationship	T-value	Test statistics value to determine the significance of a coefficient (Hair et al., 2013). The p values was obtained through the TDIST function in the Miscrosoft Excel as below: TDIST (t value; degree of freedom (*df*); tails)	t > 1.28 (α = 0.10); t > 1.65 (α = 0.05); t > 2.33 (α = 0.01) for one-tailed test	Hair et al. (2013)
	Confidence interval	"provides an estimated range of values that is likely to include an unknown population parameter" (Hair et al., 2013, p. 201)	Significance = zero does not fall into the confidence interval	Hair et al. (2013)
	Path coefficient	"are estimated path relationships for the structural model" (Hair et al., 2013, p. 202)	Standardised values between -1 and +1 (path coefficient close to +1 = strong positive relationship and almost always statistically significant; path coefficient close to -1 = strong negative relationship and almost always statistically significant)	Hair et al. (2013)
3. Predictive accuracy and relevance	Coefficient of determination (R^2 value)	"a measure of the proportion of an endogenous construct's variance that is explained by its predictor constructs" (Hair et al., 2013, p. 201)	A rough rule of thumb is 0.25 (weak), 0.50 (moderate), 0.75 (substantial). However, R^2 values of 0.20 is considered high for behavioural studies; or 0.19 (weak), 0.33 (moderate), 0.67 (substantial)	Hair et al. (2013); Chin (1998, p. 323)
	Effect sizes f^2	"a measure used to assess the relative impact of a predictor construct on an endogenous construct" (Hair et al., 2013, p. 201). The formula is as below: $f^2 = \frac{R^2_{included} - R^2_{excluded}}{1 - R^2_{included}}$	0.02 (small), 0.15 (moderate), and 0.35 (large)	Cohen (1988)

Table 4.13, continued: Evaluation criteria of the structural model

Evaluation criteria	Type of Tests	Definitions	Adopted threshold value	References
3. Predictive accuracy and relevance (continued)	Stone-Geisser's Q^2 value – cross-validated communality (cv-com)	"used to obtain Q^2 value based on the prediction of the data points by means of the underlying measurement model" (Hair et al., 2013, p. 201)	Q^2 value > zero (indicates predictive relevance); Q^2 value ≤ zero (lack of predictive relevance)	Chin (1998); Hair et al. (2013)
	Stone-Geisser's Q^2 value – cross-validated redundancy (cv-red)	"used to obtain Q^2 value based on the prediction of the data points by means of the underlying structural model and measurement model" (Hair et al., 2013, p. 201)	Q^2 value > zero (indicates predictive relevance); Q^2 value ≤ zero (lack of predictive relevance)	Chin (1998); Hair et al. (2013)
	q^2 effect size	"a measure used to assess the relative predictive relevance of a predictor construct on an endogenous construct" (Hair et al., 2013, p. 201). The formula is as below: $q^2 = \frac{Q^2_{included} - Q^2_{excluded}}{1 - Q^2_{included}}$	0.02 (small), 0.15 (moderate), and 0.35 (large)	Hair et al. (2013)
4. Global goodness-of-fit (GoF)	Global goodness-of-fit (GoF)	It is an index to validate the PLS model globally and defined "as the geometric mean of the average communality and the average R^2" (Tenenhausa et al., 2005, p. 173), $\sqrt{\left(\overline{communality}\right)^2 + \left(\overline{R^2}\right)^2}$. However, it is used purely as a diagnostic test (Wetzels et al., 2009)	0.1 (small), 0.25 (medium), and 0.36 (large)	Wetzels et al. (2009)

(b) Quantitative data analysis tools

The Statistical Package for the Social Science Version 18 (SPSS 18.0) was used as one of the statistical tool for quantitative data. This software is a popular analysis software and it has been used in many published journal articles in the fields of cultural and risk management studies (Abdul-Rashid et al., 2003; Akiner & Tijhuis, 2007; Ang & Ofori, 2001; Braunscheidel & Suresh, 2009; Chang & Lee, 2007; Fong & Kwok, 2009; Fung et al., 2005; Liu & Low, 2011; Naor et al., 2010; Rees-Caldwell & Pinnington, 2013; Wang & Abdul-Rahman, 2010; Wong et al., 2013; Zhang & Liu, 2006) in which its reliability and preference in data analysis are proved.

Researchers use the software to perform variety of test, from the simple descriptive tests to the basic reliability test to and to the complicated inferential statistical tests. In this study, SPSS 18.0 was used to perform data checking such as outlier and missing values, descriptive test such as frequency distribution in percentage, frequency and mean, reliability test such as Cronbach alpha coefficient and item-to-total correlation and inferential test such as one sample T-test. Besides, the cost of The Statistical Package for the Social Science Version 18 (SPSS 18.0) is relatively low and affordable. Moreover, this software able to retrieve data from different sources and mining them in short time. Also, the Statistical Package for the Social Sciences (SPSS) has no problems with whatsoever extensive files and it is friendly user software.

In addition, the software of SmartPLS 2.0 M3 was used to perform the partial least square path modeling to test the proposed path model. This software was chosen due to few reasons: (1) it is java-based which is independent from the user's operating system; (2) it is user-friendly in which the path model can be presented graphically by using the

"drag and drop" function, it offers a rich tool box to improve the layout of the path model and data set can be changed without having to specify the model again; (3) the output can be printed out in different format such as HTML, Excel or Latex; (4) bootstrapping and blindfolding functions are based on resampling method; (5) it can tolerate missing data; (6) it is a freeware which can be used through the website http://www.smartpls.de (Temme, Kreis, & Hildebrandt, 2010); and (7) it has been used by previous studies to identify the relationship model between independent and dependent variables (Lim et al., 2011; Ling et al., 2012). Table 4.14 indicates the analaysis tools and analysis tests for each type of quantitative data.

Table 4.14: Quantitative data analysis methods and tools

Types of information	Measurement levels	Analysis methods	Analysis tools
i. Demographic data	Nominal	Frequency distribution	SPSS 18.0
ii. Organisational characteristics	Nominal; Interval (likert scale)	Frequency distribution; Mean	SPSS 18.0
iii. Organisational cultural	Interval (likert scale)	Frequency distribution; Mean, T-Test	SPSS 18.0
iv. Organisational risk tolerance level on international bidding	Interval (likert scale)	Frequency distribution; Mean	SPSS 18.0
v. Relationship between organisational culture and organisational risk tolerance level on international bidding	Interval (likert scale)	SEM-PLS	SmartPLS 2.0 M3

4.4.5 Qualitative approach: Case studies and interviews

The following sections consists of the discussions on the qualitative case studies and interviews that were performed in this study.

4.4.5.1 Case studies – preliminary stage

(a) Justification of the qualitative research strategy

There are five (5) types of qualitative research strategies, namely case study research, ethnographic research, phenomenological research, grounded theory research and historical research (Leedy, 1997). In line with this, qualitative case studies research strategy was adopted in this study. The reasons of adopting case studies research among the five (5) identified qualitative research methods are shown in Table 4.15.

Table 4.15: Rationale of adopting case study approach

Criteria	Rationale
i. Nature investigation of the study	• Several basic reasons lead to the choice of case study and those are: (1) it aims to understand the case in depth (Punch, 1998); (2) the purpose is to shed light on a phenomenon, be it a process, event, person, or object of interest to the researcher and almost any phenomenon can be examined (Leedy, 1997); (3) the primary concern of case study is not controlling variables to measure the effects and no interest in theoretical inference or empirical generalisation (Hammersley & Gomm, 2000); (4) it is concerned about the research questions of "how" and "why", it is not to control over behavioural events and focuses on contemporary events (Yin, 1994). In addition, Wang and Chou (2003, p. 60) explained that case study provides two (2) major advantages, namely, "illuminate a decision or set of decisions: why they were taken, how they were implemented and with what result" and useful in analysing "a contemporary real-life appearance when an investigator has little or no control over events". • On top of this, case studies are perceived of being bias that influence the direction of research findings, however, it is important to highlight that bias tends to be occurred in other research strategies like experiment, questionnaire and so on (Wang & Chou, 2003). • Thus, case study serves as a better qualitative research methodology to achieve the research goal that is to gain a better understanding on how is the impact of organisational culture on international bidding decisions in response to the political and economic risks in construction through a preliminary exploration of case studies.

Table 4.15, continued: Rationale of adopting case study approach

Criteria	Rationale
i. Nature investigation of the study (continued)	• Ethnography research method is not considered in this study as it involves a prolonged period of time on observational data collection (Jonker & Pennink, 2010) although the purpose of this method is to describe the relationship between culture and behaviour (Leedy, 1997) • Phenomenological research is not opted in this study as it is about the study of lived experiences to develop a worldview (Marshall & Rossman, 1999) without theories to support the causal explanation and free from unexplained preconceptions and presuppositions (Streubert & Carpenter, 1999). • Grounded theory is out of the consideration in this study as the purpose of the study is not to devlop a theory from the data (Babbie, 2010). • Historical research does not considered as part of the qualitative research method in this study due to three (3) reasons, namely: (1) there is lack of previous studies to trace the information on the historical event; (2) it is difficult to collect data from real life case studies as there is lack of proper documentation on the culture of the organisations and the historical record of the organisational international bidding decisions and the confidentiality of the organisational strategies records; and (3) this study does not aim to investigate the historical trend of the impact of organisational culture on international bidding decisions from the past event to the most current event. • Action research is not selected in this study as this method is time consuming and the validity of the results may be influenced since participants in the action research may react based on the targeted change which will impede the researcher to acquire reliable results.
ii. Previous empirical studies	• Case study survey is an appropriate method for this research area as research in the fields of organisational culture and international bidding decisions with varied scope of investigation are able to show relevant finding and provide a reasonable conclusion. Appendix D shows the adopted case studis research method of previous studies.
iii. Nature advantages of the research method	• Case study is a better research methodology to improve the accuracy of the questionnaire findings (Naoum, 1998) and the most acceptable method of validation for the questionnaire survey (Fellows & Liu, 2008; Tellis, 1997a; Yin, 1994).

(b) Case study design

A multiple embedded case design was selected in this study. This is because this design is an important device for focusing on a case study inquiry and this approach was often considered more compelling (Yin, 1994). The case studies was designed based on cross-sectional approach. The design of the case study was depicted in the Figure 4.8. The initial step of case studies design was the development of research questions followed by the cases selection and the design of data collection protocol. Subsequently, each case study was conducted and an individual case report was produced after completing a

single case study. Thereafter, cross-case conclusions were drawn out for the development of implication. Finally, cross-case report was prepared for the study.

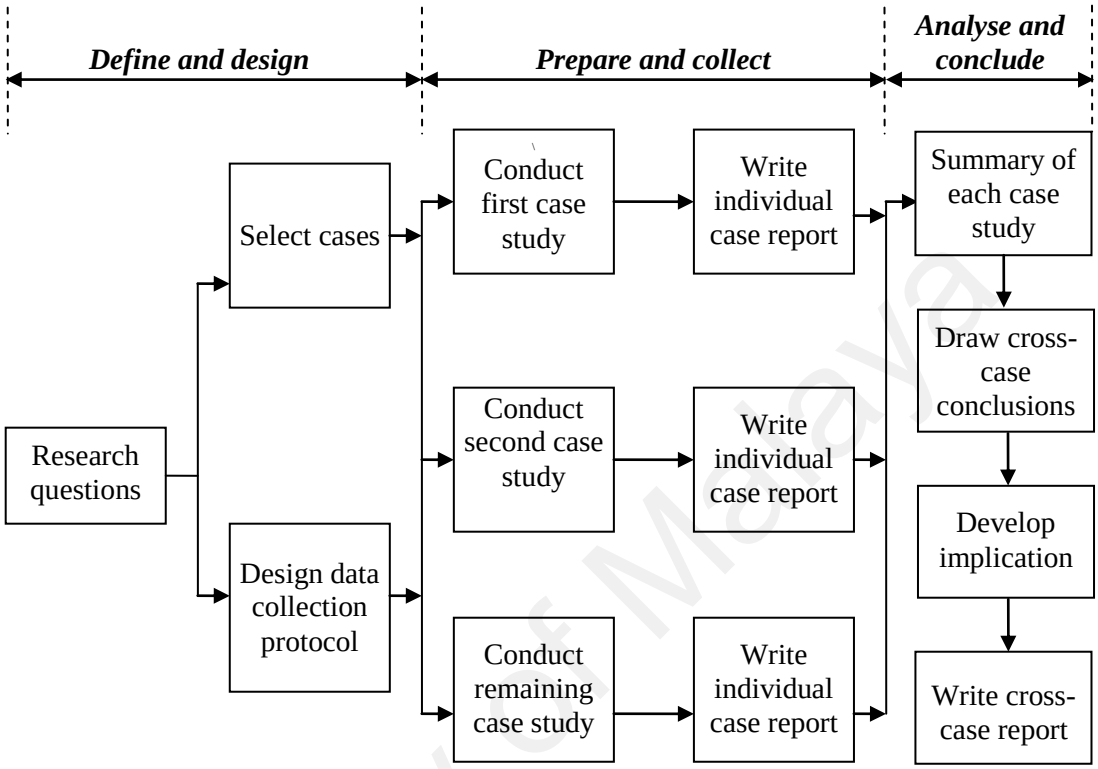


Figure 4.8: Case study design
(adopted and modified from Yin (1994, p. 49))

According to Yin (1994), five (5) components of a research design are important to the case study, these are study's questions, propositions (if any), unit of analysis, logic linking the data to the propositions and criteria for interpreting the findings. In this research, the four (4) components of the case study research design, namely, research questions, unit of analysis, logic linking the data to the research questions and the criteria for interpreting the findings are discussed in Table 4.16.

Table 4.16: The components of the case study research design

Components of the research design	Descriptions
i. Study's questions	• The research's questions of the case studies are: ➢ Which cultural orientations do the founder/leaders of your firm heavily emphasise on in overseas venture/international bidding?; and ➢ How do these cultural orientations affect your companies' international risk bidding decisions?.
ii. Unit of analysis	• The unit of analysis of this study is Malaysian international contractor firms.
iii. Logic linking the data to the propositions	• To ensure data was logical linked to the research questions, a semi-structured questionnaire was developed. Besides, data collected for each interval are linked with research questions to assure the accuracy of the data.
iv. Criteria for interpreting the findings	• The criterion for interpreting the findings of case studies is by comparing the findings among the cases. Implications were drawn out based on the discovered differences and similarities.

(c) Case study protocol

The case study protocol of the study was developed based on the outline set by Yin (1994) as indicated in Table 4.17. The case studies protocol included an overview of the cases, field procedures, case study questions and a guide for case study report. The case studies' questions consisted of principal and follow-up questions. The purpose of the follow-up questions is to allow informants to provide more detailed information and elabroration about the questions.

Table 4.17: Case studies protocol

Case studies protocol	Details
i. Profile of the cases *Organisational characteristic*	Information about the organisations: • Firm's type (private, public and semi public and private) • Firm's age • Total numbers of permanent staff • Total assets of the firm (2008-2012) • Total turnover of the firm (2008-2012) • Firm's international construction experience • The year that the firm starts to get involved in oversea project(s) • The name of the foreign countries that your firm has involved/are involving • The number of past oversea projects • The number of current oversea projects • The firm's international project portfolio (Residential buildings, commercial buildings, education institution, power plant and etc.) • Listing status of the firm (domestic, overseas and both) *(Source of evidence: Interviews and documents)*
Respondents' details	Information about respondents: • Age • Designation • Highest education level • Experience in "local and overseas markets" and "overseas market" *(Source of evidence: Interviews)*
ii. Field procedure	The field procedure discusses the preparation stages prior to the data collection process and the selection criteria of the informant(s) for the case studies.
Aim and objectives	• Aim: To explore the suitability of the proposed conceptual model as a research tool • Objective: To explore the impact of the identified organisational culture variables on international bidding decisions
Gaining access to projects	• Making a formal contact to the organisations by calling to the organisations to get contact of the person incharge and sending a formal letter (as indicated in Appendix H) upon the request by the organisations. A follow up call was made after two (2) weeks of non-response organisations. If the organisation do not give the consent, the respective organisation will be excluded and a new organisation was targeted and contacted.
Selection of the Informant(s)	• The targeted respondents in contractor organisations were top management personnel who are the decision makers at the organisational level and with sufficient experience in local and international markets. This group of people is not only responsible and involved in organisational strategic decisions. They also play an important role in forming the culture of their organisations.
Administration	• The case studies were administrated in the form of face-to-face interviews accompanied with pen-and-paper note taking.
Schedule of case study data collection	• The preliminary case studies data collection was scheduled for two (2) months period and was performed between March until April 2013.

Table 4.17, continued: Case studies protocol

Case studies protocol	Details
iii. Case studies' questions	Principal questions: • Which cultural orientations do the founder/leaders of your firm heavily emphasise on in overseas venture/international bidding? • How does each of these cultural orientations affect your company's overseas venture/international bidding decisions? Follow-up questions: • Could you explain that further? • Could you give an example? *(Source of evidence: Interviews)*
iv. The outline of the case studies report	• The outline of the case studies report was organised as follows: a. Introduction (including the purpose and profile of the organisations and respondents) b. Discussion of the findings of each individual case c. Discussion of the findings of cross-cases d. Implication of the case studies

(d) Data collection methods

Case studies can be carried in different methods, namely, documents, artifacts, interviews and observations (Yin, 1994). Multiple sources of evidence were adopted for the study as the use of various sources are highly complementary and it allows an investigator to address a broader range of issues and thus the findings or conclusions will become more convincing (Yin, 1994). Two (2) types of evidence sources were selected as a means to collect data, those were documents and interviews (refer Appendix K). Documents were opted as it provides relevant information to every case study, helps in verifying the correct spellings and titles or names of organisations and interviewees that might have been mentioned in an interview, provides other specific details to corroborate information from other sources and making inferences (Yin, 1994).

Nevertheless, the potential over-reliance on document as evidence in case studies is criticised as documents may contain unmitigated truth (Yin, 1994). To deal with this

weakness, interviews were performed as another source of evidence. The rationale of the selection of interview is due to the reason that most case studies are about human affairs (Yin, 1994) in which collection of opinions and experience from the practitioners can provide useful data for the study.

Direct observation and participant-observation were not considered as the sources of evidence due to the reason that these two (2) methods are time consuming (Yin, 1994). Moreover, participant-observation tend to cause bias finding due to the investigator's manipulation of events (Yin, 1994). Physical artifacts were not taken as a suitable data collection method in the case studies as the prime concern of the case studies is event and process which are human affairs.

(e) Numbers of cases

As highlighted by Yin (1994), there is no standard number of cases that should be conducted in the case study research and it is a matter of discretionary, judgment choice and the selection of the number of replications. According to Eisenhardt (1989), when there is no ideal number of cases, a number between four (4) and ten (10) cases usually works well. Based on the review of some prior studies within the fields of organisational culture and international risk decisions, a range from one (1) to sixteen (16) cases were selected for data collection as shown in Table 4.18. In this study, seven (7) cases were selected which were considered reasonable and appropriate in data collection compared to the previous studies.

Table 4.18: Number of cases selected by previous studies

Previous studies	Type of references	Number of cases
Past cultural studies - Construction field		
Anumba et al. (2006)	Journal article	1
Chandra and Loosemore (2010)	Journal article	1
Chandra and Loosemore (2011)	Journal article	1
Cheung et al. (2005)	Conference paper	1
Coffey (2010)	Research-based book	4
Hall (2002)	Journal article	7
Hartmann (2006)	Journal article	1
Horii et al. (2004)	Conference paper	4
Low and Leong (2000)	Journal article	1
Low and Shi (2001)	Journal article	2
Mahalingam et al. (2005)	Conference paper	4
Tukiainen et al. (2005)	Working paper	1
Zhang (2004)	Unpublished PhD thesis	5
Past risk decisions literature - Construction field		
Abdul-Rahman et al. (2012)	Journal article	10
Aleshin (2001)	Journal article	16
Ling and Hoi (2006)	Journal article	10
Wang and Chou (2003)	Journal article	6
Zhi (1995)	Journal article	1

(f) Sampling method

As discussed in the previous section, multiple-case approach was adopted in this study. In line with this, purposive sampling method was adopted in the selection of cases for the purpose of case studies. Purposive sampling method is also referred as qualitative sampling method as it is used primarily in qualitative studies and hence, it can be defined as "selecting units (e.g., individuals, groups of individuals, institutions) based on specific purposes associated with answering a research study's questions" (Teddlie & Fen, 2007, p. 77). Whilst, Creswell (2003, p. 185) asserted that purposive sampling is described as the selection of cases (organisationas or participants) that can provide information and assist researchers to understand the research problem and research questions by means of able to reflect on and share their knowledge.

(g) Sampling frame

The sampling frame of the case studies was the database from the International Unit of CIDB and the website of CIDB (http://www.cidb.gov.my). The sampling frame consisted of a list of Malaysian international contractor firms registered with CIDB.

(h) Criteria of the cases

The criteria of the cases in the case studies were the same as discussed in the section 4.4.4.3 and these included Malaysian international contractors: (1) registered under CIDB; (2) are still operating; (3) have been involved or are involving in international construction markets; and (4) provide part of or the whole spectrum of construction services in terms of the buildings and/or engineering works to the international clients.

(i) Criteria of the informants

According to Simon and Goes (2010), there is no total agreement on the standard sample size in a qualitative study. Nonetheless, some researchers propose a certain range of participants to be participated in a qualitative study. For example, Creswell (2003) suggested three (3) to five (5) participants in the case study research. In this qualitative approach, there is no limit on the number of people to be interviewed in the case studies survey. The case studies survey is more concern on whether the informants are well-informed and able to provide sufficient information for the research questions. The criteria of the informants in the case studies were: (1) the top management personnel who is playing a role on organisational decisions in international contractor organisations such as managing directors, general managers, senior managers and so on;

(2) having more than twenty (20) years of working experience in local and overseas markets; and (3) playing a role in their organisational international bidding decisions.

(j) Administration of the case studies

The case studies were administrated in the form of face-to-face interviews with the relevant industry professionals. Interview were conducted in the interviewees' office. Each interview lasted between 1.5 and 2.5 hours. All interviews were recorded by means of pen-and-paper note taking to assure that the interviewees can provide their opinions comfortably.

(k) Data analysis of qualitative data

According to Creswell (2003), the process of data analysis is about making sense of the text and/or image data. The most common type of qualitative analysis which is practiced by most of the journal articles is researchers collect the qualitative data, analyse it based on few themes or perspectives and report it accordingly (Creswell, 2003). This method was used as a guide for the qualitative data analysis in this study.

Two (2) types of data analysis techniques were adopted, namely within-case analysis and cross-case analysis. Within-case analysis was chosen as this type of analysis helped the investigator to cope with the deluge of data (Eisenhardt, 1989). This is because it involved the write-ups for each case and provides an opportunity to improve the researcher's familiarity of each case. Cross-case analysis was selected to counteract the drawback of within-case analysis in respect of where the investigators reached premature and even false conclusions as a result of information-processing biases and to

force the investigators to go beyond initial impressions (Eisenhardt, 1989). Qualitative software was not used in the qualitative data analysis as it is more suitable for large data sets, trend and relationship identification and theory testing (Suter, 2012).

(l) Reliability, validity and generalisation

Reliability and validity were used in the study to judge the quality of the research design (Yin, 1994). Qualitative reliability is achieved when "the researcher's approach is consistent across different researchers and different projects" (Creswell, 2003, p. 190). Yin (1994) addressed that a reliability approach can be established through a detailed documentation of the procedure of the case studies, a detailed cases study protocol and database. On the other hand, Tellis (1997a) argued that the use of multiple sources of data will increase the reliability of the data and the process of gathering it. Besides, a case study protocol is the most important methods to improve data reliability (Tellis, 1997b). To establish the reliability of the case studies, multiple sources of data, establishment of a chain of evidence and case protocol approaches were practiced in the case studies survey. These three (3) tactics were claimed can also increase the construct validity of the study (Yin, 1994). The multiple sources of data was adopted by means of literature review, interviews and documentation. The case study protocol was presented as shown in Table 4.17. For the chain of evidence of the study, findings from each case was linked to the aim, objective and research questions of the case studies to ensure the collected data able to achieve the research goal.

Whilst, qualitative validity is established when "the researcher checks for the accuracy of the findings by employing certain procedures" (Creswell, 2003, p. 190). To validate the qualitative findings, the qualitative data analysis process of this study was practiced

which is based on the analysis procedure suggested by Creswell (2003) as illustrated in Figure 4.9. Creswell (2003) asserted that the validation of the qualitative findings can be achieved throughout the steps in Figure 4.9. In addition, to assure the internal validity of the survey, within-case analysis and cross-case pattern-matching were used in data analysis to improve the credibility of the collected data (Riege, 2003). External validity was achieved through the adoption of replication logic in multiple-case studies that concerned on the generalising to theory (generalise from one case to another), rather than to empirical data (Yin, 1994) as adopted by Wang and Chou (2003). This is because multiple case studies will validate research findings through replication of same appearance under different cases (Yin, 1994). Although case studies are commonly being criticised for lack of scientific generalisation to populations or universe, this method able to generalise research finding into theoretical propositions (Yin, 1994).

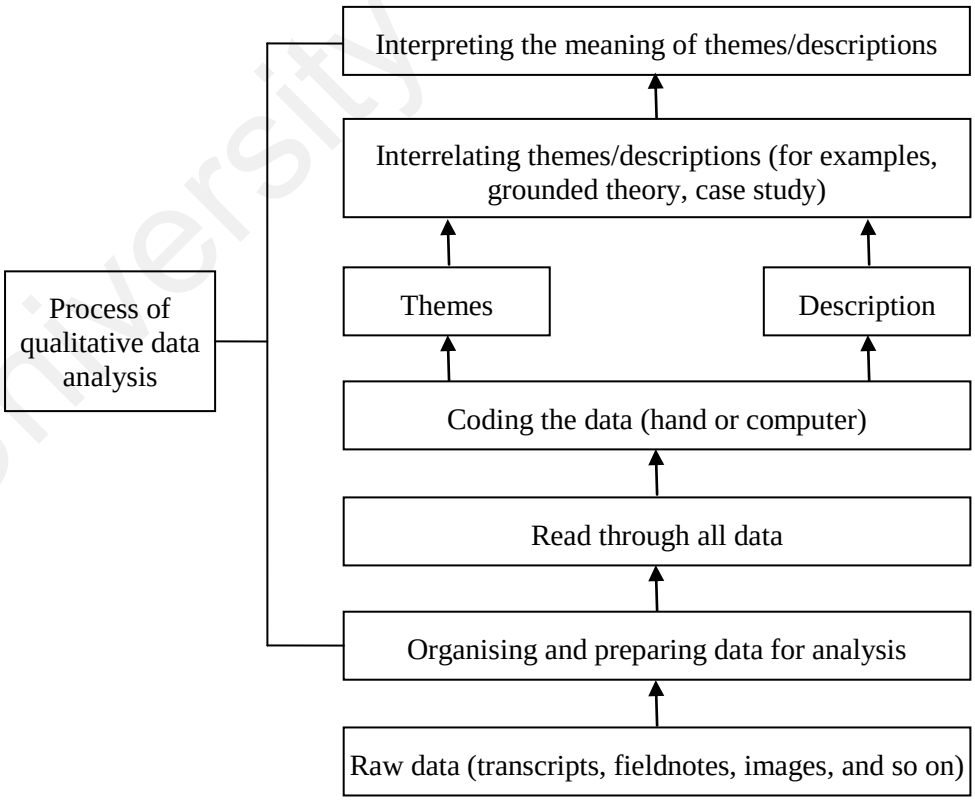


Figure 4.9: Qualitative data analysis of the study
(adapted from Creswell, 2003, p. 185)

4.4.5.2 Phenomenological research strategy

(a) Justification of the phenomenological research strategy

As discussed in the previous section 4.4.5.1, there are five (5) types of qualitative research strategies, namely case study research, ethnographic research, phenomenological research, grounded theory research and historical research (Leedy, 1997). The characteristics of each research strategy were discussed in the section 4.4.5.1. The reasons of adopting phenomenological research among the five (5) qualitative research strategy as a complementary approach are shown in Table 4.19.

Table 4.19: Rationale of adopting phenomenological research

Criteria	Rationale
i. Nature investigation of the study	• Phenomenological research was choosen as it is associated with 'lived experience' which allows researchers to gain perception, thought and knowledge based on the experience of the relevant parties (Suter, 2012).
ii. Previous empirical studies	• Phenomenological research in the form of interviews method is an appropriate method in the fields of organisational culture and international bidding decisions with varied scopes of investigation as it able to provide relevant findings and reasonable conclusion in previous studies. Appendix D shows the adopted phenomenological interview research method of previous studies.
iii. Nature advantages of the research method	• Phenomenological research is an appropriate approach to gain to perception and thought from the industry professionals (Suter, 2012).

(b) Justification of the phenomenology method: Interviews approach

Interviews were selected as a means of phenomenology strategy to further explore the quantitative data as interview is considered a suitable method to gain insight about a phenomenon in the exploratory study (Sekaran, 2000). Moreover, interviews with experienced industry professionals could obtain useful and underlying information that

assists the author to gain a better development of the understanding about the impact of organisational culture on international bidding decisions.

(c) The design of the interview survey

The interview method was designed and adapted based on the case study design proposed by Yin (1994) as shown in Figure 4.10 and on the basic of cross-sectional approach. Prior to the interview survey, objective of the interview was identified and highlighted as a guide for the development of interviews questions. Through the review of previous studies, a list of interview questions were developed. The initial list of interview questions was reviewed and some questions were filtered out to ensure only important questions were asked and answered by the interviewees. The final list of interview questions can be referred in Appendix L.

This was followed by cases selection and the design of data collection protocol. Subsequently, interview was conducted with each participant and an individual case report was produced after completing a single interview. This followed by identification of similarities and differences among the interview findings. Thereafter, cross-case conclusions were drawn out for the development of implication. Finally, cross-case report was prepared for the study. Based on the suggestions from Yin (1994), four (4) components were used in the design of interviews, namely, research questions, unit of analysis, logic linking the data to the research questions and the criteria for interpreting the findings are discussed in Table 4.20.

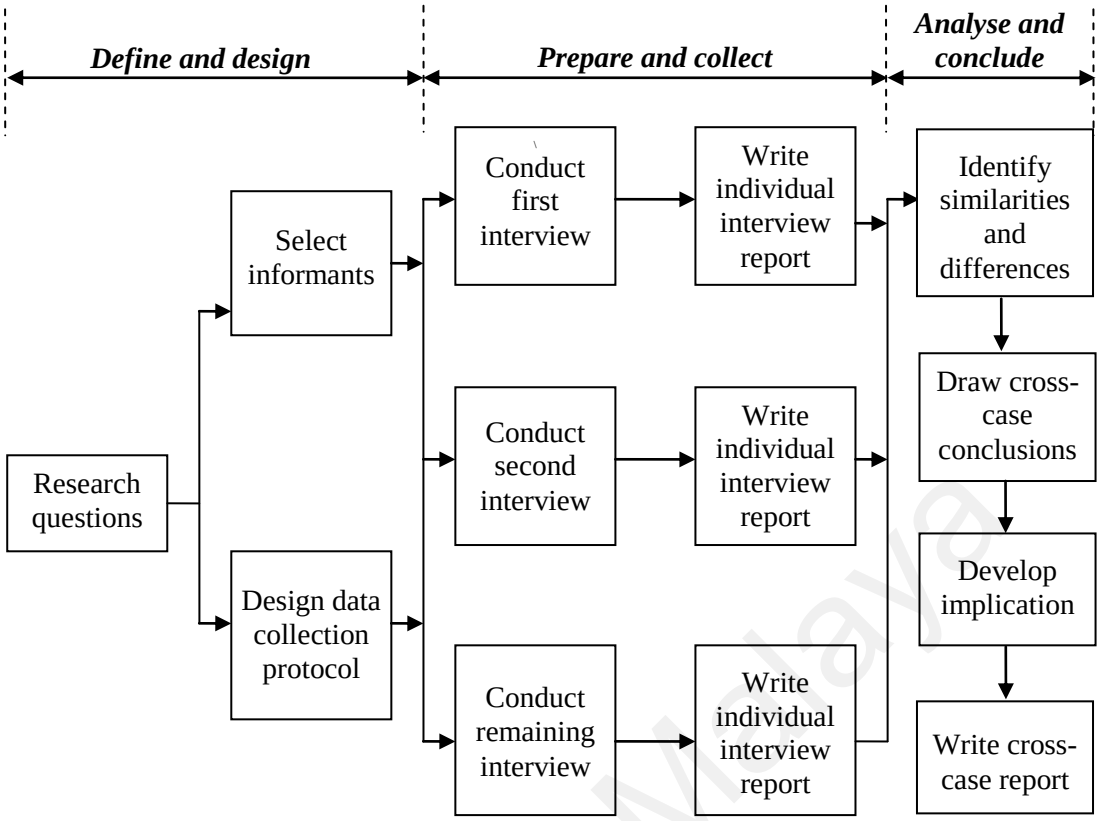


Figure 4.10: Interviews design
(adopted and modified from Yin (1994, p. 49))

Table 4.20: Components of the interviews design

Components of the research design	Descriptions
i. Study's questions	• The research's questions of the interview is: ➢ Do these cultural orientations affect international bidding decisions in response to the political and economic risks? ➢ How do these cultural orientations affect international bidding decisions in response to the political and economic risks?
ii. Unit of analysis	• The unit of analysis of this study is Malaysian industry professionals working in the international contractor firms.
iii. Logic linking the data to the propositions	• To ensure data was logical linked to the research questions, a list of interview questions was developed. Besides, data collected for each interval are linked with research objectives and questions to assure the accuracy of the data.
iv. Criteria for interpreting the findings	• The criterion for interpreting the findings of interviews is by identifying the similarities and differences among the interviewees. Implications are drawn out based on the discovered differences and similarities among the interviewees.

(d) Interviews protocol

The interviews protocol of the study was developed based on the outline set by Yin (1994) as indicated in Table 4.21. The outline included an overview of case, field procedures, case study questions and a guide for case study report.

Table 4.21: Interviews protocol

Case studies protocol	Details
i. Profile of the informants *Respondents' details*	Information about the respondents: • Age • Designation • Highest education level • Experience in "local and overseas markets" and "overseas market" *(Source of evidence: Interviews)*
ii. Field procedure	The field procedure discusses the preparation stages prior to the data collection process and the selection criteria of the informant(s) for the interviews.
Aim and objectives	• Aim: To obtain a better understanding about the impact of the identified organisational culture variables on international bidding decisions
Gaining access to projects	• Making a formal contact to the organisations by calling to the organisations to get contact information of the person incharge and/or writing an email to the targeted informant with an attached cover letter (as indicated in Appendix H). A follow up call or email was made after one (1) weeks to the non-response targeted informant. If the targeted informant was unwilling to participate the interviews, a new targeted informant would be contacted.
Selection of the Informant(s)	• The targeted respondents in the international contractor organisations were top management personnel who are the decision makers at the organisational level and with sufficient experience in local and international markets. This group of people is not only responsible and involved in organisational strategic decisions. They play an important role in forming the culture of their organisations.
Schedule of case study data collection	• The interviews were scheduled for four (4) months period and was performed between May until August 2013.
iii. Interviews' questions	Principal questions: • Do these cultural orientations affect international bidding decisions in response to the political and economic risks? • How does each of these cultural orientations affect an organisation's international bidding decisions? Follow-up questions: • Could you explain that further? • Could you give an example? *(Source of evidence: Interviews)*
iv. The outline of the interviews' report	• The outline of the case studies report was organised as follows: a. Introduction (including the purpose and profile of the organisations) b. Discussion of the interviews' findings c. Conclusion of the interviews

(e) Numbers of informants

In general, there is no total agreement on the standard sample size in a qualitative study (Simon & Goes, 2010). Nonetheless, some researchers propose a certain range of participants to be included in a qualitative study. For example, Creswell (2003) suggested ten (10) participants in the phenomenological studies and fifteen (15) to twenty (20) participants in grounded theory research. This research was more concern on whether the informants are well-informed and able to provide sufficient information for the research questions. Based on the review of some prior studies within the fields of organisational culture, a range from six (6) to thirty-two (32) informants were selected to participate the interviews as shown in Table 4.22. In this study, the number of people to be interviewed in the interviews survey was limited to ten (10) informants and above which were considered reasonable compared with previous studies and appropriate in data collection.

Table 4.22: Number of informants selected by previous studies

Previous studies	Type of references	Number of cases
Past cultural studies - Construction field		
Ankrah (2007)	Unpublished PhD thesis	9
Ankrah et al. (2009)	Journal article	9
Brockmann and Birkholz (2006)	Conference papers	20
Chen and Partington (2004)	Journal article	20
Jia et al. (2009)	Journal article	6
Kivrak et al. (2009)	Conference paper	11
Lindahl and Josephson (2003)	Conference paper	25
Ochieng and Price (2010)	Journal article	20
Rahman et al. (2003)	Conference paper	25
Rowlinson (2001)	Journal article	10
Tone et al. (2009)	Journal article	32

(f) Sampling frame

The sampling frame of the interviews is the database from the International Unit of CIDB and the website of the respective international contractor organisations. Through the website of the international contractors, the researchers can identify the background of their top management to decidie whether they are suitable candidates to be invited in the interviews.

(g) Sampling method

Purposive sampling method was used in the selection of informants for the interviews. As discussed in section 4.4.5.1, purposive sampling method refers to the selection of informants with related experience and knowledge who are willing to share their experience and provide relevant information to the researchers.

(h) Criteria of the informants

The criteria of the informants in interview survey were: (1) the top management personnel who is playing a role on organisational decisions in international contractor organisations such as managing directors, general managers, senior managers and so on; and (2) having more than ten (10) years of working experience in local and overseas markets. To reduce the probability of overestimate or underestimate that will lead to biased findings in the study, the interviewees were came from different professionalism such as engineering, architecture, quantity surveying and business.

(i) Administration of the interviews

The interviews were administrated in the form of face-to-face with the relevant industry professionals. Interview were conducted in the interviewees' office. Each interview lasted between 1 and 2.5 hours. All interviews were recorded by means of pen-and-paper note taking to assure that the interviewees can provide their opinions comfortably. During the interviews, the interviewees were explained by the author about the meaning of each cultural construct.

(j) Data analysis of qualitative data

According to Creswell (2003), the most common type of qualitative analysis which is practiced by most of the journal articles is researchers collect the qualitative data, analyse it based on few themes or perspectives and report it accordingly. This method was used as a guide to analyse the interviews' data. Two (2) types of data analysis techniques were adopted, namely within-informant analysis and cross-informants analysis. Qualitative software was not used in analysing the qualitative data in this study as the purpose of the qualitative method was to describe the quantitative findings based on the interviewees' lived experience instead of focusing on trends and relationship identification and building and testing theories (Suter, 2012).

(k) Reliability and validity

To establish the reliability of the interviews, establishment of a chain of evidence and case protocol approaches were practiced in the interviews. The interviews protocol was presented as shown in Table 4.21. For the chain of evidence of the study, findings from

each informant was linked to the research aim of the interviews to ensure the collected data able to achieve the research goal. Whilst, qualitative validity is established with the adoption of the analysis procedure suggested by Creswell (2003) as illustrated in Figure 4.9.

4.4.6 Validation of the refined conceptual model

(a) Model validation method

Model validation is defined as "the process of checking that the mathematical model is appropriate for the physical phenomenon in question" (p. 57) or in other words, it concerned about the finding proof of the existence of the correlations (Borg & Nja, 2013). Nonetheless, the concept of validation is varied based on the research discipline and the application of the model (Borg, Husted, & Nja, 2014). In social science research, the purpose is to explain a phenomenon in a society or the behaviour of a particular individuals which involve the elements of human behaviour and human decision making (Borg & Nja, 2013). Hence, the validation in the social science research is emphasised on the believability of a statement (Polkinghorne, 2007) such as the correlation between independent and dependent variables in the real world (Borg & Nja, 2013).

Based on the review of past studies, model validation can be carried out in different approaches either single method or more than one method. The validation methods are varied such as questionnaire survey, case studies, interviews and so on. For examples, Ling et al. (2012) validated their model by requesting the matter experts to fill in the questionnaire to obtain new data sets and invited them to comment on the research

findings and the practicality and comprehensiveness of the model; Abdul-Rahman, Yahya, Berawi and Low (2008) conducted their model validation by means of interviews and postal questionnaire survey in terms of the sequence, techniques and applicability of the model; and Abdul-Rahman, Wang and Lee (2013) performed an online model validation survey to validate the model in terms of the reliability and acceptability, accessibility, completeness, user friendly level, usefulness in decision making and so on. According to East, Kirby and Liu (2008), construction management models are difficult to be validated in a real case due to the complexity and expensive cost involved of the construction projects. In line with this, the validation methods of the construction management models might be limited.

In this study, model validation was performed based on the survey approach. The main purpose of the survey was to validate the research findings by confirming that whether the findings reflect the phenomenon in the real world. This type of validation is consistent with previous studies in which it serves as a single and main validation purpose (Fulford & Standing, 2014; Ling et al., 2012) or a part of the validation purposes (Abdul-Rahman et al., 2013; Abdul-Rahman et al., 2008). According to Borg and Nja (2013), the measure or criteria of validation is determined by the model application and the research goal.

(b) Design of validation survey

A set of questionnaire survey was designed for the purpose of model validation. The purpose of this validation survey is to seek the opinions of the industry managerial personnel about the research findings and the reliability and acceptability of the model. The validation survey was designed and limited to the maximum of two (2) pages length

with three (3) main sections as shown in Appendix M. Each section in the validation survey was designed for a specific purpose. Section A sought to obtain a general background of the respondents. Section B was designed to obtain the comments from the matter experts on each major research findings. Section C allowed respondents to comments on the model in terms of the usefulness and reliability of the overall findings.

Respondents were requested to answer the survey questions based on the Malaysia context. This is because the study was focused in Malaysia instead of other countries. In addition, respondents were required to indicate their level of agreement based on the 5-point likert scale. Besides that, respondents were asked to give their opinions and comments if their rating is 3, 2, or 1. The purpose was to allow respondents to share their knowledge and experience. The 5-point scale was used as it is the most common and simple scale point than others and this type of scale can improve the scale reliability and validity as compared to lower and more finely graded scale points (Dawes, 2008).

(c) Numbers of informants in the model validation

In general, there is lack of standard numbers of informants to be included in different approaches of model validation. Based on the review of some previous studies, the numbers of informants in different types of model validation methods is more than five (5) people. For examples, six (6) matter experts in the study conducted by Ling et al. (2012), eight (8) practitioners from Abdul-Rahman et al. (2008), nine (9) practitioners from Abdul-Rahman et al. (2013) and so forth. In this study, the number of people to be participated in the model validation was limited to the minimum of ten (10) informants which were considered reasonable compared with previous studies.

(d) Sampling method

Purposive sampling method was adopted in the selection of the experts for the purpose of the model validation. As discussed in the section 4.4.5.1, purposive sampling method was preferred as it is concerned about the selection of informants with related experience and knowledge who can provide relevant and reliable information to the researcher(s).

(e) **Criteria of the informants**

The criteria of the informants are almost the same as in the case studies (section 4.4.5.1) and interviews (section 4.4.5.2) and those are: (1) the top management personnel who is playing a role on organisational decisions in international contractor organisations such as managing directors, general managers, senior managers and so on; and (2) having more than twenty (20) years of working experience in local and overseas markets. These criteria were emphasised in the model validation, as according to Ling et al. (2012), both designation and experience are critical criteria to assure the relevancy of the information in model validation provided by industry practitioners.

(f) Administration of the validation survey

The validation survey was administrated in two (2) methods, namely, by post and email. These methods were chosen due to the tight schedule of the respondents to allocate time for the face-to-face discussion with the author. A cover letter was attached (as shown in Appendix H) to assure that the respondents have sufficient knowledge about the objectives of the study and the purpose of the validation. Anonymous assurance was

highlighted in the cover letter to assure unbiased responses. For the postal validation survey, each packet of envelope was supplemented with a cover letter and a self-stamped addressed ready-strip envelope for the convenience of the respondents. For the validation survey by email, a cover letter and a validation survey were attached and sent to the informants' personal email account.

An e-mail reminder and a few follow-up phone call reminder were performed to the unresponse informants after 3 weeks of the sending out of the validation survey. An additional one (1) month period were allotted to the informants upon the request by some informants due to their tight working schedule. The questionnaire survey was conducted in December 2013 till January 2014.

(g) Data analysis of quantitative data

Results of the validation survey were analysed descriptively in the form of mean and inferentially via one sample T-test. The measurement of central tendency in mean was used to obtain an average value of each validation criteria of the model. The purpose of the T-Test was to test whether the research findings and the model were significantly ($p<0.10$, test value=3) agreed by the industry experts. The statistical tool of SPSS 18.0 was used to perform the descriptive and inferential analysis. In addition, results of the validation survey were interpreted based on the concept of falsification proposed by Karl Popper whereby "a theory can never be confirmed to be true…only that it has not yet been falsified…neutral observation of the real world can be compared to predictionds obtained by the theory" (Popper as cited in Borg & Nja, 2013, p. 59).

4.5 Summary of the chapter

As a whole, this study was performed under postpositivism paradigm with the adoption of nomothetic and deductive explanations by means of mixed research strategy. The main quantitative research strategy was conducted in the form of questionnaire survey. Whilst, the qualitative research strategy was conducted in the forms of case studies and interviews. Finally, the research findings and model were validated through survey. Table 4.23 displays a matrix of research methods used for each research objective. Findings from the quantitative and qualitative research strategies were discussed in the next chapter.

Table 4.23: A matrix of research objectives and research methods

Objectives of the study	Questionnaire survey	Case studies	Interviews
i. to identify organisational culture dimensions that are currently practising by international contractors	✓		
ii. to identify the maximum risk tolerance level of international contractors in international bidding decisions in response to political (including legal risk) and economic risks	✓		
iii. to explore empirically the relationships between organisational culture and international bidding decisions in response to political (including legal risk) and economic risks	✓	✓ *(to obtain a preliminary view)*	✓ *(to further explore by gaining more comments from the industry professionals)*
iv. to develop an international bidding decisions model based on the perspective of organisational culture variables	✓		

CHAPTER 5

RESULTS AND DISCUSSION OF FINDINGS

5.1 Introduction

Chapter 5 covers the findings of the quantitative and qualitative research methods. This chapter consists of an introduction of the chapter, presentation and discussions of the findings of the preliminary case studies, questionnaire survey, interviews and validation survey, discussions of the overall research findings and a summary of the chapter as shown in Figure 5.1.

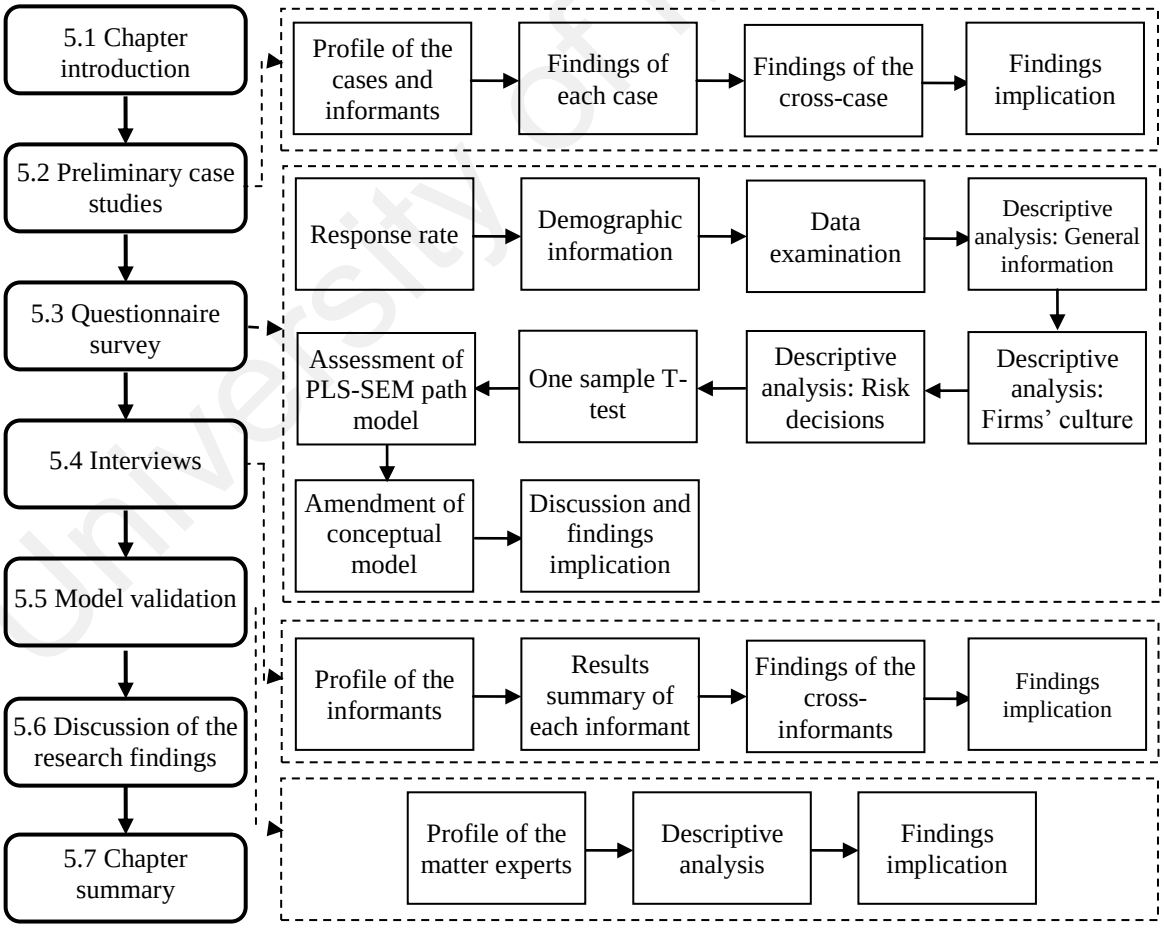


Figure 5.1: The framework for Chapter 5

5.2 Preliminary mini case-studies

5.2.1 Profile of the cases and the informants

Seven (7) organisations were participated in the preliminary case studies. The profile of the organisations and the respective informants are shown in Table 5.1. With reference to the information in Table 5.1, all the surveyed organisations are private organisations and have twenty (20) years and more operation experience. Only one (1) organisation (Company F) is a listed organisation on the main board of Bursa Malaysia Berhad, one (1) delisted organisation (Company A) and the remaining are not listed organisations. Two (2) organisations (Companies A and F) have more than twenty (20) years of experience in the international construction market, whilst, five (5) organisations have less than ten (10) years of experience in international market. This is because Malaysian international contractors are still considered new in the international market (as discussed in the 1.2.6).

All organisations venture into Asian developing countries. In addition, organisations such as Company A and C also venture into African developing countries. Others such as Company A, F and G venture into developed countries such Singapore. In addition, two (2) companies have completed more than fifty (50) international projects, those are Companies A and F. Companies A and F are having more than five (5) numbers of current international construction projects. Yet, Companies D, E and G have no current international project and they are looking for a potential international project to bid. In terms of international portfolio, Most of the companies (Companies A, B, E, F and G) are providing services on residential buildings. Companies A, F and G consist of wider

and varied international portfolio compared to other companies that cover residential building, commercial buildings and public buildings.

Eight (8) industry professionals at the top management level participated in the case studies. Table 5.1 shows the demographic details of the informants of each case study. The interviewees of the case studies were chief executive officer (12.5%), senior vice presidents (25.0%), managing director (12.5%), general managers (25.0%), business development director (12.5%) and senior general manager (12.5%). Six (6) informants (Companies A, B, D, E, F and G) have more than twenty (20) years and more working experience in the local and international construction markets and the other two (2) informants have more than twenty (20) years working experience in the local and international markets in management discipline (Companies A and C). The highest education level achieved by the informants was master degree by six (6) informants (Companies A, B, C, F and G) and advance diploma by two (2) informants (Companies D and E).

Table 5.1: Profile of the organisations and the informants

Profile of the cases and informants	Company A	Company B	Company C	Company D	Company E	Company F	Company G
Cases							
Firm's type	Private	Private	Private	Private	Private	Private	Private
Firm's age	58	32	38	30	28	30	20
Number of staff*	4752	51-200	846	9	386	1800	56
Listing status*	Delisted	Not applicable	Not applicable	Not applicable	Not applicable	Listed	Not applicable
Firm's average assets* ($US million, 2008-2012)	3082.42	-	7558.98	1.1	165.326	3970.706	5-6.5
Firm's average turnover* ($US million, 2008-2012)	698.54	-	1774.08	0.5	222.762	1379.592	19.2
Firm's international experience*	22	7	8	5	4	23	8
Year started to involved in overseas venture	1992	2007	2005	1998	1993	1990	1993
Firm's overseas venture countries	China, Thailand, Myanmar, Libya, India, Saudi Arabia, Qatar, Vietnam, Iran, Argentina, Indonesia, Singapore, Sudan, Nepal, South Africa, UAE (Abu Dhabi, Dubai), Australia, USA	Libya, Iran, Republic of Tajikistan, Indonesia, China, Middle East	Oman, Saudi Arabia, Jordan, Algeria, Bahrain	India, Sudan	China, Sudan	India, Vietnam, Abu Dhabi, Bahrain, Pakistan, Qatar, Middle east, Singapore. Argentina, Australia, China, Myanmar	Dubai, Vietnam, Thailand, Brunei, Singapore, United Arab Emirates
International portfolio of the firm	Residential buildings, commercial buildings, education institutions, public buildings (airports, hospitals and so on), power plants, water supply, sewerage/solid waste, petroleum plants, transportation facilities	Residential buildings, sewerage/solid waste, transportation facilities	Power plants, water supply, desalination	Petroleum plants	Residential buildings, commercial buildings	Residential buildings, commercial buildings, public buildings (airports, hospitals and so on), transportation facilities	Residential buildings, commercial buildings, public buildings (airports, hospitals and so on), power plants, water supply, transportation facilities, others
Completed overseas projects*	>100	6	5	2	2	>65	6
Current overseas projects*	20	2	1	0	0	6	0

Table 5.1, continued: Profile of the organisations and the informants

Profile of the cases and informants	Company A	Company B	Company C	Company D	Company E	Company F	Company G
Informants							
Designation	Chief executive officer Senior vice president	Managing director	Senior vice president	General manager	General manager	Director	Senior engineering manager
Age group	40-49 40-49	50-59	50-59	50-59	50-59	50-59	40-49
Highest education level	Master degree Master degree	Master degree	Master degree	Advance diploma	Advance diploma	Master degree	Bachelor degree
Experience in local and overseas construction markets	21-25 11-15 (>20 years in general management)	26-30	1-5 (> 31 years in general management)	26-30	31 and above	26-30	21-25

- The turnover includes domestic and overseas turnovers. Items marked with asterisk are approximate amount and all items are extracted in 2012.

5.2.2 Results summary of the cases studies

Table 5.2 indicates the results summary of each case study. As shown in Table 5.2, each organisation emphasises on different cultural orientations in relation to the overseas venture. For Company A, rules orientation, innovation orientation, flexibility orientation and ethical orientation play unsignificant role in their organisation's oversea venture/international bidding decisions. Company B takes less priority on teamwork orientation, rules orientation and ethical orientation in relation to overseas venture/international bidding decisions. Whilst, Company G take no emphasis on teamwork orientation, rule orientation, entrepreneurship orientation in relation to their international decisions.

Companies C and F give more priority on organisational culture as all cultural orientations except entrepreneurship orientation are considered important in their company's overseas venture/international bidding decisions. For Company D, cultural orientations such as teamwork orientation, power and rules orientations, entrepreneurship orientation, goals orientation and ethical orientation are not emphasised by the top management in their international decisions. On the other hand, Company E does not emphasised on teamwork orientation, power orientation, entrepreneurship orientation, innovation orientation and flexibility orientation in relation to their inetrnational decisions.

Some cultural orientations are emphasised by all the organisations such as uncertainty avoidance, long-term orientations, market orientation (clients, competitors, interdepartmental coordination), relationship orientation (political and business guanxi), learning orientation, technology orientation, marketing formalisation orientation, future

orientation, reward orientation and value orientation (relationship, strategic and business ethic). However, more than two-thirds of the companies (71.4%) do not take priority on entrepreneurship orientation in their oversea venture/international bidding decisions.

Table 5.2: Results summary of each case

No.	Cultural Dimensions	Company A	Company B	Company C	Company D	Company E	Company F	Company G
1.	Teamwork orientation	√	-	√	-	-	√	-
2.	a. Power orientation	√	√	√	-	-	√	√
	b. Rules orientation	-	-	√	-	√	√	-
3.	Uncertainty avoidance	√	√	√	√	√	√	√
4.	Long-term orientation	√	√	√	√	√	√	√
5.	Market orientation *(clients, competitors, interdepartmental coordination)*	√	√	√	√	√	√	√
6.	Relationship orientation *(political and business guanxi)*	√	√	√	√	√	√	√
7.	Entrepreneurial orientation	√	√	-	-	-	-	-
8.	Learning orientation	√	√	√	√	√	√	√
9.	Innovation orientation	-	√	√	√	-	√	√
10.	Technology orientation	√	√	√	√	√	√	√
11.	Marketing formalisation orientation	√	√	√	√	√	√	√
12.	Future orientation	√	√	√	√	√	√	√
13.	Goals orientation *(common and international)*	√	√	√	-	√	√	√
14.	Flexibility orientation	-	√	√	√	-	√	√
15.	Ethical orientation	-	-	√	-	√	√	√
16.	Reward orientation	√	√	√	√	√	√	√
17.	Values orientation *(relationship, strategic and business ethic)*	√	√	√	√	√	√	√

5.2.3 Discussion of the results of preliminary case studies based on cultural orientation and cross-cases basic

5.2.3.1 Teamwork orientation

Companies A, C and F emphasised heavily on teamwork orientation and they take it as a critical cultural value requirement in overseas venture/international bidding decisions. These interviewees highlighted that a capable and collaborative team is important to inspire, motivate and organise others in pursuit of supporting companies' decisions and achieving the targeted goals. Without a good teamwork, their companies will experience a lot of changes on the companies' decisions and goals and this will be inefficient for their companies to venture into overseas markets. Other comments included:

Company A (1st interviewee) – 'teamwork is important…staff in the organisation will be more understand the common goals of the company of undertaking a project…provide support to the company's decisions to achieve its goals'

Company B – 'teamwork is important in overseas venture…but, it may not that important in decisions…not all decisions must be made collectively like our company'

Company F – 'teamwork is much more critical in overseas projects…with good teamwork, members of team will support and assist each other…more willing to share and transfer correct information on time…else, project performance will be affected and it will create a lot of trouble'

Interviewee in company F further averred that a good teamwork is critical in mitigating the occurrence of mistakes in overseas projects. Mistakes that are occurred in overseas projects can have a greater negative effect on time and cost performance compared to

local construction projects. This interviewee addressed that a good teamwork also means that team members should support each other, share and transfer information within the team. In company C, a department is set up and operated by a group of team members specifically to deal with international projects.

Although teamwork orientation does not heavily emphasised by companies B, D, E and G, these companies addressed that teamwork orientation is critical in venturing into overseas markets. For example, Company B prefers to joint venture with a big and reputable Chinese contractor firm in China which has sufficient, capable and experienced staff that poses a good teamwork spirit. Others like companies D, E and G claimed that their staff should no doubt aware the importance of teamwork and thus they perceived that their companies have a good and capable team to handle local and overseas projects. Hence, it is unnecessary to specifically highlight this cultural value in their companies. Company D further argued that the main focus and interest of their company was to test the viability of doing business in overseas market instead of focusing and strengthening organisational culture value which can be managed and adjusted at the later stage.

5.2.3.2 Power and rules orientation

Power distance is critical in Companies A, B, C, F and G in terms of getting approval and support from the board members whether to venture or not to venture into a certain overseas market. The top management in company C addressed that a company with bureaucratic orientation will slow down the decision making process and hence a company will become incompetent to venture into overseas. This is because the company may miss an overseas venture opportunity due to inefficient decision making

process to make timely decisions. This statement is supported by interviewee in company G in which to prevent this problem, top management can bid for international projects without the prior approval from the board members and only overseas projects with project value above 0.5 million USD require the approval from board members.

In general, top management in companies C, E and F emphasised heavily on rules orientation in venturing into overseas markets. Recognising the rules and regulations differences between two countries, interviewees in companies C and F highlighted that the top management will judge and modify certain organisational rules (such as rules, regulations and requirements of working related issues) to coordinate with the rules and regulations in the host countries for the ease of doing business in foreign countries. However, this does not apply to business ethic rules. On the other hand, the interviewee in company E addressed that rules orientation is critical in overseas venture on how to discipline and manage the employees to behave according to an established and standard operating system and procedures. Although all companies will try to adopt, adapt and coordinate the rules and regulations in the host countries, some interviewees addressed that companies with strong rules orientation having difficulty to adapt to the rules and regulations in the host countries in the long-term basis especially when the rules differences are significant and inconsistency. This in turn will affect the companies' overseas venture/bidding decisions.

5.2.3.3 Uncertainty avoidance

Generally, all companies showed a high level of uncertainty avoidance in venturing into overseas markets. These companies will only take calculated risks in venturing into overseas markets. This phenomenon has led to the preference of venturing into Asian

and other developing and under developing countries at the beginning stage of overseas venture. Apart from the business opportunities in overseas market, these countries are perceived to have less competitive competitors and have a higher degree of cultural similarity which is considered less risky and competitive. Nonetheless, uncertainty avoidance has reduced the interest of some companies such as companies C, D, E, F and G to venture into overseas markets in future unless the overseas projects entail very low risks or joint venture with capable company in terms of financial and resources.

5.2.3.4 Long-term orientation

All companies emphasised on long-term orientation in overseas venture decisions. Long-term orientation is critical for these companies as it assures them stability and continuity of business development. In this regards, these companies tend to avoid risks with long-term negative effects. For example, Company A will not venture into political instability countries such as Syria, Iran and Iraq. This is because the negative impact of the risk will continue for a long period of time which will in turn affect the economy of the host country as well as their organisational performance.

Nonetheless, short-term orientation will be applied in certain circumstances. For instance, at the early stage of new overseas market venture, Company A will opt for a short-term basis business strategy to familiarise the conditions in the host country especially the risks, the regulation structure and the culture of the host country, to explore any viable long-term business opportunities, to establish social networks with foreign business communities and political parties and to gain trust from clients. This company is willing to absorb some risks and sacrifice short-term gain for the purpose of long-term business opportunities. Similarly, Company C is willing to bid for a short-

term based project to familiarise the conditions in the host country and to build up their business networks. This company is willing to bear higher risks with negative outcome in terms of the profit gained and role playing in construction projects. Other than long-term relationship and long-term goals, these companies are looking for long-term gain. Some companies highlighted that their companies are starting to shift their company's business strategy into local market due to the unsatisfactory long-term returns in overseas projects.

5.2.3.5 Market orientation

In general, all companies take market orientation as an important cultural value in overseas venture decisions. All interviewees opined that market orientation is critical in their companies as it provides decision guidance to the top management personnel whether to venture or not to venture into a particular foreign country and to decide on workable risk mitigation methods. This cultural value also allows the companies to have a better risk exploration of the host country, to decide on the calculated risks that their companies willing to take, to identify ways to reduce the risks, to have a better understanding about the background and the needs of clients and to better aware of their companies' strength and weakness compared with their competitors. Besides, company F commented that market orientation assists their company to decide on the right partner in an international partnership or joint venture. Companies tend to be risk averse if the particular risks cannot be mitigated, shared or transferred to other parties. Companies with a strong and good market orientation will be less risk averse and more confident in making overseas venture decisions.

5.2.3.6 Relationship orientation

All companies take relationship orientation with business communities and political parties especially those in the host country as an important cultural value in their overseas venture decisions. These companies highlighted that establishing a good and trusted relationship with business and political parties are critical especially in the higher risks of overseas projects. The purposes of establishing a good network with business and political parties are to reduce risks that they cannot foreseen, to transfer risks to other parties through joint venture or partnership, to gain the trust of the host country's client, to learn and share the lesson learned about doing business in host countries, to establish future and long-term business relationship, to increase the chances of getting future jobs and so on.

Most of the companies addressed that a moderate relationship with political parties is healthy and good for their companies for the long-term international business. Some interviewees pinpointed that international relationship with business communities is much more critical than with political parties as projects are awarded based on the reasonable price and the capability of contractors. However, the top management in company B showed a different point of view. They support a close relationship with political parties and establish a strong local and international relationship with political parties. The purposes are to increase international job opportunities and to assure a smooth working environment at international level. Other comments included:

Company B – 'we feel more secure in building up a good relationship with political parties such as the government of the overseas countries…it will increase the success of the project as well as project profit…trust is important in a relationship'

Company C – 'although having a good relationship with the local and host country government is important, but we will not involve in any political-related events such as election…because it will create a barrier to the company to continuously venture successfully in international markets in future'

Company D – 'good relationship is critical in overseas venture…due to previous bad experience with the host country's client…we have suffered loss and since then, the top management is not willing to future overseas market…unless we have a very good relationship and trust with the main parties'

In addition, all the companies prefer to establish close and long-term relationship with the local and foreign business communities that have good reputation, good credibility, strong financial capability, sufficient and competent resources and high technology capability especially the hardware aspect. Relationship with business communities and political parties are particularly noteworthy in international business as it plays a considerable effect on the companies in overseas venture decisions as well as the level of confidence and capability of the companies.

5.2.3.7 Entrepreneurship orientation

Companies A and B emphasised heavily on entrepreneurship orientation in terms of looking for new overseas markets, willing to absorb higher risks on the short-term basis, show a great interest in overseas markets and treat overseas market as a challenge. Yet, these companies are risk averse and not willing to tolerate high risks. Other companies do not prioritise this cultural orientation as they affirmed that this type of cultural value is too risky that will affect their companies' performance especially in the high risks of

international market environment. Hence, it is not a suitable value to be practiced in their companies especially in the listed companies.

5.2.3.8 Learning orientation

Based on the results of the case studies, all companies perceived that learning orientation is critical in overseas venture decisions. The companies learn from the past and current overseas projects from their own companies and other competitors to assist them to make a better decision on overseas venture and to perform well in overseas projects. Interviewee in company E highlighted that learning is an important cultural value in decision making to guide their companies to develop a systematic solutions and to identify the potential and hidden risks that they may face in overseas venture. However, the sharing and transferring of lesson learned is in the form of formal and informal meetings and discussion. There is a lack of systematic learning tools to capture and transfer the lesson learned in these companies.

5.2.3.9 Innovation orientation

Majority of the companies (except companies A and E) take innovation as a critical cultural value in overseas venture decisions. These companies perceived that innovation provides competitive advantage to their companies in terms of project performance and running a business. To survive and adapt in a competitive overseas market, company F strives to diversify their company construction portfolio by exploring new and potential construction portfolio, and learning and adopting new construction technology and methods. Other comment included:

Company B – 'innovation means that we must able to offer something that the host country's company cannot offer…then we will have higher chances to bid successfully and work successfully in international market…contractors are not competitive enough if they just offer a price to the client in venturing overseas…our company is trying to provide innovated services and ideas to the overseas clients, so that, we can continuously maintain our competitive advantage'

Although companies A and E pondered that innovation is not a critical cultural value in overseas venture but they admitted that it is a good practice for international organisations. The reason is innovation is not an important element in all overseas projects especially in the under developing and developing countries. According to them, the existing construction techniques and technology of their companies are sufficient and innovated enough in these countries. In addition, the importance of innovation value is depending on the types, clients' requirements and characteristics of the overseas projects. Other comment included:

Company A (2nd interviewee) – 'innovation is required in developed countries or modern and complicated design'

5.2.3.10 Technology orientation

All companies take technology orientation as an important cultural value in venturing into overseas countries. This is because this cultural value especially the hardware aspect provides competitive advantage for their companies at international level. However, some interviewees highlighted that the importance of technology orientation is depend on the type, requirements and geographical area of the overseas projects.

Others further explained that only overseas projects with complicated design require advance technology. High and advance technology is not necessary in overseas countries such as Southeast Asian countries. According to the interviewees, in most cases, the basic technology and construction methods are sufficient in these countries.

Hence, these companies claimed that they will adopt and invest in a certain type of technology (especially the hardware aspect) if the cost of the technology is reasonable and it will benefit to their companies in the long-term purposes. In addition, these companies take less emphasis on software technology aspect. The reason is software technology is less significant in construction projects and it is depend on the project value and project size. The software application with basic functions is sufficient for these companies to perform the tasks. Other comments included:

Company A (1st interviewee) – 'technology is important…it helps to improve/build up our reputation in overseas market…assist us to beat our competitors...but, software technology is not that important in overseas venture...as the importance of technology depends on project value and size...the bigger the project, the more advance software is required…'

Company A (2nd interviewee) – 'technology may not play a very important role in overseas venture…because the technology and construction methods in our company are sufficient to us to venture overseas markets such as developed countries'

Company D – 'firm that has high level of technology background/knowledge is at an advantage level at international markets'

5.2.3.11 Marketing formalisation orientation

All companies perceived that marketing formalisation is an important cultural orientation in overseas venture decisions. It is a strategic decision guidance to assure the achievement of their companies' goals. Generally, the preference of the marketing formalisation orientation of these companies is less rigid and more formalised.

5.2.3.12 Future orientation

All companies perecieved future orientation as a critical cultural orientation in overseas venture decisions. These companies emphasises future orientation on the aspects of future relationship and future business opportunities. Most of the interviewees perceived that future orientation should be associated with long-term orientation in strategy decision making as both are closely connected in business strategy planning. Some interviewees further highlighted that future orientation is critical all types of organisations.

5.2.3.13 Goal orientation

Almost all companies assented that goal orientation is an important cultural orientation that has considerable effect on their companies' business strategy and decisions. Goals such as increase companies' growth and profitability levels, increase market share and expand business internationally will motivate their companies to venture into overseas markets. However, goal orientation does not play a critical role in overseas venture decisions in Company D. This company explained that their company was testing the overseas markets to gauge the viability of doing international business. Hence, the goal

orientation of their company takes no or less effect on their firm's overseas venture decisions. In addition, overseas venture is not a 'must achieve' goal in company G although the board members encourage the top management to venture into overseas market. This is because the main goal of the company is to meet the targeted returns in local or overseas market. Other comment included:

Company E – 'our company's goals will determine the types of business that our company need to focus on…'

Company G – 'the main goal of our company is to increase return of the company, cannot loss money and doing a right thing…we will not venture into overseas projects with high risk unless there is a good guarantee on return'

5.2.3.14 Flexibility orientation

Five (5) companies take flexibility orientation as an important cultural value to venture into overseas market except companies A and E. According to the interviewees, the main aspects of flexibility orientation in construction includes the types of construction services offer to the client, the ways of managing the projects, the ways to deal with project parties and the applied methods of construction. Others hold a different opinion although these companies highlighted that this cultural orientation is an additional competitive advantage for their companies in overseas venture. The reason is flexibility does not take place in overseas countries especially in Asian countries as the ways to manage the projects, to construct the products and to deal with project parties are the same as in local projects.

5.2.3.15 Ethical orientation

Surprisingly, some companies (companies C, E, F and G) perceived that ethical orientation as a critical value in overseas venture and others (companies A, B and D) hold a different opinion. Company G is a typical example of emphasises strongly on business ethics from the board members in which company G will not venture into overseas markets with a strong culture of bribery in business. This company strongly believes that a culture of bribery in business will affect the profit, performance, goals and reputation of their company. To prevent working in the unethical business culture, this company will avoid venture into high bribery culture countries and prefer to venture into countries such as Brunei and Singapore.

Others addressed that ethical orientation is a good and healthy practice for a company in overseas venture as well as in managing a business. However, these companies highlighted that business ethics value is very difficult to follow strictly especially when venture into overseas countries like India, Indonesia, Vietnam, Thailand and so forth. This is because the culture of bribery is a common phenomenon in these countries and it has even become part of the working and living cultures in these countries. Hence, the companies have no choice but have to tolerate such culture in the event of overseas venture and they will try to find out a way to mitigate the negative impact of this unhealthy practice. Other comments included:

Company D – 'the importance of ethical orientation depends on the overseas countries that a company wants to venture…some companies are very strict on business ethic, they will not adapt and agree on the culture of bribery or cartel…they afraid that the action of bribery will provide a good opportunity to their competitors and may affect

their relationship with business community…they believe that strong ethical orientation will cause the smooth in working and enhance project performance'

5.2.3.16 Reward orientation

All companies agreed that reward orientation to the top management is critical in motivating the top management to support the companies' strategy decisions and to move towards the companies' goals in overseas venture. Yet, these companies addressed that an appropriate level of reward system is important to avoid top management acting too aggressively, which can bring negative effect on the companies such as business failure and low returns. A high reward system is not necessary encourage top management to go bid for a higher risks of overseas market and projects. For example, the reward system in company F will encourage the top management to act aggressively toward the company's overseas venture strategy but the top management is prudent in selecting overseas markets and projects as there is a culture that "no one will save you if you make the company loss money". Hence, the top management is acting aggressively to identify business opportunities in new and existing international markets but tend to be risk averse in making international decisions.

5.2.3.17 Values orientation

Findings from the case studies found that value orientation is taken priority by all the companies. This is because value orientation is the basic organisational element to run and management an organisation. Besides, interviewees in companies A, B, C and F highlighted that this cultural orientation is critical in guiding staff to move towards

organisational goals. Interviewees in companies A, B, C, D and F addressed that the values of trust, respect and professionalism are important in overseas venture as they assist them to make future overseas venture decisions. Other than the values in relationship, some interviewees pinpointed that organisational values are critical in maintaining the performance of an organisation especially if the organisations involve in international projects.

5.2.4 Implications from the case studies

Findings from the case studies provide support to the proposed conceptual model that the identified cultural constructs are likely to effect on international bidding decisions. As such, the proposed conceptual model could be further tested quantitatively through questionnaire survey. The case studies discovered that organisations emphasise on different cultural orientations tend to have different risk taking preferences in which organisations tend to perceive risks differently in overseas venture or international bidding decisions. Although some cultural orientations are heavily emphasised by all the companies, comments from the interviewees showed that uncertainty avoidance, long-term orientation, market orientation, relationship orientation, learning orientation, technology orientation, marketing formalisation orientation, future orientation, goal orientation, reward orientation and value orientation are more likely contribute a greater influence on the organisational international bidding decisions. This implied that value, goals and guanxi cultural traits are more likely to have greater impacts on international bidding decisions.

In addition, there is no single cultural dimension has a dominant influence on organisational international decisions. To be more precisely, organisational international

decisions are guided by a combination of few cultural dimensions. Besides, organisational culture is not merely affect organisational international decisions. It is an intangible form of capability of an organisation to sustain in international markets by means of affecting organisational decisions. Nonetheless, the conceptual model would be further modified, verified and validated through quantitative and qualitative methods.

5.3 Findings from the questionnaire survey

5.3.1 Response rate of the questionnaire survey

Based on the census method, the response rate of the questionnaire survey was 48.89% of the total target population as shown in Table 5.3. Sekaran (2000) addressed that a response rate of 30% in questionnaire survey is acceptable. Consistently, Oo et al. (2008) highlighted that a response rate of 30% is reasonable and representative especially in the bidding related research area which is often considered as issue of secrecy. While, Lorenz and Marosszeky (2007) contended that 25% of response rate is typical result for mailed survey. In addition, this response rate is considered acceptable and consistent with previous studies (such as Ang & Ofori, 2001; Issa & Haddad, 2008; Lim et al., 2011; Ling et al., 2012). Appendix N indicates a list of the questionnaire's response rate of some previous studies.

Table 5.3: Response rate of the questionnaire survey

Types of responses	Frequency	Percentage (%)
Responsed	44	48.89
Non-response & rejected	46	51.11
Total sending out	*90*	*100.00*

5.3.2 Demographic information

5.3.2.1 Demographic information of the responded organisations

The demographic details of the responded organisations are tabulated in Table 5.4. Based on the Table 5.4, about 97.73% of organisations are private sector organisations and 86.37% of the responded organisations have been operating for more than twenty (20) years in Malaysia. Half of the organisations have more than four hundred (400) permanent staff with an averge total assets of USD three hundred (300) million from 2008 until 2012. Whilst, thirty-two (31.82%) of the organisations have more than USD three hundred (300) million of the averge total turnover from 2008 until 2012.

About 54.55% of the responded organisations have more than ten (10) experience in international markets. Among the responded international organisations, 54.54% of them involved in international markets after 2000. Whilst, 40.91% of them have been completed more than ten (10) numbers of overseas projects and half of the organisations are having less than five (5) numbers of current overseas projects. In addition, 56.81% of the responded organisations have been involved in the international projects with a total maximum project value of more than USD hundred (100) million. About fifty-two percent (52%) of the organisations are listed companies in the Bursa Malaysia Berhad and about nine percent (9%) of them have been delisted. Half of the organisations had or having more than ten (10) years listing age in the Bursa Malaysia Berhad.

More than half of the organisations have been involved or are involving in the Western Asia (Arabian Peninsula) and Western Asia (South Caucasus). Countries in the Maritime Southeastern Asia and Eastern Asia constitute 47.73% and 43.18%

respectively. Others popular overseas ventured countries are Mainland Southeastern Asia (38.64%) and Africa (27.27%). More than forty percent (40%) of the organisations are having the international portfolio in commercial buildings (50%), residential buildings (43.18%) and transportation facilities (40.91%).

Table 5.4: Demographic information of the responded organisations

Demographic details	Frequency	Percentage (%)	Cumulative Percentage (%)
Sector type of the companies:			
Public	1	2.27	2.27
Private	43	97.73	100.00
Total	*44*	*100.00*	
Age of the companies:			
10-15	1	2.27	2.27
16-20	5	11.36	13.64
21-25	6	13.64	27.27
26-30	7	15.91	43.18
31-35	7	15.91	59.09
36-40	8	18.18	77.27
41-45	2	4.55	81.82
46-50	5	11.36	93.18
51-55	1	2.27	95.45
56-60	1	2.27	97.73
61-65	1	2.27	100.00
Total	*44*	*100.00*	
Number of permanent staff in the companies:			
1-50	4	9.09	9.09
51-100	5	11.36	20.45
101-200	9	20.45	40.91
201-300	2	4.55	45.45
301-400	2	4.55	50.00
401-500	4	9.09	59.09
501-600	2	4.55	63.64
601-700	3	6.82	70.45
701-1000	3	6.82	77.27
1001-2000	5	11.36	88.64
2001-3000	1	2.27	90.91
3001-4000	1	2.27	93.18
>4000	3	6.82	100.00
Total	*44*	*100.00*	

Table 5.4, continued: Demographic information of the responded organisations

Demographic details	Frequency	Percentage (%)	Cumulative Percentage (%)
Average total assets of the companies (2008-2012) (in USD million):			
50 and below	8	18.18	18.18
51-100	3	6.82	25.00
101-150	3	6.82	31.82
151-200	4	9.09	40.91
201-300	4	9.09	50.00
301-1000	3	6.82	56.82
1001-2000	7	15.91	72.73
2001-3000	1	2.27	75.00
3001-4000	3	6.82	81.82
>4000	2	4.55	86.36
Missing data	6	13.64	100.00
Total	*44*	*100.00*	
Average total turnover of the companies (2008-2012) (in USD million):			
1-25	5	11.36	11.36
26-50	5	11.36	22.73
51-100	5	11.36	34.09
101-150	4	9.09	43.18
151-200	1	2.27	45.45
201-250	3	6.82	52.27
251-300	1	2.27	54.55
301-400	3	6.82	61.36
401-500	1	2.27	63.64
>500	10	22.73	86.36
Missing data	6	13.64	100.00
Total	*44*	*100.00*	
International experience of the companies:			
1-5	8	18.18	18.18
6-10	12	27.27	45.45
11-15	12	27.27	72.73
16-20	6	13.64	86.36
21-25	2	4.55	90.91
>25	1	2.27	93.18
Missing data	3	6.82	100.00
Total	*44*	*100.00*	
Year of involvement in international projects of the companies:			
Before 1990	3	6.82	6.82
1990-1995	8	18.18	25.00
1996-2000	9	20.45	45.45
2001-2005	12	27.27	72.73
2006-2010	8	18.18	90.91
2011 and after	1	2.27	93.18
Missing data	3	6.82	100.00
Total	*44*	*100.00*	
Total past completed overseas projects of the companies:			
1-5	16	36.36	36.36
6-10	10	22.73	59.09
11-20	3	6.82	65.91
21-30	4	9.09	75.00
41-50	1	2.27	77.27
>50	6	13.64	90.91
Missing data	4	9.09	100.00
Total	*44*	*100.00*	

Table 5.4, continued: Demographic information of the responded organisations

Demographic details	Frequency	Percentage (%)	Cumulative Percentage (%)
Total current overseas projects of the companies:			
0	12	27.27	27.27
1-5	22	50.00	77.27
6-10	4	9.09	86.36
11-20	1	2.27	88.64
>50	1	2.27	90.91
Missing data	4	9.09	100.00
Total	*44*	*100.00*	
Total maximum overseas project value completed by the companies (in USD million):			
50 and below	13	29.55	29.55
51-100	6	13.64	43.18
101-200	4	9.09	52.27
201-300	2	4.55	56.82
301-400	1	2.27	59.09
401-500	2	4.55	63.64
501-600	4	9.09	72.73
601-700	1	2.27	75.00
701-1000	4	9.09	84.09
>1000	4	9.09	93.18
Missing data	3	6.82	100.00
Total	*44*	*100.00*	
Listing status of the companies:			
Domestic listing only	23	52.27	52.27
Not applicable	17	38.64	90.91
Delisted	4	9.09	100.00
Total	*44*	*100.00*	
Listing age of the companies			
10 and below	5	11.36	11.36
11-20	17	38.64	50.00
21-30	4	9.09	59.09
31-40	1	2.27	61.36
Not applicable	17	38.64	100.00
Total	*44*	*100.00*	
Overseas countries involved by the companies:			
Africa	12	27.27	-
Central Asia	1	2.27	-
Eastern Asia	19	43.18	-
Mainland Southeastern Asia	17	38.64	-
Maritime Southeastern Asia	21	47.73	-
Northern Asia	2	4.55	-
Western Asia (Arabian Peninsula)	25	56.82	-
Western Asia (Fertile Crescent)	4	9.09	-
Western Asia (Iranian Plateau)	4	9.09	-
Western Asia (South Caucasus)	1	2.27	-
Southern Asia	27	61.36	-
United State America	5	11.36	-
Europe countries	4	9.09	-
Australia	7	15.91	-
Papua New Guinea	2	4.55	-
Missing data	3	6.82	-

Table 5.4, continued: Demographic information of the responded organisations

Demographic details	Frequency	Percentage (%)	Cumulative Percentage (%)
International portfolio of the companies:			
Residential buildings	19	43.18	-
Commercial buildings	22	50.00	-
Education institution	4	9.09	-
Sport facilities	5	11.36	-
Manufacturing facilities	4	9.09	-
Public building and amenities (hospital, airport, museum, court, religious building and etc.)	16	36.36	-
Power plants	14	31.82	-
Water supply	13	29.55	-
Sewerage/solid waste	9	20.45	-
Industrial process/petroleum plants	3	6.82	-
Transportation facilities	18	40.91	-
Others (piling works; geotechnical works, foundation, soil improvement, precast works; structural steel works, Electrical power construction, installation, maintenance and supply; dredging; heavy engineering; jetty/port; mechanical and electrical works and so on)	13	29.55	-
Missing data	3	6.82	-

Notes:

- *When the total number is≠44, it is because the respondents were requested to choose more than one category*
- *Missing data indicate that respondents were not willing to provide the data due to confidentiality and etc.*
- *The total percentage may not equal 100% due to rounding.*

5.3.2.2 Demographic information of the respondents

Table 5.5 indicates the demographic information of the respondents. Among the forty-four (44) responded organisations, eighty-one (81) respondents were participated in the questionnaire survey. Seventy-nine percent (79.02%) of the respondents are more than forty yeas old. The questionnaire survey were filled in by the respondents at the top management level such as thirty-seven percent (37.04%) were directors, chief executive directors and managing directors, seventeen percent (17.28%) were general managers, thirty-seven percent (37.04%) were senior managers and about nine percent (8.64%) were executive directors, vice presidents and project directors. About forty-six (45.68%) of the respondents have bachelor's degree as their highest education level. More than

forty percent (40.74%) of them were having master degree level or higher education level. About forty-six (45.68%) of the respondents have more than twenty (20) years working experience in local and overseas construction markets. Although some of the respondents have less than ten (10) years working experience in local and overseas construction markets, but they have more than ten (10) years or twenty (20) working experience in the general organisational management. During the data collection stage, some of the respondents were interviewed including those with less than 10 years experience. According to them, although they have less than 10 years working experience in local and international construction, but they have more than 10 years experience in the general organisational management that are not in construction field. Some of them highlighted they are focusing on managing the organisational daily business activities and organisational decisions instead of involving in the construction process directly.

Table 5.5: Demographic information of the respondents

Demographic details	Frequency	Percentage (%)	Cumulative Percentage (%)
Age of the respondents:			
20-29	2	2.47	2.47
30-39	15	18.52	20.99
40-49	23	28.40	49.38
50-59	35	43.21	92.59
60-69	6	7.41	100.00
Total	*81*	*100.00*	
Designations in the companies:			
Director/CEO/Managing director	30	37.04	37.04
General manager	14	17.28	54.32
Senior manager	30	37.04	91.36
Others (executive director, vice president, and project director)	7	8.64	100.00
Total	*81*	*100.00*	
Highest education level:			
Secondary education	1	1.23	1.23
Certificate/advanced diploma/diploma level	10	12.35	13.58
Undergraduate level (Bachelor's degree)	37	45.68	59.26
Master's degree level	28	34.57	93.83
Doctoral level	4	4.94	98.77
Others	1	1.23	100.00
Total	*81*	*100.00*	

Table 5.5, continued: Demographic information of the respondents

Demographic details	Frequency	Percentage (%)	Cumulative Percentage (%)
Total overall experience of the respondents (local and overseas construction markets):			
No experience	0	0.00	0.00
1-5	6	7.41	7.41
6-10	10	12.35	19.76
11-15	11	13.58	33.34
16-20	11	13.58	46.92
21-25	15	18.52	65.44
26-30	9	11.11	76.55
31 and above	13	16.05	92.60
Missing data	6	7.41	100.00
Total	*81*	*100.00*	

Notes:

- *CEO = Chief executive officer*
- *Missing data indicates that respondents were not willing to provide the data due to confidentiality and etc*
- *The total percentage may not equal 100% due to rounding..*

5.3.3 Data examination of the quantitative data

5.3.3.1 Missing values

Five (5) sets of questionnaires were identified have missing values on latent exogenous and endogenous variables. Before applying the remedies methods for the missing data suggested by Hair et al. (2006), these five (5) sets of questionnaire survey (set A) were sent to the respective respondents to request them to fill in the unanswered questions by post, by face-to-face interviews or by email. All these questionnaire forms were successfully completed. Besides, ten (10) sets of questionnaires (set B) have identified with missing values on the company demographic information. Few follow-up calls and emails have been done to request the organisations to provide the required information. However, only three (3) sets of questionnaires were fully completed for the company demographic.

Follow the four-step process proposed by Hair et al. (2006) as highligted in Section 4.4.4.5, the type of missing data are ignorable as the missing value is about the company demographic details. Based on the suggestion from Hair and his fellow researchers, it is reasonable that the missing data to be included into the analysis. They further addressed that if the missing values are nonmetric variables or the missing values are metric independent variables, they can be maintained as missing data in the analysis. In this study, as the company demographic is not the main focus of the analysis, hence, no imputation method was employed in the missing values.

5.3.3.2 Outliers

Based on the descriptive statistics from the SPSS 18.0, the standard scores of some variables are fall within the value of 2.5 and 3.0 for univariate detection and some combined variables have values less than 0.001 for multivariate detection. The outliers (variables) are retained due to the reasons that the outliers are representative of the population in the small population of Malaysian international contractors and the values of these variables (outliers) are within the ordinary values which are not very high or low, hence,. In accordance to the advice from Hair et al. (2006), outliers should be retained to prevent the risk of improving the data analysis and purely for the purpose of generalisation unless the outliers have been proved that they are not representative of any observation in the population.

5.3.3.3 Normality of the data

All variables have a skewness and kurtosis values less than 1 and only three (3) indicators show skewness values within the range of 1 and 1.6 and twenty (20)

indicators show kurtosis values within the range of 1 and 2.0. The degree of skewness and kurtosis for these indicators is not a critical issue in this study as these indicators are part of the indicators in measuring their respective constructs and hence these indicators were retained (Hair et al., 2013). Table 5.6 indicates the value of skewness and kurtosis of all the indicators in this study.

Table 5.6: The values of skewness and kurtosis of the indicators in this study

Variables	Skewness		Kurtosis		Variables	Skewness		Kurtosis	
	Statistic	Std. error	Statistic	Std. error		Statistic	Std. error	Statistic	Std. error
General information					E3	-0.160	0.357	0.443	0.702
O_PSales	0.109	0.357	0.444	0.702	E4	0.703	0.357	0.042	0.702
O_PShare	0.114	0.357	-0.176	0.702	E5	-0.286	0.357	**-1.505**	0.702
O_PProfit	0.003	0.357	0.224	0.702	E6	0.243	0.357	0.351	0.702
O_PSatisfac	-0.164	0.357	-0.070	0.702	E7	0.126	0.357	-0.018	0.702
O_RSuccess	-0.583	0.357	**1.464**	0.702	E8	0.259	0.357	0.824	0.702
O_RFailure	-0.131	0.357	-0.678	0.702	Le1	-0.052	0.357	0.023	0.702
Organisational culture					Le2	-0.340	0.357	-0.180	0.702
C1	-0.770	0.357	-0.011	0.702	Le3	-0.296	0.357	0.511	0.702
C2	-0.562	0.357	-0.035	0.702	Le4	-0.434	0.357	0.400	0.702
C3	-0.498	0.357	0.228	0.702	Le5	0.182	0.357	0.232	0.702
C4	-0.096	0.357	-0.815	0.702	Le6	-0.345	0.357	0.585	0.702
P1	-0.725	0.357	**1.435**	0.702	Le7	-0.525	0.357	0.288	0.702
P2	-0.414	0.357	-0.288	0.702	Le8	-0.199	0.357	-0.267	0.702
P3	**1.044**	0.357	0.986	0.702	I1	0.476	0.357	0.381	0.702
P4	-0.323	0.357	0.167	0.702	I2	**-1.566**	0.357	**2.015**	0.702
P5	-0.432	0.357	0.550	0.702	I3	-0.443	0.357	-0.256	0.702
P6	0.373	0.357	-0.311	0.702	I4	-0.177	0.357	-0.294	0.702
U1	-0.227	0.357	-0.379	0.702	I5	0.491	0.357	0.662	0.702
U2	-0.313	0.357	0.265	0.702	I6	-0.357	0.357	0.063	0.702
U3	-0.235	0.357	-0.772	0.702	I7	**-1.142**	0.357	0.544	0.702
L1	-0.069	0.357	0.545	0.702	Ty1	0.388	0.357	**1.108**	0.702
L2	0.030	0.357	0.697	0.702	Ty2	-0.157	0.357	0.377	0.702
L3	0.466	0.357	-0.138	0.702	Ty3	-0.733	0.357	0.181	0.702
M1a	-0.329	0.357	0.389	0.702	Ty4	-0.725	0.357	0.100	0.702
M1b	-0.230	0.357	-0.152	0.702	Ty5	-0.222	0.357	**1.169**	0.702
M1c	0.372	0.357	0.053	0.702	Mf1	0.495	0.357	0.355	0.702
M2a	-0.721	0.357	**1.236**	0.702	Mf2	-0.786	0.357	0.618	0.702
M2b	-0.237	0.357	0.321	0.702	Mf3	-0.490	0.357	-0.479	0.702
M3a	-0.220	0.357	0.184	0.702	Mf4	-0.331	0.357	-0.423	0.702
M3b	-0.589	0.357	0.541	0.702	F1	0.027	0.357	-0.252	0.702
Gx1a	0.209	0.357	**1.028**	0.702	F2	0.314	0.357	0.165	0.702
Gx1b	0.189	0.357	**1.877**	0.702	F3	0.122	0.357	0.370	0.702
Gx1c	0.016	0.357	0.162	0.702	F4	-0.185	0.357	0.839	0.702
Gx1d	-0.032	0.357	0.645	0.702	G1a	0.085	0.357	0.253	0.702
Gx1e	0.303	0.357	0.431	0.702	G1b	0.013	0.357	0.025	0.702
Gx2a	0.203	0.357	-0.548	0.702	G1c	-0.008	0.357	-0.290	0.702
Gx2b	0.206	0.357	-0.660	0.702	G2a	0.165	0.357	-0.322	0.702
Gx2c	-0.050	0.357	0.647	0.702	G2b	0.150	0.357	-0.598	0.702
E1	0.409	0.357	-0.192	0.702	G2c	-0.043	0.357	-0.189	0.702
E2	0.708	0.357	0.815	0.702	Fx1	0.328	0.357	-0.058	0.702

Table 5.6, continued: The values of skewness and kurtosis of the indicators in this study

Variables	Skewness		Kurtosis		Variables	Skewness		Kurtosis	
	Statistic	Std. error	Statistic	Std. error		Statistic	Std. Error	Statistic	Std. error
Fx2	-0.361	0.357	0.472	0.702	PR3_C	-0.118	0.357	-0.259	0.702
Fx3	-0.337	0.357	0.257	0.702	PR3_O	-0.006	0.357	-0.085	0.702
Fx4	-0.032	0.357	-0.036	0.702	PR4_C	0.021	0.357	0.706	0.702
Fx5	0.269	0.357	0.953	0.702	PR4_O	0.117	0.357	**1.300**	0.702
Fx6	-0.030	0.357	**1.249**	0.702	PR5_C	-0.207	0.357	-0.235	0.702
Fx7	-0.348	0.357	0.581	0.702	PR5_O	0.230	0.357	-0.049	0.702
Fx8	0.386	0.357	0.341	0.702	PR6_C	-0.171	0.357	0.026	0.702
Fx9	-0.413	0.357	-0.102	0.702	PR6_O	0.423	0.357	0.404	0.702
Et1a	-0.297	0.357	0.304	0.702	PR7_C	0.057	0.357	-0.063	0.702
Et1b	-0.271	0.357	-0.074	0.702	PR7_O	-0.045	0.357	-0.429	0.702
Et2a	-0.236	0.357	0.564	0.702	PR8_C	-0.081	0.357	-0.065	0.702
Et2b	0.064	0.357	0.940	0.702	PR8_O	-0.208	0.357	0.105	0.702
Et2c	0.241	0.357	-0.334	0.702	ER1_C	-0.036	0.357	0.117	0.702
Et2d	-0.455	0.357	**1.020**	0.702	ER1_O	-0.062	0.357	0.601	0.702
V1a	-0.407	0.357	0.279	0.702	ER2_C	-0.099	0.357	0.294	0.702
V1b	0.115	0.357	0.340	0.702	ER2_O	0.145	0.357	0.757	0.702
V1c	0.177	0.357	0.584	0.702	ER3_C	0.193	0.357	**1.054**	0.702
V1d	-0.159	0.357	0.321	0.702	ER3_O	0.063	0.357	0.496	0.702
V1e	-0.516	0.357	0.889	0.702	ER4_C	-0.387	0.357	0.497	0.702
V1f	-0.039	0.357	-0.156	0.702	ER4_O	-0.229	0.357	0.561	0.702
V1g	-0.112	0.357	0.610	0.702	ER5_C	-0.276	0.357	0.035	0.702
V1h	-0.435	0.357	**1.300**	0.702	ER5_O	-0.005	0.357	-0.063	0.702
V2a	-0.589	0.357	**1.388**	0.702	ER6_C	0.200	0.357	0.297	0.702
V2b	0.124	0.357	0.946	0.702	ER6_O	0.226	0.357	0.372	0.702
V2c	-0.259	0.357	**1.162**	0.702	ER7_C	-0.235	0.357	0.279	0.702
Rw1	-0.366	0.357	**1.318**	0.702	ER7_O	-0.193	0.357	0.281	0.702
Rw2	0.081	0.357	0.485	0.702	ER8_C	-0.627	0.357	0.214	0.702
Rw3	-0.118	0.357	0.023	0.702	ER8_O	-0.279	0.357	-0.100	0.702
Risks decisions					ER9_C	0.056	0.357	0.263	0.702
PR1_C	0.187	0.357	**1.874**	0.702	ER9_O	0.406	0.357	0.768	0.702
PR1_O	0.150	0.357	-0.367	0.702	ER10_C	0.219	0.357	**1.096**	0.702
PR2_C	-0.303	0.357	0.114	0.702	ER10_O	0.192	0.357	**1.852**	0.702
PR2_O	-0.024	0.357	-0.364	0.702					

Notes:

- *Please refer Appendices G and H for the theme and the descriptions of the variables.*
- *C = Cost impact of the risks; O = Risk occurrence*
- *Std. = Standard*

5.3.4 Descriptive statistics: General information

The general questions in the questionnaire (set A) consisted of organisational performance in international markets compared with their major competitors based on the perception of the top management personnel, the extent of international decisions made based on the previous records and company's' interest to bid for international

construction projects in future as shown in Table 5.7 and Table 5.8. Based on the Table 5.7, top management in the international contractors perceived that their organisational performance in international markets compared to their major competitors is considered moderately good. In addition, the survey found that organisations prefer to refer successful records in making international decisions. With reference to the Table 5.8, almost all the contractor organisations with a percentage of 90.91% are interested to bid for overseas projects in future.

Table 5.7: General information about the organisations

Details	Minimum	Maximum	Mean		Standard Deviation	Variance
	Statistic	Statistic	Statistic	Standard error	Statistic	Statistic
Organisational performance in international markets						
Sales/turnover level	1	5	2.73	0.127	0.844	0.712
Market share	1	4	2.57	0.119	0.788	0.621
Profitability	1	5	2.54	0.139	0.920	0.846
Overall satisfaction - fim's performance relative to firm's target objectives	1	4	2.55	0.118	0.783	0.613
Decisions reference to previous organisational records						
Successful records	1	5	3.62	0.122	0.806	0.650
Failure records	1	5	2.66	0.142	0.940	0.883

Table 5.8: Contractors' interest to bid for overseas projects in future

Details	Frequency	Percentage (%)
Interest to bid for overseas projects in future		
Yes	40	90.91
No	4	9.09
Total sending out	*44*	*100.00*

5.3.5 Descriptive statistics: Organisational culture

Table 5.9 indicates the mean value of the international contractors' organisational culture. The mean value of the organisational culture practised by the international contractos are presented in radar chart as illustrated in Figure 5.2. Based on the data in

Table 5.9 and Figure 5.2, the mean values of market orientation (client) (4.21), goal orientations (common) (4.06) and teamwork orientation (4.01) are above 4 which indicate that these cultural orientations are taking higher priority among the international contractors. This followed by long term orientation (3.98), value (strategic) (3.94), value (relationship) (3.93), goal orientation (international) (3.90), guanxi orientation (business) (3.86), reward orientation (3.85), future orientation (3.85), guanxi orientation (political) (3.84) and market orientation (competitors) (3.84) with the mean values between 3.84 and 3.98. Surprisingly, innovation orientation (3.33), technology orientation (3.34) and marketing formalisation orientation (3.39) are taken less priority compared to other cultural orientation with the lowest mean values. Figure 5.3 indicates the mean values of the international contractors' organisational culture based on the internal and external dimensions. Overall, international contractors take higher priority on 'Goals orientation' (3.98), followed by 'Involvement orientation' (3.93), 'Values' (3.88) and 'Guanxi orientation' (3.85). In contrast, 'Capability orientation' (3.33) scored the lowest mean value among the eight (8) cultural traits.

Table 5.9: Mean values of the international contractors' organisational culture

Cultural variables	Items	Minimum	Maximum	Mean		Standard deviation	Variance	Average mean
		Statistic	Statistic	Statistic	Standard error	Statistic	Statistic	
1. C	C1	3	5	4.37	0.092	0.612	0.375	4.01
	C2	2	5	3.79	0.127	0.844	0.712	
	C3	2	5	3.84	0.112	0.744	0.553	
	C4	3	5	4.06	0.101	0.671	0.450	
2. P	P1	2	5	3.89	0.098	0.651	0.424	3.55
	P2	3	5	4.25	0.094	0.625	0.391	
	P3	2	5	2.75	0.123	0.813	0.661	
	P4	2	5	3.70	0.105	0.699	0.488	
	P5	2	5	3.70	0.101	0.672	0.452	
	P6	1	5	3.00	0.141	0.937	0.878	
3. U	U1	2	5	3.47	0.121	0.804	0.647	3.52
	U2	2	5	3.63	0.112	0.741	0.549	
	U3	2	5	3.47	0.137	0.907	0.822	
4. L	L1	3	5	4.08	0.078	0.517	0.267	3.98
	L2	3	5	4.12	0.075	0.500	0.250	
	L3	3	5	3.75	0.088	0.585	0.342	

Table 5.9, continued: Mean values of the international contractors' organisational culture

Cultural variables	Items	Minimum	Maximum	Mean		Standard deviation	Variance	Average mean
		Statistic	Statistic	Statistic	Standard error	Statistic	Statistic	
5. M1	M1a	3	5	4.22	0.079	0.522	0.273	4.21
	M1b	3	5	4.22	0.084	0.558	0.311	
	M1c	3	5	4.18	0.072	0.479	0.229	
6. M2	M2a	2	5	3.90	0.105	0.696	0.485	3.84
	M2bt	2	5	3.78	0.110	0.727	0.529	
7. M3	M3a	2	5	3.69	0.093	0.616	0.379	3.69
	M3b	2	5	3.68	0.107	0.712	0.507	
8. Gx1	Gx1a	3	5	4.12	0.069	0.461	0.212	3.86
	Gx1b	3	5	4.07	0.063	0.421	0.177	
	Gx1c	3	5	3.97	0.083	0.548	0.301	
	Gx1d	3	5	3.91	0.075	0.496	0.246	
	Gx1e	2	5	3.24	0.107	0.709	0.503	
9. Gx2	Gx2a	2	5	3.67	0.116	0.772	0.595	3.84
	Gx2b	3	5	3.90	0.098	0.650	0.423	
	Gx2c	3	5	3.97	0.076	0.506	0.256	
10. E	E1	2	5	3.15	0.126	0.838	0.702	3.54
	E2	2	5	3.28	0.111	0.736	0.542	
	E3	2	5	3.66	0.090	0.598	0.358	
	E4	3	5	3.65	0.091	0.605	0.366	
	E5	3	5	3.60	0.070	0.466	0.217	
	E6	2	5	3.37	0.110	0.730	0.533	
	E7	3	5	3.80	0.083	0.549	0.302	
	E8	3	5	3.82	0.074	0.492	0.242	
11. Le	Le1	3	5	3.87	0.081	0.540	0.291	3.64
	Le2	3	5	3.80	0.075	0.495	0.245	
	Le3	2	5	3.76	0.094	0.623	0.388	
	Le4	2	5	3.65	0.099	0.657	0.432	
	Le5	2	5	3.62	0.096	0.634	0.402	
	Le6	2	5	3.61	0.083	0.550	0.303	
	Le7	2	5	3.54	0.093	0.620	0.384	
	Le8	2	5	3.27	0.108	0.715	0.511	
12. I	I1	2	5	3.37	0.107	0.712	0.507	3.33
	I2	2	4	3.64	0.081	0.538	0.289	
	I3	2	4	3.15	0.091	0.604	0.365	
	I4	2	5	3.24	0.110	0.728	0.530	
	I5	2	5	3.19	0.107	0.706	0.499	
	I6	2	4	3.24	0.087	0.576	0.332	
	I7	2	4	3.47	0.093	0.619	0.383	
13. Ty	Ty1	2	5	3.32	0.087	0.580	0.337	3.34
	Ty2	2	5	3.42	0.096	0.635	0.403	
	Ty3	2	4	3.35	0.090	0.595	0.354	
	Ty4	2	4	3.41	0.088	0.583	0.340	
	Ty5	1	5	3.21	0.117	0.773	0.597	
14. Mf	Mf1	2	5	3.03	0.106	0.704	0.496	3.39
	Mf2	2	5	3.62	0.078	0.514	0.265	
	Mf3	2	4	3.49	0.078	0.514	0.265	
	Mf4	2	5	3.42	0.089	0.591	0.349	

Table 5.9, continued: Mean values of the international contractors' organisational culture

Cultural variables	Items	Minimum	Maximum	Mean		Standard deviation	Variance	Average mean
		Statistic	Statistic	Statistic	Standard error	Statistic	Statistic	
15. F	F1	3	5	4.00	0.088	0.581	0.338	3.85
	F2	3	5	3.82	0.083	0.551	0.303	
	F3	3	5	3.75	0.074	0.489	0.239	
	F4	2	5	3.83	0.095	0.632	0.400	
16. G1	G1a	3	5	4.12	0.079	0.527	0.278	4.06
	G1b	3	5	4.08	0.083	0.550	0.302	
	G1c	3	5	3.98	0.089	0.593	0.352	
17. G2	G2a	3	5	3.90	0.092	0.609	0.371	3.90
	G2b	3	5	3.79	0.093	0.615	0.378	
	G2c	3	5	4.01	0.087	0.576	0.332	
18. Fx	Fx1	3	5	3.73	0.084	0.555	0.308	3.54
	Fx2	2	5	3.44	0.094	0.624	0.389	
	Fx3	2	5	3.46	0.106	0.705	0.497	
	Fx4	2	5	3.15	0.107	0.709	0.503	
	Fx5	3	5	3.81	0.074	0.492	0.242	
	Fx6	2	5	3.51	0.091	0.601	0.361	
	Fx7	2	5	3.61	0.105	0.698	0.487	
	Fx8	2	5	3.55	0.095	0.633	0.401	
	Fx9	2	5	3.63	0.125	0.830	0.688	
19. Et1	Et1a	2	5	3.68	0.106	0.706	0.498	3.57
	Et1b	2	5	3.45	0.110	0.729	0.532	
20. Et2	Et2a	2	5	3.63	0.090	0.597	0.357	3.77
	Et2b	3	5	3.77	0.071	0.468	0.219	
	Et2c	3	5	3.80	0.089	0.592	0.351	
	Et2d	2	5	3.87	0.094	0.621	0.386	
21. V1	V1a	2	5	3.65	0.088	0.582	0.338	3.94
	V1b	3	5	4.15	0.073	0.487	0.237	
	V1c	3	5	4.13	0.072	0.476	0.227	
	V1d	3	5	4.09	0.079	0.527	0.278	
	V1e	2	5	3.92	0.096	0.640	0.409	
	V1f	3	5	3.78	0.079	0.526	0.276	
	V1g	3	5	3.90	0.076	0.504	0.254	
	V1h	3	5	3.90	0.064	0.426	0.182	
22. V2	V2a	3	5	3.94	0.062	0.410	0.168	3.93
	V2b	3	5	3.96	0.073	0.485	0.235	
	V2c	3	5	3.88	0.069	0.456	0.208	
23. Rw	Rw1	3	5	3.92	0.067	0.447	0.200	3.85
	Rw2	3	5	4.11	0.077	0.509	0.259	
	Rw3	2	5	3.51	0.111	0.735	0.540	

Notes:

- *Please refer Appendix I for the theme and the descriptions of the variables.*
- *The mean values were calculated prior to the reliability and validity tests.*

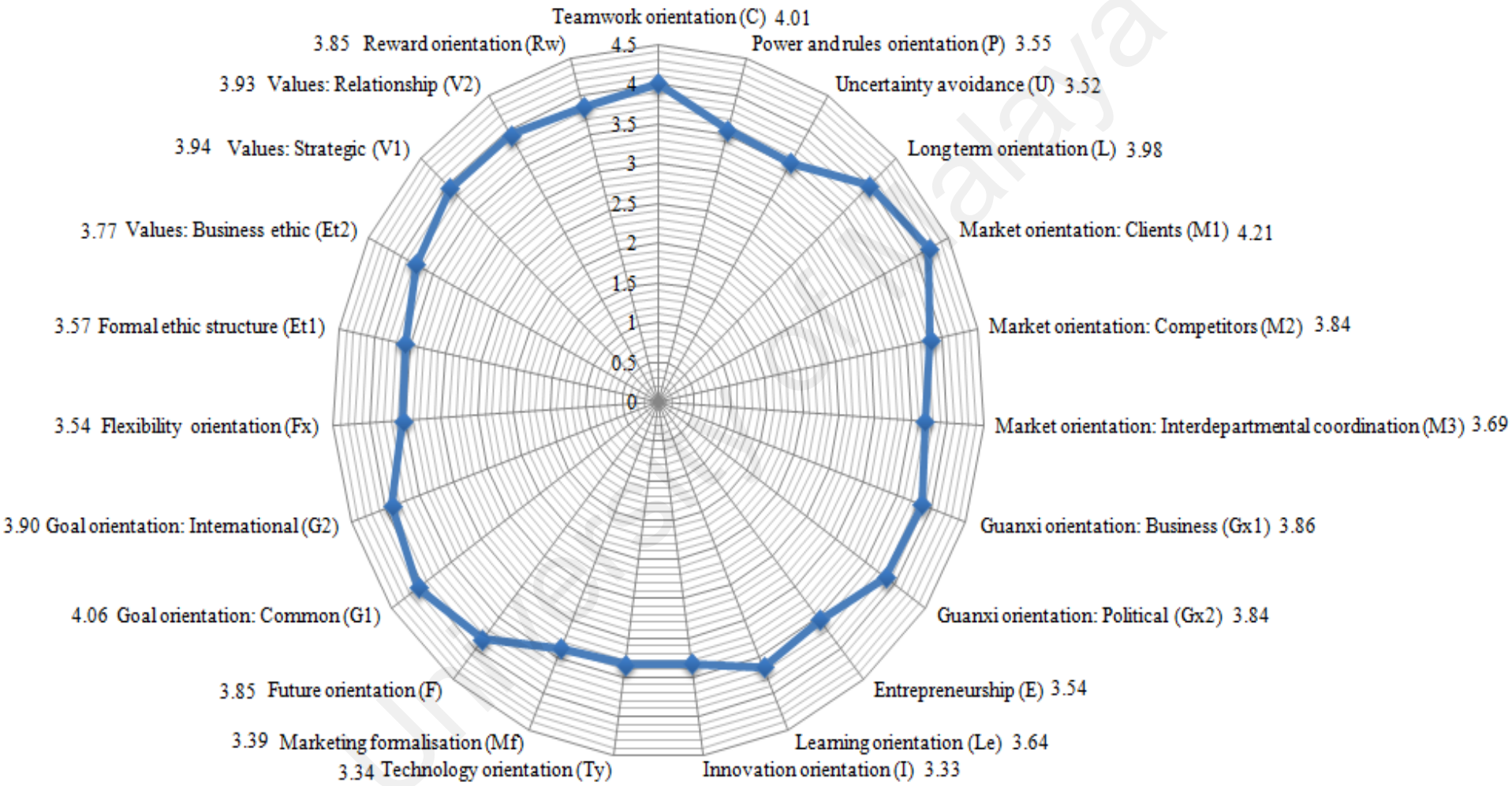


Figure 5.2: Mean value of the international contractors' organisational culture

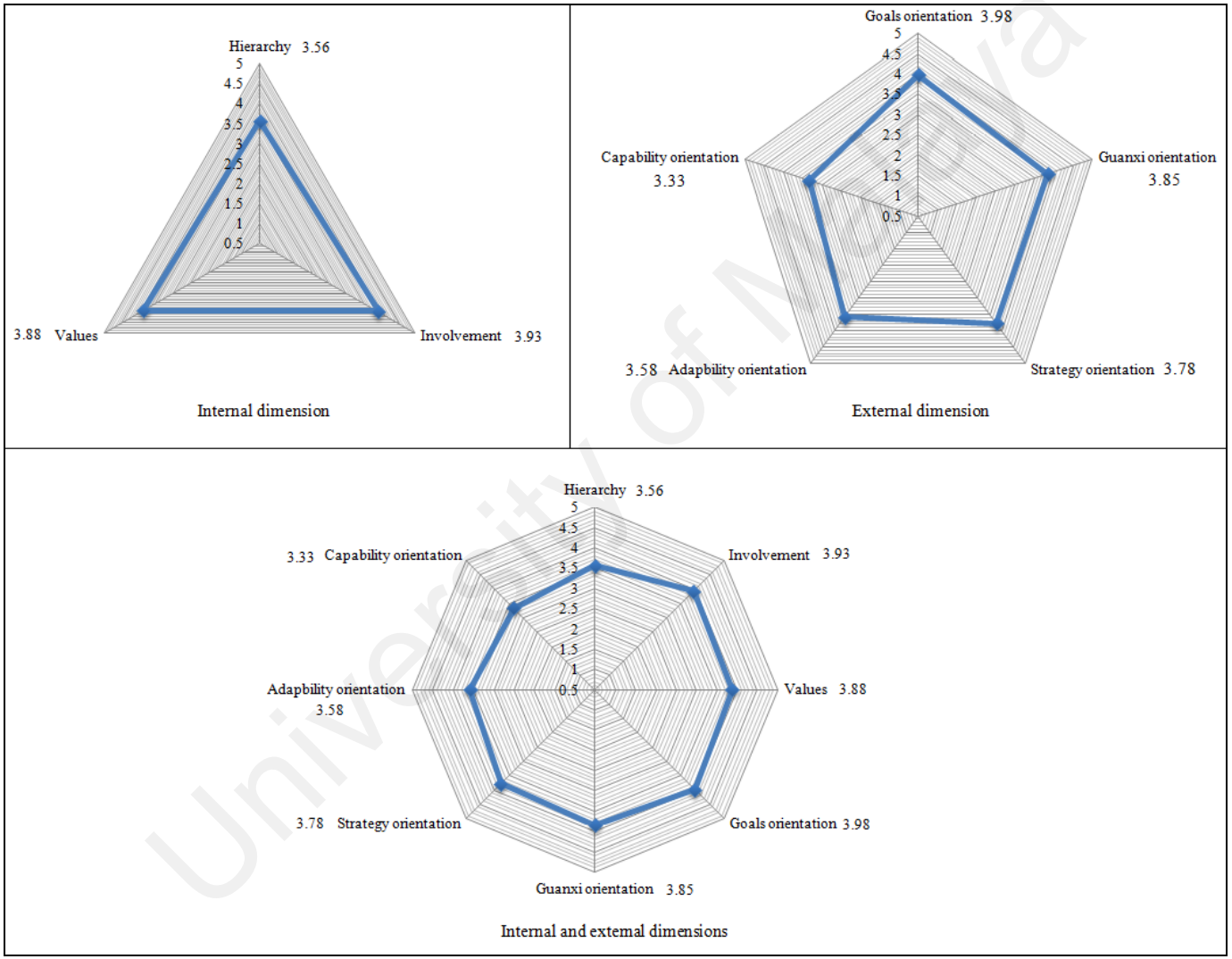


Figure 5.3: Mean value of international contractors' organisational culture based on the internal and external dimensions

5.3.6 Descriptive statistics: Maximum risk tolerance level on political and economic risk-related decisions

The mean values of the maximum risk tolerance level on international political and economic risk decisions among the international contractors are tabulated as Table 5.10. These mean values are transferred into scatter charts based on the risk matrix approach as illustrated in Figure 5.4 and Figure 5.5. Risk matrix is a semi-quantitative assessment tool to measure variety types of risks in different situations (Ni, Chen, & Chen, 2010). Although the application of risk matrix is lack of precision, non-meticulous mathematical basis and the subjective calculation process, Ni and his fellows addressed that the use of risk matrix is easy to understand and it can be applied in any types of industry sectors. Risk matrix consists of two (2) axes in which the first axe can be referred as likelihood, probability or frequency and the second axe is referred as consequence, impact, severity or magnitude (Cox, 2008). Hence, risk matrix was adopted in this study to present organisations' maximum risk tolerance level.

In general, there is no standardised and objective method to classify risk with different degree of severity and probability (Cox, 2008). The categorisation of risk level is based on Borda's category (Ni et al., 2010). Based on the Figure 5.4, international contractors are willing to accept medium level of political risks such as political instability, local protectionism, bride and corruption, confiscation, absence of effective legal system and repudiation. In contrast, they tend to accept higher level of political risks in terms of inconsistency in government policies and bureaucratic. On the other hand, international contractors are inclined to accept economic risks at the medium level such as interest rate crisis, uncertain policy towards economic liberalisation, unfavourable repatriation of profit, foreign country's debt crisis, custom restrictions on import and export and

insurance-related issues as shown in the Figure 5.5. Whilst, they tend to accept higher level of economic risks like currency crisis, inflation crisis, fluctuation in prices and shortage in resources supply.

Table 5.10: Mean value of the international risk decisions

International risk variables	Items	Minimum	Maximum	Mean		Standard deviation	Variance
		Statistic	Statistic	Statistic	Standard error	Statistic	Statistic
PR	PR1_C	1	5	3.05	0.124	0.824	0.678
(mean value=	PR1_O	1	5	2.93	0.170	1.131	1.279
3.007)	PR2_C	1	5	3.39	0.151	1.001	1.002
	PR2_O	1	5	3.11	0.170	1.125	1.266
	PR3_C	1	5	3.24	0.156	1.032	1.065
	PR3_O	1	5	2.92	0.155	1.027	1.054
	PR4_C	1	5	3.13	0.121	0.803	0.645
	PR4_O	1	5	2.91	0.125	0.827	0.683
	PR5_C	1	5	3.04	0.166	1.101	1.213
	PR5_O	1	5	2.68	0.161	1.067	1.139
	PR6_C	1	5	2.84	0.149	0.992	0.983
	PR6_O	1	5	2.56	0.145	0.961	0.924
	PR7_C	1	5	2.94	0.139	0.923	0.853
	PR7_O	1	5	2.87	0.154	1.023	1.046
	PR8_C	1	5	3.28	0.139	0.919	0.845
	PR8_O	1	5	3.24	0.136	0.901	0.811
ER	ER1_C	1	5	3.24	0.138	0.918	0.842
(mean value=	ER1_O	1	5	3.12	0.124	0.823	0.678
3.0378)	ER2_C	1	5	3.15	0.127	0.842	0.708
	ER2_O	1	5	3.06	0.120	0.799	0.639
	ER3_C	1	5	2.99	0.120	0.796	0.633
	ER3_O	1	5	2.90	0.117	0.776	0.602
	ER4_C	1	5	2.99	0.130	0.865	0.748
	ER4_O	1	5	2.72	0.133	0.883	0.780
	ER5_C	1	5	3.00	0.131	0.870	0.758
	ER5_O	1	5	2.88	0.145	0.962	0.925
	ER6_C	1	5	2.89	0.146	0.966	0.933
	ER6_O	1	5	2.73	0.152	1.006	1.012
	ER7_C	1	5	3.36	0.136	0.904	0.816
	ER7_O	1	5	3.17	0.129	0.859	0.738
	ER8_C	1	5	3.33	0.132	0.878	0.770
	ER8_O	1	5	3.20	0.131	0.870	0.757
	ER9_C	1	5	3.06	0.139	0.921	0.848
	ER9_O	1	5	2.98	0.139	0.922	0.851
	ER10_C	1	5	3.09	0.117	0.774	0.599
	ER10_O	1	5	2.90	0.121	0.799	0.639

Notes:

- *Please refer Appendix J for the theme and the descriptions of the variables.*
- *PR = Political risk; ER = economic risk; C = Cost impact of the risks; O = Risk occurrence*
- *The mean values were calculated prior to the reliability and validity tests.*

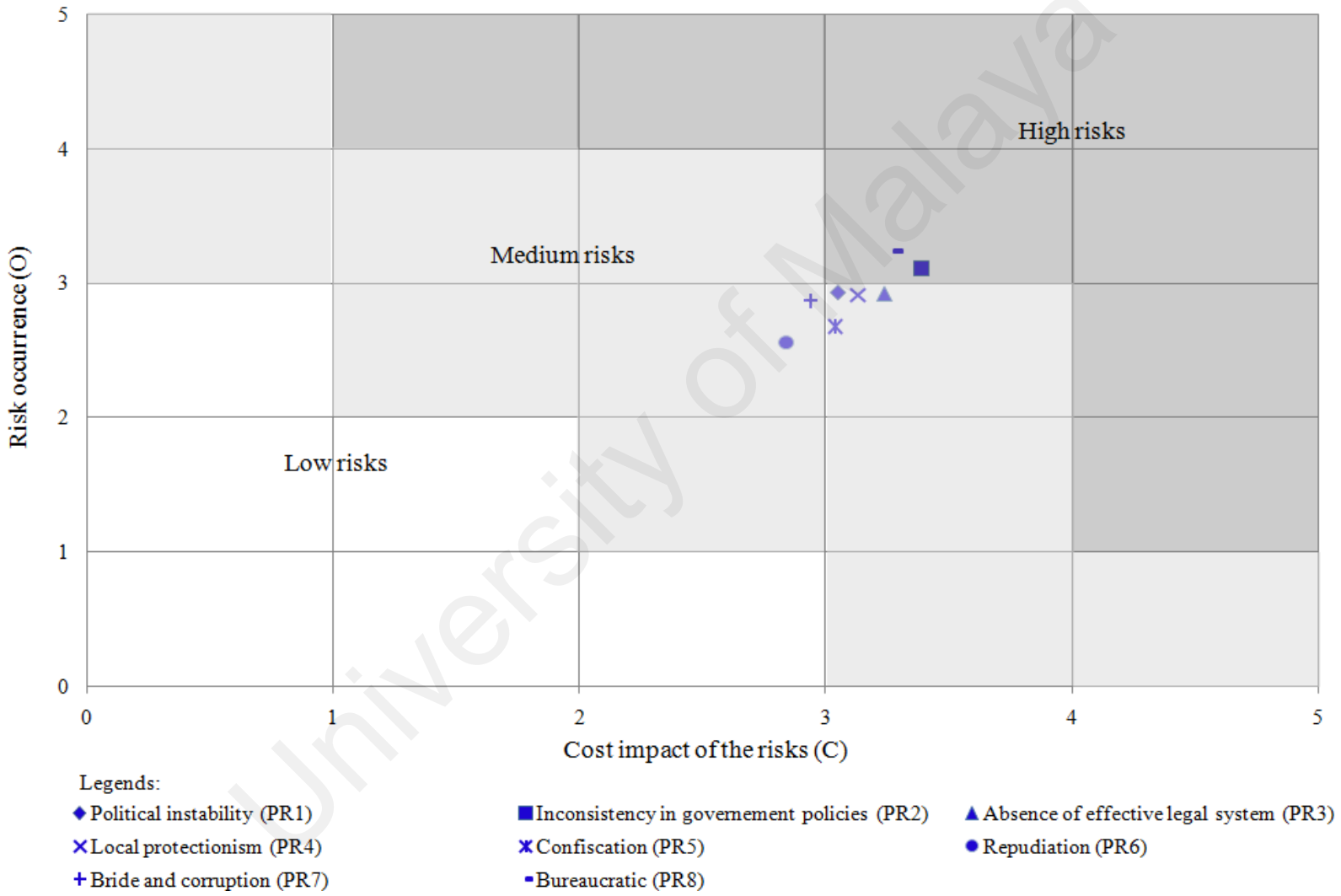


Figure 5.4: Risk tolerance level on political-related risk decisions

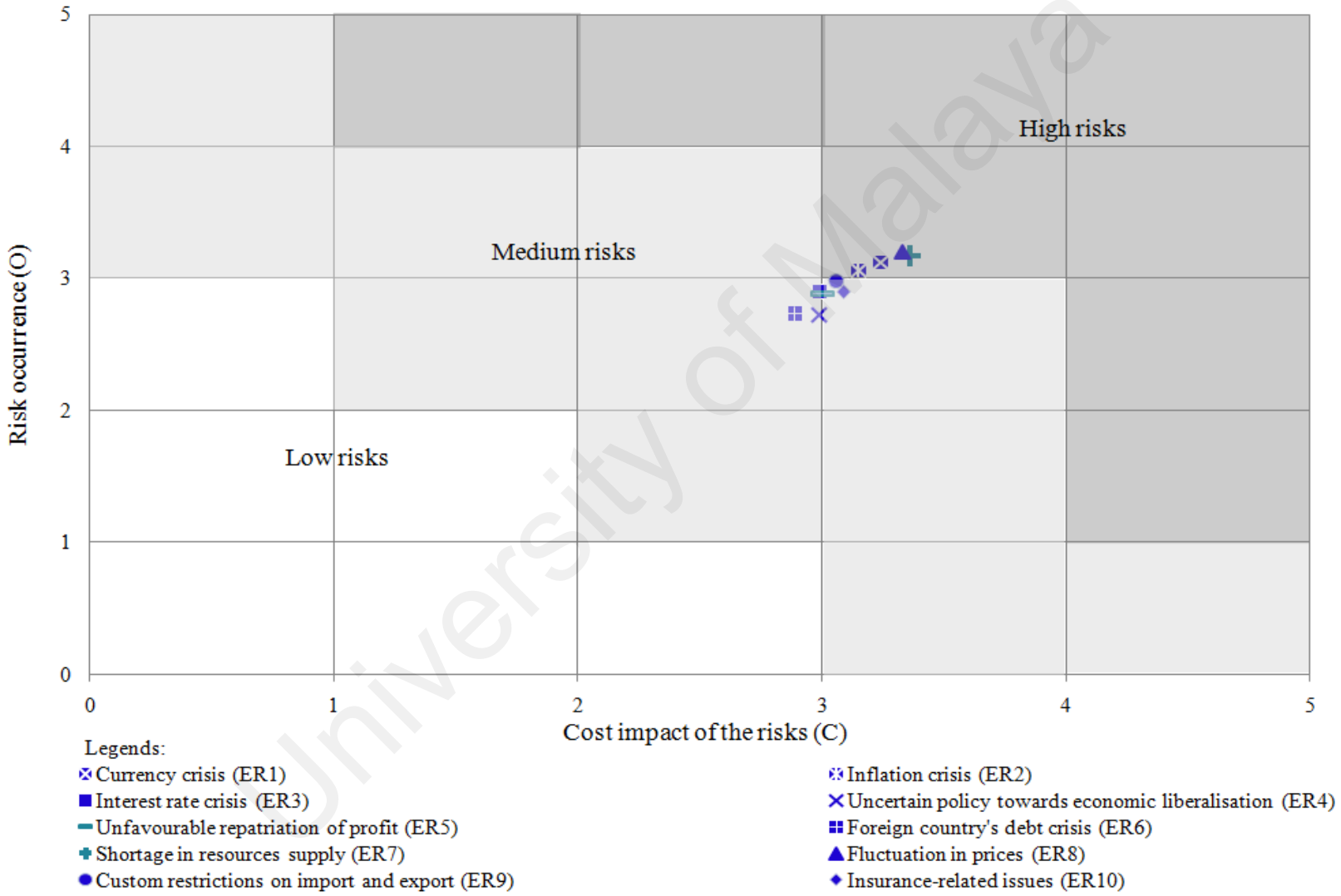


Figure 5.5: Risk tolerance level on economic-related risk decisions

5.3.7 One sample T-test

Table 5.11 indicates the results of one sample T-test of the organisational culture practised by the Malaysian international contractors. The results were based on the test value of three (3) which is consistent with the study by Ling et al. (2012). The degree of freedom (df) was forty-three (43). Three (3) insignificant cultural items were excluded from the subsequent PLS-SEM analysis and those are P6, Mf1 and E1. The remaining was retained for PLS-SEM analysis.

Table 5.11: One sample T-test of organisational culture practice

Cultural variables	Items	T value	Sig. (1-tailed)	Retain?
1. C	C1	14.834	0.000	√
	C2	6.182	0.000	√
	C3	7.532	0.000	√
	C4	10.444	0.000	√
2. P	P1	9.061	0.000	√
	P2	13.296	0.000	√
	P3	-2.056	0.023	√
	P4	6.626	0.000	√
	P5	6.950	0.000	√
	P6	-0.002	0.499	x
3. U	U1	3.884	0.000	√
	U2	5.678	0.000	√
	U3	3.435	0.001	√
4. L	L1	13.825	0.000	√
	L2	14.925	0.000	√
	L3	8.511	0.000	√
5. M1	M1a	15.491	0.000	√
	M1b	14.549	0.000	√
	M1c	16.297	0.000	√
6. M2	M2a	8.603	0.000	√
	M2b	7.073	0.000	√
7. M3	M3a	7.448	0.000	√
	M3b	6.329	0.000	√
8. Gx1	Gx1a	16.151	0.000	√
	Gx1b	16.836	0.000	√
	Gx1c	11.674	0.000	√
	Gx1d	12.110	0.000	√
	Gx1e	2.292	0.013	√
9. Gx2	Gx2a	5.731	0.000	√
	Gx2b	9.140	0.000	√
	Gx2c	12.700	0.000	√

Table 5.11, continued: One sample T-test of organisational culture practice

Cultural variables	Items	T value	Sig. (1-tailed)	Retain?
10. E	E1	1.200	0.118	x
	E2	2.541	0.007	√
	E3	7.313	0.000	√
	E4	7.087	0.000	√
	E5	8.602	0.000	√
	E6	3.317	0.001	√
	E7	9.629	0.000	√
	E8	11.016	0.000	√
11. Le	Le1	10.732	0.000	√
	Le2	10.744	0.000	√
	Le3	8.133	0.000	√
	Le4	6.581	0.000	√
	Le5	6.449	0.000	√
	Le6	7.322	0.000	√
	Le7	5.806	0.000	√
	Le8	2.528	0.008	√
12. I	I1	3.484	0.001	√
	I2	7.890	0.000	√
	I3	1.602	0.058	√
	I4	2.142	0.019	√
	I5	1.810	0.039	√
	I6	2.768	0.004	√
	I7	5.045	0.000	√
13. Ty	Ty1	3.707	0.000	√
	Ty2	4.351	0.000	√
	Ty3	3.860	0.000	√
	Ty4	4.664	0.000	√
	Ty5	1.775	0.041	√
14. Mf	Mf1	0.327	0.372	x
	Mf2	7.947	0.000	√
	Mf3	6.301	0.000	√
	Mf4	4.769	0.000	√
15. F	F1	11.375	0.000	√
	F2	9.923	0.000	√
	F3	10.227	0.000	√
	F4	8.672	0.000	√
16. G1	G1a	14.079	0.000	√
	G1b	13.063	0.000	√
	G1c	11.013	0.000	√
17. G2	G2a	9.811	0.000	√
	G2b	8.477	0.000	√
	G2c	11.590	0.000	√
18. Fx	Fx1	8.737	0.000	√
	Fx2	4.661	0.000	√
	Fx3	4.337	0.000	√
	Fx4	1.388	0.086	√
	Fx5	10.956	0.000	√
	Fx6	5.615	0.000	√
	Fx7	5.811	0.000	√
	Fx8	5.809	0.000	√
	Fx9	5.057	0.000	√

Table 5.11, continued: One sample T-test of organisational culture practice

Cultural variables	Items	T value	Sig. (1-tailed)	Retain?
19. Et1	Et1a	6.426	0.000	√
	Et1b	4.106	0.000	√
20. Et2	Et2a	7.033	0.000	√
	Et2b	10.908	0.000	√
	Et2c	8.924	0.000	√
	Et2d	9.299	0.000	√
21. V1	V1a	7.385	0.000	√
	V1b	15.641	0.000	√
	V1c	15.676	0.000	√
	V1d	13.750	0.000	√
	V1e	9.490	0.000	√
	V1f	9.813	0.000	√
	V1g	11.788	0.000	√
	V1h	14.017	0.000	√
22. V2	V2a	15.171	0.000	√
	V2b	13.160	0.000	√
	V2c	12.831	0.000	√
23. Rw	Rw1a	13.728	0.000	√
	Rw1b	14.440	0.000	√
	Rw1c	4.562	0.000	√

Notes:

- *Please refer Appendix I for the theme and the descriptions of the variables.*

5.3.8 PLS-SEM

5.3.8.1 Convergence of the algorithm

Prior to the assessment of measurement model, the convergence of the algorithm was examined for data checking. As shown in Table 5.12, the numbers of iteration was lower than the value of the 'maximum iteration' in the PLS-SEM algorithm parameter settings in which the total numbers of nine (9) iterations in Table 5.12 is lower than the maximum iteration, three hundred (300) in the algorithm parameter settings (section 4.4.4.5, page 268). In this regards, PLS-SEM could be performed and proceeded in the next stage.

Table 5.12: Results of the iteration

Iteration	P4	P4	P5	P5	Et1a	Et1a	Et1b	Et1b	Rw1	Rw1	Rw2	Rw2	C2	C2	C4	C4	Et2a	Et2a	Et2b	Et2b	Et2c	Et2c	Et2d	Et2d
Iteration 0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Iteration 1	0.5565	0.3465	0.5529	0.3405	0.5526	0.3444	0.5351	0.3299	0.5437	0.3629	0.5345	0.3544	0.5871	0.3525	0.5451	0.3247	0.2475	0.0937	0.2689	0.1033	0.2986	0.1153	0.2861	0.1091
Iteration 2	0.558	0.3489	0.5514	0.3405	0.5546	0.3447	0.533	0.3272	0.5437	0.3663	0.5345	0.3574	0.5929	0.3518	0.5392	0.318	0.2457	0.0932	0.2685	0.1035	0.2998	0.1161	0.2869	0.1097
Iteration 3	0.5585	0.3495	0.5509	0.3407	0.5551	0.3445	0.5325	0.3266	0.5435	0.3675	0.5347	0.3588	0.5944	0.3512	0.5376	0.3154	0.2455	0.0932	0.2685	0.1035	0.2999	0.1162	0.287	0.1098
Iteration 4	0.5586	0.3496	0.5508	0.3408	0.5552	0.3445	0.5324	0.3264	0.5434	0.368	0.5348	0.3594	0.5949	0.3509	0.5371	0.3145	0.2455	0.0932	0.2685	0.1035	0.2999	0.1162	0.287	0.1098
Iteration 5	0.5586	0.3497	0.5508	0.3408	0.5552	0.3445	0.5324	0.3264	0.5434	0.3682	0.5348	0.3596	0.5951	0.3507	0.5369	0.3142	0.2455	0.0932	0.2685	0.1035	0.2999	0.1162	0.287	0.1098
Iteration 6	0.5586	0.3497	0.5508	0.3408	0.5552	0.3445	0.5324	0.3264	0.5434	0.3683	0.5348	0.3597	0.5952	0.3506	0.5368	0.314	0.2455	0.0932	0.2685	0.1035	0.2999	0.1162	0.287	0.1098
Iteration 7	0.5586	0.3497	0.5508	0.3408	0.5552	0.3444	0.5324	0.3264	0.5434	0.3683	0.5348	0.3598	0.5952	0.3506	0.5368	0.314	0.2455	0.0932	0.2685	0.1035	0.2999	0.1162	0.287	0.1098
Iteration 8	0.5586	0.3497	0.5508	0.3408	0.5552	0.3444	0.5324	0.3264	0.5434	0.3684	0.5348	0.3598	0.5952	0.3506	0.5368	0.3139	0.2455	0.0932	0.2685	0.1035	0.2999	0.1162	0.287	0.1098
Iteration 9	0.5586	0.3497	0.5508	0.3408	0.5552	0.3444	0.5324	0.3264	0.5434	0.3684	0.5348	0.3598	0.5952	0.3506	0.5368	0.3139	0.2455	0.0932	0.2685	0.1035	0.2999	0.1162	0.287	0.1098
Iteration	**V2a**	**V2a**	**V2b**	**V2b**	**V2c**	**V2c**	**V1b**	**V1b**	**V1c**	**V1c**	**V1d**	**V1d**	**V1f**	**V1f**	**V1g**	**V1g**	**V1h**	**V1h**	**G1a**	**G1a**	**G1b**	**G1b**	**G2a**	**G2a**
Iteration 0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Iteration 1	0.4293	0.1145	0.3129	0.0851	0.3824	0.1054	0.1797	0.0902	0.212	0.1095	0.205	0.1061	0.193	0.0981	0.2204	0.1135	0.203	0.1043	0.5259	0.3019	0.525	0.2968	0.4956	0.2938
Iteration 2	0.4317	0.1148	0.3068	0.0827	0.3853	0.1057	0.1783	0.0895	0.2128	0.1097	0.2056	0.1062	0.1928	0.0981	0.221	0.1139	0.2024	0.1041	0.5278	0.3051	0.5232	0.2976	0.5111	0.2968
Iteration 3	0.432	0.1148	0.3061	0.0825	0.3856	0.1057	0.1782	0.0895	0.2129	0.1098	0.2056	0.1062	0.1928	0.098	0.2211	0.1139	0.2024	0.104	0.5281	0.3057	0.5228	0.2976	0.5128	0.2978
Iteration 4	0.432	0.1148	0.306	0.0825	0.3856	0.1057	0.1781	0.0894	0.2129	0.1098	0.2056	0.1062	0.1928	0.098	0.2211	0.1139	0.2024	0.104	0.5282	0.3058	0.5227	0.2976	0.5132	0.2979
Iteration 5	0.432	0.1148	0.306	0.0824	0.3856	0.1057	0.1781	0.0894	0.2129	0.1098	0.2056	0.1062	0.1928	0.098	0.2211	0.1139	0.2024	0.104	0.5282	0.3058	0.5227	0.2976	0.5132	0.2979
Iteration 6	0.432	0.1148	0.306	0.0824	0.3856	0.1057	0.1781	0.0894	0.2129	0.1098	0.2056	0.1062	0.1928	0.098	0.2211	0.1139	0.2024	0.104	0.5282	0.3058	0.5227	0.2976	0.5133	0.2979
Iteration 7	0.432	0.1148	0.306	0.0824	0.3856	0.1057	0.1781	0.0894	0.2129	0.1098	0.2056	0.1062	0.1928	0.098	0.2211	0.1139	0.2024	0.104	0.5282	0.3058	0.5227	0.2976	0.5133	0.2979
Iteration 8	0.432	0.1148	0.306	0.0824	0.3856	0.1057	0.1781	0.0894	0.2129	0.1098	0.2056	0.1062	0.1928	0.098	0.2211	0.1139	0.2024	0.104	0.5282	0.3058	0.5227	0.2976	0.5133	0.2979
Iteration 9	0.432	0.1148	0.306	0.0824	0.3856	0.1057	0.1781	0.0894	0.2129	0.1098	0.2056	0.1062	0.1928	0.098	0.2211	0.1139	0.2024	0.104	0.5282	0.3058	0.5227	0.2976	0.5133	0.2979

Table 5.12, continued: Results of the iteration

Iteration	G2b	G2b	G2c	G2c	Gx1a	Gx1a	Gx1b	Gx1b	Gx1c	Gx1c	Gx1d	Gx1d	Gx1e	Gx1e	Gx2a	Gx2a	Gx2b	Gx2b	Gx2c	Gx2c	L1	L1	L2	L2	F1
Iteration 0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Iteration 1	0.3913	0.2226	0.4049	0.2266	0.2424	0.1767	0.2476	0.1838	0.2513	0.1735	0.2413	0.1638	0.2156	0.1438	0.3117	0.1471	0.3635	0.1718	0.447	0.1943	0.5747	0.0883	0.5688	0.0878	0.3947
Iteration 2	0.38	0.2167	0.3973	0.2229	0.2456	0.1784	0.2507	0.1857	0.2508	0.1743	0.2405	0.1637	0.2094	0.1412	0.3043	0.1429	0.3655	0.1707	0.452	0.196	0.5759	0.0881	0.5676	0.0878	0.3971
Iteration 3	0.3783	0.2155	0.3969	0.2221	0.2459	0.1789	0.251	0.1862	0.2508	0.1743	0.2406	0.1638	0.2085	0.1406	0.3029	0.1421	0.3656	0.1706	0.4531	0.196	0.5758	0.088	0.5677	0.0877	0.3972
Iteration 4	0.3779	0.2153	0.3968	0.222	0.246	0.179	0.2511	0.1863	0.2508	0.1744	0.2406	0.1638	0.2083	0.1405	0.3027	0.142	0.3656	0.1705	0.4533	0.196	0.5758	0.088	0.5677	0.0877	0.3972
Iteration 5	0.3779	0.2152	0.3968	0.222	0.246	0.179	0.2511	0.1863	0.2508	0.1744	0.2406	0.1639	0.2083	0.1405	0.3026	0.142	0.3656	0.1705	0.4534	0.196	0.5758	0.088	0.5677	0.0877	0.3972
Iteration 6	0.3779	0.2152	0.3968	0.222	0.246	0.179	0.2511	0.1863	0.2508	0.1744	0.2406	0.1639	0.2083	0.1405	0.3026	0.142	0.3656	0.1705	0.4534	0.196	0.5758	0.088	0.5677	0.0877	0.3972
Iteration 7	0.3778	0.2152	0.3968	0.222	0.246	0.179	0.2511	0.1863	0.2508	0.1744	0.2406	0.1639	0.2083	0.1405	0.3026	0.142	0.3656	0.1705	0.4534	0.196	0.5758	0.088	0.5677	0.0877	0.3972
Iteration 8	0.3778	0.2152	0.3968	0.222	0.246	0.179	0.2511	0.1863	0.2508	0.1744	0.2406	0.1639	0.2083	0.1405	0.3026	0.142	0.3656	0.1705	0.4534	0.196	0.5758	0.088	0.5677	0.0877	0.3972
Iteration 9	0.3778	0.2152	0.3968	0.222	0.246	0.179	0.2511	0.1863	0.2508	0.1744	0.2406	0.1639	0.2083	0.1405	0.3026	0.142	0.3656	0.1705	0.4534	0.196	0.5758	0.088	0.5677	0.0877	0.3972

Iteration	F1	F2	F2	F4	F4	M1a	M1a	M1b	M1b	M1c	M1c	M2a	M2a	M2b	M2b	M3b	M3b	Mf2	Mf2	Mf3	Mf3	Mf4	Mf4	Fx1	Fx1
Iteration 0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Iteration 1	0.1	0.3913	0.098	0.3598	0.0894	0.4123	0.1068	0.3797	0.1005	0.3617	0.0941	0.504	0.1046	0.5222	0.1097	1	0.0985	0.3772	0.1027	0.4081	0.1114	0.3485	0.0962	0.2309	0.114
Iteration 2	0.1002	0.3922	0.0979	0.3565	0.0891	0.4129	0.1069	0.3798	0.1004	0.3611	0.0937	0.504	0.1048	0.5222	0.1098	1	0.0985	0.3788	0.1029	0.4073	0.1117	0.3478	0.0961	0.2326	0.1141
Iteration 3	0.1002	0.3922	0.098	0.3564	0.0891	0.4129	0.1069	0.3798	0.1004	0.361	0.0937	0.504	0.1048	0.5222	0.1098	1	0.0985	0.3789	0.1029	0.4073	0.1117	0.3478	0.0961	0.2327	0.114
Iteration 4	0.1002	0.3922	0.098	0.3564	0.0891	0.4129	0.1069	0.3798	0.1004	0.361	0.0937	0.504	0.1048	0.5222	0.1098	1	0.0985	0.3789	0.1029	0.4073	0.1117	0.3478	0.0961	0.2327	0.114
Iteration 5	0.1002	0.3922	0.098	0.3564	0.0891	0.4129	0.1069	0.3798	0.1004	0.361	0.0937	0.504	0.1048	0.5222	0.1098	1	0.0985	0.3789	0.1029	0.4073	0.1117	0.3478	0.0961	0.2327	0.114
Iteration 6	0.1002	0.3922	0.098	0.3564	0.0891	0.4129	0.1069	0.3798	0.1004	0.361	0.0937	0.504	0.1048	0.5222	0.1098	1	0.0985	0.3789	0.1029	0.4073	0.1117	0.3478	0.0961	0.2327	0.114
Iteration 7	0.1002	0.3922	0.098	0.3564	0.0891	0.4129	0.1069	0.3798	0.1004	0.361	0.0937	0.504	0.1048	0.5222	0.1098	1	0.0985	0.3789	0.1029	0.4073	0.1117	0.3478	0.0961	0.2327	0.114
Iteration 8	0.1002	0.3922	0.098	0.3564	0.0891	0.4129	0.1069	0.3798	0.1004	0.361	0.0937	0.504	0.1048	0.5222	0.1098	1	0.0985	0.3789	0.1029	0.4073	0.1117	0.3478	0.0961	0.2327	0.114
Iteration 9	0.1002	0.3922	0.098	0.3564	0.0891	0.4129	0.1069	0.3798	0.1004	0.361	0.0937	0.504	0.1048	0.5222	0.1098	1	0.0985	0.3789	0.1029	0.4073	0.1117	0.3478	0.0961	0.2327	0.114

Table 5.12, continued: Results of the iteration

Iteration	Fx2	Fx2	Fx3	Fx3	Fx5	Fx5	Fx7	Fx7	Fx8	Fx8	Le1	Le1	Le2	Le2	Le3	Le3	Le4	Le4	Le5	Le5	E2	E2	E3	E3	I3
Iteration 0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Iteration 1	0.2022	0.095	0.1998	0.095	0.2147	0.1103	0.2363	0.1136	0.211	0.1032	0.2257	0.0957	0.2577	0.1147	0.2651	0.1149	0.2362	0.1056	0.2423	0.1007	0.5309	0.1146	0.592	0.126	0.3904
Iteration 2	0.199	0.0939	0.1954	0.0938	0.2165	0.11	0.2391	0.1142	0.2122	0.1034	0.2242	0.0951	0.2599	0.115	0.2673	0.1155	0.2362	0.1058	0.2396	0.1	0.531	0.1148	0.592	0.1272	0.3925
Iteration 3	0.1987	0.0937	0.195	0.0934	0.2166	0.1101	0.2394	0.1144	0.2124	0.1035	0.2241	0.0951	0.26	0.1151	0.2674	0.1156	0.2362	0.1057	0.2393	0.0999	0.5309	0.1149	0.5921	0.1272	0.393
Iteration 4	0.1986	0.0937	0.1949	0.0934	0.2166	0.1101	0.2395	0.1144	0.2124	0.1035	0.2241	0.0951	0.2601	0.1151	0.2675	0.1156	0.2362	0.1058	0.2393	0.0999	0.5309	0.1149	0.5921	0.1272	0.3931
Iteration 5	0.1986	0.0937	0.1949	0.0934	0.2166	0.1101	0.2395	0.1144	0.2124	0.1035	0.2241	0.0951	0.2601	0.1151	0.2675	0.1156	0.2362	0.1058	0.2393	0.0999	0.5309	0.1149	0.5921	0.1272	0.3931
Iteration 6	0.1986	0.0937	0.1949	0.0934	0.2166	0.1101	0.2395	0.1144	0.2124	0.1035	0.2241	0.0951	0.2601	0.1151	0.2675	0.1156	0.2362	0.1058	0.2393	0.0999	0.5309	0.1149	0.5921	0.1272	0.3931
Iteration 7	0.1986	0.0937	0.1949	0.0934	0.2166	0.1101	0.2395	0.1144	0.2124	0.1035	0.2241	0.0951	0.2601	0.1151	0.2675	0.1156	0.2362	0.1058	0.2393	0.0999	0.5309	0.1149	0.5921	0.1272	0.3931
Iteration 8	0.1986	0.0937	0.1949	0.0934	0.2166	0.1101	0.2395	0.1144	0.2124	0.1035	0.2241	0.0951	0.2601	0.1151	0.2675	0.1156	0.2362	0.1058	0.2393	0.0999	0.5309	0.1149	0.5921	0.1272	0.3931
Iteration 9	0.1986	0.0937	0.1949	0.0934	0.2166	0.1101	0.2395	0.1144	0.2124	0.1035	0.2241	0.0951	0.2601	0.1151	0.2675	0.1156	0.2362	0.1058	0.2393	0.0999	0.5309	0.1149	0.5921	0.1272	0.3931

Iteration	I3	I5	I5	I6	I6	Ty3	Ty3	Ty4	Ty4	Ty5	Ty5	PR1	PR2	PR3	PR4	PR5	ER1	ER2	ER3	ER4	ER5	ER6	ER7	ER8	ER9
Iteration 0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Iteration 1	0.2295	0.3854	0.2263	0.3636	0.2189	0.3667	0.2242	0.3918	0.2348	0.3872	0.2411	0.2471	0.2293	0.2616	0.2698	0.1425	0.1489	0.1488	0.1722	0.1382	0.1618	0.1039	0.0836	0.1115	0.1804
Iteration 2	0.2294	0.3851	0.2252	0.3618	0.2173	0.3665	0.2249	0.3907	0.2358	0.3886	0.2423	0.2502	0.2306	0.2647	0.2694	0.1346	0.1502	0.1506	0.1735	0.1403	0.1612	0.1008	0.0876	0.1122	0.1737
Iteration 3	0.2295	0.385	0.225	0.3615	0.2169	0.3667	0.2251	0.3906	0.2358	0.3885	0.2425	0.2506	0.2309	0.2651	0.2688	0.1338	0.1503	0.1516	0.1738	0.1403	0.1611	0.1003	0.0882	0.1124	0.1724
Iteration 4	0.2295	0.385	0.225	0.3614	0.2168	0.3667	0.2251	0.3906	0.2358	0.3885	0.2425	0.2507	0.231	0.2653	0.2686	0.1337	0.1504	0.1518	0.1738	0.1402	0.161	0.1002	0.0883	0.1124	0.1722
Iteration 5	0.2295	0.385	0.225	0.3614	0.2168	0.3668	0.2251	0.3905	0.2358	0.3885	0.2425	0.2508	0.231	0.2653	0.2685	0.1336	0.1504	0.1519	0.1738	0.1402	0.161	0.1002	0.0883	0.1124	0.1721
Iteration 6	0.2295	0.385	0.225	0.3614	0.2168	0.3668	0.2251	0.3905	0.2358	0.3885	0.2425	0.2508	0.231	0.2654	0.2685	0.1336	0.1504	0.1519	0.1738	0.1402	0.161	0.1001	0.0883	0.1124	0.1721
Iteration 7	0.2295	0.385	0.225	0.3614	0.2168	0.3668	0.2251	0.3905	0.2358	0.3885	0.2425	0.2508	0.231	0.2654	0.2685	0.1336	0.1504	0.1519	0.1738	0.1402	0.161	0.1001	0.0883	0.1124	0.1721
Iteration 8	0.2295	0.385	0.225	0.3614	0.2168	0.3668	0.2251	0.3905	0.2358	0.3885	0.2425	0.2508	0.231	0.2654	0.2685	0.1336	0.1504	0.1519	0.1738	0.1402	0.161	0.1001	0.0883	0.1124	0.1721
Iteration 9	0.2295	0.385	0.225	0.3614	0.2168	0.3668	0.2251	0.3905	0.2358	0.3885	0.2425	0.2508	0.231	0.2654	0.2685	0.1336	0.1504	0.1519	0.1738	0.1402	0.161	0.1001	0.0883	0.1124	0.1721

5.3.8.2 Assessment of measurement model

Table 5.13 tabulates the statistical results of the reliability tests, AVE and R^2 of the measurement model and the adjusted mean values of each construct after the reliability and validity tests. Overall, the measurement model shows a satisfactory results on both reliability and validity criteria. The values of the item-total correlation of all the first and second order components were above the minimum threshold of 0.30. While, the values of the outer loading of all the first and second order components were above the minimum threshold of 0.55. All the first and second order components indicated Cronbach's Apha values of 0.70 and above, except international goal (G2), long term orientation (L) and involvement with Cronbach's Alpha value 0.65 and above which were considered acceptable in exploratory study. On the other hand, the values of the composite reliability of all the first and second order components were above 0.50. The values of the communality are equal to the values of AVE.

In addition, the Fornell-Larcker criterion indicated that the square root of AVE of each construct (bold numbers on the diagonal) is higher than its correlation coefficients between the construct and other constructs (off-diagonal values) as tabulated in the Table 5.14. With reference to the Table 5.15, the measurement model showed a satisfactory results on cross loadings in which the outer loading of each indicator of the particular construct was higher than all of its cross loadings with other constructs. Some items were excluded from the model due to their low values in reliability and/or validity test(s). Those deleted cultural items were C1, C3, P1-P3, P6, U1-U3, L3, M3a, E1, E4-E8, Le6-8, I1-2, I6-7, Ty1-2, Mf1, F3, G1c, Fx4, Fx6, Fx9, V1a, V1e and Rw3. For international risk decisions items, the deleted items were PR6-PR8 and ER10. Results from the reliability and validity tests imply that the proposed items truly measure their

respective latent variable and all latent variables are distinctly different from others. Hence, the measurement model is sufficiently well to proceed to the next stage to test the relationship among the latent independent and latent dependent variables.

In addition, Table 5.13 also represents the indicators of each latent independent and dependent variables of the trimmed conceptual model. Based on the Table 5.13, items that measured political risk were political instability (PR1), inconsistency/changes/unfavourable in government policies and regulations (PR2), absence of sound, effective and fair legal system (PR3), local protectionism (PR4) and expropriation/confiscation (PR5). While, the influential indicators of economic risk were currency crisis (ER1), inflation crisis (ER2), interest rate crisis (ER3), uncertain policy towards economic liberalisation (ER4), unfavourable repatriation of profits (ER5), foreign country's debt crisis (ER6), shortage in resource supply (ER7) and fluctuation in prices (ER8).

In terms of the independent variables, for instance, involvement trait consisted of teamwork orientation (C) and reward orientation (Rw). With reference to the Table 5.13, the influential indicators that measure teamwork orientation were "teamwork performance" (C2) and "teamwork relationship" (C4). On the other hand, the influential items of reward orientation (Rw) were "achievement of organisational performance goals" (Rw1) and "opportunity for career advancement"(Rw2).

Table 5.13: Statistical results of the reliability tests, AVE, R^2 and mean

Variables	Item-total correlation		Outer loadings		Cronbachs Alpha	Composite reliability	AVE	R Square	Redundancy	Mean
	First order components	Second order components	First order components	Second order components						
Exogenous variables (organisational culture)										
First (lower) order components:										
1. Power and rules orientation (P)										
P4	0.625	0.479	0.903	0.734	0.7691	0.8965	0.8124	0.6543	0.5316	3.2230
P5	0.625	0.479	0.900	0.724						
2. Formal ethic structure (Et1)										
Et1a	0.691	0.549	0.923	0.755	0.8170	0.9161	0.8452	0.6480	0.5474	3.5677
Et1b	0.691	0.504	0.916	0.724						
3. Reward orientation (Rw)										
Rw1	0.720	0.449	0.929	0.769	0.8375	0.9248	0.8602	0.6771	0.5824	4.0163
Rw2	0.720	0.416	0.926	0.757						
4. Teamwork orientation (C)										
C2	0.560	0.504	0.896	0.701	0.7176	0.8760	0.7794	0.5726	0.4450	3.9210
C4	0.560	0.458	0.870	0.632						
5. Business ethic orientation (Et2)										
Et2a	0.754	0.608	0.851	0.659	0.9273	0.9485	0.8218	0.6690	0.5481	3.7678
Et2b	0.831	0.684	0.905	0.721						
Et2c	0.881	0.770	0.939	0.805						
Et2d	0.857	0.726	0.928	0.770						
6. Relationship values (V1)										
V2a	0.801	0.754	0.935	0.809	0.8590	0.9142	0.7811	0.6458	0.4992	3.9270
V2b	0.626	0.498	0.796	0.573						
V2c	0.764	0.654	0.915	0.722						
7. Strategic values (V2)										
V1b	0.678	0.593	0.773	0.662	0.9037	0.9262	0.6774	0.8377	0.5662	3.9900
V1c	0.767	0.739	0.843	0.791						
V1d	0.745	0.700	0.832	0.764						
V1f	0.669	0.659	0.779	0.716						
V1g	0.872	0.776	0.917	0.821						
V1h	0.690	0.707	0.785	0.752						

Table 5.13, continued: Statistical results of the reliability tests, AVE, R^2 and mean

Variables	Item-total correlation		Outer loadings		Cronbachs Alpha	Composite reliability	AVE	R Square	Redundancy	Mean
	First order components	Second order components	First order components	Second order components						
Exogenous variables (organisational culture)										
First (lower) order components:										
8. Common goals (G1)										
G1a	0.811	0.654	0.952	0.835	0.8955	0.9504	0.9054	0.7629	0.6907	4.1008
G1b	0.811	0.647	0.951	0.827						
9. International goals (G2)										
G2a	0.593	0.648	0.874	0.794	0.6513	0.8118	0.5923	0.7599	0.4488	3.8990
G2b	0.389	0.414	0.693	0.584						
G2c	0.416	0.442	0.730	0.614						
10. Guanxi orientation: Business (Gx1)										
Gx1a	0.677	0.640	0.815	0.783	0.8878	0.9192	0.6967	0.8380	0.5810	3.8604
Gx1b	0.746	0.660	0.865	0.799						
Gx1c	0.829	0.675	0.903	0.798						
Gx1d	0.808	0.638	0.894	0.765						
Gx1e	0.539	0.568	0.675	0.663						
11. Guanxi orientation: Politic (Gx2)										
Gx2a	0.721	0.474	0.843	0.551	0.8681	0.9180	0.7888	0.6151	0.4667	3.8436
Gx2b	0.795	0.583	0.912	0.666						
Gx2c	0.723	0.777	0.907	0.825						
12. Long-term orientation (L)										
L1	0.529	0.559	0.876	0.627	0.6923	0.8667	0.7647	0.5068	0.3875	4.0985
L2	0.529	0.554	0.873	0.618						
13. Future orientation (F)										
F1	0.679	0.678	0.864	0.730	0.8437	0.9055	0.7617	0.6501	0.4929	3.8823
F2	0.728	0.671	0.884	0.721						
F4	0.721	0.591	0.870	0.655						
14. Market orientation: Customers (M1)										
M1a	0.725	0.737	0.891	0.786	0.8331	0.8998	0.7497	0.7179	0.5371	4.2060
M1b	0.695	0.670	0.865	0.723						
M1c	0.662	0.635	0.841	0.687						

Table 5.13, continued: Statistical results of the reliability test, AVE, R^2 and mean

Variables	Item-total correlation		Outer loadings		Cronbachs Alpha	Composite reliability	AVE	R Square	Redundancy	Mean
	First order components	Second order components	First order components	Second order components						
Exogenous variables (organisational culture)										
First (lower) order components:										
15. Market orientation: Competitors (M2)										
M2a	0.899	0.720	0.973	0.771	0.9468	0.9741	0.9495	0.6491	0.6159	3.8393
M2b	0.899	0.753	0.975	0.799						
16. Market orientation: Interdepartment coordination (M3)										
M3b	-	0.602	1.000	0.666	1.0000	1.0000	1.0000	0.4436	0.4436	3.6791
17. Marketing formalisation orientation (Mf)										
Mf2	0.666	0.708	0.857	0.750	0.8540	0.9117	0.7752	0.7251	0.5611	3.5099
Mf3	0.831	0.765	0.935	0.806						
Mf4	0.679	0.631	0.846	0.688						
18. Flexibility orientation (Fx)										
Fx1	0.701	0.704	0.805	0.751	0.8641	0.8983	0.5957	0.8217	0.4854	3.6015
Fx2	0.725	0.595	0.798	0.641						
Fx3	0.617	0.579	0.727	0.629						
Fx5	0.606	0.633	0.738	0.699						
Fx7	0.655	0.715	0.790	0.773						
Fx8	0.643	0.623	0.770	0.685						
19. Learning orientation (Le)										
Le1	0.671	0.575	0.799	0.650	0.8740	0.9084	0.6650	0.7688	0.5055	3.7413
Le2	0.661	0.683	0.800	0.754						
Le3	0.682	0.722	0.804	0.775						
Le4	0.758	0.618	0.841	0.685						
Le5	0.743	0.643	0.832	0.694						
20. Entrepreneurship orientation (E)										
E2	0.585	0.621	0.877	0.699	0.7380	0.8839	0.7920	0.6930	0.5471	3.4709
E3	0.585	0.712	0.903	0.779						
21. Innovation orientation (I)										
I3	0.617	0.635	0.831	0.747	0.8515	0.9103	0.7722	0.6790	0.5202	3.1913
I4	0.826	0.617	0.924	0.732						
I5	0.751	0.559	0.879	0.687						

Table 5.13, continued: Statistical results of the reliability tests, AVE, R^2 and mean

Variables	Item-total correlation		Outer loadings		Cronbachs Alpha	Composite reliability	AVE	R Square	Redundancy	Mean
	First order components	Second order components	First order components	Second order components						
Exogenous variables (organisational culture)										
First (lower) order components:										
22. Technology orientation (Ty)										
Ty3	0.797	0.530	0.919	0.702	0.8449	0.9069	0.7649	0.7030	0.5324	3.3210
Ty4	0.708	0.598	0.883	0.748						
Ty5	0.601	0.579	0.818	0.744						
Second (higher) order components:										
1. Hierarchy (P, Et1)	-	-	-	-	0.7155	0.8241	0.5395	0.0000	0.0000	3.3954
2. Involvement (Rw, C)	-	-	-	-	0.6821	0.8079	0.5140	0.0000	0.0000	3.9687
3. Values (Et2, V1, V2)	-	-	-	-	0.9296	0.9395	0.5463	0.0000	0.0000	3.8949
4. Goal (G1, G2)	-	-	-	-	0.7846	0.8547	0.5459	0.0000	0.0000	3.9999
5. Guanxi (Gx1, Gx2)	-	-	-	-	0.8761	0.9034	0.5425	0.0000	0.0000	3.8520
6. Strategy (L, F, M1, M2, M3, Mf)	-	-	-	-	0.9270	0.9369	0.5165	0.0000	0.0000	3.8692
7. Adapbility (Fx, Le, E)	-	-	-	-	0.9176	0.9295	0.5048	0.0000	0.0000	3.6046
8. Capability (I, Ty)	-	-	-	-	0.8214	0.8705	0.5287	0.0000	0.0000	3.2562
Endogenous variables (International bidding decisions)										
1. Political risk (PR)										
PR1	-	0.813	-	0.887	0.9188	0.9388	0.7551	0.3033	0.0853	3.0388
PR2	-	0.871	-	0.915						
PR3	-	0.878	-	0.935						
PR4	-	0.639	-	0.775						
PR5	-	0.777	-	0.823						
2. Economic risk (ER)										
ER1	-	0.807	-	0.846	0.9266	0.9386	0.6304	0.3222	0.0042	3.0423
ER2	-	0.753	-	0.823						
ER3	-	0.699	-	0.790						
ER4	-	0.602	-	0.709						
ER5	-	0.775	-	0.842						
ER6	-	0.714	-	0.763						
ER7	-	0.676	-	0.713						
ER8	-	0.745	-	0.787						
ER9	-	0.825	-	0.858						

Table 5.14: Results of the Fornell-Larcker's test

Variables	P	Et1	Rw	C	Et2	V2	V1	G1	G2	Gx1	Gx2	L	F	M1	M2	M3	Mf	Fx	Le	E	I	Ty	PR	ER
Culture variables:																								
1. P	0.9013																							
2. Et1	0.3023	0.9193																						
3. Rw	0.0646	0.2913	0.9275																					
4. C	-0.0020	0.4438	0.2511	0.8828																				
5. Et2	0.4272	0.5558	0.5630	0.3236	0.9065																			
6. V2	0.1393	0.3148	0.5279	0.5000	0.5018	0.8838																		
7. V1	0.4026	0.5447	0.4847	0.3567	0.5821	0.6651	0.8230																	
8. G1	0.3766	0.5252	0.1321	0.1161	0.3433	0.0595	0.3751	0.9515																
9. G2	0.4035	0.5095	0.2618	0.3462	0.4858	0.1527	0.2660	0.5228	0.7696															
10. Gx1	0.4798	0.4388	0.3280	0.3679	0.5927	0.4096	0.5332	0.5569	0.4468	0.8347														
11. Gx2	0.5719	0.4280	0.0503	0.2311	0.3473	0.3363	0.4030	0.5708	0.6039	0.4684	0.8881													
12. L	0.3603	0.3575	0.3461	0.3691	0.4962	0.2698	0.3787	0.3057	0.3074	0.4079	0.1550	0.8745												
13. F	0.3768	0.6496	0.3808	0.2202	0.5817	0.2513	0.4422	0.6907	0.5046	0.4950	0.4831	0.4443	0.8728											
14. M1	0.3720	0.5531	0.4280	0.5602	0.6450	0.4966	0.5865	0.4248	0.4211	0.6029	0.3405	0.7157	0.6092	0.8659										
15. M2	0.1800	0.4940	0.1503	0.5306	0.4683	0.4288	0.2029	0.4010	0.4370	0.5417	0.3724	0.4571	0.4986	0.6769	0.9744									
16. M3	0.4279	0.6612	0.0882	0.3221	0.5177	0.2270	0.3041	0.4188	0.2650	0.4709	0.3143	0.3178	0.4862	0.4216	0.4460	SI								
17. Mf	0.3728	0.6584	0.1085	0.3103	0.5546	0.3103	0.3525	0.4424	0.2542	0.3811	0.3664	0.4857	0.6436	0.5132	0.6601	0.7051	0.8805							
18. Fx	0.2561	0.5899	0.4353	0.2997	0.6498	0.2359	0.3161	0.4195	0.5280	0.5643	0.3241	0.5616	0.6652	0.5652	0.5722	0.4315	0.5334	0.7718						
19. Le	0.4982	0.6339	0.5291	0.3486	0.7061	0.4642	0.6288	0.4380	0.4961	0.6108	0.4267	0.6432	0.6764	0.6081	0.4513	0.5985	0.6562	0.6266	0.8155					
20. E	0.3540	0.5278	0.3344	0.1828	0.5743	0.2262	0.4970	0.3914	0.5042	0.4899	0.4048	0.5570	0.6002	0.5557	0.4425	0.3390	0.4691	0.6926	0.6449	0.8899				
21. I	0.0582	0.2620	0.1355	0.2067	0.2636	0.1463	0.1285	0.0335	0.0308	0.3281	-0.0063	0.2968	0.2632	0.2631	0.2531	0.0894	0.2182	0.5748	0.2225	0.4157	0.8787			
22. Ty	0.1723	0.3467	0.2729	0.5728	0.3580	0.3162	0.2372	0.1510	0.4071	0.5788	0.2014	0.3873	0.3106	0.5368	0.6358	0.3944	0.3803	0.5182	0.4445	0.4943	0.3822	0.8746		
Risks variables:																								
1. PR	0.3509	0.2040	0.1469	-0.2144	0.3170	-0.1757	-0.0412	0.3329	0.4161	0.1788	0.2308	0.1202	0.2185	0.0109	0.0302	0.2309	0.0963	0.2520	0.2310	0.1513	-0.0316	0.0228	0.8690	
2. ER	0.2052	0.1878	-0.0295	-0.0358	0.2554	-0.1747	0.1908	0.3338	0.3098	0.1616	0.1461	0.1678	0.1654	0.1315	0.0205	0.1661	0.1113	0.2408	0.1156	0.3572	0.0271	0.2940	0.4973	0.7940

Note:

- *SI = Single item construct.*
- *Fornell-Larcker criterion is not applicable for single item constructs and second order components (Hair et al., 2013)*

Table 5.15: Results of the cross loadings

Variables	P	Et1	Rw	C	Et2	V2	V1	G1	G2	Gx1	Gx2	L	F	M1	M2	M3	Mf	Fx	Le	E	I	Ty	PR	ER
P4	0.9028	0.2776	0.1504	-0.0789	0.3745	0.1542	0.3630	0.2877	0.3458	0.3627	0.5089	0.3042	0.3975	0.2458	0.1348	0.4029	0.3779	0.2985	0.4647	0.4033	0.1354	0.1942	0.3620	0.1562
P5	0.8999	0.2672	-0.0353	0.0764	0.3958	0.0964	0.3628	0.3919	0.3818	0.5032	0.5222	0.3457	0.2810	0.4261	0.1901	0.3682	0.2937	0.1622	0.4332	0.2336	-0.0316	0.1159	0.2700	0.2140
Et1a	0.2976	0.9229	0.3616	0.3459	0.4590	0.2784	0.5304	0.4337	0.4572	0.3462	0.3481	0.3624	0.5681	0.5113	0.3812	0.5975	0.5226	0.5312	0.6101	0.5769	0.2047	0.3478	0.1962	0.1996
Et1b	0.2574	0.9158	0.1700	0.4729	0.5653	0.3009	0.4699	0.5342	0.4802	0.4631	0.4410	0.2935	0.6277	0.5056	0.5303	0.6189	0.6916	0.5541	0.5545	0.3897	0.2787	0.2885	0.1786	0.1446
Rw1	-0.0217	0.2179	0.9287	0.2412	0.4871	0.5410	0.4693	0.0788	0.1661	0.3216	-0.0550	0.2342	0.2448	0.3576	0.1025	0.1024	0.0427	0.3425	0.4668	0.1735	0.1091	0.2245	0.0797	-0.0781
Rw2	0.1428	0.3232	0.9263	0.2244	0.5577	0.4373	0.4295	0.1669	0.3208	0.2865	0.1500	0.4093	0.4633	0.4370	0.1769	0.0608	0.1596	0.4659	0.5149	0.4490	0.1426	0.2821	0.1938	0.0243
C2	-0.0758	0.4710	0.2589	0.8956	0.2721	0.3526	0.1963	0.0673	0.2610	0.3100	0.1137	0.3208	0.2164	0.4576	0.5414	0.2765	0.3123	0.3606	0.3198	0.1512	0.3009	0.4936	-0.1566	-0.1726
C4	0.0803	0.3045	0.1807	0.8699	0.3011	0.5405	0.4468	0.1416	0.3555	0.3416	0.3045	0.3319	0.1703	0.5362	0.3881	0.2935	0.2318	0.1585	0.2949	0.1730	0.0515	0.5197	-0.2259	0.1246
Et2a	0.3650	0.5627	0.2583	0.2706	0.8515	0.3440	0.4675	0.4549	0.3130	0.5502	0.3181	0.4232	0.6197	0.5902	0.5329	0.5852	0.6692	0.6174	0.6086	0.4688	0.2998	0.2182	0.1612	0.2070
Et2b	0.4060	0.4807	0.5498	0.3142	0.9049	0.4760	0.4777	0.3027	0.4886	0.5656	0.3498	0.3841	0.4592	0.5644	0.3541	0.5029	0.3667	0.5388	0.6082	0.4423	0.1316	0.2983	0.2561	0.1749
Et2c	0.4079	0.5228	0.5442	0.3661	0.9394	0.5284	0.5879	0.3037	0.5257	0.5605	0.3925	0.5076	0.5444	0.6468	0.4990	0.4143	0.5428	0.6402	0.6706	0.5663	0.2542	0.4282	0.3714	0.3051
Et2d	0.3702	0.4594	0.6576	0.2195	0.9277	0.4568	0.5672	0.2065	0.4184	0.4797	0.2007	0.4772	0.4982	0.5387	0.3232	0.3999	0.4496	0.5631	0.6700	0.5945	0.2733	0.3341	0.3389	0.2303
V2a	0.2255	0.3968	0.5419	0.4625	0.5027	0.9347	0.7105	0.1252	0.1948	0.3744	0.3546	0.2863	0.3160	0.5560	0.4175	0.2424	0.3334	0.2335	0.4680	0.2936	0.1330	0.2795	-0.1827	-0.1825
V2b	-0.0542	0.0483	0.2590	0.3816	0.2786	0.7956	0.4913	-0.0913	-0.1165	0.2468	0.1470	0.0858	-0.0731	0.2390	0.2127	0.1194	0.1127	0.0003	0.2398	-0.0092	0.0092	0.1282	-0.2787	-0.1826
V2c	0.1515	0.3335	0.5563	0.4757	0.5171	0.9148	0.5390	0.0865	0.2702	0.4470	0.3581	0.3109	0.3556	0.4752	0.4755	0.2223	0.3417	0.3500	0.4893	0.2651	0.2229	0.4051	-0.0298	-0.1037
V1b	0.2401	0.2727	0.5112	0.2439	0.3461	0.4952	0.7732	0.1145	0.1546	0.4382	0.1416	0.1791	0.0870	0.3942	-0.0174	0.0418	-0.0377	0.1067	0.4002	0.2710	0.0288	0.1267	-0.0944	-0.0058
V1c	0.3345	0.3858	0.3396	0.2685	0.4890	0.6333	0.8431	0.2861	0.2315	0.4147	0.4266	0.3099	0.4095	0.5226	0.1891	0.1765	0.3084	0.2065	0.5019	0.3799	0.0863	0.1771	0.0035	0.1106
V1d	0.2467	0.4697	0.3935	0.3659	0.4386	0.6257	0.8321	0.2771	0.1816	0.3782	0.2915	0.3542	0.3087	0.5242	0.1480	0.2566	0.2822	0.1270	0.4691	0.2790	-0.0451	0.1735	0.0287	0.1168
V1f	0.4497	0.5550	0.2720	0.2649	0.5047	0.4589	0.7787	0.3618	0.2918	0.3739	0.4661	0.3556	0.4491	0.4098	0.2402	0.3599	0.4670	0.4279	0.6030	0.5417	0.1891	0.1420	-0.0610	0.1629
V1g	0.4411	0.5519	0.3945	0.3646	0.5428	0.5303	0.9173	0.4317	0.3868	0.5676	0.4532	0.2955	0.4640	0.5713	0.2070	0.3259	0.3024	0.2936	0.5800	0.4978	0.0729	0.3043	0.0277	0.3327
V1h	0.2655	0.4368	0.4981	0.2429	0.5380	0.5323	0.7848	0.3543	0.0498	0.4525	0.1826	0.3663	0.4293	0.4542	0.2137	0.3205	0.3888	0.3935	0.5425	0.4745	0.3047	0.2306	-0.1254	0.1943
G1a	0.3908	0.5507	0.0559	0.0850	0.2915	-0.0282	0.3433	0.9520	0.5033	0.4908	0.5695	0.1928	0.6677	0.3517	0.3456	0.4161	0.4310	0.3644	0.3696	0.3585	0.0177	0.1449	0.3219	0.3519
G1b	0.3256	0.4483	0.1962	0.1362	0.3621	0.1423	0.3707	0.9510	0.4916	0.5694	0.5166	0.3899	0.6466	0.4573	0.4178	0.3808	0.4107	0.4342	0.4644	0.3866	0.0462	0.1424	0.3116	0.2830
G2a	0.2907	0.5751	0.3440	0.3566	0.4286	0.1224	0.2870	0.5094	0.8735	0.4468	0.5082	0.1814	0.5139	0.3986	0.3118	0.2464	0.1685	0.4620	0.4016	0.4029	0.0157	0.3642	0.4116	0.3131
G2b	0.1386	0.1419	-0.0843	0.0857	0.1821	-0.1596	-0.1723	0.3276	0.6933	0.1056	0.3337	0.2612	0.3159	0.1513	0.3148	-0.0238	0.1606	0.4088	0.1381	0.2773	0.1248	0.1433	0.2860	0.1879
G2c	0.5089	0.4051	0.2951	0.3296	0.4964	0.3785	0.4632	0.3468	0.7302	0.4476	0.5468	0.2914	0.3060	0.4016	0.3984	0.3720	0.2696	0.3438	0.5994	0.4854	-0.0615	0.4185	0.2439	0.1970

Table 5.15, continued: Results of the cross loadings

Variables	P	Et1	Rw	C	Et2	V2	V1	G1	G2	Gx1	Gx2	L	F	M1	M2	M3	Mf	Fx	Le	E	I	Ty	PR	ER
Gx1a	0.3727	0.3407	0.3223	0.2855	0.4539	0.4504	0.5327	0.5628	0.4437	0.8149	0.4549	0.3181	0.3903	0.4857	0.3958	0.3617	0.2630	0.3649	0.4725	0.3971	0.1161	0.4622	0.2212	0.2075
Gx1b	0.5237	0.4426	0.3546	0.2774	0.6332	0.3171	0.5787	0.6274	0.5460	0.8652	0.4120	0.3928	0.4873	0.5554	0.4104	0.4887	0.3544	0.4327	0.6454	0.4727	0.1442	0.4727	0.3216	0.2771
Gx1c	0.4096	0.3575	0.2360	0.2553	0.4342	0.3133	0.3922	0.4284	0.3056	0.9032	0.3642	0.3292	0.4475	0.4747	0.4650	0.3782	0.3347	0.5440	0.5401	0.3894	0.4176	0.5067	0.1503	0.0785
Gx1d	0.4108	0.3592	0.2257	0.2516	0.4977	0.2779	0.4079	0.4267	0.2388	0.8941	0.3040	0.3128	0.4381	0.5178	0.4431	0.4437	0.3645	0.4740	0.4918	0.3275	0.3324	0.4127	0.1117	0.0487
Gx1e	0.2641	0.3252	0.2217	0.4967	0.4485	0.3542	0.2899	0.2439	0.3189	0.6752	0.4249	0.3512	0.2830	0.4817	0.5669	0.2764	0.2678	0.5541	0.3777	0.4659	0.3773	0.5763	-0.1005	0.0461
Gx2a	0.4127	0.2398	-0.1160	0.0942	0.0898	0.0939	0.1137	0.3461	0.4259	0.2383	0.8434	-0.0964	0.2204	0.0973	0.2131	0.1478	0.1375	0.1742	0.1123	0.1740	-0.0760	0.0363	0.2223	0.0775
Gx2b	0.4601	0.3678	-0.0582	0.1551	0.2823	0.2692	0.3127	0.6369	0.5184	0.3531	0.9119	0.1662	0.4801	0.3165	0.3800	0.3065	0.3802	0.2471	0.3094	0.3723	-0.0100	0.1253	0.2567	0.2044
Gx2c	0.6150	0.4875	0.2353	0.3218	0.4786	0.4620	0.5608	0.5144	0.6296	0.5893	0.9074	0.2724	0.5314	0.4309	0.3728	0.3474	0.4097	0.3993	0.6166	0.4764	0.0450	0.3190	0.1536	0.1058
L1	0.1864	0.2669	0.3803	0.3250	0.4798	0.2163	0.3293	0.3069	0.2329	0.3680	0.0878	0.8764	0.3145	0.7285	0.4761	0.2046	0.3784	0.5100	0.4662	0.4893	0.2593	0.3428	0.1225	0.1454
L2	0.4457	0.3590	0.2239	0.3206	0.3874	0.2559	0.3331	0.2271	0.3052	0.3452	0.1841	0.8726	0.4636	0.5218	0.3223	0.3523	0.4717	0.4719	0.6601	0.4847	0.2599	0.3345	0.0874	0.1480
F1	0.3012	0.5626	0.2347	0.2716	0.4700	0.2715	0.3986	0.6065	0.5129	0.5023	0.4302	0.3752	0.8640	0.5348	0.5142	0.4364	0.6051	0.6194	0.6131	0.5879	0.3212	0.4527	0.2315	0.2284
F2	0.3878	0.6298	0.4562	0.2050	0.6273	0.2838	0.3932	0.5317	0.4923	0.3801	0.4923	0.3506	0.8841	0.5578	0.4670	0.4382	0.5810	0.6348	0.6127	0.5458	0.3160	0.2700	0.2175	0.1070
F4	0.2949	0.5025	0.3050	0.0896	0.4179	0.0900	0.3637	0.6768	0.3023	0.4107	0.3344	0.4425	0.8699	0.4996	0.3121	0.3957	0.4921	0.4777	0.5403	0.4283	0.0329	0.0697	0.1158	0.0919
M1c	0.3234	0.4924	0.2250	0.4024	0.4679	0.2258	0.4322	0.5082	0.4151	0.5151	0.4116	0.4994	0.5163	0.8411	0.5793	0.3286	0.3957	0.4083	0.3877	0.4615	0.1434	0.4039	0.0135	0.1310
M1b	0.3036	0.4669	0.4632	0.4209	0.6687	0.5343	0.5664	0.2914	0.3404	0.5472	0.1407	0.6380	0.4748	0.8652	0.5687	0.4421	0.4280	0.5466	0.5905	0.5450	0.2583	0.4623	0.0131	0.1280
M1a	0.3389	0.4795	0.4138	0.6177	0.5380	0.5137	0.5214	0.3165	0.3438	0.5065	0.3354	0.7098	0.5874	0.8906	0.6098	0.3272	0.5033	0.5092	0.5906	0.4411	0.2743	0.5218	0.0025	0.0861
M2b	0.2076	0.4927	0.1288	0.5043	0.4531	0.3969	0.1800	0.4413	0.4717	0.5440	0.4068	0.4324	0.5136	0.6586	0.9753	0.4842	0.6573	0.5689	0.4238	0.4498	0.2194	0.6356	0.0756	0.0387
M2a	0.1420	0.4695	0.1647	0.5302	0.4596	0.4396	0.2161	0.3383	0.3784	0.5112	0.3174	0.4589	0.4572	0.6606	0.9735	0.3831	0.6287	0.5460	0.4563	0.4120	0.2748	0.6029	-0.0184	0.0004
M3b	0.4279	0.6612	0.0882	0.3221	0.5177	0.2270	0.3041	0.4188	0.2650	0.4709	0.3143	0.3178	0.4862	0.4216	0.4460	1.0000	0.7051	0.4315	0.5985	0.3390	0.0894	0.3944	0.2309	0.1661
Mf2	0.2800	0.5103	-0.0561	0.1994	0.4285	0.2518	0.2127	0.4549	0.1855	0.3637	0.4200	0.2996	0.6285	0.4236	0.6746	0.6072	0.8575	0.3687	0.5091	0.4022	0.0932	0.3343	0.0718	0.0709
Mf3	0.4078	0.6284	0.1595	0.2892	0.5484	0.3092	0.4142	0.3684	0.2087	0.3061	0.3060	0.5612	0.6002	0.5090	0.5582	0.6414	0.9352	0.5295	0.6931	0.4666	0.2147	0.2772	0.1078	0.0821
Mf4	0.2895	0.6012	0.1864	0.3362	0.4857	0.2557	0.2968	0.3451	0.2843	0.3413	0.2374	0.4130	0.4631	0.4181	0.5094	0.6150	0.8460	0.5120	0.5204	0.3642	0.2745	0.4048	0.0724	0.1467
Fx1	0.3147	0.5423	0.2368	0.2300	0.5094	0.1201	0.3379	0.4401	0.4528	0.4778	0.4143	0.4329	0.7069	0.5685	0.4763	0.3566	0.5062	0.8054	0.5052	0.6516	0.4106	0.4332	0.1355	0.2051
Fx2	0.1169	0.3599	0.3748	0.2298	0.4475	0.2265	0.2678	0.1240	0.1863	0.3791	0.0949	0.3869	0.3810	0.4153	0.4267	0.2571	0.2858	0.7983	0.3671	0.4459	0.4911	0.4119	0.1114	0.1364
Fx3	0.2600	0.2796	0.2760	0.1359	0.4167	0.1282	0.2351	0.1715	0.1873	0.4658	0.2326	0.3368	0.3139	0.3306	0.2445	0.3284	0.2315	0.7267	0.4444	0.3976	0.5061	0.3976	0.1968	0.1818
Fx5	0.1219	0.4470	0.5538	0.2459	0.5454	0.2453	0.1250	0.3614	0.5047	0.4767	0.2555	0.3300	0.5751	0.3915	0.4502	0.3474	0.3418	0.7379	0.5076	0.5440	0.4599	0.5038	0.4061	0.2735
Fx7	0.2590	0.4938	0.2751	0.1340	0.5604	0.1751	0.2206	0.3830	0.4822	0.3858	0.2305	0.5590	0.5599	0.3740	0.4941	0.3341	0.5541	0.7897	0.5849	0.6281	0.4679	0.2237	0.1558	0.0586
Fx8	0.0967	0.5777	0.3113	0.4176	0.5125	0.2022	0.2757	0.4191	0.5852	0.4305	0.2495	0.5322	0.4955	0.5257	0.5328	0.3684	0.5036	0.7695	0.4683	0.5023	0.3362	0.4491	0.1637	0.2695

Table 5.15, continued: Results of the cross loadings

Variables	P	Et1	Rw	C	Et2	V2	V1	G1	G2	Gx1	Gx2	L	F	M1	M2	M3	Mf	Fx	Le	E	I	Ty	PR	ER
Le1	0.3673	0.3432	0.4887	0.3402	0.6369	0.5408	0.5465	0.2760	0.3747	0.5912	0.3281	0.4248	0.3549	0.4329	0.3517	0.4818	0.3927	0.4183	0.7991	0.4661	0.0769	0.3923	0.0690	0.0657
Le2	0.3863	0.5306	0.4951	0.3595	0.6196	0.5120	0.5366	0.3929	0.6030	0.5729	0.4686	0.4771	0.5428	0.5102	0.4724	0.3669	0.4742	0.5495	0.8000	0.6436	0.2673	0.4740	0.1772	0.1473
Le3	0.4089	0.6941	0.5101	0.2283	0.5370	0.2518	0.4865	0.4240	0.4158	0.3660	0.3690	0.5262	0.7008	0.4763	0.3271	0.5062	0.6294	0.6163	0.8044	0.5891	0.2025	0.2591	0.2437	0.0356
Le4	0.5465	0.5621	0.3019	0.1635	0.5636	0.2909	0.5503	0.4588	0.3195	0.5354	0.3805	0.5675	0.6032	0.5135	0.3493	0.5992	0.6048	0.4443	0.8410	0.4831	0.1244	0.2985	0.3097	0.1947
Le5	0.3218	0.4203	0.3470	0.3310	0.5244	0.3084	0.4458	0.2179	0.2868	0.4384	0.1783	0.6233	0.5254	0.5421	0.3328	0.4936	0.5584	0.5018	0.8318	0.4238	0.2183	0.3908	0.1299	0.0295
E2	0.1426	0.3751	0.3171	0.1849	0.4875	0.2004	0.3009	0.2360	0.3886	0.3886	0.2591	0.4800	0.4697	0.4830	0.4689	0.1753	0.3730	0.6462	0.4493	0.8771	0.4932	0.5354	0.1251	0.2932
E3	0.4700	0.5552	0.2806	0.1430	0.5329	0.2024	0.5697	0.4495	0.5031	0.4790	0.4514	0.5103	0.5927	0.5055	0.3270	0.4154	0.4578	0.5905	0.6864	0.9025	0.2600	0.3547	0.1434	0.3405
I3	0.2224	0.3445	0.1336	0.2855	0.2874	0.1682	0.1779	0.0425	0.1042	0.4224	0.0347	0.3167	0.2156	0.2605	0.1908	0.3224	0.2527	0.5200	0.3160	0.2750	0.8306	0.4212	-0.0414	-0.0173
I5	-0.0547	0.1347	0.1427	0.1150	0.1994	0.0855	0.0561	-0.0184	-0.0461	0.2566	-0.1522	0.2184	0.1980	0.1932	0.2340	-0.0339	0.1241	0.5098	0.1395	0.3614	0.9240	0.3054	-0.0548	-0.0199
I6	-0.0226	0.2068	0.0776	0.1389	0.2045	0.1306	0.1022	0.0660	0.0210	0.1751	0.1070	0.2443	0.2828	0.2390	0.2436	-0.0672	0.1967	0.4817	0.1235	0.4662	0.8793	0.2739	0.0159	0.1150
Ty3	0.1180	0.3454	0.2091	0.5983	0.2305	0.2820	0.2339	0.0774	0.3003	0.4276	0.1452	0.2884	0.1550	0.4887	0.5385	0.3737	0.3215	0.3471	0.3394	0.3300	0.2359	0.9190	-0.0581	0.2488
Ty4	0.1800	0.2256	0.2508	0.4746	0.3138	0.3386	0.2517	0.1252	0.3101	0.5297	0.2077	0.3284	0.2886	0.5934	0.6685	0.1881	0.3146	0.4308	0.3185	0.4843	0.3516	0.8835	-0.1594	0.1597
Ty5	0.1512	0.3397	0.2528	0.4324	0.3884	0.2072	0.1368	0.1896	0.4528	0.5538	0.1726	0.3945	0.3629	0.3239	0.4562	0.4734	0.3592	0.5730	0.5036	0.4738	0.4076	0.8183	0.2737	0.3614
PR1	0.4236	0.2120	0.0933	-0.1265	0.3465	-0.1815	0.0331	0.4466	0.3627	0.2881	0.2575	0.2218	0.2379	0.1292	0.0384	0.3195	0.1682	0.2310	0.2194	0.1496	-0.0539	0.0680	0.8868	0.5843
PR2	0.3311	0.1645	0.1535	-0.1290	0.2553	-0.1325	0.0304	0.3150	0.3958	0.2339	0.1906	0.0770	0.1760	0.0606	0.0286	0.2392	0.0420	0.1690	0.2048	0.1169	-0.0638	0.1244	0.9148	0.4575
PR3	0.3067	0.1970	0.1871	-0.1615	0.3190	-0.2013	-0.0662	0.3568	0.4065	0.1319	0.2240	0.1648	0.2836	0.0541	-0.0166	0.2290	0.0491	0.2311	0.2078	0.1237	-0.0854	-0.0339	0.9352	0.4898
PR4	0.2572	0.1415	0.0575	-0.3626	0.1449	-0.1880	-0.1449	0.0646	0.3144	-0.0404	0.1500	-0.0496	0.0660	-0.2576	-0.0421	0.0347	0.0508	0.2197	0.1745	0.1346	0.0478	-0.1058	0.7753	0.2281
PR5	0.1330	0.1688	0.1717	-0.0949	0.3560	0.0323	-0.0004	0.2703	0.3103	0.2122	0.1678	0.1224	0.1890	0.1444	0.2222	0.1901	0.1328	0.2601	0.1995	0.1329	0.0482	0.1079	0.8226	0.4030
ER1	0.1648	0.2289	-0.0760	0.0332	0.2584	-0.2382	0.1886	0.4479	0.3037	0.1974	0.1586	0.2204	0.2796	0.1874	0.0564	0.2488	0.1320	0.2376	0.1532	0.3329	-0.0426	0.1765	0.3572	0.8457
ER2	0.0559	0.0815	-0.0885	-0.0864	0.1213	-0.1999	0.2296	0.1434	0.1818	-0.0683	-0.0103	0.0042	-0.0049	0.0825	-0.1862	-0.0504	-0.0624	-0.0700	-0.0110	0.2119	-0.1370	0.0776	0.2600	0.8233
ER3	0.2641	0.1896	-0.1184	-0.2540	0.0825	-0.1701	0.2019	0.2044	0.1191	-0.0171	0.0679	0.1950	0.0621	0.0219	-0.0891	0.0646	0.1017	0.1779	0.0526	0.3558	0.0699	0.0945	0.2865	0.7898
ER4	0.1612	0.2638	-0.0098	-0.0203	0.3134	-0.0414	0.1269	0.0808	0.1509	0.1360	0.0218	0.2056	0.1235	0.0188	0.0917	0.2455	0.2760	0.3377	0.2505	0.4354	0.2926	0.2907	0.3360	0.7090
ER5	0.0369	0.2565	0.0384	0.0788	0.3247	-0.1397	0.0984	0.1856	0.3749	0.1819	0.1221	0.0782	0.1035	0.1221	0.1018	0.2426	0.0636	0.3482	0.1098	0.3686	0.1023	0.4176	0.5633	0.8420
ER6	0.3610	0.2697	0.0503	0.2194	0.2926	-0.0060	0.2027	0.3990	0.3315	0.2692	0.3313	0.2327	0.2963	0.3397	0.1941	0.2863	0.2356	0.2610	0.1813	0.3234	0.0184	0.3488	0.4048	0.7634
ER7	0.1049	-0.0910	-0.0868	-0.0822	0.0870	-0.2479	0.0474	0.2843	0.0737	0.0722	0.0075	0.0370	0.0860	-0.0010	-0.0823	0.0050	0.0233	0.0346	-0.1009	-0.0186	-0.1256	0.0913	0.3044	0.7127
ER8	0.0541	-0.1214	0.0035	-0.1492	-0.0013	-0.1861	0.0098	0.2003	0.1803	-0.0105	0.0543	-0.0431	-0.0233	-0.0698	-0.1452	-0.1033	-0.1367	-0.0655	-0.0864	0.0062	-0.1570	0.1463	0.4214	0.7866
ER9	0.2671	0.1420	0.0782	0.0504	0.2945	-0.0420	0.1930	0.4666	0.4320	0.3764	0.2871	0.2147	0.2598	0.2240	0.1782	0.1981	0.1398	0.3457	0.1900	0.3561	0.0671	0.4173	0.5908	0.8577

5.3.8.3 Assessment of structural model

(a) Collinearity assessment

Collinearity assessment was conducted prior to the assessment structural model. Table 5.16 shows the collinearity results between the independent and dependent variables. All the VIF values were below the threshold of five (5). This indicated that all the constructs have no critical issue of collinearity which can affect the research findings.

Table 5.16: Results of the collinearity assessment

Model	Unstandardised coefficients		Standardised coefficients	t	Significance	Collinearity statistics	
	B	Standard error	Beta			Tolerance	VIF
1. DV: Hierarchy							
(Constant)	0.000	0.000		0.020	0.984		
P	0.622	0.000	0.622	1,381.936	0.000	0.909	1.101
Et1	0.617	0.000	0.617	1,369.392	0.000	0.909	1.101
2. DV: Involvement							
(Constant)	0.000	0.000		-0.018	0.985		
Rw	0.675	0.000	0.675	3,051.488	0.000	0.937	1.067
C	0.587	0.000	0.587	2,652.249	0.000	0.937	1.067
3. DV: Values							
(Constant)	0.000	0.000		0.041	0.968		
Et2	0.384	0.000	0.384	1,007.941	0.000	0.638	1.568
V2	0.270	0.000	0.270	651.092	0.000	0.538	1.860
V1	0.512	0.000	0.512	1,158.149	0.000	0.475	2.104
4. DV: Goals							
(Constant)	0.000	0.001		-0.005	0.996		
G1	0.575	0.001	0.575	616.065	0.000	0.727	1.376
G2	0.571	0.001	0.571	612.282	0.000	0.727	1.376
5. DV: Guanxi							
(Constant)	0.000	0.002		-0.003	0.998		
Gx1	0.702	0.002	0.702	364.861	0.000	0.781	1.281
Gx2	0.455	0.002	0.455	236.670	0.000	0.781	1.281
6. DV: Strategy							
(Constant)	0.000	0.000		-0.077	0.939		
L	0.154	0.000	0.154	456.108	0.000	0.437	2.287
F	0.250	0.000	0.250	765.321	0.000	0.466	2.145
M1	0.261	0.000	0.261	603.329	0.000	0.267	3.745
M2	0.209	0.000	0.209	577.660	0.000	0.382	2.621
M3	0.099	0.000	0.099	307.671	0.000	0.481	2.078
Mf	0.274	0.000	0.274	635.606	0.000	0.268	3.728

Table 5.16, continued: Results of the collinearity assessment

Model	Unstandardised coefficients		Standardised coefficients	t	Significance	Collinearity statistics	
	B	Standard error	Beta			Tolerance	VIF
7. DV: Adaptability							
(Constant)	0.000	0.001		0.007	0.994		
Fx	0.484	0.001	0.484	352.429	0.000	0.465	2.151
Le	0.433	0.001	0.433	333.627	0.000	0.522	1.916
E	0.218	0.001	0.218	155.383	0.000	0.447	2.237
8. DV: Capability							
(Constant)	0.000	0.001		-0.020	0.984		
I	0.590	0.001	0.590	862.313	0.000	0.854	1.171
Ty	0.613	0.001	0.613	896.458	0.000	0.854	1.171
9. DV: Political risk							
(Constant)	0.000	0.141		0.000	1.000		
Hierarchy	0.331	0.243	0.331	1.362	0.182	0.336	2.973
Involvement	-0.063	0.215	-0.063	-0.293	0.771	0.429	2.331
Values	-0.168	0.272	-0.168	-0.619	0.540	0.270	3.709
Goals	0.412	0.247	0.412	1.669	0.104	0.327	3.056
Guanxi	-0.108	0.263	-0.108	-0.410	0.684	0.287	3.485
Strategy	-0.407	0.268	-0.407	-1.519	0.138	0.277	3.609
Adaptability	0.383	0.301	0.383	1.275	0.211	0.220	4.543
Capability	-0.089	0.209	-0.089	-0.427	0.672	0.454	2.200
10.DV: Economic risk							
(Constant)	0.000	0.139		0.000	1.000		
Hierarchy	0.015	0.240	0.015	0.061	0.952	0.336	2.973
Involvement	-0.469	0.212	-0.469	-2.206	0.034	0.429	2.331
Values	0.512	0.268	0.512	1.909	0.064	0.270	3.709
Goals	0.736	0.243	0.736	3.026	0.005	0.327	3.056
Guanxi	-0.497	0.260	-0.497	-1.912	0.064	0.287	3.485
Strategy	-0.309	0.264	-0.309	-1.169	0.250	0.277	3.609
Adaptability	0.008	0.297	0.008	0.027	0.979	0.220	4.543
Capability	0.443	0.206	0.443	2.145	0.039	0.454	2.200

Notes:
- *DV = dependent variables*

(b) Paths relationship

The proposed paths of the structural model was assessed based on the bootstrapping function with 500 resamples and the results of the boostrapping were shown as Table 5.17. Each hypothesis or path was evaluated according to the value of path coefficient, t-value and significance level (p value or confidence intervals). Figure 5.6 represents the results of each path relationship. Figure 5.7 illustrates the final OC-IBDs conceptual

model with the exclusion of non-significant paths. Among the sixteen (16) major proposed paths, ten (10) paths were significant at the levels of 0.1, 0.05 and 0.01. Three (3) paths were significant at the level of 0.1. Those paths included 'Hierarchy orientation' to 'Political risk', 'Strategy orientation' to 'Economic risk' and 'Adaptability orientation' to 'Political risk'. Six (6) paths were significant at the level of 0.05. These consisted of 'Involvement orientation' to 'Economic risk', 'Values orientation' to 'Economic risk', 'Goals orientation' to 'Political risk', 'Guanxi orientation' to 'Economic risk', 'Strategy orientation' to 'Political risk', and 'Capability orientation' to 'Economic risk'. Only one path was significant at the level of 0.01 and it was 'Goals orientation' to 'Economic risk'. Four (4) paths showed a negative sign, namely 'Involvement orientation' to 'Economic risk', 'Guanxi orientation' to 'Economic risk', 'Strategy orientation' to 'Economic risk' and 'Strategy orientation' to 'Political risk'. In contrast, the remaining six (6) paths indicated positive influences on political and economic risks.

With accordance to the statistical results, 'Goals orientation' was the major determinant in international political-related risk with the highest path coefficient (0.4116) and t-value (1.7587) at 0.05 significance level and followed by 'Strategy orientation' with path coefficient (0.4071) and t-value (1.6679) at 0.05 significance level. In terms of the international economic-related risk, the key determinant was 'Goals orientation' with the highest path coefficient (0.7360) and t-value (2.7275) at 0.01 significance level. Other two (2) key determinants were 'Guanxi orientation' with path coefficient (0.5116) and t-value (2.0646) at 0.05 significance level and 'Values orientation' with path coefficient (0.4968) and t-value (2.1994) at 0.05 significance level. Only two (2) cultural constructs showed influences on political and economic risk-related decisions in international bidding and those were 'Goals orientation' and 'Strategy orientation'.

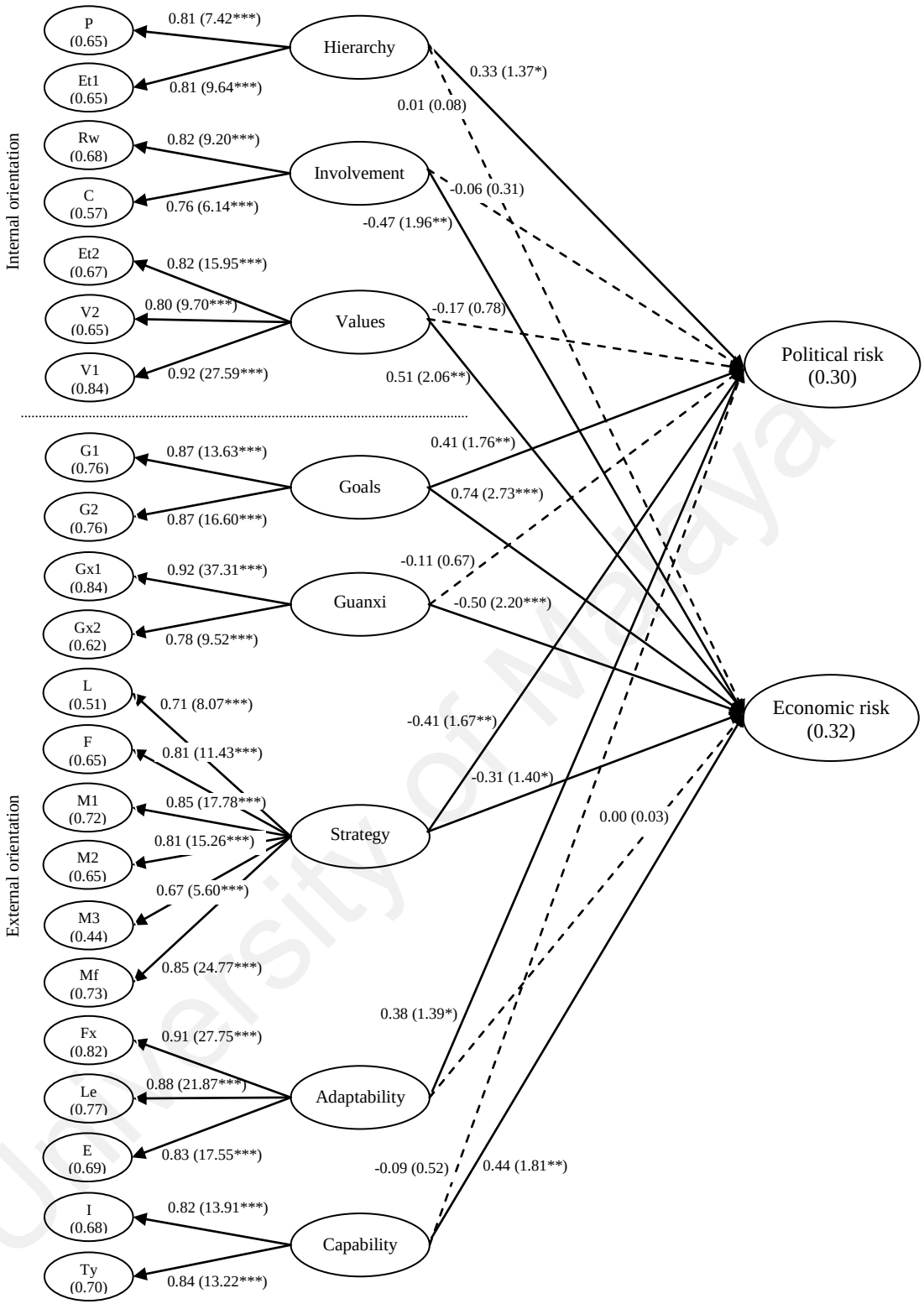
Table 5.17: Results of the paths relationship

Paths	Standardised path coefficient (β)	Sample mean	Standard deviation	Standard error	T-value	Confidence interval		p values	Significance levels	Inferences supported? (Yes-Y/No-N)
						Lower bound	Upper bound			
Paths between higher- and lower-order constructs:										
Hierarchy ➡Power and rules orientation	0.8089	0.7971	0.1090	0.1090	7.4222	0.6690	0.9480	0.00	***	-
Hierarchy ➡ Formal ethic structure	0.8050	0.8072	0.0835	0.0835	9.6406	0.6980	0.9120	0.00	***	-
Involvement ➡ Reward orientation	0.8228	0.8292	0.0894	0.0894	9.2012	0.7080	0.9370	0.00	***	-
Involvement ➡ Teamwork orientation	0.7567	0.7429	0.1232	0.1232	6.1410	0.5990	0.9140	0.00	***	-
Values ➡ Business ethic values	0.8179	0.8201	0.0513	0.0513	15.9452	0.7520	0.8840	0.00	***	-
Values ➡ Relationship values	0.8036	0.7956	0.0829	0.0829	9.6968	0.6970	0.9100	0.00	***	-
Values ➡ Strategic/decision value	0.9153	0.9100	0.0332	0.0332	27.5877	0.8730	0.9580	0.00	***	-
Goals ➡ Common goals	0.8734	0.8780	0.0641	0.0641	13.6316	0.7910	0.9550	0.00	***	-
Goals ➡ International goals	0.8717	0.8746	0.0525	0.0525	16.5974	0.8050	0.9390	0.00	***	-
Guanxi ➡ Business guanxi orientation	0.9154	0.9217	0.0245	0.0245	37.3087	0.8840	0.9470	0.00	***	-
Guanxi ➡ Politic guanxi orientation	0.7843	0.7766	0.0824	0.0824	9.5225	0.6790	0.8900	0.00	***	-
Strategy ➡ Long-term orientation	0.7119	0.7134	0.0882	0.0882	8.0743	0.5990	0.8250	0.00	***	-
Strategy ➡ Future orientation	0.8063	0.7985	0.0706	0.0706	11.4263	0.7160	0.8970	0.00	***	-
Strategy ➡ Clients orientation	0.8473	0.8488	0.0477	0.0477	17.7768	0.7860	0.9080	0.00	***	-
Strategy ➡ Competitors orientation	0.8057	0.8040	0.0528	0.0528	15.2643	0.7380	0.8730	0.00	***	-
Strategy ➡ Interdepartment coordination	0.6660	0.6679	0.1189	0.1189	5.6004	0.5140	0.8180	0.00	***	-
Strategy ➡ Marketing formalisation orientation	0.8515	0.8520	0.0344	0.0344	24.7674	0.8070	0.8960	0.00	***	-
Adapbility ➡ Flexibility orientation	0.9065	0.9098	0.0327	0.0327	27.7549	0.8650	0.9480	0.00	***	-
Adapbility ➡ Learning orientation	0.8768	0.8787	0.0401	0.0401	21.8650	0.8250	0.9280	0.00	***	-
Adapbility ➡ Entrepreneurship orientation	0.8325	0.8347	0.0474	0.0474	17.5523	0.7720	0.8930	0.00	***	-
Capability ➡ Innovation orientation	0.8240	0.8279	0.0592	0.0592	13.9097	0.7480	0.9000	0.00	***	-
Capability ➡ Technology orientation	0.8385	0.8395	0.0634	0.0634	13.2218	0.7570	0.9200	0.00	***	-

Table 5.17, continued: Results of the paths relationship

Paths	Standardised path coefficient (β)	Sample mean	Standard deviation	Standard error	T-value	Confidence interval		p values	Significance levels	Inferences supported? (Yes-Y/No-N)
						Lower bound	Upper bound			
Paths between exogenous and endogenous constructs:										
Hierarchy ➡ Political risk	0.3312	0.3886	0.2413	0.2413	1.3728	0.0220	0.6400	0.09	*	Y
Hierarchy ➡ Economic risk	0.0146	0.2109	0.1743	0.1743	0.0836	-0.2090	0.2380	0.47	NS	N
Involvement ➡ Political risk	-0.0632	-0.2644	0.2026	0.2026	0.3120	-0.3230	0.1960	0.38	NS	N
Involvement ➡ Economic risk	-0.4686	-0.4363	0.2390	0.2390	1.9602	-0.7750	-0.1630	0.03	**	Y
Values ➡ Political risk	-0.1683	-0.2807	0.2145	0.2145	0.7847	-0.4430	0.1060	0.22	NS	N
Values ➡ Economic risk	0.5116	0.4691	0.2478	0.2478	2.0646	0.1940	0.8290	0.02	**	Y
Goals ➡ Political risk	0.4116	0.3898	0.2340	0.2340	1.7587	0.1120	0.7110	0.04	**	Y
Goals ➡ Economic risk	0.7360	0.6647	0.2699	0.2699	2.7275	0.3910	1.0810	0.00	***	Y
Guanxi ➡ Political risk	-0.1081	-0.1963	0.1617	0.1617	0.6684	-0.3150	0.0990	0.25	NS	N
Guanxi ➡ Economic risk	-0.4968	-0.4493	0.2259	0.2259	2.1994	-0.7860	-0.2080	0.02	**	Y
Strategy ➡ Political risk	-0.4071	-0.3711	0.2441	0.2441	1.6679	-0.7200	-0.0950	0.05	**	Y
Strategy ➡ Economic risk	-0.3089	-0.3279	0.2200	0.2200	1.4041	-0.5910	-0.0270	0.08	*	Y
Adapbility ➡ Political risk	0.3833	0.3874	0.2763	0.2763	1.3874	0.0300	0.7370	0.09	*	Y
Adapbility ➡ Economic risk	0.0080	0.3030	0.2318	0.2318	0.0345	-0.2890	0.3050	0.49	NS	N
Capability ➡ Political risk	-0.0893	-0.2430	0.1727	0.1727	0.5172	-0.3100	0.1320	0.30	NS	N
Capability ➡ Economic risk	0.4427	0.4232	0.2445	0.2445	1.8103	0.1300	0.7560	0.04	**	Y

Notes:
* *Significant at p<0.10 if above 1.28 (one-tailed)*
** *Significant at p<0.05 if above 1.64 (one-tailed)*
*** *Significant at p<0.01 if above 2.33 (one-tailed)*
NS = Not significant



Notes:

- The path model includes the values of R^2 (parentheses in the oval-shaped objects), path coefficient, t-value (parentheses on the respective path) and the significant level of the paths (represented by asterisk(s)).
- Straight lines indicate significant paths; dashed lines indicate insignificant paths

* Significant at p<0.10 if above 1.28 (one-tailed)
** Significant at p<0.05 if above 1.64 (one-tailed)
*** Significant at p<0.01 if above 2.33 (one-tailed)

Figure 5.6: Results of the paths relationship
(Low, Abdul-Rahman, & Zakaria, 2014)

Notes:

- The path model includes the values of R^2 (parentheses in the oval-shaped objects), path coefficient, t-value (parentheses on the respective path) and the significant level of the paths (represented by asterisk(s)).

* Significant at p<0.10 if above 1.28 (one-tailed)
** Significant at p<0.05 if above 1.64 (one-tailed)
*** Significant at p<0.01 if above 2.33 (one-tailed)

Figure 5.7: Final conceptual OC-IBDs model.

(c) Predictive relevance

The predictive relevance of the model was assessed based on the R^2, Stone-Geisser's Q^2, global goodness-of-fit and the effect size of f^2 and q^2. The values of the R^2 can be referred in Table 5.13 and Table 5.18. Based on the Table 5.13 and Table 5.18, the cultural constructs explained one third of the variance in international risk decisions with the R^2 values of 0.3033 for political risk and 0.3222 for economic risk. This indicated that about 30% of the changes in international bidding decisions in response to political and economic risks can be explained by organisational culture. According to the rough rule of thumb by Hair et al. (2013), these R^2 values were considered acceptable. Although some researcher (Hair et al., 2013) highlighted that the R^2 value of 0.20 were considered high for behavioural studies, however, the value of 0.20 was considered low based on the rough rule of thumb by Hair et al. (2013). The The F test results showed that the predictive relevance of the model at 10% level of significance whereby F=1.905 with p=0.09 for political risk and F=2.080 with p=0.06 for economic risk. The results of the Stone-Geisser's Q^2 and global goodness-of-fit were within satisfactory range as presented in Table 5.18. The values of the cv-red and cv-com were greater than zero for reflective latent variables which indicated the predictive relevance of the path model. In addition, the global goodness-of-fit of the model was acceptable (Tenenhausa et al., 2005) and considered large based on the categorisation recommended by Wetzels et al. (2009).

Thereafter, the changes in R^2 and Q^2 (effect size of f^2 and q^2) were assessed. As shown in Table 5.19, the effect size of f^2 and q^2 for the eight (8) exogenous variables fall under the inferences of small and small to medium effects. 'Hierarchy orientation', 'Goals orientation', 'Strategy orientation' and 'Adaptability orientation' have a small to

medium f^2 effect size in political risk-related decisions. While, 'Involvement orientation', 'Values orientation', 'Goals orientation', 'Guanxi orientation', 'Strategy orientation' and 'Capability orientation' have a small to medium f^2 effect size in economic risk-related decisions. Consistently, these cultural variables contribute significant impact on the dependant variable as presented in Table 5.17. For the q^2 effect size, 'Strategy orientation' has a small to medium q^2 effect size (cv-red) in political risk-related decisions. Whilst, 'Involvement orientation', 'Values orientation', 'Guanxi orientation' and 'Capability orientation' have a small to medium q^2 effect size (cv-red) in economic risk-related decisions. 'Goals orientation' has medium to large q^2 effect size (cv-red) and small to medium q^2 effect size (cv-com) in economic risk-related decisions. Hence, it was not surprise that these cultural constructs showed significant relationships ($p<0.05$) in their respective risk decision paths as showed in Table 5.17. Findings of the effect size also indicated that 'Goals orientation' plays a substantive impact in economic risk compared to other cultural variables. The rest of the paths have small f^2 and q^2 effect sizes.

5.3.9 Implications from the questionnaire survey

Findings from the questionnaire survey showed that different cultural constructs tend to have different degree of impact on a particular type of risk decision. For examples, 'Hierarchy orientation', 'Goals orientation', 'Strategy orientation' and 'Adaptability orientation' were associated with political risk-related decisions in international bidding, while, 'Involvement orientation', 'Values orientation', 'Goals orientation', 'Guanxi orientation', 'Strategy orientation' and 'Capability orientation' were associated with economic risk-related decisions in international bidding. Findings indicated that 'Goals orientation' and 'Strategy orientation' are critical element in organisational international

bidding decisions as both cultural constructs were associated with political and economic risk-related decisions. Besides that, only 30% of the changes in organisational international bidding decisions in response to the political and economic risks were caused by organisational culture. This findings showed that organisational international bidding decisions in response to the political and economic risks are caused by other factors which can contribute main or partial effects.

Table 5.18: Results of the Stone-Geisser's Q^2 and global goodness-of-fit

Variables	R^2	Communality	CV-Red	CV-Com
Exogenous variables				
First (lower) order constructs:				
Power and rules orientation	0.6543	0.8124	0.5025	0.8116
Formal ethic structure	0.6480	0.8452	0.5116	0.8464
Reward orientation	0.6771	0.8602	0.5622	0.8560
Teamwork orientation	0.5726	0.7794	0.4004	0.7746
Business ethic values	0.6690	0.8218	0.5459	0.8219
Relationship values	0.6458	0.7811	0.4916	0.7810
Strategic value	0.8377	0.6774	0.5690	0.6765
Common goals	0.7629	0.9054	0.6828	0.9052
International goals	0.7599	0.5923	0.4465	0.5937
Business guanxi orientation	0.8380	0.6967	0.5857	0.6974
Politic guanxi orientation	0.6151	0.7888	0.4624	0.7883
Long-term orientation	0.5068	0.7647	0.3844	0.7644
Future orientation	0.6501	0.7617	0.4810	0.7612
Clients orientation	0.7179	0.7497	0.5337	0.7487
Competitors orientation	0.6491	0.9495	0.6037	0.9493
Interdepartment coordination	0.4436	1.0000	0.4347	1.0000
Marketing formalisation orientation	0.7251	0.7752	0.5553	0.7755
Flexibility orientation	0.8217	0.5957	0.4680	0.5945
Learning orientation	0.7688	0.6650	0.4961	0.6645
Entrepreneurship orientation	0.6930	0.7920	0.5465	0.7921
Innovation orientation	0.6790	0.7722	0.5094	0.7716
Technology orientation	0.7030	0.7649	0.5166	0.7642
Second (higher) order constructs:				
Hierarchy	0.0000	0.5395	-	0.5403
Involvement	0.0000	0.5140	-	0.5164
Values	0.0000	0.5463	-	0.5461
Goals	0.0000	0.5459	-	0.5441
Guanxi	0.0000	0.5425	-	0.5425
Strategy	0.0000	0.5165	-	0.5163
Adapbility	0.0000	0.5048	-	0.5053
Capability	0.0000	0.5287	-	0.5312

Table 5.18, continued: Results of the Stone-Geisser's Q^2 and global goodness-of-fit

Variables	R^2	Communality	CV-Red	CV-Com
Endogenous variables				
Political risk	0.3033	0.7551	0.1746	0.7523
Economic risk	0.3222	0.6304	0.2044	0.6285
Average	*0.6527*	*0.7117*	*0.4862*	*0.7113*
GoF	*0.6816*			

Table 5.19: Results of the f^2 and q^2 effect size
(Low et al., 2014)

Cultural traits	Effect size of R^2			Effect size of cv-red			Effect size of cv-com		
	R^2 excluded	f^2 effect size	Inference	Q^2 excluded	q^2 effect size	Inference	Q^2 excluded	q^2 effect size	Inference
DV: Political risk									
Hierarchy	0.2609	0.06	small to medium effect	0.1852	-0.01	small effect	0.7607	-0.03	small effect
Involvement	0.3018	0.002	small effect	0.2039	-0.04	small effect	0.7569	-0.02	small effect
Values	0.2935	0.01	small effect	0.2008	-0.03	small effect	0.7495	0.01	small effect
Goals	0.2612	0.06	small to medium effect	0.1800	-0.01	small effect	0.7494	0.01	small effect
Guanxi	0.2994	0.01	small effect	0.2164	-0.05	small effect	0.7570	-0.02	small effect
Strategy	0.2548	0.07	small to medium effect	0.1523	0.03	small to medium effect	0.7560	-0.01	small effect
Adapbility	0.2695	0.05	small to medium effect	0.1882	-0.02	small effect	0.7532	-0.004	small effect
Capability	0.2988	0.01	small effect	0.2008	-0.03	small effect	0.7552	-0.01	small effect
DV: Economic risk									
Hierarchy	0.3222	0.00	small effect	0.1933	0.01	small effect	0.6332	-0.01	small effect
Involvement	0.2359	0.13	small to medium effect	0.1392	0.08	small to medium effect	0.6256	0.01	small effect
Values	0.2601	0.09	small to medium effect	0.1505	0.07	small to medium effect	0.6286	0.00	small effect
Goals	0.2336	0.13	small to medium effect	0.0737	0.16	medium to large effect	0.6021	0.07	small to medium effect
Guanxi	0.2605	0.09	small to medium effect	0.1297	0.09	small to medium effect	0.6328	-0.01	small effect
Strategy	0.2943	0.04	small to medium effect	0.1922	0.02	small effect	0.6308	-0.01	small effect
Adapbility	0.3223	-0.0001	small effect	0.1890	0.02	small effect	0.6303	-0.005	small effect
Capability	0.2373	0.13	small to medium effect	0.1328	0.09	small to medium effect	0.6332	-0.01	small effect

Notes:

- *The R^2 included is 0.3033 for political risk and 0.3222 for economic risk as shown in the Table 5.17 or Table 5.18.*
- *The Q^2 included (cv-red) is 0.1746 for political risk and 0.2044 for economic risk as shownin the Table 5.18.*
- *The Q^2 included (cv-com) is 0.7523 for political risk and 0.6285 for economic risk as shownin the Table 5.18.*
- *DV = Dependent variables*
- For example, the endogenous latent variable 'political risk' has an original R^2 of 0.3033 (R^2 included). If 'Hierarchy orientation' is deleted from the path model and after reestimating the path model, the R^2 value of 'political risk' is 0.2609 (R^2 excluded). The change in R^2 gives a small to medium f^2 effect size of 0.06.

5.4 Findings from the interviews survey

5.4.1 Profile of the interviewees

Table 5.20 indicates the general profile of the interviewees. Table 5.20 shows that the background of the interviewees were distributed quite equally in terms of the designation and years of working experience. The interviewees of the study were top management personnel, namely, managing directors (16.67%), chief executive officer (11.11%), chief operating officers (5.56%), vice president (5.56%), senior vice presidents (11.11%), directors (11.11%), general managers (22.22%) and senior managers (16.67%). Among the eighteen (18) interviewees, three (3) interviewees (16.67%) had 11-15 years of working experience, three (3) (16.67%) had 16-20 years of working experience, three (3) (16.67%) with 21-25 years working experience, five (5) (27.78%) with 26-30 years of working experience and four (4) (22.22%) had 31 and above years of working experience in local and overseas markets. Most of the interviewees had master degree (44.44%) and bachelor degree (38.89%) as their highest education level and three (3) (16.67%) interviewees are advance diploma holders.

Table 5.20: Profile of the interviewees

Interviewee	Designation of the interviewees	Age group	Highest education level	Experiene in local and oversea markets
Interviewee A	Managing director	50-59	Master degree	26-30
Interviewee B	Chief executive officer	40-49	Master degree	21-25
Interviewee C	Senior vice president (Group business development)	40-49	Master degree	11-15
Interviewee D	Senior vice president	50-59	Master degree	31 and above
Interviewee E	General manager	50-59	Advance diploma	16-20
Interviewee F	General manager	50-59	Advance diploma	31 and above
Interviewee G	Senior engineering manager	40-49	Bachelor degree	21-25
Interviewee H	Director (Business development)	50-59	Master degree	26-30
Interviewee I	Managing director	60-69	Bachelor degree	31 and above
Interviewee J	Managing director	50-59	Bachelor degree	16-20
Interviewee K	Vice president (Group business development)	40-49	Bachelor degree	11-15
Interviewee L	Director	60-69	Bachelor degree	31 and above
Interviewee M	Chief operating officer	40-49	Advanced diploma	21-25
Interviewee N	Senior manager	40-49	Bachelor degree	16-20
Interviewee O	Chief executive officer	50-59	Master degree	26-30
Interviewee P	Senior manager	30-39	Bachelor degree	11-15
Interviewee Q	General manager	50-59	Master degree	26-30
Interviewee R	General manager	50-59	Master degree	26-30

5.4.2 A results summary of each interview

Table 5.21 indicates the perception of the interviewees about the impact of organisational culture on international risk decisions during the bidding stage. More than 85% of the interviewees perceived that organisational culture variables such as uncertainty avoidance, long-term orientation, market orientation, guanxi orientation, entrepreneurship orientation, learning orientation, innovation orientation, technology orientation, future orientation, goals orientation, flexibility orientation, reward orientation and value orientation contribute influences on international bidding decisions in response to the host country's risks. Less than 65% of the interviewees perceived that organisational culture variables such as teamwork orientation, power and rules orientation, marketing formalisation orientation and ethical orientation are related with international bidding decisions.

Table 5.21: The impact of organisational culture on international risk bidding decisions

Nos.	Cultural constructs	Interviewees																		Frequency	Percentage (%)
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R		
1.	Teamwork orientation	√	√	√	√	√	√	√	-	√	-	√	√	-	-	-	-	√	-	11	61.11
2.	a. Power orientation	-	√	-	√	-	-	√	√	√	-	√	√	-	√	-	-	√	-	9	50.00
	b. Rules orientation	√	-	-	√	√	√	-	-	-	-	√	√	√	√	√	-	√	-	10	55.56
3.	Uncertainty avoidance	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	18	100.00
4.	Long-term orientations	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	18	100.00
5.	Market orientation *(clients, competitors, interdepartmental coordination)*	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	18	100.00
6.	Guanxi orientation *(political and business guanxi)*	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	17	94.44
7.	Entrepreneurial orientation	√	√	-	-	√	√	√	√	√	√	√	√	√	√	√	√	√	√	16	88.89
8.	Learning orientation	√	-	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	17	94.44
9.	Innovation orientation	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	√	-	√	16	88.89
10.	Technology orientation	√	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	√	17	94.44
11.	Marketing formalisation orientation	√	-	-	√	√	-	-	-	-	√	√	√	-	-	-	-	-	-	6	33.33
12.	Future orientation	√	√	√	√	√	√	√	√	√	√	√	√	-	√	-	√	√	√	16	88.89
13.	Goals orientation *(common and international)*	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	18	100.00
14.	Flexibility orientation	√	√	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	17	94.44
15.	Ethical orientation	-	-	-	√	√	√	√	√	-	√	√	√	-	-	√	-	√	-	10	55.56
16.	Reward orientation	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	18	100.00
17.	Values orientation *(relationship, strategic and business ethic)*	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	√	-	16	88.89

5.4.3 Discussions of the impact of organisational culture on international bidding decisions

5.4.3.1 Teamwork orientation

All the interviewees unanimously addressed that teamwork orientation plays a critical role in construction industry. However, eleven (11) interviewees opined that teamwork orientation contributes influences on international risk decisions during the bidding stage. Six (6) interviewees stated that teamwork orientation represents the capability of organisations to assure organisational performance especially in terms of time and cost performance. Interviewee L further commented that teamwork orientation determines the success and failure of an organisation. Interviewees B, D and Q highlighted that teamwork orientation represents the strength of organisation as it represents the support of the staff on organisational decisions and goals to move towards organisational targeted achievement. Interviewees I and Q further explained that poor teamwork orientation will increase the risks of organisations in overseas venture and hence it plays a role on international bidding decisions.

5.4.3.2 Power and rules orientation

Five (5) interviewees commented that power and rule orientation is related with international bidding decisions. However, nine (9) interviewees argued that power orientation is more related with international bidding decisions. Six (6) of them explained that centralised power structure tends to demand a longer time frame in decision making process in which it will make the organisations lack of efficiency to response to the opportunities in overseas markets and the top management tends to be

more risk averse if the decision making time frame is longer. One of the interviewees further addressed that managerial personnel tends to face the difficulty and challenge to propose new ideas such as new venture decisions as it involves a lot of documentation and support from the top personnel.

Whilst, ten (10) interviewees commented that rule orientation is related with international bidding decisions. Seven (7) of them pointed out that international organisations should be less rule-orientated and flexible to adapt themselves to the rules, regulations and practices in host countries. This is because high rule orientation will encourage organisations to be more risk averse due to the consideration of pros and cons of rule-related issues on their organisations. Interviewee Q described in detail that the purpose of rules in an organisation is to mitigate the risk exposure of an organisation especially the long established organisations. Hence, he addressed that it is a great challenge and difficult to organisations to change in their overseas venture decisions (for example, absorb higher risk) instead of their existing way of doing a business.

5.4.3.3 Uncertainty avoidance

All interviewees opined that uncertainty avoidance has a direct effect on international bidding decisions. It is a direct measure of organisational risk behaviour. According to the interviewees B, C and D, different organisations tend to have different level of risk tolerance on different types of risks. Five (5) interviewees addressed that organisations generally prefer lower risks and stable countries. Interviewee P explained that the reason is to protect and secure organisational performance. Four (4) interviewees further highlighted that organisations prefer countries with minimum or no political risk. Interviewee Q highlighted that uncertainty avoidance of an organisation change over the

time and it depends on few factors such as economic condition, lesson learned from the past bidding decisions, past overseas venture experience and the support of government.

5.4.3.4 Long-term orientation

All interviewees unanimously commented that long-term orientation will influence organisational international bidding decisions. Six (6) interviewees highlighted that organisations that emphasise on long-term orientation tend to avoid risks with long-term effect. Interviewees P, Q and R further explained that long-term orientation encourages organisations to take lower risks. Interviewee Q also pointed out that short-term orientated organisations perform business based on the "hit and run" basic which will encourage them to venture into higher risks overseas countries. According to six (6) interviewees, the reasons are long-term orientated organisations stress on business continuality, continuos return and business stability in their organisational strategy which will induce them to venture into overseas markets with lower risks and short-term risk effect. Interviewee C provided an example that their company will not venture into political instability overseas countries such as Syria, Iran and Iraq as this risk will have a long-term effect on time which can affect their organisational performance in the long-term. Besides, interviewee C further addressed that their company will consider to tolerate higher risk if the impact of the risk can be mitigated through price in method.

5.4.3.5 Market orientation (client, competitors and interdepartmental coordination orientations)

All interviewees consistently agreed that market orientation which enables the organisations to have a better understanding about the client and competitors in terms of

the clients' needs and the strength and weakness of competitors will provide influence on international bidding decisions. Interviewees G. L and P stated that market orientation allows organisations to understand the foreign markets betters in terms of the risks of host countries and hence improve the proposal of risk mitigation methods. In other words, it enables organisations to evaluate their organisational capability to bid an overseas project, as commented by interviewees F and I. Interviewee R further addressed that this will affect the level of confidence of organisations in making international bidding decisions.

5.4.3.6 Guanxi orientation (business and political relationship orientation)

Seventeen (17) interviewees argued that guanxi orientation plays a role in international bidding decisions. All these interviewees addressed that relationship with business communities and political-related parties are important in overseas venture and international bidding except interviewee Q. Interviewee Q does not encourage political relationship in international bidding as this kind of relationship is not healthy and will bring side effect to an organisation. Both interviewees D and G highlighted that it is critical to establish political relationship at the appropriate level and it should be handled with care as mismanagement in political relationship will bring negative impact on the organisational performance. Generally, guanxi orientation plays a considerable important role in international bidding decisions as it allows organisations to: (1) learn the overseas experience from others; (2) reduce organisations' risks by sharing and transferring risks through partnering or joint venture which in turns encourage organisations to bid for higher risk projects; (3) reduce the time taken to understand the conditions of the host countries (in terms of the political, legal, economic, social and cultural aspects) by identifying the potential risks and mitigation methods; (4) share the

resources, technology and financial assistance; and (5) gain trust from the host countries's clients, as commented by twelve (12) interviewees. Interviewee P argued that relationship orientation is widely practiced by Malaysian international contractors as the current state of their organisational capability allows them to take limited calculated risks only.

5.4.3.7 Entrepreneurship orientation

Sixteen (16) interviewees commented that entrepreneurship orientation plays a role in international bidding decisions. Eight (8) of them pointed out that entrepreneurship-orientated organisations are more risk taking than non-entrepreneurship-orientated organisations. Seven (7) interviewees highlighted that organisations that are entrepreneurship-orientated willing to absorb higher risks to go beyond the local market and look for potential international markets for business opportunities. Interviewees A argued that entrepreneurship-orientated organisations tend to offer new services or products that cannot be done by the organisations of the host countries. Interviewee R addressed that this value is practicing by few Malaysian international contractors which are performing quite well in the overseas markets and these contractors are willing to take risks and try new things. Nonetheless, this orientation is not suitable for big and listed organisations as the top management of these organisations has to account for then organisational profits and losses to the shareholders by reporting to them every year or every few months about the organisational business activities throughout the preceeding year or months.

5.4.3.8 Learning orientation

Seventeen (17) interviewees commented that learning orientation provides influences on international bidding decisions. Seven (7) interviewees stated that learning orientation encourages organisations learn from their past experience and adopt and apply the lesson learned in new and future projects as a guidance in decision making and problem solving. Interviewee G highlighted that learning-orientated organisations tend to aware the importance of providing the diversified construction services to clients. Interviewees L, Q and R addressed that through the lesson learned practice, organisations will be more careful in dealing with risks and hence they will be more risk averse than before. However, interviewee P argued that a lesson learned system enable organisations to manage risks in a proper manner which will encourage organisations to tolerate higher risks in future.

5.4.3.9 Innovation orientation

Sixteen (16) interviewees showed in the same view that innovation orientation plays a role in international bidding decisions but its impact is not strong. According to the seven (7) of them, organisations emphasise and practise innovation in their daily business activities are able to enjoy the benefits of cost and time saving. Besides, interviewee G commented that innovation orientation enables organisations to diversify their construction service which allow them to compete with competitors in the international markets. In line with this, innovated organisations are more capable to tolerate higher risks especially the risks that can affect time and cost performance, as stated by the interviewees I, N and O. However, five (5) interviewees pointed out that

the impact of innovation orientation in international bidding decisions depends also on the geographical location, types of projects and the requirements of clients.

5.4.3.10 Technology orientation

Seventeen (17) interviewees revealed that technology orientation plays a role in international bidding decisions. Nonetheless, all of them commented that the impact of technology orientation on international bidding decisions is not strong. Four (4) interviewees highlighted that technology orientation establishes organisational capability which can increase the chances of organisations to compete with competitors especially at the international level. Others reasons included:

Interviewee B - 'Improve organisational reputation and increase organisational competency'

Interviewee K – 'Important in cost controlling'

Interviewee L – 'It plays a critical role on improving organisational and project performance'

However, interviewees B, D and G highlighted that the software-related technology does not play an important in international bidding decisions in construction industry compared to the hardware related technology. Interviewee Q stressed that the effect of technology orientation on organisational risk taking behaviour is not strong as technology is not a critical criteria in overseas venture and international bidding. Consistently, interviewees C and D pointed out that the importance of technology orientation depends on the geograpahical area and the characteristics of the projects.

5.4.3.11 Marketing formalisation orientation

Only six (6) interviewees argued that marketing formalisation orientation plays a role in international bidding decisions. According to the four (4) interviewees, marketing formalisation orientation assists the top management and employees to better aware about organisational goals and directions. It guides the top management to make a right decision on behalf of the organisation, as commented by the interviewees D and K. Interviewee J addressed that a formalised marketing strategy consists of information about the list of targeted foreign countries, the risks of each foreign country and the mitigation method on a particular type of risk.

5.4.3.12 Future orientation

Sixteen (16) interviewees argued that future orientation contributes influences on international bidding decisions. Six (6) interviewees pointed out that future orientation will affect organisational judgement in decision making due to the consideration on future achievement, future challenges, future return, future business connection, future strategy and future risks. Others statements were:

Interviewee D – 'It will benefit an organisation in terms of the innovation and competitive advantage'

Interviewee F – 'Future consideration and planning are related with the present business activities and decisions'

Interviewee G – 'It is critical for an organisation to survive in a competitive market'

Interviewees G and I suggested that future-orientated organisations are more likely to absorb higher risks for future advantages such as relationship, returns and business opportunities. Yet, four (4) interviewees indicated an opposed opinion with the argument that future orientation encourages organisations to be more careful-orientated especially in dealing with risks and hence they are more risk averse for the consideration of organisational future planning.

5.4.3.13 Goals orientation (common and international goals)

All interviewees strongly agreed that goal orientation plays an important role in international bidding decisions. This is because organisational goals determine the degree of risks to be tolerated by the organisation, as addressed by interviewees N and P. Other importances of goal orientation in international bidding decisions are:

Interviewee B – 'It guides the top management to make right decisions and actions'
Interviewee D – 'It defines the directions of an organisation in terms of the long- and short-term business development'
Interviewee F – 'It assists an organisation to identify the appropriate types of business to be involved and business strategy for the purpose of firm's goals achievement'

According to the fifteen (15) interviewees, goals that encourage organisations to venturue overseas were profit making, gaining more future projects, increase firm's growth, increase firm's turnover and expand internationally. However, interviewees H highlighted that goal such as increase the firm's return (either in terms of the cash flow or profit) will not encourage them to bid for overseas projects which are high in risks and no guarantee on the return. In addition, interviewee Q further explained that goals

like increase firm's revenue will encourage an organisation to behave aggressively to bid for more projects but the goals like profit making will constrain organisational risk taking behaviour. Furthermore, the limited opportunities in Malaysian construction industry makes international organisations face the difficult to achieve the firm's goals such as increase the firm's growth (interviewees A and J) and profit making (interviewee I). According to some interviwees, this phenomenon indirectly encourages organisations to venture overseas markets and bid for international projects.

5.4.3.14 Flexibility orientation

Seventeen (17) interviewees argued that flexibility orientation is having influences on international bidding decisions. Interviewees J and M addressed that flexibility orientation is critical in organisational overseas venture and international bidding. This is because it assures organisations to operate smoothly and continuatiy in international markets as indicated by interviewees N and O. Interviewee P and Q addressed that organisations with high degree of flexibility are more likely to have a higher degree of risk tolerance level. Four (4) interviewees highlighted that international organisations should be flexible in the aspects of construction services provided to the clients, construction methods and market conditions. This will also increase organisational competitive advantage at international level. While, five (5) interviewees highlighted that international organisations should be flexible in all aspects including their business ethic values as suggested by interviewee O.

5.4.3.15 Ethical orientation

Ten (10) interviewees argued that ethical orientation plays a role on international bidding decisions. According to interviewee D, organisations that emphasise on ethical orientation especially bribery issue tend to be more careful in overseas venture and international bidding decisions. This could be due to the reasons that they cannot adapt and agree on the culture of unethical issue (interviewee E) and it will affect their firm's profit and reputation (interviewee G). Interviewee J highlighted that ethical issue is one of the decision consideration criterion in their organisational risk assessment programme. Interviewee E, K and O commented that unethical issue is unavoidable in overseas venture and international bidding especially in Asian countries. Interviewee O explained that there is a conflict between ethical orientation and goal orientation in which to achieve organisational goals, it is difficult for an organisation to run a business based on the ethical principle especially at the international level. Interviewee Q stated that organisations with strong ethical orientation will face difficulties in doing international business and hence it will control organisations' risk taking behaviour.

5.4.3.16 Reward orientation

All interviewees unanimously opined that reward orientation contributes influence on international bidding decisions. Ten (10) interviewees stated that reward orientation motivates organisational staff especially the top management to support the organisational decisions and to pursue towards the achievement of organisational goals. Interviewee N addressed that different type of reward system will affect the top management to make different type of risk decisions. Interviewees D, K and Q adviced that high reward tends to encourage the top management to make a higher risk decisions

and hence an appropriate reward system is critical in an organisation. In line with this, interviewees G and H described in detail that the reward system may not encourage the top management to bid for higher risk projects as the top management needs to bear the full responsibility if the project is suffering lost.

5.4.3.17 Values orientation (relationship, strategic and business ethic)

Sixteen (16) interviewees argued that value orientation plays a role in international bidding decisions. Interviewee M highlighted that the purpose of organisational values is to assure the achievement of organisational goals. Interviewee K addressed that values will lead to the right attitude and decisions. Without the focus on appropriate values, organisations have no direction and control in performing a business, as commented by interviewee I. In addition, interviewee N pointed out that organisational values will lead to the successful implementation of organisational strategy in which organisational strategies are made to deal with different types of risks. According to the interviewee Q, organisational values will either control or encourage a risk decision to be made. Interviewee O and Q provided an example that performance-related values will affect an organisation to absorb higher risks to maintain the performance of the organisation. Among the important values in overseas venture and international bidding were trust, professionalism, outcome excellence, integrity, respect, corporate social responsibility, performance and responsibility.

5.4.4 Implications of the interviews

Interviews survey showed that each selected cultural construct contributes different degree of impact on international bidding decisions. Different interviewees tend to have

different perception about the impact of organisational culture on international bidding decisions which was based on the interviewees' sensitivity and perceived importance of organisational culture and the geographical location and characteristics of the projects. With reference to the discussions in section 5.4.2 and 5.4.3, it was noticed that most interviewees perceived that 'Values', 'Goal orientation', Guanxi orientation'. 'Strategy orientation', 'Adaptability orientation' and 'Capability orientation' were more associated with international bidding decisions.

5.5 Validation of model

5.5.1 Profile of the experts

Table 5.22 indicates the general profile of the experts. Eleven (11) experts were took part in the validation survey to comment on the statistical results and the reliability and acceptability of the research model. The industry experts are those at the top management level, namely, director (9.09%), executive vice president (9.09%), general managers (54.54%) and senior managers (27.27%). They were working in the Malaysian international contractor organisations. All experts have more than 20 years of working experience in the local and international industry markets with an average of approximately 27 years of working experience. Five (5) (45.45%) experts had 20-30 years of working experience in local and overseas markets and six (6) (54.55%) had more than thirty (30) years working experience in local and international industry markets. Seven (7) (63.64%) interviewees have civil engineering/engineering/building construction professional background, three (3) (27.27%) interviewees were from the quantity surveying background and one (9.09%) with contracting background.

Table 5.22: Profile of the experts

Experts	Designation of the experts	Profession	Experiene in the local and overseas markets
Expert A	Business development director	Civil engineering	30 years
Expert B	General manager	Building construction	33 years
Expert C	General manager	Civil engineering	30 years
Expert D	General manager	Quantity surveying	31 years
Expert E	Senior manager	Civil engineering	20 years
Expert F	General manager	Civil engineering	36 years
Expert G	Engineering manager	Civil engineering	20 years
Expert H	Executive vice president	Engineering	30++ years
Expert I	Senior general manager	Quantity surveying	27 years
Expert J	General manager	Contracting	24 years
Expert K	Senior manager	Quantity surveying	20 years

5.5.2 Results of the validation survey

Results of the validation survey are presented in Table 5.23. Validation results showed that experts are generally agree with the quantitative results of the ten significant paths in which the mean values were 3.82 for the path 'Hierarchy orientation' to 'Political risk', 3.55 for 'Involvement orientation' to 'Economic risk', 3.73 for 'Values orientation' to 'Economic risk', 3.64 for 'Goals orientation' to 'Political risk', 3.82 for 'Goals orientation' to 'Economic risk', 3 for 'Guanxi orientation' to 'Economic risk', 3.27 for 'Strategy orientation' to 'Political risk', 3.18 for 'Strategy orientation' to 'Economic risk', 3 for 'Adaptability orientation' to 'Political risk' and 3.73 for 'Capability orientation' to 'Economic risk'. Nonetheless, four (4) paths were not statistically higher than the mean value of 3. Those paths were 'Guanxi orientation' to 'Economic risk' (mean=3), 'Strategy orientation' to 'Political risk' (mean=3.27), 'Strategy orientation' to 'Economic risk' (mean=3.18) and 'Adaptability orientation' to 'Political risk' (mean=3). The experts were neither agree nor disagree on these four (4) paths.

Overall, the research findings are ‘acceptable and reliable’ (mean = 3.73) and it provides guidelines to managers in terms of ‘organisational internationalisation decision quality’ (mean = 3.55) and ‘assessing and improving organisational culture management’ (mean = 3.64). Expert D commented in detailed that the research findings of this study contain certain basic of decision evaluation criterion in international bidding decision making. All experts opined that the research findings ‘indicate organisational culture plays a role in organisational international bidding decisions’ (mean = 3.91). However, six (6) experts addressed that it is logical and acceptable to argue that organisational culture plays a role in organisational international bidding decisions but it is not an important factor. Based on the comments from four (4) experts (experts A, D, H and J), other than organisational culture, international bidding decisions in political and economic risks are affected by other factors such as project characteristics, procurement methods, conditions of the industry, government strategy, risk adverseness of final decision maker(s), organisational level of competency, familiarity of organisations on the overseas markets condition such as environment, politics and industry conditions.

Although the path ‘Hierarchy orientation’ to ‘Political risk’ attained a high mean value, however, some experts showed an opposite point of view by commenting that political risk is a country risk which is out of the control of organisational hierarchical system as highlighted by expert D and it is a norm that organisations venture into politically stable countries regardless of hierarchical differences as commented by expert E. For the path ‘Involvement orientation’ to ‘Economic risk’, expert F pinpointed that no matter how good the teamwork is and how attractive the organisational reward is, economic risk is viewed as a very serious issue by organisations in international bidding decisions. Whilst, expert D addressed that this result depends on the type of countries in which

majority Malaysian international construction organisations prefer to bid projects from the third world countries. This is because higher economic risk provide no stable platform for organisations to do business in certain turbulent countries such as Middle East countries, as described by expert D. For the path 'Values orientation' to 'Economic risk', interviwee A commented that the final international bidding decisions depend on the final decision maker(s) who can be either risk averse or risk taking.

For the paths 'Goal and mission' to 'Political risk' and 'Economic risk', expert A explained that because of the pressure of the key performance indicators (KPI), the top management has no choice but to tolerate higher political and economic risks to achieve organisational goals. Interviwee D addressed that goal orientation is critical in international bidding decisions in guiding the top management in decision making as organisations do not have social responsibility in other countries. For the path 'Guanxi orientation' to 'Economic risk', expert A commented that a good business relationship may provide organisations an advantage to overcome or mitigate the impact of the perceived risks. Consistently, expert K argued that guanxi orientation should encourage organisations to tolerate higher level of risks. On the other hand, expert F explained that guanxi is only a small part in doing a business, while, economic risk is a very serious issue in international bidding. Hence, it does not play a significant impact on economic risk-related bidding decisions.

For the paths 'Strategy orientation' to 'Political risk' and 'Economic risk', expert A commented that international bidding decisions on political and economic risks depend on project by project basic and not based on the strategy orientation of an organisation. Expert F pointed out that both political and economic risks can ruin an organisation' expectation and profit forecast of a project, no matter how perfect an organisational

strategy is. In contrast, expert D highlighted that profit making is the motto of an organisation to venture overseas and to bid international projects and hence strategy orientation is critical in international bidding decisions to eliminate organisations from suffering unpredicted risks. For the path 'Adaptability orientation' to 'Political risk', expert D addressed that adaptability orientation is applicable in the comfort zone of risk level not the higher risk level. This is because it is very difficult to handle political risk, as commented by expert K. However, expert F argued that if organisations are adaptable to the external environment, the perceived political risk will be reduced. For the path 'Capability orientation' to 'Economic risk', expert A commented that capability orientation will encourage organisations to tolerate higher economic risk in international bidding decisions as their threshold level of the perceived risk is higher than the average. Finally, expert E summarised that organisations usually will joint venture with the local foreign company to deal with the political and economic risks in international bidding.

Table 5.23: Mean values of the validation results

Validation questions	Mean	Test value = 3	
		t-value	Significance (1-tailed)
1. Research model – Significant paths:			
i. Hierarchy orientation ➡ Political risk decisions (+)	3.82	2.52	0.02**
ii. Involvement orientation ➡ Economic risk decisions (–)	3.55	2.21	0.03**
iii. Values orientation ➡ Economic risk decisions (+)	3.73	2.03	0.04**
iv. Goals orientation ➡ Political risk decisions (+)	3.64	2.61	0.01**
v. Goals orientation ➡ Economic risk decisions (+)	3.82	3.61	0.00***
vi. Guanxi orientation ➡ Economic risk decisions (–)	3.00	0.00	0.50
vii. Strategy orientation ➡ Political risk decisions (–)	3.27	1.00	0.17
viii. Strategy orientation ➡ Economic risk decisions (–)	3.18	0.56	0.29
ix. Adapbility orientation ➡ Political risk decisions (+)	3.00	0.00	0.50
x. Capability orientation ➡ Economic risk decisions (+)	3.73	2.67	0.01**
2. Evaluation of the overall research findings:			
i. The research findings are generally acceptable and reliable.	3.73	3.73	0.00***
ii. The research findings provide guidelines in organisational internationalisation decisions quality.	3.55	2.63	0.01**
iii. The research findings provide guidelines in assessing and improving organisational culture management.	3.64	4.18	0.00***
iv. The research findings indicate that organisational culture plays a role in organisational international decisions.	3.91	4.30	0.00***

Notes:

- ** *Significant at p<0.05;* *** *Significant at p<0.01*
- \+ *Positive relationship;* – *Negative relationship*

5.5.3 Implication of the validation survey

Based on the review of the industry experts, the research model is acceptable in the construction sector. Nonetheless, the research model is not comprehensive. This is because organisational culture only contribute one third of the total effect on international bidding decisions in response to the political and economic risks based on the analysis results of the PLS-SEM test. Consistently, some experts stressed that organisational culture is not the main determinant in international bidding decisions in response to the political and economic risks.

5.6 Discussions of the findings

By comparison, results from the questionnaire survey, interviews and validation were consistent for the paths 'Involvement orientation' to 'Economic risk', 'Goals orientation' to 'Political risk', 'Goals orientation' to 'Economic risk', 'Values orientation' to 'Economic risk' and 'Capability orientation' to 'Economic risk'. These paths were achieved the conventional significance level of 0.05, agreed by most interviewees and scored the mean value of 3.5 and above in the validation survey. For the path 'Involvement orientation' to 'Economic risk', the most influential factor was reward orientation and followed by teamwork orientation. Items that measured reward orientation were "achievement of organisational performance goals" and "opportunity for career advancement". While, the items of teamwork orientation were "teamwork performance" and "teamwork relationship". Some researchers (Kwak & LaPlace, 2005; Zhou & Pham, 2004) addressed in a neutral point of view that reward structure will influence a decision maker either to be risk seeking or risk averse. Hsee and Weber (1999) highlighted that collectivist culture (in-group) is more related with financial

aspect instead of other aspects as collectivist community is more likely to get financial assistance from others that encourages them to take risky option. However, our research findings showed a negative relationship. This could be explained in the way that top management tends to avoid risk taking failure to reduce their liability and to protect their personal financial setbacks (Wei & Atuahene-Gima, 2009) as well as the benefits of other team members especially in the international construction markets which is flooded with unpredictable uncertainties and risks.

For the path 'Values orientation' to 'Economic risk', strategic values is the most influential factor followed by business ethic values and relationship values. Among the strategic values, Malaysian international contractors emphasise more on "conformity", followed by "outcome excellence", "responsibility and accountability", "stability and continuity", "analysis and control" and "getting the job done". Items of the business ethic values were "highlight value integrity as much as profits", "treating people fairly", "seeking the good of society" and "doing the right things". Three (3) items that measure relationship values were "professionalism and expertise", "respect for people" and "trust. These values determine the risk seeking of Malaysian international contractors in international bidding decisions by encouraging them to absorb higher risks.

For the path 'Capability orientation' to 'Economic risk', technology orientation plays a more influential role followed by innovation orientation. The measured items of technology orientation were "technological innovation in hardware aspect", "technological innovation in software aspects" and "invests in the latest technological developments in managing risks". While, items that measure innovation orientation included "invests heavily in developing new operating systems", "introduce many modifications to the existing construction services" and "introduced more new

construction services than our competitors". Technology orientation is not merely improve the competitive advantage and profit of organisations (Flanagan, Anson, Ko, & Lam, 2002) but increase the capability of organisations to deal with risks in terms of the use of risk response strategies (Ahmed & Azhar, 2004). Hence, organisations are more likely to be risk takers in making economic risk decisions. Similarly, innovation-orientated organisations are not only have higher opportunities to success in the respective marketplace due to the increased of market advantages (Simpson et al., 2006) but the capability to sustain in different economic conditions.

On the other hand, 'Goals orientation' plays a role in 'Political risk' and 'Economic risk' bidding decisions. Both common and international goals carried equal loadings. In terms of international goals, Malaysian international contractors are much affected by gaining more new and different future markets" followed by "increase firm's competitive advantage" and "expansion of business internationally" in international bidding decisions. The items of the common goals were "profit making" and "gaining more new future work". This supports the assertion made by Han et al. (2005), the main reason of firms from majority countries venturing into overseas construction is to increase an organisation's volume of international construction. In addition, this findings confirmed the statement made by Han and Diekmann (2001a, 2001b) in which goals such as profit-oriented, gaining future markets and need for work affect organisational international entry decisions. Han and Diekmann further reinforced that these goals will influence an organisational strategic decision-making. Besides, results showed that these goals encourage Malaysian international contractors to take higher risks.

Although the path ‘Guanxi orientation’ to ‘Economic risk’ was at the 0.05 significance level and agreed by majority of the interviewees, this path has a lowest mean value in the validation survey. This is because ‘Guanxi orientation’ in international bidding decisions depends also on the capability of business partner(s) in terms of their financial, resources and experience capability factors. In contrast, the path ‘Hierarchy orientation’ to ‘Political risk’ has the highest mean value of 4 than other paths in the validation survey, at the 0.10 significance level and agreed by few interviewees only. Both rules orientation and formal ethic structure carry equal loadings in the hierarchy trait. As political risk is concerned about governmental events, political conditions and law and regulations of host country, the rules and procedures of organisations provide guidelines to the top management to decide whether to bid or not to bid by means of identifying conflict of rules and regulations between two countries, possibility to make changes and changes that need to be made in their organisations to coordinate effectively with the host country. Fitzpatrick (1983) found that organisations take political risk as a key influencial risk determinant on their foreign investment decisions. In addition, a study by Kartam and Kartam (2001) discovered that contractors in Kuwaiti are more willing to accept contractual and legal-related risks than other types of risks. This is because the impact of legal-related risks are more easier to reduce compared to other types of risks.

On the other hand, results between the validation survey and questionnaire-interviews were divergent for the paths ‘Strategy orientation’ to ‘Political risk’ ($p<0.05$), ‘Strategy orientation’ to ‘Economic risk’ ($p<0.10$) and ‘Adaptability orientation’ to ‘Political risk’ ($p<0.10$). Although most of the interviewees agreed on these paths and recognised their importance in international bidding decisions, yet, experts showed neutral point of views. This showed that the impact of strategy orientation and adaptability orientation

on international bidding decisions were not crucial among Malaysian contractors. Nonetheless, Cheung et al. (2011) addressed that adapability is critical for an organisation especially if the organisation intends to enter into a new market.

5.7 Summary of the chapter

As a summary of this chapter, the use of mixed research strategy in this study has further verified the impact of organisational culture in international bidding decision in response to the political and economic risks and organisational culture is not the main determinant in international bidding decisions. Besides, we discovered that different types of cultural orientations contribute different impact on certain type of risk decisions. A discussions of conclusions, recommendation of future research and limitations were presented in the following chapter.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS OF FUTURE STUDIES

6.1 Introduction

Chapter 6 consists of an introduction of the chapter, conclusions, implications, organisational culture and its challenges, limitations of the research, recommendations of future studies and chapter summary as illustrated in Figure 6.1.

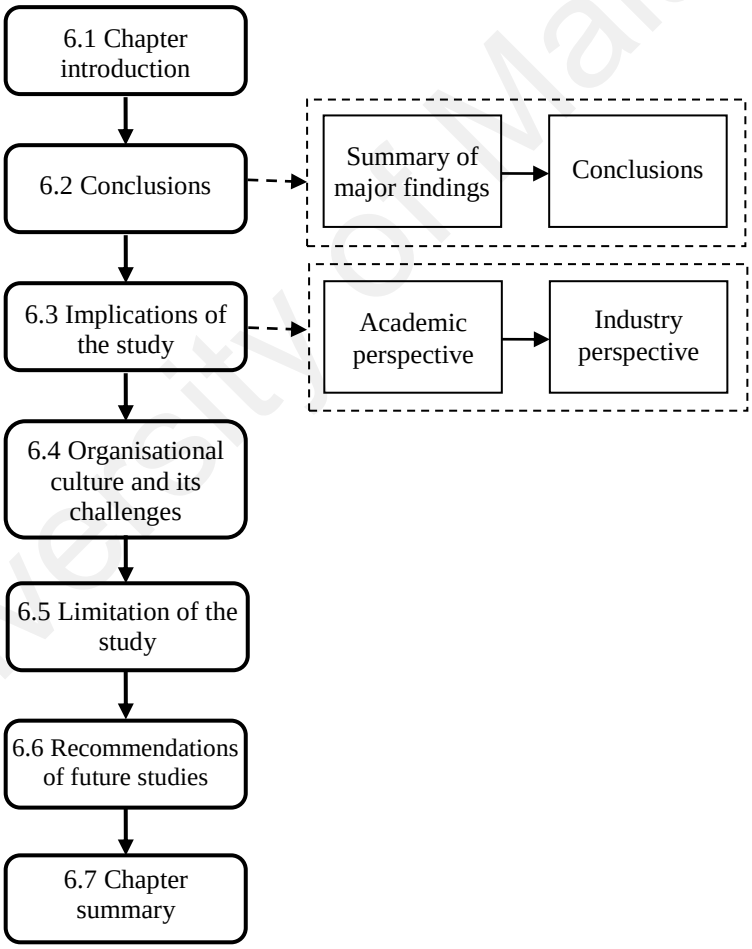


Figure 6.1: The framework for Chapter 6

6.2 Conclusions

In summary, this study explored empirically the complex interrelationship between organisational culture and international bidding decisions in response to the political and economic risks. The findings have not only indicated that organisational culture can affect organisational international bidding decisions but the effect can be either positive or negative. Different cultural orientation tends to have different degree of impact on certain types of risk decisions. According to the analysis results, about 30% of the changes in the international bidding decisions are caused by organisational culture. This results suggested that organisational culture is not the dominant factor on international bidding decisions especially in risk decisions. The impact of organisational culture on decisions seems to be overestimated by some literature. International bidding decisions could be affected by other situational factors and due to the effect of globalisation. Hence, the relationship between organisational culture and international bidding decisions is subject to controversial (Low et al., 2014).

Based on the conceptual model developed in this study, 'Goals orientation', 'Involvement orientation', 'Values orientation', 'Guanxi orientation', 'Strategy orientation' and 'Capability orientation' play more critical roles on international bidding decisions compared to 'Hierarchy orientation' and 'Adaptability orientation'. 'Goals orientation' and 'Strategy orientation' contribute greater influence ($p<0.05$) on political risk decisions. In contrast, 'Goals orientation' and 'Guanxi orientation; cast the greater influence ($p<0.01$) on economic risk decisions followed by 'Involvement orientation', 'Values orientation' and 'Capability orientation' ($p<0.05$). The results indicated that organisational culture is not merely impinge on the degree of organisational internationalisation but to a certain extent, it represents organisational risk capability

(Low et al., 2014). Based on the findings of the quantitative approach, results of each objective were summarised as indicated in the Table 6.1.

Table 6.1: A summary of the research findings

Objectives of the study	Research findings
i. to identify organisational culture dimensions that are currently practising by international contractors	• Market orientation (client), goal orientations (common) and teamwork orientation are taken higher priority among the international contractors. This followed by long term orientation, value orientation (strategic), value orientation (relationship), goal orientation (international), guanxi orientation (business), reward orientation, future orientation, guanxi (political) orientation and market (competitors) orientation. • In contrast, innovation orientation, technology orientation and marketing formalisation orientation are taken less priority compared to other cultural orientation with the lowest mean values of less than 3.40.
ii. to identify the maximum risk tolerance level of international contractors in international bidding decisions in response to political (including legal risk) and economic risks	• The maximum risk tolerance level of Malaysian international contractors on political and economic risks are fall under medium and high levels. • International contractors are more willing to accept higher level of economic risk than political risk. • International contractors tend to accept higher level of political risks in terms of inconsistency in government policies and bureaucratic. • On the other hand, international contractors are inclined to accept higher level of economic risks on currency crisis, inflation crisis, fluctuation in prices and shortage in resources supply.
iii. to explore empirically the relationships between organisational culture and international bidding decisions in response to political (including legal risk) and economic risks	• According to the analysis results, about 30% of the changes in the international bidding decisions are caused by organisational culture. • Based on the predictive model, goals and strategy orientations contribute greater influence ($p<0.05$) on political risk decisions. • While, goals and guanxi orientations cast the greater influence ($p<0.01$) on economic risk decisions followed by involvement, values and capability orientations ($p<0.05$).
iv. to develop an international risk decisions model with the inclusion of organisational culture variables	

6.3 Implications of the study

The study provides four (4) aspects of the theoretical implication. First, this study bridges the gap between theories and practice in construction sector by verifying the

relationship between organisation culture and international bidding decisions empirically based on the combination concepts among descriptive, SOR and cultural theories (Low et al., 2014). Second, the research findings of this study add knowledge to the bidding decisions and organisational culture literature by confirming the general assumptions that organisational culture influences international bidding decisions although it is not the dominant cause. Third, this study presented a set of organisational culture traits based on the DOCM and CVF models. Fourth, this study is one of the few empirical organisational culture studies focused on international bidding decisions in response to the political and economic risks and carried out in the eastern developing countries (Low et al., 2014).

In terms of the practical implications, the predictive model provides a new direction for top management in strategy decision making in the context of organisational culture and assists them to gain a better understanding about the relationships between organisational culture and international bidding decisions. Instead of over-emphasising on the tangible assets of an organisation, organisations should invest on organisational culture development by judging, reviewing and stimulating appropriate organisational culture in the events of overseas venture and internationalisation. Given the important role of goals orientation in international bidding decisions, organisations should regularly reflect and review the impact of organisational goals on their firm's risk tolerance level and organisational future performance. In addition, guanxi orientation is practiced as a means to reduce the impact of economic risk. Hence, a web of healthy relationship connections is prominent to avoid business conflict which can affect the performance of organisations and projects. Based on the survey results, some practical guidance in organisational bidding decision strategy were suggested, namely: (1) include organisational culture as one of the factors in risk assessment programme for

international bidding decisions; (2) be sensitive and diligent in evaluating the implication of the current organisational culture to assure appropriate culture is being developed; (3) perform possible change in organisational culture to align with organisational risk decision strategy; and (4) evaluate again the implication of existing and/or new organisational culture (Low et al., 2014). Table 6.2 indicates a summary of the research implications of this study.

Table 6.2: A summary of the research implications

Aspects of research implications	Explanations
i. Theoretical implication	• bridges the gap between theories and practice in construction sector by verifying the relationship between organisation culture and international bidding decisions empirically based on the adopted theories (Low et al., 2014); • adds knowledge to international bidding decisions and organisational culture literature; • presented a set of organisational culture traits based on the DOCM and CVF models; and • one of the few empirical organisational culture studies focused on international bidding decisions in response to the political and economic risks and carried out in the eastern developing countries (Low et al., 2014).
ii. Practical implication	• the model provides a new direction for top management in strategy decision making in the context of organisational culture; • this study highlights the importance of investing on organisational culture development in the events of overseas venture and internationalisation instead of over-emphasising on the tangible assets of an organisation; • highlighs the importance of goals and guanxi orientation in international bidding decisions; and • suggests some practical guidance in organisational bidding decision strategy, namely: (1) include organisational culture as one of the factors in risk assessment programme for international bidding decisions; (2) be sensitive and diligent in evaluating the implication of the current organisational culture to assure appropriate culture is being developed; (3) perform possible change in organisational culture to align with organisational risk decision strategy; and (4) evaluate again the implication of existing and/or new organisational culture (Low et al., 2014).

6.4 Organisational culture and its challenges

During the course of data collection, few challenges and issues were identified in the international contractor organisations as follows:

i. The top management in international contractor organisations is taking little attention on the critical role of organisational culture compared to western organisations.
ii. Although the top management agreed that organisational culture plays a role in the organisational international bidding decisions, little effort is implemented and planned in the overseas venture strategy.

6.5 Limitations of the research

As with other research, the design of this study is subject to limitations. The limitations of the study include:

i. due to time (in particular the top management personnel who has quite frequent international business trips) and resources limitations and to achieve cultural uniformity, this study was conducted in Malaysian international construction organisations (developing country that venturing into overseas countries) in which the research findings may incline towards in Malaysian, Asian or developing countries' construction sector (Low et al., 2014);
ii. the sample size of this study is relatively small due to the small size of the targeted population (Low et al., 2014);
iii. this study was limited into political and economic risks (Low et al., 2014);

iv. the informants of this study were top management personnel which can create informant bias (Low et al., 2014);
v. this study was mostly based on privatised international organisations and hence the findings are more applicable in privatised organisations (Low et al., 2014);
vi. this research focused on the impact of multiple organisational culture variables but not delve into a single cultural variable (Low et al., 2014);
vii. this study does not aim to produce an exhaustive research model and hence, other related variables are excluded in the development of research model.

6.6 Recommendations of future research

The limitations of the study serve as a good piece of new and interesting avenue of future research to furthering the understanding of the existing knowledge and theory of culture and contractors' risk bidding decisions in international construction. Based on the above limitations (Section 6.5), the recommendations of future research include:

i. replication of this study in other countries or other industries could help to verify the research assumptions or findings in a more generalised manner. Besides, future studies could compare the effect of organisational culture on international bidding decisions between developing and developed countries (Low et al., 2014);
ii. future research could include a wider population (Low et al., 2014) by including contractors from other Asian developing countries of similar national culture characteristics or comparing the effect of organisational culture on international bidding decisions between developing countries;
iii. factors such as client-related risks, project-related risks, projects characteristics (Low et al., 2014) and cultural risk are worth to be studied in future to disentangle factors that influence international contractors' bidding behaviour;

iv. to avoid informant bias, this research could be further extended by including multiple or other informants such as owners and board members of organisations (Low et al., 2014);

v. future research could attempt to focus on a sample of government-linked organisations or to perform a comparison study between government-linked organisations and private organisations (Low et al., 2014);

vi. future research can delve into the complexities and richness of single or few organisational cultural variables such as guanxi and goals orientations (Low et al., 2014), decision risks characteristics (for instance, different types of risks), construction projects characteristics and owner-related issues;

vii. future studies can develop a larger scale of research model by including more variables and test the model empirically quantitatively and/or qualitatively with different research method(s);

viii. future research can be extended by exploring the impact of cultural practice of international contractors in enterprise risk management and its influence on their international bidding decisions; and

ix. to mitigate the effect of sample inhomogeneity, future studies can compare the impact of organisational culture on bidding decisions in international organisations of different size and international portfolio.

6.7 Summary of the chapter

As a summary of the chapter, although the findings of this study were based on single nationality under the mixed research strategy. Yet, it has highlighted the significance of organisational culture in international bidding decisions in response to the political and economic risks instead of the impact of national culture in decision making.

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LIST OF PUBLICATIONS AND PAPERS PRESENTED

Conference paper

Low, W. W., Abdul-Rahman, H., and Zakaria, N. (2013). A conceptual discussion: the impact of organisational culture and international risk decisions. *Paper presented at the 7th ASEAN Postgraduate Seminar 2013, Sustainable Development: Present and Future*, 5th-6th December 2013, Faculty of Built Environment, University of Malaya, Kuala Lumpur, Malaysia. (Non-ISI/Non-SCOPUS Cited Publication)

Journal paper

Low, W. W., Abdul-Rahman, H., and Zakaria, N. (2014). The impact of organisational culture on international bidding decisions: Malaysia context. *International Journal of Project Management*. doi: 10.1016/j.ijproman.2014.10.010 (Accepted) (ISI Cited Publication)

Conference paper (The first page of the article)

Low, W. W., Abdul-Rahman, H., and Zakaria, N. (2013). A conceptual discussion: the impact of organisational culture and international risk decisions. *Paper presented at the 7th ASEAN Postgraduate Seminar 2013, Sustainable Development: Present and Future*, 5th-6th December 2013, Faculty of Built Environment, University of Malaya, Kuala Lumpur, Malaysia. (Non-ISI/Non-SCOPUS Cited Publication)

A CONCEPTUAL DISCUSSION: THE IMPACT OF ORGANIZATIONAL CULTURE AND INTERNATIONAL RISK DECISIONS

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ABSTRACT

This paper presents part of an on-going research effort on the impact of organizational culture and international risk decisions. Although the effect of culture on decision is known and frequently discussed in literature, the impact of organizational culture on international risk decisions is seldom highlighted and the empirical studies to date especially in construction sector is deficient. In this paper, we discuss about the current state of culture and decision making literature, the knowledge gaps of previous literature, and the related theories between organizational culture and risk decisions. A culture-decision conceptual model was proposed and grounded on three (3) theories, namely, descriptive decision theory and stimulus-organism-response (SOR) theory. The main contribution of the conceptual model is to advance the existing knowledge in the fields of culture and decision making in international construction. Review of the extant literature showed that there is plenty of room for improvement in the field of organizational culture and international risk decisions. Hence, we urge for more future research to be exploited and studied in breadth and depth in terms of the geographical location, research methodology, theories and management practices.

Keywords: Conceptual, Decision making, International construction, Organizational culture, Risk response.

1. INTRODUCTION

In the era of globalization, all countries in the world are facing the force of global competition. Construction industry is experiencing rapid globalization (Horii, Yan, & Levitt, 2004). The phenomenon of globalization has lead to the increase of international construction projects (Mahalingam, Levitt, & Scott, 2005). Consequently, international construction becomes an important sector in the global economy (Chen, 2008). Overseas venture occurs in a situation that organizations which is resident in a country performs works or involve in a business in another country (Mawhinney, 2001; Ngowi, Pienaar, Talukhaba, & Mbachu, 2005). Enderwick (as cited in Ling & Hoi, 2006, p. 262) highlights that international construction involved "the combination of business and project management skills with both mobile factors of production and location-bound support industries".

International construction market is experiencing an inevitable changes and challenges from different aspects that pose serious threats to international and global contactors (Han, Kim, Jang, & Choi, 2010). Based on the ENR records from 1995 to 2005, Han and his fellows disclosed that forty-three percent (43%) of the top global contractors have been withdrawn from the top global contractor list. As a consequence, only a few firms in advanced industrialized countries are able to sustain in the international market (Ngowi et al., 2005).

According to the statistics from the Construction Industry Development Board from 1986-March 2013, a total of 691 projects have been secured by Malaysian international contractors in the global

Journal paper (The first page of the article)

Low, W. W., Abdul-Rahman, H., and Zakaria, N. (2014). The impact of organisational culture on international bidding decisions: Malaysia context. *International Journal of Project Management*. doi: 10.1016/j.ijproman.2014.10.010 (Accepted) (ISI Cited Publication)

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JPMA-01704; No of Pages 15

Available online at www.sciencedirect.com

ScienceDirect

International Journal of Project Management xx (2014) xxx – xxx

International Journal of Project Management

www.elsevier.com/locate/ijproman

The impact of organizational culture on international bidding decisions: Malaysia context

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Received 4 March 2014; received in revised form 12 October 2014; accepted 17 October 2014
Available online xxxx

Abstract

With the rapid urbanization and globalization, developing countries contractors start to venture overseas. These contractors are exposed to various types of risks especially external risks. Although it is well known that organizational culture has impact on decisions, yet, the effect of organizational culture on international bidding decisions in construction to date is under-research. This paper explores the relationship between organizational culture and international bidding decisions in response to the political and economic risks of Malaysian international contractors. A culture-decision conceptual model was proposed and tested using questionnaire survey and further interpreted through interviews. Goals and strategy orientations contribute greater influence on political risk decisions. While, goal and guanxi orientations cast the greater influence on economic risk decisions followed by involvement, values and capability orientations. This study found that organizational culture casts the influence on international bidding decisions, yet, it is not the dominant cause especially in risk decisions.

Keywords: International construction; Organizational culture; Political risk; Economic risk; Legal risk

1. Introduction

Construction sector plays a key role in economic development and growth in developing countries (Dang and Low, 2011). The effect of globalization and the rapid urbanization in developing countries (Zhang, 2011) due to the increased demand on knowledge, expertise and technology from more advanced countries have led to an expansion and increased of international construction markets. Globally, construction growth is expected to have an average 3.5% compound annual growth rate (CAGR) between 2009 and 2014 and it will be led by Non-Japan Asian countries with the growth at a 7.3% CAGR. While, the total construction spending in the regions of Asia–Pacific is expected to expand at 5.8% and led by China, India and Indonesia (IHS Global Insight, 2010).

However, international construction is fraught with higher uncertainties and risks than in domestic market (Han and Diekmann, 2001a, 2001b; Han et al., 2005). International external risks generally consist of political, economic, legal, cultural (languages and religious differences) and social risks (Li et al., 1999; Wang et al., 2004). These risks play an imperative role on a firm's strategic bidding decisions in international construction (Han et al., 2005) that can spook contractors to venture overseas (Han and Diekmann, 2001b). Cultural (language and religious differences) and social risks play a less important role in international construction compared to political, economic and legal risks (Li et al., 1999). For example, macro condition affects bidding behavior via markup decisions (Ye et al., 2014).

As such, international bidding decisions become difficult and complicated (Han and Diekmann, 2001a, 2001b; Han et al., 2005). Construction firms seem to be increasingly risk averse

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http://dx.doi.org/10.1016/j.ijproman.2014.10.010
0263-7863/00/

APPENDIX A: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
≤ 2000	Maloney and Federle (1990)	An article in a book	Qualitative and quantitative	Engineering and construction organisations	United States	Organisational culture	-	Work from Quinn and Cameron
	Lansley and Riddick (1991)	Journal article	Qualitative	Senior management groups from national and international construction and engineering contractors	United Kingdom and North America	Organisational culture	Characteristics of small groups	-
	Maloney and Federle (1993)	Journal article	Quantitative	An owner organisation and a construction organisation	United States	Organisational culture	-	Work from Quinn and Cameron
	Rowlinson and Root (1996)	A working paper	Qualitative and quantitative	Architects and quantity surveyors from private and public sectors	Hong Kong and United Kingdom	National culture	Construction professional's attitudes	Hofstede's work
	Winch et al. (1997)	Journal article	Quantitative	A Channel Tunnel project - British and French managers	Sangatte (France) and Folkestone (United Kingdom)	Organisational culture differences	Organisational behaviour	Works from Hofstede in 1980 and Van de Ven in 1980

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
≤ 2000	Hall (1999)	Unpublished PhD thesis	Qualitative	British construction companies	United Kingdom	Cultural diversity	International construction activity	-
	Hancock (1999)	An article in a book	Qualitative and quantitative	Architects, civil engineers and building surveyors	Danish and UK	National culture	Cultural differences and attitude towards European Union procurement directive	Hofstede's work in 1984
	Liu (1999)	Journal article	Quantitative	Real estate professional firms	Hong Kong	Organisational culture	Real-estate professionals'performance and perceived job satisfaction	Works from Greiner and Schein in 1988, Hackman and Oldham in 1980, Hofstede, Neuyen, Ohayv and Sanders in 1990, Palmer in 1990, Ng in 1994, Reynolds in 1986 and McKenzie in 1994
	Loosemore and Muslmani (1999)	Journal article	Quantitative	Contractors and consultants involved in construction projects in Persian Gulf	United Kingdom and Persian Gulf	Cultural diversity	Communication problems	Hofstede's work in 1980
	Seymour and Fellows (1999)	An article in a book	Quantitative and qualitative	Contracting organisations	Unknown	Organisational culture	Strategic orientation on quality	Works from Hofstede in 1980, Hall in 1995 and so on
	Low and Leong (2000)	Journal article	Qualitative	A New Chinese Hotel project	China	Cross-cultural management	International construction	-

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
≤ 2000	Ngowi (2000)	Journal article	Qualitative	Construction firms	Botswana	National and organisational culture	Compatibility of total quality management implementation	-
> 2000	Ang and Ofori (2001)	Journal article	Quantitative	Building contracting firms owned by Chinese Singaporeans	Singapore	Chinese culture	Partnering in Singapore	-
	Fisher and Ranasinghe (2001)	Journal article	Quantitative	Foreign building and construction firms	Singapore	Culture	Choice of foreign investment venture structure	Hofstede's work in 1980
	Low and Shi (2001)	Journal article	Qualitative	International projects – Singaporean and Chinese employees	China	Cross-cultural	Project management in international projects	Hofstede's work in 1980
	Rowlinson (2001)	Journal article	Quantitative and qualitative	A large public sector organisation	Hong Kong	Organisational culture and commitment	Organisational change	Works from Hofstede in 1984, Handy in 1985 and Allen and Meyer in 1990
	Hall (2002)	Journal article	Qualitative	Contractors and consultants	United Kingdom	National culture differences	International construction marketing	-
	Loosemore and Lee (2002)	Journal article	Qualitative	Supervisors	Australia and Singapore	Cross culture among employees	Communication problem - language differences	-

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
> 2000	Low and Shi (2002)	Journal article	Quantitative	Two projects - related construction professionals	China	Cross-cultural	Project management in international projects	Hofstede's work in 1980
	Tran and Skitmore (2002)	Journal article	Quantitative	All local and expatriate project managers, construction managers, consultants and architects	Singapore	National culture; organisational culture and personal characteristics	Efficacy of project communication	Works from Trompenaars and Hampden-Turner in 1998, Hofstede in 1980 and 1991, and Schein in 1992
	Chan and Tse (2003)	Journal article	Quantitative	Construction professionals with international experience	Hong Kong. United Kingdom	Culture differences influences	Dispute and the choice of dispute resolution mechanism	-
	Coffey (2003); Coffey and Willar (2010)	Conference papers	Quantitative	Construction enterprises – building contractors	Hong Kong	Organisational culture	Construction quality performance	Denison Organisational Culture Survey (DOCS) by Denison and Mishra in 1995
	Lindahl and Josephson (2003)	Conference paper	Quantitative and qualitative	A Hotel Gothia Towers project and other projects - users, client, designers, contractors and sub-contractors	Swedish	Organisational culture	Partnering projects	Works by Johnson and Johnson in 1997, Carlsson and Josephson in 2001 and Josephson in 2002

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
>2000	Rahman et al. (2003)	Conference paper	Qualitative	Consultants, contractors and clients	Hong Kong	Flexible construction project culture	Project success	-
	Chen and Partington (2004)	Journal article	Qualitative	Construction firms	UK and China	National culture difference between UK and China	Construction project management work	Works from Hofstede, Trompenaars and Schwartz
	Horii et al. (2004)	Conference paper	Qualitative and virtual experiment	Japanese and American firms	San Francisco Bay	Cultural differences between Japanese and America	Team performance in international joint venture project teams	Hofstede in 1991
	Liu et al. (2004)	Journal article	Quantitative	Consultant surveying firms, development companies, contracting companies	Hong Kong	Organisational culture	Ethics	Ethical Climate Questionnaire (ECQ) from Victor and Cullen in 1987 and 1988
	Phua and Rowlinson (2004)	Journal article	Quantitative	Foreign and local construction firms	Hong Kong	National culture	Social identity perspective (individualism-collectivism, inter-organisational differentiation and co-peration)	Works from Wagner and Moch in 1986, Jackson and Smith in 1999 and Wagner in 1995
	Zhang (2004)	Unpublished PhD thesis	Quantitative and qualitative	Construction enterprises	China	Organisational culture	Performance effectiveness – employee satisfaction, project quality, completion time, productivity and profitability	Organisational Culture Inventory (OCI) by Cooke and Lafftery in 1987 and Organisational Culture Assessment Instrument (OCAI) by Cameron and Quinn in 1999

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
> 2000	Ankrah and Langford (2005)	Journal article	Quantitative	Architect and contractor firms	Scotland	Organisational culture	-	Works from Handy in 1993 and 1995, Taylor and Bowers in 1972, Quinn in 1988, Hofstede in 1997, Harrison, Sonnenfield, Eldridge and Crombie
	Cheung et al. (2005)	Conference paper	Quantitative and qualitative	A public sector organisation	Australia	Cultural variables - organisational structure, organisational culture and commitment	Project performance - the practice and preconditions for alliancing to be successful	-
	Fung et al. (2005)	Journal article	Quantitative	Civil construction firms, private building construction firms and government authorities	Hong Kong	Culture difference among construction personnel	Safety	-
	Mahalingam et al. (2005)	Conference paper	Qualitative	Project participants	Taiwan and India	Cultural clashes	International infrastructure development projects	-
	Tukiainen et al. (2005)	Working paper	Qualitative	Power plant project – Finnish and Polish managers	Poland	Cultural dynamics	Process and outcome of a global engineering project	-
	Anumba et al. (2006)	Journal article	Quanlitative	Managers and users	United Kingdom	Cultural factors	Success of information and coummunication technology (ICT)	-

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
> 2000	Brockmann and Birkholz (2006)	Conference papers	Quantitative and qualitative	Construction companies and automobile companies	Germany	Professional culture	Civil engineers (construction industry) and mechanical engineers (automobile industry)	Frameworks from Hofstede in 2005, Riley and Clare-Brown in 2001 and Woodward in 1965
	Hartmann (2006)	Journal article	Qualitative	Construction firms	Swiss	Organisational culture	Innovative behaviour	O'Reilly and Chatman in 1996
	Igo and Skitmore (2006)	Journal article	Quantitative	Engineering, procurement and construction management consultancy	Australia	Organisational culture	-	Competing Values Framework by Quinn and Rohrbaugh in 1983
	Liu et al. (2006)	Journal article	Quantitative	Construction enterprises	China	Organisational culture	-	Organisational Culture Assessment Instrument (OCAI) by Cameron and Quinn in 1999
	Zhang and Liu (2006)	Journal article	Quantitative	Construction enterprises	China	Organisational culture	-	Organisational Culture Assessment Instrument (OCAI) by Cameron and Quinn in 1999
	Akiner and Tijhuis (2007)	Journal article	Quantitative	Architects and civil engineers	Turkey	Culture on occupational groups	Work goal orientation	Hofstede's work

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
> 2000	Ankrah (2007)	Unpublished PhD thesis	Quantitative and qualitative	Construction projects	United Kingdom	Organisational project culture	Construction project performance - cost, time, quality, health and safety, disputes, and productivity outcomes	-
	Lorenz and Marosszeky (2007)	An article in a book	Quantitative and qualitative	German and Austrian contractors and designers	Australia	National and organisational cultures differences	International collaboration and organisational and technical differences in the aspects of trade union, safety, bureaucracy and employment	Competing Values Framework Questionnaire by Cameron and Quinn in 2005
	Oney-Yazıcı et al. (2007)	Journal article	Quantitative	Contracting and architectural firms	Turkish	Organisational culture	-	Organisational Culture Assessment Instrument (OCAI) by Cameron and Quinn in 1999
	Wong et al. (2007)	Journal article	Quantitative	Local Chinese and Western expatriate project managers in multinational construction companies	Hong Kong	Relationship cultures	Leadership styles	-
	Issa and Haddad (2008)	Journal article	Quantitative	Contractors	United States	Organisational culture	Knowledge sharing	Works from Goffee and Jones in 1996 and Hofstede in 1997
	Koh and Low (2008)	Journal article	Quantitative	Construction enterprises	Singapore	Organisational culture	Total quality managment	Organisational Culture Assessment Instrument (OCAI) by Cameron and Quinn in 1998

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
>2000	Liu and Fellows (2008)	Journal article	Quantitative	Quantity surveyors from construction firms, consultancy firms and government	Hong Kong	Organisational culture – individualism-collectivism	Organisational citizenship behaviour	Works from Hofstede in 1980 and Wagner and Moch in 1986
	Ankrah et al. (2009)	Journal article	Quantitative and qualitative	Private-based construction projects – housing and commercial projects	United Kingdom	Organisational project culture	Features of construction projects	-
	Fong and Kwok (2009)	Journal article	Quantitative	Managers of local or overseas contracting firms	Hong Kong	Organisational culture	Knowledge management	Organisational Culture Assessment Instrument (OCAI) by Cameron and Quinn in 1999
	Jia et al. (2009)	Journal article	Quantitative and qualitative	Bachelor and Master architecture students in two (2) universities	Hong Kong	Culture – Confucian conformity values	Burnout	Works from Schwartz in 1992 and 1994
	Kivrak et al. (2009)	Conference paper	Qualitative	Senior managers	United Kingdom	Culture differences	Knowledge management practice	-
	Mohamed et al. (2009)	Journal article	Quantitative	Construction workers	Pakistan	National culture	Work safety behaviour	Work from Hofstede in 1994
	Tone et al. (2009)	Journal article	Quantitative and qualitative	Project managers	Samoa	Cross-cultural	Communication in international projects	-

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
> 2000	Chandra and Loosemore (2010)	Journal article	Qualitative	Partnering hospital project - Clinicians, consultants, planners and contractors	Australia	Cultural learning	Key concept of project success during briefing stage	-
	Coffey (2010)	Research-based book	Quantitative and qualitative	Construction enterprises – building contractors	Hong Kong	Organisational culture	Construction quality performance	Denison Organisational Culture Survey (DOCS) by Denison and Mishra in 1995
	Kuo and Kuo (2010)	Journal article	Quantitative	Construction companies	Taiwan	Corporate culture	Project performance	Denison's model in 1995
	Ochieng and Price (2010)	Journal article	Qualitative	Senior project managers	UK and Kenya	National culture differences	Communication in multicultural project team	-
	Wang and Abdul-Rahman (2010)	Journal article	Quantitative	Construction contracting organisations	Malaysian	Organisational culture	Business performance - leadership styles and enterprise axiology	-
	Styhre (2010)	Journal article	Qualitative	Construction professionals	Scandinavia	Culture	Complaint in construction industry	-
	Chandra and Loosemore (2011)	Journal article	Qualitative	Partnering hospital project - Clinicians, consultants, planners and contractors	Australia	Exchanged of cultural knowledge	Communication during briefing stage	-

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
>2000	Cheung et al. (2011)	Journal article	Quantitative	Construction professionals like developers, consultants and contractors	Hong Kong	Organisational culture	General organisational culture framework in construction	Nine (9) existing models (for example, Hofstede in 1983, Fulmer in 1988, Hansen and Wernerfelt in 1989, Woodcock in 1989, Bettinger in 1989, Denison in 1990, Cameron and Quinn in 1999, Liu in 1999, Coffey in 2002)
	Liu and Low (2011)	Journal article	Quantitative	Construction project managers	China	Chinese culture, industry culture and organisational culture	Balance and conflict between work and family life	-
	Phua (2012)	Journal article	Quantitative	Construction professionals from Australia and Hong Kong	Australia and Hong Kong	National culture	Nature and characteristics of human resource practices – remuneration and job autonomy	-
	Wong et al. (2013)	Journal article	Quantitative	Contractors	Australia	Organisational culture	Carbon reduction strategies and carbon reduction drivers	Works from Peters and Waterman in 2004, Bettinger in 1989, Cameron and Quinn in 1999, Denison in 1990, Hofstede in 1983, Coffey in 2002, Ankrah and Langford in 2005, Zhang and Liu in 2006, Cheung, Wong and Wu in 2010 and Cheung, Wong and Lam in 2012

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
>2000	Giritli et al. (2013)	Journal article	Quantitative	Contracting companies	Turkish	Organisational culture	Leadership	Cameron and Quinn's and Hofstede's works
	Jaeger and Adair (2013)	Journal article	Quantitative	Construction organisations	Gulf Cooperation Council (GCC) countries	Organisational culture	-	Organisational Culture Assessment Instrument (OCAI) by Cameron and Quinn in 2006
	Rees-Caldwell and Pinnington (2013)	Journal article	Quantitative	Project mangers	UK and United Arab Emirates (UAE)	National culture	Project planning	Works from Hofstede in 2001, GLOBE in 2004, Kaufman, Lane and Lindquist in 1991 and Kluckhohn and Strodtbeck in 1961
	Wong and Zapantis (2013)	Journal article	Quantitative	Contractors, developers and consultants	Australia	Organisational culture	Carbon reduction strategies and carbon reduction drivers (tightening regulations and carbon tax)	Works from Peters and Waterman in 2004, Bettinger in 1989, Cameron and Quinn in 1999, Denison in 1990, Hofstede in 1983, Coffey in 2002, Ankrah and Langford in 2005, Zhang and Liu in 2006, Cheung, Wong and Wu in 2010 and Cheung, Wong and Lam in 2012

APPENDIX A, CONTINUED: CULTURAL LITERATURE IN CONSTRUCTION INDUSTRY

Year	Sources	Type of source	Research type	Samples	Countries	Research direction		Measurement of culture
						Culture aspects	Management aspects	
>2000	Wong et al. (2013)	Journal article	Quantitative	Contractors	Australia	Organisational culture	Carbon reduction strategies and carbon reduction drivers	Works from Peters and Waterman in 2004, Bettinger in 1989, Cameron and Quinn in 1999, Denison in 1990, Hofstede in 1983, Coffey in 2002, Ankrah and Langford in 2005, Zhang and Liu in 2006, Cheung, Wong and Wu in 2010 and Cheung, Wong and Lam in 2012

APPENDIX B: CULTURE ON RISK-RELATED DECISION-MAKING LITERATURE IN NON-CONSTRUCTION FIELDS

Year	Sources	Type of source	Field	Research type	Samples	Countries	Research direction		Measurement of culture
							Culture aspects	Management aspects	
≤ 2000	Kogut and Singh (1988)	Journal paper	Non-construction	Empirical research - quantitative	Firms from various industry	United States	National culture	Choice of entry mode	Hofstede in 1980
	Agarwal (1994)	Journal paper	Non-construction	Empirical research - quantitative	Manufacturing firms	United States	-	Socio-cultural distance and the choice of joint ventures	-
	Sitkin and Weingart (1995)	Journal paper	Non-construction	Empirical research - quantitative	Master and undergraduate students	-	-	Relationship among outcome history, problem framing, risk propensity and risk perception on risky decision-making behaviour	-
	Weber and Hsee (1998)	Journal paper	Non-construction	Empirical research - quantitative	Students - United States, Chinese, Polish, German	Major urban universities	National culture	Preference for risky option and perception of the options' riskiness on financial investment	-
	Hsee and Weber (1999)	Journal paper	Non-construction	Empirical research - quantitative	Students	America and China	National culture	Risk preference and risk preference on financial, medicine and essay	-

APPENDIX B, CONTINUED: CULTURE ON RISK-RELATED DECISION-MAKING LITERATURE IN NON-CONSTRUCTION FIELDS

Year	Sources	Type of source	Field	Research type	Samples	Countries	Research direction		Measurement of culture
							Culture aspects	Management aspects	
> 2000	Martinsons and Davison (2007)	Journal paper	Non-construction	Empirical research - quantitative and qualitative	Business leaders	United States, Japan and China	National culture	Strategic decision-making style in information systems	-
	Murray-Webster and Hillson (2008)	A book	Non-construction	Empirical research - quantitative	Professionals who are interested in risk management and organisational change and members of some professional bodies	Unknown	People with high power, people with lower power, group dynamics, organisation culture, societal norms, national culture	Group decision-making in an uncertain context	-
	Griffin et al. (2009)	Conference paper	Non-construction	Empirical research - quantitative	Diversified types of firms	35 countries (from Peru to Japan)	National culture (haromony, individualism, uncertainty avoidance)	Corporate risk taking	Works from Hofstede in 1980 and Schwartz in 1994
	Demirbag et al. (2010)	Journal paper	Non-construction	Empirical research - quantitative	Large-sized manufacturing and service firms	British and Turkish countries	National culture differences – British and Turkish firms	Strategic decision-making efficiency	-
	Dimitratos et al. (2011)	Journal paper	Non-construction	Empirical research - quantitative	Internationalised small and medium-sized manufacturing and service firms	United States, United Kingdom, Greece and Cyyprus	National culture	Strategic decision-making process in internationalisation	Hofstede's three cultural dimensions, namely, power distance, individualism and uncertainty avoidance

APPENDIX B, CONTINUED: CULTURE ON RISK-RELATED DECISION-MAKING LITERATURE IN NON-CONSTRUCTION FIELDS

Year	Sources	Type of source	Field	Research type	Samples	Countries	Research direction		Measurement of culture
							Culture aspects	Management aspects	
> 2000	Nielsen and Nielsen (2011)	Journal paper	Non-construction	Empirical research - quantitative	Firms from diversified industries	Switzerland	International experience and nationality diversity	Choice of foreign entry mode	Hofstede's work in 1980
	Tjemkes et al. (2012)	Journal paper	Non-construction	Empirical research - quantitative (scenario-based experiment)	Business students	Japan, Netherlands, Switzerland, Turkey, and United Kingdom	National culture	Preferences of response strategy under particular types of adverse situation	Hofstede's work in 2001

APPENDIX C: ADOPTED RESEARCH STRATEGY OF PREVIOUS RELATED STUDIES

References	Article type	Research strategy		
		Quantitative	Qualitative	Mixed
Past cultural studies - Construction field				
Akiner and Tijhuis (2007)	Journal article	•		
Ang and Ofori (2001)	Journal article	•		
Ankrah (2007)	Unpublished PhD thesis			•
Ankrah and Langford (2005)	Journal article	•		
Ankrah et al. (2009)	Journal article			•
Anumba et al. (2006)	Journal article		•	
Brockmann and Birkholz (2006)	Conference papers			•
Chan and Tse (2003)	Journal article	•		
Chandra and Loosemore (2010)	Journal article		•	
Chandra and Loosemore (2011)	Journal article		•	
Chen and Partington (2004)	Journal article		•	
Cheung et al. (2005)	Conference paper			•
Cheung et al. (2011)	Journal article	•		
Coffey (2003); Coffey and Willar (2010)	Conference paper	•		
Coffey (2010)	Research-based book			•
Fisher and Ranasinghe (2001)	Journal article	•		
Fong and Kwok (2009)	Journal article	•		
Fung et al. (2005)	Journal article	•		
Giritli et al. (2013)	Journal article	•		
Hall (2002)	Journal article		•	
Hancock (1999)	An article in a book			•
Hartmann (2006)	Journal article		•	
Horii et al. (2004)	Conference paper			•
Igo and Skitmore (2006)	Journal article	•		
Issa and Haddad (2008)	Journal article	•		
Jaeger and Adair (2013)	Journal article	•		
Jia et al. (2009)	Journal article			•

APPENDIX C, CONTINUED: ADOPTED RESEARCH STRATEGY OF PREVIOUS RELATED STUDIES

References	Article type	Research strategy		
		Quantitative	Qualitative	Mixed
Past cultural studies - Construction field				
Kivrak et al. (2009)	Conference paper		•	
Koh and Low (2008)	Journal article	•		
Kuo and Kuo (2010)	Journal article	•		
Lansley and Riddick (1991)	Journal article		•	
Lindahl and Josephson (2003)	Conference paper			•
Liu (1999)	Journal article	•		
Liu and Fellows (2008)	Journal article	•		
Liu and Low (2011)	Journal article	•		
Liu et al. (2004)	Journal article	•		
Liu et al. (2006)	Journal article	•		
Loosemore and Lee (2002)	Journal article		•	
Loosemore and Muslmani (1999)	Journal article	•		
Lorenz and Marosszeky (2007)	An article in a book			•
Low and Leong (2000)	Journal article		•	
Low and Shi (2001)	Journal article		•	
Low and Shi (2002)	Journal article	•		
Mahalingam et al. (2005)	Conference paper		•	
Maloney and Federle (1993)	Journal article	•		
Mohamed et al. (2009)	Journal article	•		
Ngowi (2000)	Journal article		•	
Ochieng and Price (2010)	Journal article		•	
Oney-Yazıcı et al. (2007)	Journal article	•		
Phua (2012)	Journal article	•		
Phua and Rowlinson (2004)	Journal article	•		
Rahman et al. (2003)	Conference paper		•	
Rees-Caldwell and Pinnington (2013)	Journal article	•		
Rowlinson (2001)	Journal article			•
Rowlinson and Root (1996)	A working paper			•

APPENDIX C, CONTINUED: ADOPTED RESEARCH STRATEGY OF PREVIOUS RELATED STUDIES

References	Article type	Research strategy		
		Quantitative	Qualitative	Mixed
Past cultural studies - Construction field				
Seymour and Fellows (1999)	An article in a book			•
Styhre (2010)	Journal article		•	
Tone et al. (2009)	Journal article			•
Tran and Skitmore (2002)	Journal article	•		
Tukiainen et al. (2005)	Working paper		•	
Wang and Abdul-Rahman (2010)	Journal article	•		
Winch et al. (1997)	Journal article	•		
Wong and Zapantis (2013)	Journal article	•		
Wong et al. (2013)	Journal article	•		
Wong et al. (2007)	Journal article	•		
Zhang (2004)	Unpublished PhD thesis			•
Zhang and Liu (2006)	Journal article	•		
Past risk decisions literature - Construction field				
Abdul-Rahman et al. (2012)	Journal article			•
Ahmad (1990)	Journal article	•		
Ahmed and Azhar (2004)	Conference paper			•
Aleshin (2001)	Journal article		•	
Baker et al. (1999)	Journal article	•		
Dikmen and Birgonul (2004)	Journal article			•
Fang et al. (2004)	Journal article			•
Han and Diekmann (2001a)	Journal article			•
Han and Diekmann (2001b)	Journal article			•
Han, Diekmann and Ock (2005)	Journal article	•		
Ling and Hoi (2006)	Journal article		•	
Oo et al. (2008)	Journal article			•
Panthi et al. (2007)	Conference paper	•		
Seydel and Olson (1990)	Journal article	•		
Seyedhoseini et al. (2009)	Journal article	•		
Thuyet et al. (2007)	Journal article			•

APPENDIX C, CONTINUED: ADOPTED RESEARCH STRATEGY OF PREVIOUS RELATED STUDIES

References	Article type	Research strategy		
		Quantitative	Qualitative	Mixed
Past risk decisions literature - Construction field				
Wang and Chou (2003)	Journal article		•	
Zarkada-Fraser and Fraser (2002)	Journal article	•		
Zhi (1995)	Journal article		•	
Zou et al. (2007)	Journal article	•		
Past literature on the relationship between cultural and risk-related decision making - Non-construction fields				
Agarwal (1994)	Journal paper	•		
Demirbag et al. (2010)	Journal paper	•		
Dimitratos et al. (2011)	Journal paper	•		
Griffin et al. (2009)	Conference paper	•		
Hsee and Weber (1999)	Journal paper	•		
Kogut and Singh (1988)	Journal paper	•		
Martinsons and Davison (2007)	Journal paper			•
Murray-Webster and Hillson (2008)	A book	•		
Nielsen and Nielsen (2011)	Journal paper	•		
Sitkin and Weingart (1995)	Journal paper	•		
Tjemkes et al. (2012)	Journal paper	•		
Weber and Hsee (1998)	Journal paper	•		

APPENDIX D: ADOPTED QUANTITATIVE AND QUALITATIVE RESEARCH METHODS OF PREVIOUS STUDIES

References	Article type	Research methods		
		Questionnaire survey	Interviews	Others - case study etc.
Past cultural studies - Construction field				
Akiner and Tijhuis (2007)	Journal article	•		
Ang and Ofori (2001)	Journal article	•		
Ankrah (2007)	Unpublished PhD thesis	•	•	
Ankrah and Langford (2005)	Journal article	•		
Ankrah et al. (2009)	Journal article	•	•	
Anumba et al. (2006)	Journal article			Case study
Brockmann and Birkholz (2006)	Conference papers	•	•	
Chan and Tse (2003)	Journal article	•		
Chandra and Loosemore (2010)	Journal article		•	Case study
Chandra and Loosemore (2011)	Journal article			Case studies
Chen and Partington (2004)	Journal article		•	Phenomenography
Cheung et al. (2005)	Conference paper	•	•	Case studies
Cheung et al. (2011)	Journal article	•		
Coffey (2003); Coffey and Willar (2010)	Conference paper	•		
Coffey (2010)	Research-based book	•		Case studies
Fisher and Ranasinghe (2001)	Journal article	•		
Fong and Kwok (2009)	Journal article	•		
Fung et al. (2005)	Journal article	•		
Giritli et al. (2013)	Journal article	•		
Hall (2002)	Journal article			Case studies
Hancock (1999)	An article in a book	•	•	
Hartmann (2006)	Journal article			Case study
Horii et al. (2004)	Conference paper			Case studies and experiment
Igo and Skitmore (2006)	Journal article	•		
Issa and Haddad (2008)	Journal article	•		
Jaeger and Adair (2013)	Journal article	•		
Jia et al. (2009)	Journal article	•	•	
Kivrak et al. (2009)	Conference paper		•	

APPENDIX D, CONTINUED: ADOPTED QUANTITATIVE AND QUALITATIVE RESEARCH METHODS OF PREVIOUS STUDIES

References	Article type	Research methods		
		Questionnaire survey	Interviews	Others - case study etc.
Past cultural studies - Construction field				
Koh and Low (2008)	Journal article	•		
Kuo and Kuo (2010)	Journal article	•		
Lansley and Riddick (1991)	Journal article			Observations
Lindahl and Josephson (2003)	Conference paper	•	•	
Liu (1999)	Journal article	•		
Liu and Fellows (2008)	Journal article	•		
Liu and Low (2011)	Journal article	•		
Liu et al. (2004)	Journal article	•		
Liu et al. (2006)	Journal article	•		
Loosemore and Lee (2002)	Journal article		•	
Loosemore and Muslmani (1999)	Journal article	•		
Lorenz and Marosszeky (2007)	An article in a book	•	•	
Low and Leong (2000)	Journal article			Case study
Low and Shi (2001)	Journal article			Case studies
Low and Shi (2002)	Journal article	•		
Mahalingam et al. (2005)	Conference paper			Case studies
Maloney and Federle (1993)	Journal article	•		
Mohamed et al. (2009)	Journal article	•		
Ngowi (2000)	Journal article		•	
Ochieng and Price (2010)	Journal article		•	
Oney-Yazıcı et al. (2007)	Journal article	•		
Phua (2012)	Journal article	•		
Phua and Rowlinson (2004)	Journal article	•		
Rahman et al. (2003)	Conference paper		•	
Rees-Caldwell and Pinnington (2013)	Journal article	•		
Rowlinson (2001)	Journal article	•	•	
Rowlinson and Root (1996)	A working paper	•	•	
Seymour and Fellows (1999)	An article in a book	•		Observational and shadowing techniques

APPENDIX D, CONTINUED: ADOPTED QUANTITATIVE AND QUALITATIVE RESEARCH METHODS OF PREVIOUS STUDIES

References	Article type	Research methods		
		Questionnaire survey	Interviews	Others - case study etc.
Past cultural studies - Construction field				
Styhre (2010)	Journal article		•	
Tone et al. (2009)	Journal article	•	•	
Tran and Skitmore (2002)	Journal article	•		
Tukiainen et al. (2005)	Working paper			Case study
Wang and Abdul-Rahman (2010)	Journal article	•		
Winch et al. (1997)	Journal article	•		
Wong and Zapantis (2013)	Journal article	•		
Wong et al. (2013)	Journal article	•		
Wong et al. (2007)	Journal article	•		
Zhang (2004)	Unpublished PhD thesis	•		Case studies
Zhang and Liu (2006)	Journal article	•		
Past risk decisions literature - Construction field				
Abdul-Rahman et al. (2012)	Journal article	•		Case studies
Ahmad (1990)	Journal article	•		
Ahmed and Azhar (2004)	Conference paper	•	•	
Aleshin (2001)	Journal article			Case studies
Baker et al. (1999)	Journal article	•		
Dikmen and Birgonul (2004)	Journal article		•	Case studies
Fang et al. (2004)	Journal article	•		Case studies
Han and Diekmann (2001a)	Journal article			Experimental case study
Han and Diekmann (2001b)	Journal article			Experimental case study
Han et al. (2005)	Journal article			Experiments
Ling and Hoi (2006)	Journal article			Case studies
Oo et al. (2008)	Journal article		•	Experiments
Panthi et al. (2007)	Conference paper	•		
Seydel and Olson (1990)	Journal article			Case study
Seyedhoseini et al. (2009)	Journal article			Case study
Thuyet et al. (2007)	Journal article	•	•	
Wang and Chou (2003)	Journal article			Case studies

APPENDIX D, CONTINUED: ADOPTED QUANTITATIVE AND QUALITATIVE RESEARCH METHODS OF PREVIOUS STUDIES

References	Article type	Research methods		
		Questionnaire survey	Interviews	Others - case study etc.
Past risk decisions literature - Construction field				
Zarkada-Fraser and Fraser (2002)	Journal article	•		
Zhi (1995)	Journal article			Case study
Zou et al. (2007)	Journal article	•		
Past cultural on risk-related decision making studies - Non-construction fields				
Agarwal (1994)	Journal paper	•		
Demirbag et al. (2010)	Journal paper	•		
Dimitratos et al. (2011)	Journal paper	•		
Griffin et al. (2009)	Conference paper			Case studies
Hsee and Weber (1999)	Journal paper	•		
Kogut and Singh (1988)	Journal paper	•		
Martinsons and Davison (2007)	Journal paper	•	•	
Murray-Webster and Hillson (2008)	A book	•		
Nielsen and Nielsen (2011)	Journal paper			Case studies
Sitkin and Weingart (1995)	Journal paper	•		
Tjemkes et al. (2012)	Journal paper	•		
Weber and Hsee (1998)	Journal paper	•		

APPENDIX E: SAMPLE SIZES OF PREVIOUS LITERATURE

References	Article type	Population	Samples
Past cultural studies - Construction field			
Akiner and Tijhuis (2007)	Journal article	Unknown	126 construction professionals
Ang and Ofori (2001)	Journal article	Unknown	77 firms
Ankrah (2007)	Unpublished PhD thesis	176 000 contractors	497 contractors
Ankrah and Langford (2005)	Journal article	Unknown	60 firms
Ankrah et al. (2009)	Journal article	Unknown	64 projects
Chan and Tse (2003)	Journal article	Unknown	200; 200; 50 professionals
Cheung et al. (2011)	Journal article	Unknown	362 professionals
Coffey (2003); Coffey and Willar (2010)	Conference paper	53 firms	53 firms
Coffey (2010)	Research-based book	53 firms	53 firms
Fisher and Ranasinghe (2001)	Journal article	Unknown	33 joint ventures
Fong and Kwok (2009)	Journal article	Unknown	205 managers
Fung et al. (2005)	Journal article	Unknown	Ten sites (423 construction personnel)
Giritli et al. (2013)	Journal article	Unknown	265 contracting firms
Hancock (1999)	An article in a book	Unknown	887 professionals
Igo and Skitmore (2006)	Journal article	Unknown	1 firm
Issa and Haddad (2008)	Journal article	400 contractor firms	195 contractor firms
Jaeger and Adair (2013)	Journal article	99 organisations	99 organisations
Jia et al. (2009)	Journal article	Unknown	596 students
Koh and Low (2008)	Journal article	145 contractor firms	145 contractor firms
Kuo and Kuo (2010)	Journal article	Unknown	600 respondents (30 construction firms)
Liu (1999)	Journal article	Unknown	254 professionals
Liu and Fellows (2008)	Journal article	Unknown	300 firms
Liu and Low (2011)	Journal article	Unknown	51 contractors and master students (120 respondents)
Liu et al. (2004)	Journal article	Unknown	30 companies
Liu et al. (2006)	Journal article	Unknown	5 firms
Loosemore and Lee (2002)	Journal article	Unknown	77 professionals
Loosemore and Muslmani (1999)	An article in a book	Unknown	75 firms

APPENDIX E, CONTINUED: SAMPLE SIZES OF PREVIOUS LITERATURE

References	Article type	Population	Samples
Past cultural studies - Construction field			
Low and Shi (2002)	Journal article	Unknown	2 projects
Maloney and Federle (1993)	Journal article	Unknown	2 firms
Mohamed et al. (2009)	Journal article	Unknown	8 sites
Oney-Yazıcı et al. (2007)	Journal article	Unknown	351 firms
Phua (2012)	Journal article	Unknown	3000 construction professionals
Phua and Rowlinson (2004)	Journal article	Unknown	2005 senior executives
Rees-Caldwell and Pinnington (2013)	Journal article	Unknown	-
Rowlinson (2001)	Journal article	Unknown	40 professionals
Tone et al. (2009)	Journal article	Unknown	90 project managers
Tran and Skitmore (2002)	Journal article	Unknown	100 professionals
Wang and Abdul-Rahman (2010)	Journal article	Unknown	4076 organisations
Wong and Zapantis (2013)	Journal article	Unknown	600 (contractors, developers and consultants)
Wong et al. (2013)	Journal article	Unknown	300 contractors
Wong et al. (2007)	Journal article	Unknown	200 professionals
Zhang (2004)	Unpublished PhD thesis	552 enterprises	110 enterprises
Zhang and Liu (2006)	Journal article	552 enterprises	110 enterprises
Past risk decisions literature - Construction field			
Abdul-Rahman et al. (2012)	Journal article	Unknown	200 professionals
Ahmad (1990)	Journal article	Unknown	400 contractors
Ahmed and Azhar (2004)	Conference paper	Unknown	300 companies
Baker et al. (1999)	Journal article	Unknown	107 companies
Fang et al. (2004)	Journal article	Unknown	562 contractors
Thuyet et al. (2007)	Journal article	Unknown	70 professionals
Zarkada-Fraser and Fraser (2002)	Journal article	72 firms	72 firms
Zou et al. (2007)	Journal article	Unknown	177 practitioners
Past cultural on risk-related decision making studies - Non-construction fields			
Agarwal (1994)	Journal paper	300 observation	148 observation
Demirbag et al. (2010)	Journal paper	Unknown	1138 firms

APPENDIX E, CONTINUED: SAMPLE SIZES OF PREVIOUS LITERATURE

References	Article type	Population	Samples
Past cultural on risk-related decision making studies - Non-construction fields			
Dimitratos et al. (2011)	Journal paper	Unknown	≈ 2905 firms
Hsee and Weber (1999)	Journal paper	Unknown	209; 131 students
Sitkin and Weingart (1995)	Journal paper	Unknown	38; 63 students

APPENDIX F: QUESTIONNAIRE SURVEY (SET A)

A RESPONDENTS BACKGROUND

1. Please fill in your personal details by ticking ☑ or fill in an appropriate box for each question.

a. Your age (in years):

20-29 ☐
30-39 ☐
40-49 ☐
50-59 ☐
60-69 ☐
70 and above ☐

b. Your designation in the firm:

Director/CEO/Managing director ☐
General manager ☐
Senior manager ☐
_____Others (please specify) ☐

c. The **Highest** education level that you have completed:

Primary education ☐
Secondary education ☐
Certificate/advanced diploma/diploma level ☐
Undergraduate level (Bachelor's degree) ☐
Master's degree level ☐
Doctoral level ☐
_____Others (please specify) ☐

d. Your working experience (in years) on each aspect (in each column):

No experience ☐
1-5 ☐
6-10 ☐
11-15 ☐
16-20 ☐
21-25 ☐
26-30 ☐
31 and above ☐

B ORGANISATIONAL CHARACTERISTICS

2. Please tick ☑ or fill in an appropriate box for each question that best reflect your company.

a. Please rate your firm's performance in international market compared with your major competitors.

	Poor	*Fair*	*Good*	*Very good*	*Excellent*
	1	*2*	*3*	*4*	*5*
• Sales/turnover level	☐	☐	☐	☐	☐
• Market share	☐	☐	☐	☐	☐
• Profitability	☐	☐	☐	☐	☐
• Overall satisfaction – your firm's performance relative to your firm's objectives	☐	☐	☐	☐	☐

b. How frequent the following firm's records are referred in your firm's international bidding decisions?

	Past successful records	Past failure records
Never	☐	☐
Rarely	☐	☐
Occasionally/sometimes	☐	☐
Almost every time	☐	☐
All the time	☐	☐

c. Will your firm interested in bidding on international projects in future?

Yes ☐ No ☐

Thanks ☺ Next page ➲

APPENDIX F, CONTINUED: QUESTIONNAIRE SURVEY (SET A)

C **ORGANISATIONAL CULTURE CHARACTERISTICS**

3. For each statement below, please indicate your degree of agreement that best reflect your organisational environment by ticking ☑ in an appropriate box.

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Stronly agree*
	1	*2*	*3*	*4*	*5*
Our firm emphasises heavily on teamwork and collaboration rather than individual contributions.	☐	☐	☐	☐	☐
In our firm, each team member must be responsible for the performance of other team members.	☐	☐	☐	☐	☐
Our firm emphasises heavily and believes on collective (group) decisions.	☐	☐	☐	☐	☐
Relationship among our staff is like a colleague or family link rather than competitor link.	☐	☐	☐	☐	☐
Information will only be transferred to employees who are related with their scope of works.	☐	☐	☐	☐	☐
All organisational decisions and actions will be taken only after the prior approval from the top management.	☐	☐	☐	☐	☐
Employees do not have any say in decisions about the adoptions of new policies, new programmes and so on.	☐	☐	☐	☐	☐
There are many detailed written rules and policies readily available in our firm.	☐	☐	☐	☐	☐
It is critical to follow strictly the firm's rules and procedures for all the decisions and works.	☐	☐	☐	☐	☐
It is very difficult to challenge or change the company's rules.	☐	☐	☐	☐	☐
Only known, familiar and controllable *<u>*risks*</u> are taken in our firm.	☐	☐	☐	☐	☐
The management is very concerned about the control of uncertainties than market position and relationship.	☐	☐	☐	☐	☐
Our firm is not willing to accept uncertainties or *<u>*risks*</u> with negative outcomes in making major strategic decisions.	☐	☐	☐	☐	☐
Our firm strongly believes that long-term relationship is profitable.	☐	☐	☐	☐	☐
Organisational strategies are planned with a focus on long-term performance and success.	☐	☐	☐	☐	☐
In our firm, long-term goals are prioritised over short-term gains.	☐	☐	☐	☐	☐
Our firm emphasises heavily on commitment towards customer satisfaction and value.	☐	☐	☐	☐	☐
Our firm emphasises heavily on gaining and strengthening customers' trust.	☐	☐	☐	☐	☐
Our management always exploring new and potential customers/markets.	☐	☐	☐	☐	☐
Our management regularly assesses market environment and competitors' strategies.	☐	☐	☐	☐	☐
Management is aggressive and constantly alert to new and potential competitors.	☐	☐	☐	☐	☐
In our firm, resources and information are shared across departments.	☐	☐	☐	☐	☐
Managers from different functional units frequently meet to anticipate a response to the changing environment.	☐	☐	☐	☐	☐
Our firm establishes strong personal networks with:					
• developer firms/clients	☐	☐	☐	☐	☐
• consultants firms (architect, engineering, surveyors and etc.)	☐	☐	☐	☐	☐
• sub-contractor firms	☐	☐	☐	☐	☐
• supplier firms	☐	☐	☐	☐	☐
• competitor firms	☐	☐	☐	☐	☐
• political leaders in various levels in government	☐	☐	☐	☐	☐
• officials in various bureaus *(government departments)*	☐	☐	☐	☐	☐
• officials in regulatory and supporting organisations *(tax bureaus, banks, and etc.)*	☐	☐	☐	☐	☐
Our firms marketing strategy is:					
• formalised and rigid	☐	☐	☐	☐	☐
• systematic and structured	☐	☐	☐	☐	☐
• precise and specific	☐	☐	☐	☐	☐
• detailed	☐	☐	☐	☐	☐
Our firm constantly uses sophisticated hardware technologies to enhance service quality.	☐	☐	☐	☐	☐
Our firm constantly uses sophisticated software technologies to enhance service quality.	☐	☐	☐	☐	☐
Our firm constantly practises on technological innovation in hardware aspect.	☐	☐	☐	☐	☐
Our firm constantly practises on technological innovation in software aspect.	☐	☐	☐	☐	☐

** risks - refer to political, economic and legal risks at foreign countries*

Thanks ☺ Next page ➲

APPENDIX F, CONTINUED: QUESTIONNAIRE SURVEY (SET A)

C **ORGANISATIONAL CULTURE CHARACTERISTICS**

3. For each statement below, please indicate your degree of agreement that best reflect your organisational environment by ticking ☑ in an appropriate box.

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Stronly agree*
	1	*2*	*3*	*4*	*5*
Our firm constantly invests in the latest technological developments in managing risks.	☐	☐	☐	☐	☐
Our firm is very often the first to introduce/use new operating technologies, administrative techniques and so on in the industry.	☐	☐	☐	☐	☐
Our firm always ahead of our competitors in responding to market challenges.	☐	☐	☐	☐	☐
We are aggressive and constantly at identifying opportunities for competitive advantage.	☐	☐	☐	☐	☐
In our firm, uncertainty is treated as a challenge.	☐	☐	☐	☐	☐
In our firm, new venture failure is viewed as a learning experience.	☐	☐	☐	☐	☐
The term 'risk taker' is considered a positive attribute in our firm's strategy.	☐	☐	☐	☐	☐
Our firm actively encourages improvement and innovation in all business aspects.	☐	☐	☐	☐	☐
Our firm always seeks out new ways to do things.	☐	☐	☐	☐	☐
Our firm highly values learning as an investment for the key to improvement.	☐	☐	☐	☐	☐
Our firm highly values learning as an investment for the key to guarantee firm survival.	☐	☐	☐	☐	☐
All employees commit to the organisational goals and visions.	☐	☐	☐	☐	☐
There is a total agreement on our organisational vision across all levels and departments.	☐	☐	☐	☐	☐
We reflect constantly and critically on the shared assumptions (belief) of our way of doing business.	☐	☐	☐	☐	☐
Our firm places a high value on open-mindedness.	☐	☐	☐	☐	☐
We always analyse successful and unsuccessful organisational endeavours and communicate the lessons learned widely.	☐	☐	☐	☐	☐
We have specific mechanisms for sharing lessons learned from department to department and from team to team.	☐	☐	☐	☐	☐
We constantly benchmark our **operating systems* to world class standards.	☐	☐	☐	☐	☐
Work practices in our firm are constantly updated and reviewed.	☐	☐	☐	☐	☐
Our firm invests heavily in developing new **operating systems*.	☐	☐	☐	☐	☐
Our firm has introduced many modifications to the existing **construction services*.	☐	☐	☐	☐	☐
Our firm has introduced more new **construction services* than our competitors.	☐	☐	☐	☐	☐
We constantly introduce new ways of managing our business.	☐	☐	☐	☐	☐
Management constantly seeks new ways to improve and update administrative systems.	☐	☐	☐	☐	☐
Management shows great interest on prospects, future potentials, and future achievements.	☐	☐	☐	☐	☐
All planning and strategising are done enthusiastically in our firm.	☐	☐	☐	☐	☐
Present and past organisational decisions are exploited constantly for future advantages.	☐	☐	☐	☐	☐
Our organisational goals are clearly defined and regularly reviewed.	☐	☐	☐	☐	☐
The followings are the main goals in our firm strategy:					
• profit making	☐	☐	☐	☐	☐
• gaining more new future work	☐	☐	☐	☐	☐
• developing and increasing market share	☐	☐	☐	☐	☐
• gaining more new and different future markets	☐	☐	☐	☐	☐
• expansion of business internationally	☐	☐	☐	☐	☐
• increase firm's competitive advantage	☐	☐	☐	☐	☐
Our firm constantly integrates, constructs and reshapes firm's financial resources.	☐	☐	☐	☐	☐
Our firm constantly modifies construction equipment to suit different operational needs.	☐	☐	☐	☐	☐
Our firm constantly constructs products by using different construction methods and materials.	☐	☐	☐	☐	☐
Our firm constantly changes the number of employees in each business operation.	☐	☐	☐	☐	☐
Our firm constantly trains employees to handle multiple responsibilities.	☐	☐	☐	☐	☐
Our firm always adopts a range of alternative logistics supports to operations.	☐	☐	☐	☐	☐
Our firm operates **effectively* in both local and overseas markets.	☐	☐	☐	☐	☐
Our firm operates **effectively* and profitably in different market conditions.	☐	☐	☐	☐	☐
Our firm provides a range of different **construction services*.	☐	☐	☐	☐	☐
Our firm has a formal ethics policy, either in a distinct code of ethics or in regular policy manuals to assist in decision making.	☐	☐	☐	☐	☐
Our firm provides ethics training and education to all staff from different levels periodically.	☐	☐	☐	☐	☐

** construction services – the types of business activities provide to the clients such as infrastructure works, building works and etc.*
** operating system – construction operations such as management, construction, installation and other procedures to construct a building*
** effectively – achieve client's desired results and company's goals*

Thanks ☺ Next page ➲

APPENDIX F, CONTINUED: QUESTIONNAIRE SURVEY (SET A)

C ORGANISATIONAL CULTURE CHARACTERISTICS

3. For each statement below, please indicate your degree of agreement that best reflect your organisational environment by ticking ☑ in an appropriate box.

\

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Stronly agree*
	1	*2*	*3*	*4*	*5*
Top managers frequently discuss and highlight the following issues:					
• value integrity as much as profits	☐	☐	☐	☐	☐
• treating people fairly	☐	☐	☐	☐	☐
• seeking the good of society (to act responsibly towards environment, consumers, employees, society and public in doing business)	☐	☐	☐	☐	☐
• doing the right things (acting according to accepted rules, laws and moral)	☐	☐	☐	☐	☐
Our firm places a highest value on:					
• business ethics than financial gains	☐	☐	☐	☐	☐
• professionalism and expertise	☐	☐	☐	☐	☐
• getting the job done	☐	☐	☐	☐	☐
• outcome excellence	☐	☐	☐	☐	☐
• responsibility and accountability	☐	☐	☐	☐	☐
• communication and transparency	☐	☐	☐	☐	☐
• respect for people (in the business communities including staff)	☐	☐	☐	☐	☐
• trust in people (in the business communities including staff)	☐	☐	☐	☐	☐
• analysis and control	☐	☐	☐	☐	☐
• Conformity (acting according to accepted standard rules, regulations and laws)	☐	☐	☐	☐	☐
• stability and continuity	☐	☐	☐	☐	☐
Part of the *<u>*employee*</u>'s rewards is linked with the achievement of organisational performance goals.	☐	☐	☐	☐	☐
An *<u>*employee*</u> who is working hard for organisational performance has a great opportunity for career advancement.	☐	☐	☐	☐	☐
Part of *<u>*employee*</u>'s payment in our firm is variable (keep changing and not fix).	☐	☐	☐	☐	☐

** Employee - refer to the people from the senior management, executive management and management team*

D INTERNATIONAL BIDDING DECISION PREFERENCES

4. For each of the following risks, please indicate your firm's **<u>maximum risk acceptable level</u>** on two (2) aspects *("impact of a risk on cost" and "chances of a risk will happen")* in international bidding decisions. Please answer the questions based on your company's point of views.

For an example:
Our firm is willing to absorb/accept the risk of political instability at "Low" level on cost impact and "Medium" level on chances of happening.

	Very low (<10%)	*Low (10-25%)*	*Medium (>25-50%)*	*High (>50-75%)*	*Very high (>75%)*
	1	*2*	*3*	*4*	*5*
a. Political instability (revolution, government collapse or composition changes, election)					
• Impact of a risk on cost	☐	☐	☐	☐	☐
• Chances of a risk will happen	☐	☐	☐	☐	☐
b. Inconsistency in government policies and regulations (tariff and tax laws, and etc.)					
• Impact of a risk on cost	☐	☐	☐	☐	☐
• Chances of a risk will happen	☐	☐	☐	☐	☐
c. Absence of sound, effective and fair legal system (arbitration, and etc.)					
• Impact of a risk on cost	☐	☐	☐	☐	☐
• Chances of a risk will happen	☐	☐	☐	☐	☐
d. Local protectionism (foreign ownership limitation, unfair risk allocation, and etc.)					
• Impact of a risk on cost	☐	☐	☐	☐	☐
• Chances of a risk will happen	☐	☐	☐	☐	☐
e. Expropriation/confiscation (act of taking a property by government for public benefits)					
• Impact of a risk on cost	☐	☐	☐	☐	☐
• Chances of a risk will happen	☐	☐	☐	☐	☐

Thanks ☺ Next page ➲

D INTERNATIONAL BIDDING DECISION PREFERENCES

4. For each of the following risks, please indicate your firm's **maximum risk acceptable level** on two (2) aspects *("impact of a risk on cost" and "chances of a risk will happen")* in international bidding decisions. Please answer the questions based on your company's point of views.

For an example:
Our firm is willing to absorb/accept the risk of political instability at "Low" level on cost impact and "Medium" level on chances of happening.

	Very low (<10%)	*Low (10-25%)*	*Medium (>25-50%)*	*High (>50-75%)*	*Very high (>75%)*
	1	*2*	*3*	*4*	*5*
f. Repudiation (the rejection of right, privilege such as on sovereign debt)					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
g. Bribe and corruption					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
h. Bureaucratic (delays in approvals/permits, and etc.)					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
i. Currency crisis (fixed or floating foreign exchange rate and etc.)					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
j. Inflation crisis					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
k. Interest rate crisis					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
l. Uncertain policy towards economic liberalisation					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
m. Unfavourable repatriation of profits					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
n. Foreign country's debt crisis					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
o. Shortage in resources supply (materials, equipments and manpower)					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
p. Fluctuation in price (materials, equipment, and etc.)					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
q. Custom restrictions on import and export (materials, equipments and labours)					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
r. Insurance-related issues (indemnity difficulty, limited types of insurance, and etc.)					
• Impact of a risk on cost • Chances of a risk will happen	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐

Would you be interested in participating in further interview? If YES, please provide details to enable us to contact you:

Name:
Contact number:

OR ATTACH YOUR BUSINESS CARD

☺☺ **THANK YOU FOR YOUR TIME AND VALUABLE CONTRIBUTION** ☺☺

At the end of the research, we will send a small token of appreciation for your generous contribution.

APPENDIX G: QUESTIONNAIRE SURVEY (SET B)

ORGANISATIONAL CHARACTERISTICS

1. Please tick ☑ whichever applies or fill in the blank for each of the following questions that best reflect your company.

a. Your firm's type:

Public ☐
Private ☐
Semi public and private ☐

b. Your firm age:

_____ (in years)

c. Total numbers of permanent staff:

_____ (in numbers)

d. Total assets of your firm in last five (5) years: (in US$ million)

2008	*2009*	*2010*	*2011*	*2012*

e. Total turnover of your firm in last five (5) years: (in US$ million)

2008	*2009*	*2010*	*2011*	*2012*

f. Your firm's international construction experience:

_____ (in years)

g. Please state the year that your firm starts to get involved in oversea project(s).

_____ (in years)

h. Please state the name of the foreign countries that your firm has involved and is involving:

i. Please state the number of past oversea projects that have been completed by your company.

_____ (in numbers)

j. Please state the number of oversea projects that are currently undertaking by your company.

_____ (in numbers)

k. Please state the maximum amount of oversea project value that your firm has involved.

_____ (US$million)

l. Our firm's international project portfolio: (You may tick ☑ more than one (1) option)

Residential buildings ☐
Commercial buildings ☐
Education institution ☐
Sport facilities ☐
Manufacturing facilities ☐
Public building and amenities (hospital, airport, museum, court, religious building and etc.) ☐
Power plants ☐
Water supply ☐
Sewerage/solid waste ☐
Industrial process/petroleum plants ☐
Transportation facilities ☐
Hazardous waste ☐
Others (please specify) ☐

APPENDIX G, CONTINUED: QUESTIONNAIRE SURVEY (SET B)

ORGANISATIONAL CHARACTERISTICS

1. Please tick ☑ whichever applies or fill in the blank for each of the following questions that best reflect your company.

m. Listing status of your firm.

Domestic listing only *(Please go to Question p and skip Question q)* ☐
Oversea listing only *(Please skip Question p and go to Question q)* ☐
Domestic and oversea listings *(Please answer Questions p and q)* ☐
Delisted ☐
Not applicable ☐

n. Please indicate your firm's domestic listing age (The length of time your firm has been listed): in years).

_____(in years)

o. Please indicate your firm's overseas listing age (The length of time your firm has been listed): in years).

_____ (in years)

APPENDIX H: AN EXAMPLE OF COVER

UNIVERSITY OF MALAYA
KUALA LUMPUR
Producing Leaders Since 1905

10th February 2013

TO WHOM IT MAY CONCERN:

A Study on "The Impact of Organisational Culture on International Bidding Decisions"

Reference the above matter.

2. High level risks in international construction pose serious threats in decision making especially during the bidding stage. Cultural factors are critical on decision making as culture within an organisation will affect a firm's behavioural response to environmental stimuli. This survey aims to investigate the influence of organisational culture on international bidding decisions. The research objectives are:

- to identify the culture of your company, and
- to identify your company's risk acceptance level of political, economical and legal risks on international bidding decisions.

3. This questionnaire is to be **completed** by **management personnel** who are involved in organisational decisions from their company's point of view. The questionnaire takes about **20-30 minutes** to complete. Please inform us if you require additional time to complete the questionnaire or if you need any further information.

4. We hope the outcome of the survey can assist local companies towards internationalisation. As a remuneration of your generous contribution, a small token of our appreciation will be sent to you by post. Please attach your business card and details for our sending purpose. It is our pleasure to provide you a copy of survey results upon request.

Your generous and kind respond towards this survey is highly appreciated.

Yours faithfully,

MS. LOW WAI WAH
Project researcher, postgraduate student
Faculty of Built Environment
University of Malaya
Contact No.: 012-6194418
Email: amethystlww@yahoo.com

PROF. DR. HAMZAH ABDUL RAHMAN
Supervisor
President/CEO
International University of Malaya-Wales
Contact No.: 03-26173198
Email: arhamzah@um.edu.my

**** All information obtained from this survey will be treated with the strictest confidentiality, and the name of respondents and organisation will be treated anonymous. ****

Kindly return the completed questionnaire in the enclosed self-addressed, stamped envelope before _____.

APPENDIX I: REFERENCES AND RELIABILITY OF THE ADOPTED CULTURAL ITEMS IN THE PAST STUDIES

Cultural variables	Code nos.	Items of the variables	References	Reliability (Cronbach Alpha, composite reliability and etc.)
Teamwork orientation (Collectivism) (C)	C1	Our firm emphasises heavily on teamwork and collaboration rather than individual contributions.	Hofstede (2001, p. 244) Liu (1999)	Refer to the note below. 0.7742
	C2	In our firm, each team member must be responsible for the performance of other team members.	Hofstede (2001, p. 244)	Refer to the note below.
	C3	Our firm emphasises heavily and believes on collective (group) decisions.	Hofstede (2001, p. 244)	Refer to the note below.
	C4	Relationship among our staff is like a colleague or family link rather than competitor link.	Liu (1999)	0.7742
Power and rules orientation (P)	P1	Information will only be transferred to employees who are related with their scope of works.	Hofstede (2001, pp. 107-108)	Refer to the note below.
	P2	All organisational decision and actions will be taken only after the prior approval from the top management.	Liu (1999)	0.7784
	P3	Employees do not have any say in decisions about the adoptions of new policies, new programmes and so on.	Liu (1999)	0.8187
	P4	There are many detailed written rules and policies readily available in our firm.	Liu (1999)	0.7643
	P5	It is critical to follow strictly the firm's rules and procedures for all the decisions and works.	Liu (1999)	0.7643
	P6	It is very difficult to challenge or change the company's rules.	Author	-
Uncertainty avoidance (U)	U1	Only known, familiar and controllable **risks* are taken in our firm.	Hofstede (2001, p. 161)	Refer to the note below.
	U2	The management is very concerned about the control of uncertainties than market position and relationship.	Hofstede (2001, pp. 169-170)	Refer to the note below.
	U3	Our firm is not willing to accept uncertainties or **risks* with negative outcomes in making major strategic decisions.	Johnson et al. (2012)	0.90
		** refer to political, economic and legal risks at foreign countries.*		

APPENDIX I, CONTINUED: REFERENCES AND RELIABILITY OF THE ADOPTED CULTURAL ITEMS IN THE PAST STUDIES

Cultural variables	Code nos.	Items of the variables	References	Reliability (Cronbach Alpha, composite reliability and etc.)
Long term orientation (L)	L1	Our firm strongly believes that long-term relationship is profitable.	Cannon et al. (2010); Ganesan (1994)	*0.88-093; 0.82 & 0.94
	L2	Organisational strategies are planned with a focus on long-term performance and success.	Johnson et al. (2012)	0.90
	L3	In our firm, long-term goals are prioritised over short-term gains.	Johnson et al. (2012)	0.90
Market orientation (M)	M1	*Customers orientation:*		
	M1a	Our firm emphasises heavily on commitment towards customer satisfaction and value.	Narver and Slater (1990); Gonzalez-Benito and Gonzalez-Benito (2005) Nasution et al. (2011)	0.8547 & 0.8675; 0.8709 0.95; **0.90
	M1b	Our firm emphasises heavily on gaining and strengthening customers' trust.	Gonzalez-Benito and Gonzalez-Benito (2005)	0.7239
	M1c	Our management always exploring new and potential customers/markets.	Nasution et al. (2011)	0.95; **0.90
	M2	*Competitors orientation:*		
	M2a	Our management regularly assesses market environment and competitors' strategies.	Narver and Slater (1990); Chung (2011); Gonzalez-Benito and Gonzalez-Benito (2005); Nasution et al. (2011)	0.7164 & 0.7271; 0.874; 0.8709; 0.95; **0.90
	M2b	Management is aggressive and constantly alert to new and potential competitors.	Author	-
	M3	*Interfunctional coordination:*		
	M3a	In our firm, resources and information are shared across departments.	Narver and Slater (1990); Chung (2011)	0.7112 & 0.7348; 0.898
	M3b	Managers from different functional units frequently meet to anticipate a response to the changing environment.	Gonzalez-Benito and Gonzalez-Benito (2005)	0.8709

APPENDIX I, CONTINUED: REFERENCES AND RELIABILITY OF THE ADOPTED CULTURAL ITEMS IN THE PAST STUDIES

Cultural variables	Code nos.	Items of the variables	References	Reliability (Cronbach Alpha, composite reliability and etc.)
Guanxi (Gx)		Our firm establishes strong personal networks with:		
	Gx1	*Business:*		-
	Gx1a	• developer firms/clients	Author	
	Gx1b	• consultants firms (architect, engineering, surveyors and etc.)	Author	-
	Gx1c	• sub-contractor firms	Author	-
	Gx1d	• supplier firms	Chung (2011)	0.783
	Gx1e	• competitor firms	Chung (2011)	0.783
	Gx2	*Political:*		
	Gx2a	• political leaders in various levels in government	Chung (2011)	0.859
	Gx2b	• officials in various bureaus *(government departments)*	Chung (2011)	0.859
	Gx2c	• officials in regulatory and supporting organisations *(tax bureaus, banks, and etc.)*	Chung (2011)	0.859
Entrepreneuship (E)		*Proactiveness:*		
	E1	Our firm is very often the first to introduce/use new operating technologies, administrative techniques and so on in the industry.	Engelen (2010); Nasution et al. (2011)	0.85; 0.89
	E2	Our firm always ahead of our competitors in responding to market challenges.	Hughes and Morgan (2007); Nasution et al. (2011)	0.75; 0.89
	E3	We are aggressive and constantly at identifying opportunities for competitive advantage.	Hughes and Morgan (2007); Nasution et al. (2011)	0.75; 0.89
		Risk taking:		
	E4	In our firm, uncertainty is treated as a challenge.	Nasution et al. (2011)	0.89
	E5	In our firm, new venture failure is viewed as a learning experience.	Nasution et al. (2011)	0.89
	E6	The term 'risk taker' is considered a positive attribute in our firm's strategy.	Hughes and Morgan (2007)	0.77
		Innovativeness:		
	E7	Our firm actively encourages improvement and innovation in all business aspects.	Hughes and Morgan (2007)	0.81
	E8	Our firm always seeks out new ways to do things.	Hughes and Morgan (2007)	0.81

APPENDIX I, CONTINUED: REFERENCES AND RELIABILITY OF THE ADOPTED CULTURAL ITEMS IN THE PAST STUDIES

Cultural variables	Code nos.	Items of the variables	References	Reliability (Cronbach Alpha, composite reliability and etc.)
Learning orientation (Le)		*Commitment to learning:*		
	Le1	Our firm highly values learning as an investment for the key to improvement.	Calantone (2002); Nasution et al. (2011)	0.80; 0.93
	Le2	Our firm highly values learning as an investment for the key to guarantee firm survival.	Calantone (2002); Nasution et al. (2011)	0.80; 0.93
		Shared vision:		
	Le3	All employees commit to the organisational goals and visions.	Calantone (2002); Nasution et al. (2011)	0.79; 0.93
	Le4	There is a total agreement on our organisational vision across all levels and departments.	Calantone (2002); Nasution et al. (2011)	0.79; 0.93
		Open mindedness:		
	Le5	We reflect constantly and critically on the shared assumptions of our way of doing business.	Calantone (2002); Nasution et al. (2011)	0.72; 0.93
	Le6	Our firm places a high value on open-mindedness.	Nasution et al. (2011)	0.93
		Intraorganisational knowledge sharing:		
	Le7	We always analyse successful and unsuccessful organisational endeavours and communicate the lessons learned widely.	Calantone (2002)	0.75
	Le8	We have specific mechanisms for sharing lessons learned from department to department and from team to team.	Calantone (2002)	0.75
Innovation n orientatio (I)		*Process innovation:*		
	I1	We constantly benchmark our operating systems to world class standards.	Nasution et al. (2011)	0.95
	I2	Work practices in our firm are constantly updated and reviewed.	Nasution et al. (2011)	0.95
	I3	Our firm invests heavily in developing new operating systems.	Nasution et al. (2011)	0.95
		Product innovation:		
	I4	Our firm has introduced many modifications to the existing construction services.	Nasution et al. (2011)	0.95
	I5	Our firm has introduced more new construction services than our competitors.	Nasution et al. (2011)	0.95

APPENDIX I, CONTINUED: REFERENCES AND RELIABILITY OF THE ADOPTED CULTURAL ITEMS IN THE PAST STUDIES

Cultural variables	Code nos.	Items of the variables	References	Reliability (Cronbach Alpha, composite reliability and etc.)
Innovation orientation (I) (continued)		*Administrative innovation:*		
	I6	We constantly introduce new ways of managing our business.	Nasution et al. (2011)	0.95
	I7	Management constantly seeks new ways to improve and update administrative systems.	Nasution et al. (2011)	0.95
Technologies orientation (Ty)	Ty1	Our firm constantly uses sophisticated hardware technologies to enhance service quality.	Nasution et al. (2011); Zhou and Li (2010)	0.95; *0.73
	Ty2	Our firm constantly uses sophisticated software technologies to enhance service quality.	Nasution et al. (2011); Zhou and Li (2010)	0.95; *0.73
	Ty3	Our firm constantly practices on technological innovation in hardware aspect.	Zhou and Li (2010)	*0.73
	Ty4	Our firm constantly practices on technological innovation in software aspect.	Zhou and Li (2010)	*0.73
	Ty5	Our firm constantly invests in the latest technological developments in managing risks.	Author	Nil
Marketing formalisation (Mf)		Our firms marketing strategy is:	Johnson et al. (2012)	0.93
	Mf1	• formalised and rigid		
	Mf2	• systematic and structured		
	Mf3	• precise and specific		
	Mf4	• detailed		
Future orientation (F)	F1	Management shows great interest on prospects, future potentials, aspirations and future achievements.	Trompenaars (1993, pp. 122-123)	Refer to the note below.
	F2	All planning and strategising are done enthusiastically in our firm.	Trompenaars (1993, pp. 122-123)	Refer to the note below.
	F3	Present and past organisational decisions are exploited constantly for future advantages.	Trompenaars (1993, pp. 122-123)	Refer to the note below.
	F4	Our organisational goals are clearly defined and regularly reviewed.	Liu (1999)	0.7328

APPENDIX I, CONTINUED: REFERENCES AND RELIABILITY OF THE ADOPTED CULTURAL ITEMS IN THE PAST STUDIES

Cultural variables	Code nos.	Items of the variables	References	Reliability (Cronbach Alpha, composite reliability and etc.)
Goal orientation (G)		The followings are the main goals in our firm strategy:		
	G1	*Common:*		
	G1a	• profit making	Han and Diekmann (2001a, 2001b)	-
	G1b	• gaining more new future work	Han and Diekmann (2001a, 2001b)	-
	G1c	• developing and increasing market share	Han and Diekmann (2001a, 2001b)	-
	G2	*International:*		
	G2a	• gaining more new and different future markets	Han and Diekmann (2001a, 2001b)	-
	G2b	• expansion of business internationally	Author	-
	G2c	• increase firm's competitive advantage	Author	-
Flexibility orientation (Fx)		*Operational flexibility:*		
	Fx1	Our firm constantly integrates, constructs and reshapes firm's financial resources.	Lim et al. (2011)	0.825
	Fx2	Our firm constantly modifies construction equipment to suit different operational needs.	Lim et al. (2011)	0.825
	Fx3	Our firm constantly constructs products by using different construction methods and materials.	Lim et al. (2011)	0.825
		Tactical flexibility:		
	Fx4	Our firm constantly changes the number of employees in each business operation.	Lim et al. (2011)	0.783
	Fx5	Our firm constantly trains employees to handle multiple responsibilities.	Lim et al. (2011)	0.783
	Fx6	Our firm always adopts a range of alternative logistics supports to operations.	Lim et al. (2011)	0.783
		Strategic flexibility:		
	Fx7	Our firm operates effectively in both local and overseas markets.	Lim et al. (2011)	0.703
	Fx8	Our firm operates effectively and profitably in different market conditions.	Lim et al. (2011)	0.703
	Fx9	Our firm provides a range of different construction services.	Lim et al. (2011)	0.703
Ethical orientation (Et)	Et1	*Formal ethical structure:*		
	Et1a	Our firm has a formal ethics policy, either in a distinct code of ethics or in regular policy manuals to assist in decision making.	Bucar et al. (2003); Robertson et al. (2003); Watson and Weaver (2003)	-; 0.87; -

APPENDIX I, CONTINUED: REFERENCES AND RELIABILITY OF THE ADOPTED CULTURAL ITEMS IN THE PAST STUDIES

Cultural variables	Code nos.	Items of the variables	References	Reliability (Cronbach Alpha, composite reliability and etc.)
Ethical orientation (Et)	Et1	*Formal ethical structure:*		
	Et1b	Our firm provides ethics training and education to all staff from different levels periodically.	Watson and Weaver (2003); Robertson et al. (2003)	- 0.87
	Et2	*Informal ethical structure:*		
		Top managers frequently discuss and highlight the following issues:		
	Et2a	• value integrity as much as profits	Watson and Weaver (2003)	0.78
	Et2b	• treating people fairly	Watson and Weaver (2003)	0.78
	Et2c	• seeking the good of society	Watson and Weaver (2003)	0.78
	Et2d	• doing the right things	Watson and Weaver (2003)	0.78
Value Orientation (V)		Our firm places a highest value on:		
	V1	*Strategic:*		
	V1a	• business ethics than financial gains	Robertson et al. (2003)	0.77
	V1b	• getting the job done	Fong and Kwok (2009)	-
	V1c	• outcome excellence	Fong and Kwok (2009)	-
	V1d	• responsibility and accountability	Fournier (as cited by Legault & Chasserio, 2012, p. 703); Bowen et al. (2007)	-
	V1e	• communication and transparency	Fong and Kwok (2009); Fournier (as cited by Legault & Chasserio, 2012, p. 703)	-
	V1f	• analysis and control	Fong and Kwok (2009)	-
	V1g	• conformity	Mills, Austin, Thomson and Devine-Wright (2009)	-
	V1h	• stability and continuity	Fong and Kwok (2009)	-
	V2	*Relationship:*		
	V2a	• professionalism and expertise	Bowen et al. (2007)	-
	V2b	• respect for people	Fong and Kwok (2009)	-
	V2c	• trust	Fong and Kwok (2009)	-

APPENDIX I, CONTINUED: REFERENCES AND RELIABILITY OF THE ADOPTED CULTURAL ITEMS IN THE PAST STUDIES

Cultural variables	Code nos.	Items of the variables	References	Reliability (Cronbach Alpha, composite reliability and etc.)
Reward orientation (Rw)	Rw1	Part of the **employee*'s rewards is linked with the achievement of organisational performance goals.	Balkin and Gomez-Mejia (1990); Wei and Atuahene-Gima (2009)	0.92; 0.64
	Rw2	An **employee* who is working hard for organisational performance has a great opportunity for career advancement.	Wei and Atuahene-Gima (2009)	0.64
	Rw3	Part of **employee*'s payment in our firm is variable (not constant).	Balkin and Gomez-Mejia (1990)	0.92
		**Employee = refer to the people from the senior management, executive management and management team*		

Notes:

- *Hofstede is a prominent researcher specifically in the field of national and organisational culture that influence behaviour of the societies and organisations. His works have been referred by many researchers like Akiner and Tijhuis (2007), Fisher and Ranasinghe (2001), Low and Shi (2001, 2002), Mohamed, Ali and Tam (2009) and so on.*
- *Trompenaars is a prominent researcher and consultant specifically in the field of cross-cultural communication. His cultural dimensions are referred by some cultural researchers like Tran and Skitmore (2002).*
- ** = Composite reliability; ** = Internal consistency; none asterisk values = Cronbach alpha*

APPENDIX J: EXOGENOUS RISK FACTORS OF THE STUDY

Code nos.	Types of risk factors	References
	Political and legal risks	
PR1	Political instability (revolution, government collapse, government composition changes, election, change in political leadership etc.)	Ahmed et al. (1999); Andi (2006); Hastak and Shaked (2000); Jaselskis and Talukhaba (1998); Jha and Devaya (2008); Ling and Hoi (2006); Loo (2011); Panthi et al. (2007); Wang and Chou (2003); Wang et al. (2004); Zarkada-Fraser and Fraser (2002); Zhi (1995)
PR2	Inconsistency/changes/ unfavourable in government policies and regulations related to construction (labour laws, tax laws, permit laws, subsidy, foreign ownership laws, environmental laws, established international standards and etc.)	Ahmed et al. (1999); Andi (2006); El-Sayegh (2008); Fang, Li et al. (2004); Han and Diekmann (2001a, 2001b); Hastak and Shaked (2000); Jaselskis and Talukhaba (1998); Jha and Devaya (2008); Kangari (1995); Kapila and Hendrickson (2001); Kartam and Kartam (2001); Li and Tiong (1999); Li et al. (1999); Ling and Hoi (2006); Loo (2011); Panthi et al. (2007); Thuyet et al. (2007); Wang and Chou (2003); Wang et al. (2004); Zarkada-Fraser and Fraser (2002); Zhi (1995)
PR3	Absence of sound, effective and fair legal system (arbitration and etc.)	Ahmed et al. (1999); Andi (2006); Fang, Li et al. (2004); Wang et al. (2004)
PR4	Local protectionism (foreign ownership limitation, unfair risk allocation, etc.)	Fang, Li et al. (2004); Zarkada-Fraser and Fraser (2002)
PR5	Expropriation/confiscation (seizure of an investment and etc.)	Han and Diekmann (2001a, 2001b); Hastak and Shaked (2000); Loo (2011); Wang et al. (2004)
PR6	Repudiation	Han and Diekmann (2001a, 2001b); Loo (2011)
PR7	Bribe and corruption (unfairness/ collusion during bidding stage and etc.)	El-Sayegh (2008); Fang, Li et al. (2004); Hastak and Shaked (2000); Jaselskis and Talukhaba (1998); Loo (2011); Thuyet et al. (2007); Wang et al. (2004); Zhi (1995)
PR8	Bureaucratic (delays in approvals or permits, low efficiency and etc.)	Ahmed et al. (1999); Andi (2006); El-Sayegh (2008); Fang, Li et al. (2004); Hastak and Shaked (2000); Jha and Devaya (2008); Kangari (1995); Kartam and Kartam (2001); Loo (2011); Panthi et al. (2007); Thuyet et al. (2007); Wang et al. (2004); Zarkada-Fraser and Fraser (2002); Zou et al. (2007)
	Economic risk	
ER1	Currency crisis (such as restricted foreign currency exchange rate)	El-Sayegh (2008); Han and Diekmann (2001a, 2001b); Hastak and Shaked (2000); Jha and Devaya (2008); Kapila and Hendrickson (2001); Khattab et al. (2007); Li and Tiong (1999); Li et al. (1999); Ling and Hoi (2006); Ling and Lim (2007); Loo (2011); Panthi et al. (2007); Thuyet et al. (2007); Wang et al. (2004); Zhi (1995)
ER2	Inflation crisis (such as rising inflation)	Ahmed et al. (1999); Andi (2006); El-Sayegh (2008); Fang, Li et al. (2004); Han and Diekmann (2001a, 2001b); Hastak and Shaked (2000); Kangari (1995); Kapila and Hendrickson (2001); Kartam and Kartam (2001); Li and Tiong (1999); Li et al. (1999); Ling and Lim (2007); Loo (2011); Panthi et al. (2007); Thuyet et al. (2007); Wang and Chou (2003); Wang et al. (2004); Zhi (1995); Zou et al. (2007)

APPENDIX J, CONTINUED: EXOGENOUS RISK FACTORS OF THE STUDY

Code nos.	Types of risk factors	References
	Economic risk	
ER3	Interest rate crisis (such as rising rate for the tariff, taxation and etc.)	Han and Diekmann (2001a, 2001b); Kapila and Hendrickson (2001); Loo (2011); Thuyet et al. (2007); Wang et al. (2004); Zhi (1995)
ER4	Uncertain policy towards economic liberalisation	Ling and Hoi (2006)
ER5	Unfavourable repatriation of profits	Hastak and Shaked (2000); Kapila and Hendrickson (2001); Li and Tiong (1999); Li et al. (1999); Ling and Hoi (2006); Ling and Lim (2007); Loo (2011); Zarkada-Fraser and Fraser (2002)
ER6	Foreign country's debt crisis	Hastak and Shaked (2000);
ER7	Shortage in resources supply (materials, equipments and manpower)	Ahmed et al. (1999); Andi (2006); El-Sayegh (2008); Han and Diekmann (2001a); Jaselskis and Talukhaba (1998); Kangari (1995); Kartam and Kartam (2001); Ling and Hoi (2006); Wang et al. (2004); Zou et al. (2007)
ER8	Sudden changes/fluctuation in prices (materials, equipment, manpower and etc.)	Fang, Li et al. (2004); Han and Diekmann (2001b); Jaselskis and Talukhaba (1998); Ling and Lim (2007); Loo (2011); Thuyet et al. (2007); Zou et al. (2007)
ER9	Custom restrictions on import and export (materials, equipments and labours)	Fang, Li et al. (2004); Jaselskis and Talukhaba (1998); Kapila and Hendrickson (2001); Li and Tiong (1999); Li et al. (1999); Ling and Lim (2007); Loo (2011); Wang et al. (2004)
ER10	Insurance-related issues (indemnity difficulty, limited variety of construction insurance policies and etc.)	El-Sayegh (2008)

APPENDIX K: CASE STUDIES' QUESTIONS

A RESPONDENTS BACKGROUND

1. Please fill in your personal details by ticking ☑ or fill in an appropriate box for each question.

a. Your age (in years):

20-29 ☐
30-39 ☐
40-49 ☐
50-59 ☐
60-69 ☐
70 and above ☐

b. Your designation in the firm:

Director/CEO/Managing director ☐
General manager ☐
Senior manager ☐
_____Others (please specify) ☐

c. The **Highest** education level that you have completed:

Primary education ☐
Secondary education ☐
Certificate/advanced diploma/diploma level ☐
Undergraduate level (Bachelor's degree) ☐
Master's degree level ☐
Doctoral level ☐
_____Others (please specify) ☐

d. Your working experience in construction markets (local and overseas projects) (in years).

No experience ☐
1-5 ☐
6-10 ☐
11-15 ☐
16-20 ☐
21-25 ☐
26-30 ☐
31 and above ☐

B ORGANISATIONAL CHARACTERISTICS

2. Please tick ☑ whichever applies or fill in the blank for each of the following questions that best reflect your company.

a. Your firm's type:

Public ☐
Private ☐
Semi public and private ☐

b. Your firm age:

_____ (in years)

c. Total numbers of permanent staff:

_____ (in numbers)

d. Total assets of your firm in last five (5) years: (in US$ million)

2008	*2009*	*2010*	*2011*	*2012*

e. Total turnover of your firm in last five (5) years: (in US$ million)

2008	*2009*	*2010*	*2011*	*2012*

APPENDIX K, CONTINUED: CASE STUDIES' QUESTIONS

B **ORGANISATIONAL CHARACTERISTICS**

2. Please tick ☑ whichever applies or fill in the blank for each of the following questions that best reflect your company.

f. Your firm's international construction experience:

_____ (in years)

g. Please state the year that your firm starts to get involved in oversea project(s).

_____ (in years)

h. Please state the name of the foreign countries that your firm has involved and is involving:

i. Please state the number of past oversea projects that have been completed by your company.

_____ (in numbers)

j. Please state the number of oversea projects that are currently undertaking by your company.

_____ (in numbers)

k. Our firm's international project portfolio: (You may tick ☑ more than one (1) option)

- ☐ Residential buildings
- ☐ Commercial buildings
- ☐ Education institution
- ☐ Sport facilities
- ☐ Manufacturing facilities
- ☐ Public building and amenities (hospital, airport, museum, court, religious building and etc.)
- ☐ Power plants
- ☐ Water supply
- ☐ Sewerage/solid waste
- ☐ Industrial process/petroleum plants
- ☐ Transportation facilities
- ☐ Hazardous waste
- ☐ Others (please specify)

l. Listing status of your firm.

- ☐ Domestic listing only
- ☐ Oversea listing only
- ☐ Domestic and oversea listings
- ☐ Delisted
- ☐ Not applicable

C **ORGANISATIONAL CULTURE AND INTERNATIONAL RISK DECISIONS**

3. Please provides your comments on the following questions from your company's perspective.

a. Which cultural orientations do the founder/leaders of your firm heavily emphasise on in overseas venture/international bidding?
b. How does each of these cultural orientations affect your company's overseas venture/ international bidding decisions?

- Teamwork orientation (collectivism)
- Power and rules orientation
- Uncertainty avoidance
- Long- and short-term orientation
- Market orientation
- Learning orientation
- Technology orientation
- Future orientation
- Flexibility orientation
- Goal orientation
- Guanxi/relationship orientation
- Innovation orientation
- Entrepreneurial orientation
- Marketing formalisation orientation
- Ethical orientation (Formal and informal orientation)
- Reward orientation
- Value orientation

APPENDIX L: INTERVIEWS' QUESTIONS

A RESPONDENTS BACKGROUND

1. Please fill in your personal details by ticking ☑ or fill in an appropriate box for each question.

a. Your age (in years):

20-29 ☐
30-39 ☐
40-49 ☐
50-59 ☐
60-69 ☐
70 and above ☐

b. Your designation in the firm:

Director/CEO/Managing director ☐
General manager ☐
Senior manager ☐
_____Others (please specify) ☐

c. The **Highest** education level that you have completed:

Primary education ☐
Secondary education ☐
Certificate/advanced diploma/diploma level ☐
Undergraduate level (Bachelor's degree) ☐
Master's degree level ☐
Doctoral level ☐
_____Others (please specify) ☐

d. Your working experience (in years) on each aspect (in each column):

No experience ☐
1-5 ☐
6-10 ☐
11-15 ☐
16-20 ☐
21-25 ☐
26-30 ☐
31 and above ☐

B ORGANISATIONAL CULTURE AND INTERNATIONAL RISK DECISIONS

2. Please provides your comments on the following questions based on your experience.

   a. Do these cultural orientations affect international bidding decisions in response to the political and economic risks?
   b. How do these cultural orientations affect international bidding decisions in response to the political and economic risks?

- Teamwork orientation (collectivism)
- Power and rules orientation
- Uncertainty avoidance
- Long- and short-term orientation
- Market orientation
- Learning orientation
- Technology orientation
- Future orientation
- Flexibility orientation
- Goals orientation
- Guanxi/relationship orientation
- Innovation orientation
- Entrepreneurial orientation
- Marketing formalisation orientation
- Ethical orientation (Formal and informal orientation)
- Reward orientation
- Value orientation

APPENDIX M: VALIDATION SURVEY

"We are looking for a few construction industry experts (those holding managerial position in contractor companies, preferable 20 years and more working experience in local & overseas projects or 10 years and more working experience in overseas projects) to validate our research findings. In appreciation of your experience and knowledge, we would like to invite you to participate in this validation survey. All information will be treated with strictest **confidentiality** and **anonymous**. The deadline of the survey is till **31st Deccember 2013** but subject to extend. Please let us know if you need additional time to complete the survey. Your generous time and respond will make a great different in my survey. Attached is the cover letter of my main survey for your reference. Please attach your business card so that we can send you a small gift for your generous participation."

PLEASE PROVIDE YOUR ANSWERS IN THE SPACE (BRACKET/COLUMN C) PROVIDED AND VALIDATE THE FINDINGS BASED ON YOUR VIEWPOINT OF MALAYSIA.

a. Your designation in the firm ( ) with the profession in ( ).
Your working experience:
1. in both local and international projects. (years)

b. How much do you agree with each of the following statement (as per Figure 1)? Please write down your agreement rate and provide your comments if your rate is 1, 2 or 3 in the column (C) (see the definitions notes on the second page). *(1- strongly disagree; 2- disagree; 3- neither agree nor disagree; 4- agree; 5- strongly agree)*

Nos.	Statements *[Generally, the higher the concern about the* **…(A)…**, the **…(B)…** *risk decisions would be made by a firm in international bidding]*		Your agreement rate and comments (C)
	(A)	(B)	
1.	hierarchy orientation	higher political	
2.	involvement orientation	lower economic	
3.	values orientation	higher economic	
4.	goals orientation	higher political	
5.	goals orientation	higher economic	
6.	guanxi orientation	lower economic	
7.	strategy orientation	lower political	
8.	strategy orientation	lower economic	
9.	adaptability orientation	higher political	
10.	capability orientation	higher economic	

APPENDIX M, CONTINUED: VALIDATION SURVEY

Definitions:

Cultural factors	**Definitions/Examples**
• Hierarchy orientation	A controlling environment in a firm with the clear lines of decision-making, formal and standardised rules, procedure and policies.
• Involvement orientation	A culture of employee involvement and motivation in terms of the teamwork and reward system in a firm.
• Business-related values orientation	It includes business ethic values (such as integrity, treating the people fairly), relationship values (such as respect, trust, professionalism) and performance values (such as getting the job done, outcome excellence).
• Goals orientation	The goals are profit making, gaining more new future work, invest in new and different future markets, expansion of business internationally, and to increase firm's competitive advantage.
• Guanxi/relationship orientation	A close and wide social connection with business communities (such as clients, consultants, subcontractors, suppliers and etc.) and political parties (such as political leader, officers in government department and so on).
• Strategy orientation	The market strategies of a firm and these include the strategic focus on future planning and long-term business, the focus on clients' satisfaction, assessment competitors' strategy, interdepartmental coordination, and the focus on detailed and systematic marketing strategy.
• Adaptability orientation	The ability of a firm to response and adapt to the international market/external environment in terms of their learning, flexibility and entrepreneurship capabilities.
• Capability orientation	The ability of a firm in terms of innovation and technology capabilities.
• Political risk	Examples of political risk are political instability, inconsistency in government policies and regulations, absence of sound, effective and fair legal system, local protectionism and confiscation.
• Economic risk	Examples of economic risk are inflation, uncertain policy towards economic liberalisation, unfavourable repatriation of profits, currency crisis, fluctuation in price, foreign country's debt crisis, interest rate crisis, custom restrictions on import and export and shortage in resources supply.

c. Please rate the following statements based on the table in Question b (from b1 to b10) on a scale of 1-5. Please write down your agreement rate and provide your comments if your rate is 1, 2 or 3 in column (C). *(1- strongly disagree; 2- disagree; 3- neither agree nor disagree; 4- agree; 5- strongly agree)*

Nos.	**Statements**	**Your agreement rate and comments (C)**
1.	Overall, the findings (table on Page 1) are general acceptable and reliable.	
2.	Overall, the findings (table on Page 1) provide guidelines in organisational internationalisation decisions quality.	
3.	Overall, the findings (table on Page 1) provide guidelines in assessing and improving organisational management.	
4.	Overall, the findings (table on Page 1) indicate that organisational culture plays a role in organisational international bidding decisions.	

Notes:

- The path model includes the values of R^2 (parentheses in the oval-shaped objects), path coefficient, t-value (parentheses on the respective path) and the significant level of the paths (represented by asterisk(s)).

* Significant at p<0.10 if above 1.28 (one-tailed)
** Significant at p<0.05 if above 1.64 (one-tailed)
*** Significant at p<0.01 if above 2.33 (one-tailed)

Figure 1: Final conceptual OC-IBDs model.

APPENDIX N: QUESTIONNAIRE'S RESPONSE RATE OF SOME PREVIOUS STUDIES

References	Article type	Response rate
Past cultural studies - Construction field		
Akiner and Tijhuis (2007)	Journal article	88% (111 professionals)
Ang and Ofori (2001)	Journal article	35% (27 contractors)
Ankrah (2007)	Unpublished PhD thesis	15.42% (85 contractors)
Ankrah and Langford (2005)	Journal article	40% (12 firms); 33.3% (10 firms)
Ankrah et al. (2009)	Journal article	11.62% (64 contractors)
Chan and Tse (2003)	Journal article	13% (26 professionals); 25.5% (51 professionals) ; 27% (13 professionals)
Cheung et al. (2011)	Journal article	40.3% (146)
Coffey (2003); Coffey and Willar (2010)	Conference paper	43.4% (23 contractors)
Coffey (2010)	Research-based book	43.4% (23 contractors)
Fong and Kwok (2009)	Journal article	71.6% (139)
Giritli et al. (2013)	Journal article	40.38% (107 firms)
Hancock (1999)	An article in a book	27.3% (100 professionals); 27.3% (142 professionals)
Igo and Skitmore (2006)	Journal article	59.5% (113 staffs)
Issa and Haddad (2008)	Journal article	14.87% (29 contractors)
Jaeger and Adair (2013)	Journal article	96.97% (96 contractors)
Jia et al. (2009)	Journal article	49.3% (294 students)
Koh and Low (2008)	Journal article	38.6% (56 contractors)
Kuo and Kuo (2010)	Journal article	61.83% (371 respondents)
Liu (1999)	Journal article	22% (56 professionals)
Liu and Fellows (2008)	Journal article	66.3% (199 firms)
Liu and Low (2011)	Journal article	22% (46 respondents)
Liu et al. (2004)	Journal article	50% (15 firms)
Liu et al. (2006)	Journal article	34.3% (159 respondents)
Loosemore and Muslmani (1999)	Journal article	76.6% (59 professinals)
Lorenz and Marosszeky (2007)	An article in a book	32.5% (13 firms); 40% (10 firms)
Oney-Yazıcı et al. (2007)	Journal article	38.2% (134 firms)
Phua (2012)	Journal article	21.8% (604 professionals)
Phua and Rowlinson (2004)	Journal article	21.4% (398 executives)
Rees-Caldwell and Pinnington (2013)	Journal article	- (200 managers)

APPENDIX N, CONTINUED: QUESTIONNAIRE'S RESPONSE RATE OF SOME PREVIOUS STUDIES

References	Article type	Response rate
Past cultural studies - Construction field		
Tone et al. (2009)	Journal article	40% (38 project managers)
Tran and Skitmore (2002)	Journal article	39% (39 professionals)
Wang and Abdul-Rahman (2010)	Journal article	8.02% (327 organisations)
Winch et al. (1997)	Journal article	31% (52 responsdents); 42% (153 respondents)
Wong and Zapantis (2013)	Journal article	36.3% (218 respondents)
Wong et al. (2013)	Journal article	34% (102 respondents)
Wong et al. (2007)	Journal article	57% (45 managers); 50% (61 subordinates)
Zhang (2004)	Unpublished PhD thesis	83.6% (92 enterprises)
Zhang and Liu (2006)	Journal article	60% (66 enterprises)
Past risk decisions literature - Construction field		
Abdul-Rahman et al. (2012)	Journal article	71.5% (143 respondents)
Ahmed and Azhar (2004)	Conference paper	34% (34 companies); 28% (14 companies); 34% (17 companies); 30% (15 companies); 26% (13 companies)
Baker et al. (1999)	Journal article	50% (40 companies); 44.4% (12 companies)
Fang et al. (2004)	Journal article	14.3% (42 contractors)
Thuyet et al. (2007)	Journal article	60% (42 respondents)
Zarkada-Fraser and Fraser (2002)	Journal article	51.4% (37 firms)
Zou et al. (2007)	Journal article	46.9% (83 practitioners)
Past cultural on risk-related decision making studies - Non-construction fields		
Demirbag et al. (2010)	Journal paper	23% (113 companies); 21.2% (135 companies)
Dimitratos et al. (2011)	Journal paper	15% (115 firms); 13% (101 firms); 22% (208 firms); 25% (104 firms)
Murray-Webster and Hillson (2008)	A book	281 professionals