

Graduate School of Business

**Leadership Partnership: Chinese and Expatriate Managers
in Multi-national Construction Companies in Hong Kong**

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

To the best of my knowledge this thesis contains no material previously published by any other person except where due acknowledgement has been made.

Signature:

Date:

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ABSTRACT

In the era of globalization, people from various cultures are being put together and interactions between them in the workplace are inevitable. The construction industry is no exception. How the management personnel respond to such development has been one of the most popular research areas in the construction management literature. Generally speaking, the literature states that project managers tend to adjust their style of management in a workplace in which he/she deals with subordinates from a variety of nations worldwide. For instance, western project managers, known for their conventional task-oriented management style, usually adopt a more people-oriented approach in a workplace that consists of subordinates from various other nations. Meanwhile, Chinese managers, known for their people-oriented style of management, lean towards the western style of task-orientation in managing construction projects in a multicultural working environment. Similar adjustments have also been discovered in other aspects of these project managers' management, such as relationship cultures (i.e. communication & conflict resolutions, power relationship with subordinates, and power relationship with superiors and clients) as well.

In light of such circumstances, this study aims 1) to investigate if intercultural adjustment takes place in Hong Kong's multinational construction companies, and 2) to find out the relationships, from the perspectives of Hong Kong Chinese/Expatriate managers and of their subordinates between project managers' leadership orientations (and relationship cultures) and project performance.

The findings suggest that both local (Hong Kong) Chinese and expatriate project managers are experiencing a certain degree of intercultural adjustments. Interestingly, rather than the convergence of management style, which implies a unified set of practices which might be applicable to all project managers within an multicultural workplace, project managers adjust different aspects of their existing management practices. Meanwhile, some deep-rooted cultural values and beliefs are not easily altered, such as the notion of "face" among Chinese project managers and of individual freedom and equal relationship between superiors and subordinates among expatriate managers. The other conclusion reached in this study is that there are noticeable differences as to the relationship between leadership orientations (and relationship cultures) and assessments of project performance, not only among project managers themselves, but also between the perspectives of managers themselves and those of their subordinates. The disparities among the managers may lie in their varying

degrees of intercultural adjustments (i.e. previous working/living experience abroad plus current working experience in the multinational workplace). Between project managers and subordinates, the difference is believed to be caused by 1) their respective positions in the project and hence the different perspectives incurred; 2) the subordinates' innate judgment of project managers based upon their ethnic and cultural backgrounds, which might not necessarily relate to the latter's actual behaviours in leadership orientations and relationship cultures or 3) project managers' perceptions of their own leadership orientations/relationship cultures styles reflecting normative judgment of what they 'should' reflect.

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CHAPTER 1: THE RESEARCH PROBLEM

1.1 INTRODUCTION

This chapter presents the background to the research into the leadership orientations of the project managers, and the question of whether there is a relationship with project performance in the multinational construction firms in Hong Kong. It introduces the research problems, objectives and hypotheses addressed in this study. It also outlines the significance of this study, research methodology and the chapter organisation of this thesis.

1.2 BACKGROUND

The fragmented nature of construction processes and the involvement of temporary multi-disciplinary teams in different stages make the role of project managers especially critical in delivering a project not only on time, but also within the budget costs, and at an acceptable level of quality performance (Giritli and Oraz, 2004; Dvir et al., 2003; Pinto and Slevin, 1988; and Simpson, 1987). To achieve the required results for a project, it is not only dependent on effective teamwork and good project networks, but also the experiences of the project managers in project planning and decision making (Thamhain, 2004; Egbu and Botterill, 2001; Mustapha and Naoum, 1997). Accordingly, both relationship management and task leadership skills are considered very important to a project's success

(Watson et al., 2002; Limsila and Ogunlana, 2008). Despite their importance, the weighting of relationship management and task leadership skills varies according to different value dimensions and cultural orientations of project managers (Hofstede, 1983; Chan and Partington, 2004; Mäkilouko, 2004; Walumbwa, Lawler and Avolio, 2007; Byrne and Bradley, 2007; Emmerik, Euwema and Wendt, 2008).

Cross-cultural and international business researchers have traditionally recognized that different cultures support different sets of beliefs and practices towards management and leadership, particularly when those cultures reflect fundamentally different concepts of reality (Chen and Partington, 2004; Mäkilouko, 2004; Chan and Goto, 2003; Liang and Whiteley, 2003; and, Thomas, 2002; Loosemore and Lee, 2002; Leung and Chan, 1999; Mason and Spich, 1987; Hofstede, 1983; and Testa, 2009). Leadership studies generally suggest that deep-rooted cultural diversities lead to different leadership orientations and other aspects of management, between Westerners (primarily North America and Europe) and non-Westerners (Hofstede, 1998), in terms of disparities in the use of superiority, power, and close supervision (Hofstede, 2001; Inglehart, 1995; Triandis, 2006; Van de Vliert, 2006; Emmerik, Euwema and Wendt, 2008). This is particularly the case when it comes to Western and Chinese styles of project management (Cheung and Chan, 2008). For example, the Chinese

are generally perceived as people-oriented, and more concerned with relationships, group harmony and 'face' in the workplace (Easterby-Smith et al., 1995). In contrast, Westerners are described as task-orientated, as they value productivity, as well as preferring employees to follow procedures and instructions so that they can work productively (Bass, 1990a, 1990b; Misumi and Peterson, 1985).

Attempts to classify such diversities (Brodbeck et al., 2000; Chhokar et al., 2007; Gerstner and Day, 1994; Hofstede, 2001; House et al., 2004; Shaw, 1990; Smith et al., 2002; Hofstede, 1983; Chan and Partington, 2004; and Mäkilouko, 2004) contributed useful references in a western framework to make general predictions about leadership orientations and various other aspects of management of project managers with a particular cultural and ethnic background. However, whether the same findings are also applicable to non-western cultures is still a debatable topic (Javidan and Dale, 2005). Recent empirical studies (for example: Brew and Cairns, 2004) argue that such dichotomized leadership assumptions based on cultural dimensions alone may be less precise when dealing with situations in which intercultural interactions exist. Over the last few decades, the growth of the global economy and the expansion of international corporations have led to an increasing number of managing professionals working across boundaries

and forming a multicultural workplace comprising expatriates from Western countries and host-nationals (local staff).

The construction industry is one of the fields that involve multinational participants with diverse cultural backgrounds. Using Hong Kong as an example, the strong economic growth and high demand for infrastructure development has attracted a large number of worldwide construction companies and building professionals, despite recent fluctuations. However, as argued by Brew and Cairns (2004), when people with diverse cultural backgrounds, attitudes and working styles interact, complications may arise. These developments have led to increasing interconnections among cultures; such moves have also triggered academic interest over their effects on traditional cultural dichotomies (Parker and McEvoy, 1993; Herman and Kempen, 1998; and Connerley and Pedersen, 2005).

In the last few years we have seen issues of the culturally-diverse workplace receiving more attention in the construction literature. Cultural diversity of project leaders from different locations has been investigated by Chan and Tse (2003), Loosemore and Lee (2002) and Chen and Partington (2004). Hermans and Kempen (1998) indicated that the 'conceptions of independent, coherent and stable cultures' becomes increasingly inappropriate in an increasingly interconnected world society.

They further indicated that the increasing cultural connection has led to the emergence of cultural mixtures and the phenomenon of cultural hybridization. Ralston et al. (1997) argued that cultures will converge to the point that no difference in values, attitudes, beliefs, and behaviours exist. The continuing interpenetration between the global and local further speeded up the process of developing interconnected cultures.

Yet, there have been relatively few studies scrutinizing the leadership orientations of building professionals or practitioners (Giritli and Oraz, 2004; Fellows et al., 2003; Thite, 2000; Rowlinson et al., 1993), much less studies on the influence of increasing cross-cultural interactions on leadership (See Toor and Ofori, 2008 for detailed discussions). A key reason, according to Nguyen et al. (2004), is attributed to the uncertain nature of the construction industry, in addition to the projects' difficulties and dynamics, which induce problems for professionals on a daily basis. Besides, insufficient understanding of the industry among social scientists and the lack of knowledge regarding social sciences for those within the construction industry only further add to the problem (Langford et al., 1995). As a result, little has been known about how the dynamics in an increasingly-global and increasingly-complex sector such as the construction industry (Toor & Ofori, 2008) impact the relationship between leaders and stakeholders within a multi-cultural setting (Testa, 2009).

Although there are a variety of leadership orientations that have been thoroughly studied, such as leader-member exchange (LMX), shared leadership, servant leadership, along with the three principle styles (people-oriented, task-oriented, and charismatic leaders) (see Moss, Dowling and Callanan, 2009 for detailed discussions), this study specifically concentrates on two principle styles (people- and task-oriented leadership orientations). The main reason is related to the nature of the construction industry itself, in which the mainstream paradigm of leaders has been both technology- and project-oriented (Pries et al., 2004). Management has become the focus (Skipper and Bell, 2006). This, in addition to the conservative culture of the industry, has produced lots of project “managers”, rather than skilful project “leaders” (Toor and Ofori, 2008). As construction managers are usually not perceived as leaders (Russell and Stouffer, 2003), newer forms of leadership that emphasize innovation, exchange of ideas and even power-sharing, might not fit into the daily operations of construction projects. Within the context of Hong Kong, although Cheung and Chan’s (2008) findings pointed out that the Hong Kong Chinese CEOs use a style of management noticeably different from western styles, their study is solely limited to that of top management. Is the situation any different when it comes to middle-level management (i.e. project managers)? In addition, the prominence of expatriate project managers leading mostly-Chinese subordinates creates vastly different

dynamics between these two groups within this industry, as compared to other industries. How do these managers adapt their management styles to the predominantly-Chinese workplace inside an industry generally regarded as conservative? Therefore, there is a need for research investigating leadership orientations and power relationships between the local and expatriate project managers in a multicultural working environment in Hong Kong in order to fill this knowledge gap.

In addition to research on leadership orientation, there have been several empirical studies on the relationship between leadership orientations and project performance (for example: Turner and Müller, 2005; Wang et al., 2005; Chan and Chan, 2005; Belout and Gauvrea, 2004; Odusami et al., 2003; Chan and Tse, 2003; Mustapha and Naoum, 1998; Madlock, 2008). However, findings from these studies are diverse. While some studies (for example, Odusami et al., 2003 and Wang et al., 2005) suggested that there was a significant correlation between the preferred management style of project managers and project performance, some others argued that little relationship was found between project success and the effectiveness of site managers (Mustapha and Naoum, 1998; and, Belout and Gauvrea, 2004). A review of the construction literature further indicated that there has been little research (for example: Odusami et al., 2003; Chan and Chan, 2005; Toors and Ofori, 2008; Limsila and Ogunlana, 2008) to explore the impact

of varied leadership orientations (i.e. people orientation vs. task orientation) on project performance. Although some studies pointed out that better performing site managers are more likely to prefer management styles combining both people-orientated and task-orientated leadership orientations (Blake and Mouton, 1978; and, Mustapha and Naoum, 1998), others (for instance, Hill, 1973; Hollander, 1978, and Ekvall and Arvonen, 1984; and more recently, Muller and Turner, 2007) argued that there is no particular type of leadership which could demonstrate the most effective way to achieve the best business performance. Considering the paucity of consensus in this regard, further research is needed not only to investigate the relationship between leadership orientations and project performance, but also to explore the possible relationship between relationship cultures and project performance, which has been relatively overlooked in previous studies.

This thesis proposes to 1) study the leadership orientations and relationship cultures of both local Chinese project managers and expatriate project managers who worked within multinational construction companies in Hong Kong, with the emphasis on their level of exposure to foreign cultures through prior overseas working/living experience; and 2) examine the relationship between leadership orientations (in addition to relationship

cultures) and project performance in the multinational construction firms in Hong Kong.

1.3 SIGNIFICANCE OF THE STUDY

This research is of critical significance, as it contributes to the understanding of project leadership within multinational construction companies in Hong Kong, and of how varying levels of intercultural adjustments (by means of prior overseas experience, be it working or living) dictate project managers' behaviours in both leadership orientations and relationship cultures (such as power relationships and communication & conflict resolution) in a workplace which consists of people from numerous countries. The results reflect the dynamic interactions between one's innate cultural values and incoming foreign cultures, from both business and personal standpoints. An investigation of the relationship between leadership orientations (and relationship cultures) and project performance will allow for a better understanding of the significance of different project management factors to project performance among project managers of various ethnic and cultural backgrounds. It may lead to an understanding of the leadership patterns of local managers and expatriate managers alike, within a specific working environment (that is, in multinational construction companies); and to the development of appropriate training programs accordingly, in order to balance the issues of maintaining internal

team harmony and meeting task delivery for promoting a successful project delivery in construction organizations.

1.4 RESEARCH QUESTION & RESEARCH OBJECTIVES

The research question asked is, “is there a relationship between leadership orientation(s)/relationship cultures of project managers and the performance of construction projects that are under their supervision?”

The specific objectives of this research are:

- a) To investigate whether or not project managers of various ethnic/cultural backgrounds adjust their leadership orientations and relationship cultures (from the traditional Eastern-Western dichotomies in management) within multinational construction firms in Hong Kong;
- b) To explore if these managers show similarities in leadership orientations and in relationship cultures, in the event that adjustments take place
- c) To find out if project managers’ own assessments of their leadership orientations (and relationship cultures) are different from the assessments of their subordinates; and,
- d) To assess the relationship between leadership orientations (and relationship cultures) and project performance, with the emphasis on the varying degrees of intercultural adjustments among project

managers derived from their previous overseas working (and/or living) experiences.

1.5 HYPOTHESES

Research objectives are translated into following six hypotheses for testing:

H1: There are no significant differences in terms of leadership orientations (i.e. Task Orientation and People Orientation) between local Hong Kong Chinese managers and Expatriate managers;

H2: There are no significant differences in terms of relationship cultures (i.e. Power Relationships with Subordinates and with Superiors & clients, and Communication & Conflict Resolutions) between local Hong Kong Chinese managers and Expatriate managers;

H3: The perceptions of project managers and of subordinates towards the manager's leadership orientations have no significant differences;

H4: The perceptions of project managers and of subordinates towards the manager's relationship cultures have no significant differences;

H5: 'There will be no differences for the project manager groups, when classified broadly by ethnicity and overseas experience, in the association between their espoused leadership orientations and relationship culture and their assessment of project performance.'

H6: The relationship between leadership orientations/relationship cultures and project performance will not vary between the perceptions of project managers and those of their subordinates

The derivation of these hypotheses is explained in detail in Chapter 4.

1.6 RESEARCH METHODOLOGY

The rationale for the choice of research methodology and the research methods adopted will be described in detail in Chapters 4 and 5. In brief, it consists of the seven-step methodology as illustrated in Figure 1.1 by means of a flow chart diagram. The methodology is in the positivist paradigm and involves a quantitative study.

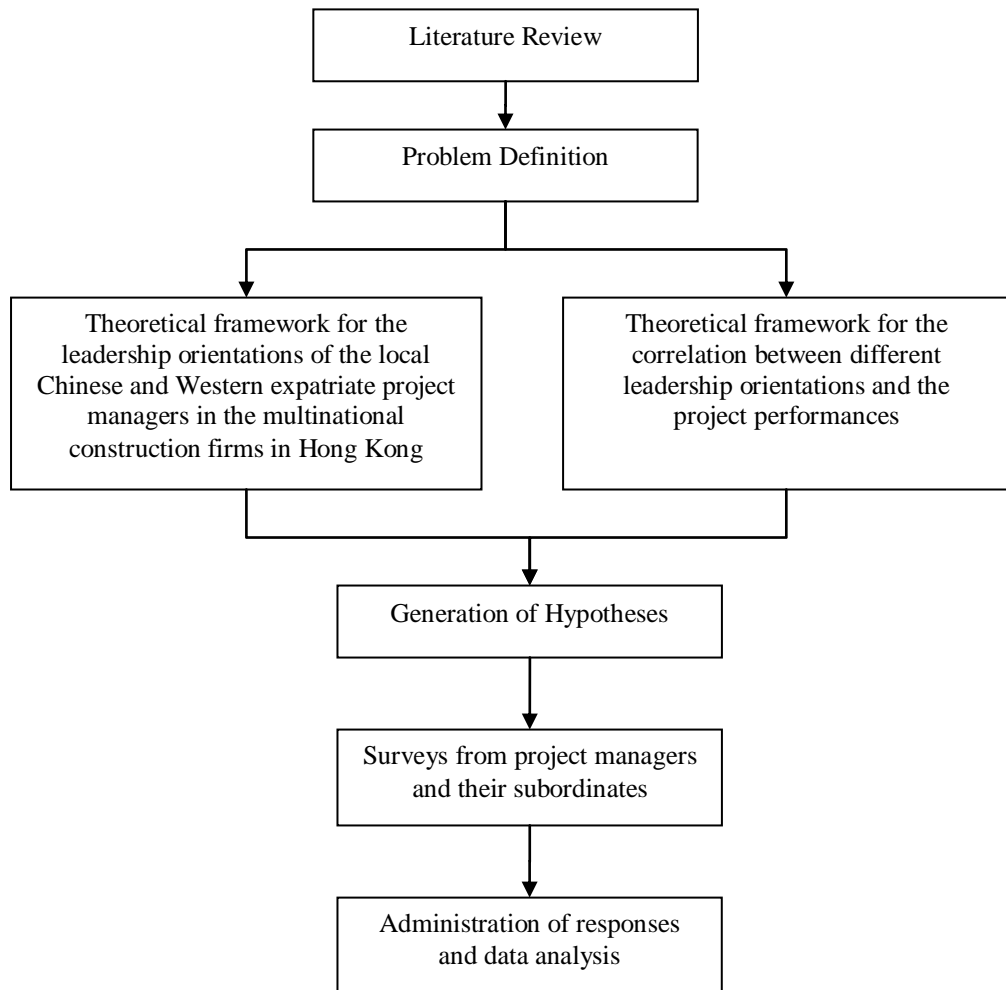


Figure 1.1: Flowchart of research methodology

1.7 STRUCTURE OF THE THESIS

This thesis is organised to present the work logically in order to fulfil the research objectives. This introductory chapter (Chapter 1) discusses the rationale for studying the issue of leadership orientations and project performance in the multinational construction firms in Hong Kong. It also briefly sets out the background, research objectives and hypotheses of the

study, and the research methodology, as well as the significance of this research.

Chapter 2 introduces the research context of the construction industry with detailed discussions on the current status of the Hong Kong construction industry. It includes details of the market size of both domestic and international construction companies in the Hong Kong's construction field. The importance of the role and functions of project managers to the success of construction projects is also discussed.

Chapter 3 reviews the relevant literature in two parts. Part 1 discusses the literature on cross-cultural leadership orientations and relationship cultures. It presents and discusses the issue of culture, cultural orientation, and cultural constructs. The literature on cultural orientations of the Chinese and Westerners is then reviewed. This part also examines the effect of intercultural adjustments on the traditional cultural dichotomies, and introduces a model specifically for leadership orientations and relationship cultures. Meanwhile, Part 2 reviews the literature on the relationship between leadership orientations and project performance. In addition, it discusses the key measures of success in construction projects. The chapter concludes with a discussion on the relationship between different leadership orientations and project performance.

Chapter 4 delineates the basis of the research design and the methodology of this study. It covers the type of research methodology, and discusses the research paradigms (quantitative and qualitative) and positivist orientation for the current study. This chapter also outlines the research model, describes the theoretical framework for investigation and the development of the hypotheses.

Chapter 5 describes the method and design of the research. This covers the data collection process, the development and structure of questionnaires, the sample used and the statistical techniques used for the analysis of data.

Chapter 6 reports the results of the statistical tests. The demographic data and descriptive statistics for the questionnaire are analysed using SPSS. The independent-sample *t*-test is adopted for evaluating the difference between the means of the local Chinese and Western expatriate manager groups and testing the first two hypotheses. Then, the managers' perceptions of their leadership orientations (and relationship cultures) are to be compared with the subordinates' assessments of such, using *t*-tests (H3 & H4). Afterwards, the relationship between the leadership orientations of project managers, along with the various aspects of relationship cultures, and project performance is examined via multiple regression analyses on

both the managers' sample (for testing H5) and the subordinates' sample (H6), with emphases on the varying cultural backgrounds and experiences of the managers and hence potential for intercultural adjustments among managers.

In closing, Chapter 7 presents the overall conclusions and implications of the research. The limitations of the study, together with the recommendations for future studies, are also addressed.

1.8 SUMMARY

This chapter presented an introduction of this thesis. The research background and the objectives of the thesis were described. The methodology and structure of the thesis were also discussed, providing a clearer picture of the research activities which were to be conducted for this thesis.

CHAPTER 2: RESEARCH CONTEXT – THE CONSTRUCTION INDUSTRY

2.1 INTRODUCTION

This chapter introduces the research context of the construction industry. It provides the detailed discussion on the current status of the Hong Kong construction industry and the main problems faced by the construction companies at present.

2.2 THE NATURE OF HONG KONG CONSTRUCTION INDUSTRY

Hong Kong is situated at the south-eastern tip of the mainland of China. It covers a total area of about 1,100 square kilometers and comprises Hong Kong Island, Kowloon peninsula, the New Territories and islands. Given the high population density and the need to use land wisely, the industry is critical to the economy and does encourage innovative entrepreneurial behaviours in terms of the capital, labour and design (Hui et al., 2006). In Hong Kong, over 90 percent of the residential and commercial buildings are skyscrapers.

Hong Kong's construction industry is characterized by a small number of large local contractors, a high level of subcontracting, the presence of many

overseas contractors, and a substantial number of companies that act as both developers and contractors (Walker, 1995). As of March 31, 2009, there were about 259 approved contractors for public works, 540 approved suppliers of materials and specialist contractors for public works, according to the Development Bureau, HKSAR government. Most of Hong Kong's contractors are small in size; as shown in Table 2.1, nearly 92% of such had less than HKD 10 million in gross value of construction work performed in 2007, hiring less than 10 persons each and sharing only about 18% of the market in total. On the other hand, the largest firms (1% of the total number of contractors) captured nearly 58% of the total market share.

Table 2.1: Size of construction firms by average number of employees and total work billed, 2007

Gross value of construction works performed (HK\$'000)	Number of establishments	Number of persons directly engaged	Average no. of persons directly engaged	Gross value of construction works performed (HK\$)	Value added (HK\$)
<5,000	16,635	42,615	2.56	18,399,790	9,024,040
5,000 - 9,999	1,142	11,064	9.69	7,588,707	3,936,676
10,000 - 19,999	935	10,435	11.16	12,771,741	4,512,939
20,000 - 49,999	384	10,388	27.05	12,973,035	4,575,021
50,000 - 99,999	111	6,502	58.58	8,066,437	2,700,759
100,000+	193	33,291	172.49	82,235,918	17,691,818
Total	19,399	114,294	N/A	142,035,628	42,441,252

Source: 2007 Survey of Building, Construction and Real Estate Sectors, Census and Statistic Department, Hong Kong Government, p.13

The majority of these small contractors act as subcontractors to the large companies which tend to be main contractors (Walker, 1995). There are quite a number of very big construction companies that are capable of handling projects that require sophisticated technology and strong financial backing. It is estimated that the construction sector employs over 50,000 site workers (Anson et. al, 2008). Since the contractors in Hong Kong are

experienced and highly skilled, the current industry trend is to award large and complex contracts as a single package to multi-disciplinary contractors.

2.3 THE CONTEMPORARY CONSTRUCTION MARKET SCENE

The Construction and property sector is influential in Hong Kong. As shown in Table 2.2, between 1998 and 2007, constructions contributed a yearly average of 4 percent to Hong Kong's GDP. However, primarily due to economic downturn during the period, its contribution declined gradually from 5.7% in 1998 to 2.6% in 2007.

Table 2.2: Construction Industry's contribution to Hong Kong's GDP, 1998-2007

Year	1998	1999	2000	2001	2002
Construction (HK\$Mn)	69,101	65,560	62,054	57,167	51,534
GDP at current factor cost (HK\$Mn)	1,218,263	1,194,772	1,245,033	1,233,059	1,223,153
GDP at current market price (HK\$Mn)	1,292,764	1,266,668	1,317,650	1,299,218	1,277,314
% contribution (at current factor cost)	5.7	5.5	5.0	4.6	4.2

Year	2003	2004	2005	2006	2007 #
Construction (HK\$Mn)	44,910	40,376	38,538	38,688	40,153
GDP at current factor cost (HK\$Mn)	1,191,807	1,244,819	1,332,830	1,423,299	1,551,488
GDP at current market price (HK\$Mn)	1,234,761	1,291,923	1,382,590	1,475,357	1,615,016
% contribution (at current factor cost)	3.8	3.2	2.9	2.7	2.6

Provisional figures

Sources: Gross Domestic Product (GDP) by Economic Activity - Percentage Contribution to GDP at Current Factor Cost, Census and Statistic Department, Hong Kong Government, updated on 25 Feb, 2009;

Gross Domestic Product (GDP) by Economic Activity at Current Prices, Census and Statistic Department, Hong Kong Government, updated on 25 Feb, 2009

The Hong Kong economy is expected to continue slowing down in 2009 (Census and Statistic Department, 2009), amidst a more difficult external environment, further weakening the asset markets and employment situations. As a result, the slowdown of the Hong Kong economy directly hampers the property and construction sectors, in particular the private sector.

The local construction market has continued to experience a downturn since the financial crisis in 2008. Table 2.3 shows a decreasing trend in the gross value of work done by main contractors between 2001 and 2007. Despite a slight recovery in 2007, the 2008 global financial turmoil derailed the economic upturn and was expected to cause the economy to contract in the fourth quarter (Census and Statistic Department, 2009). In particular, the building sector has declined by more than 50% since 1997. During each year 2001 and 2002, the total number of construction investments in Hong Kong decreased in the order of 9%. In addition, the number of new constructions in Hong Kong has been in a downward trend since the late 1990's. On the front of private residential units, the number of new units has dropped from 35,300 in 1998 to 15,000 in 2005. For the public sector, while expenditure on public infrastructure is still steady, the gross value of

construction work performed by main contractors has decreased over the years as shown in Table 2.3.

Table 2.3: Gross value of construction work in nominal terms (HK\$Mn) performed by main contractors analyzed by broad trade group, 2001 – 2007

Broad trade group	2001	2002	2003	2004	2005	2006	2007
<u>Overall total</u>	<u>113,986</u>	<u>106,000</u>	<u>99,032</u>	<u>93,171</u>	<u>90,851</u>	<u>90,230</u>	<u>92,866</u>
	(-6.6)	(-7.0)	(-6.6)	(-5.9)	(-2.5)	(-0.7)	(+2.9)
<u>I. Construction work at construction sites</u>	<u>82,290</u>	<u>74,362</u>	<u>67,564</u>	<u>56,553</u>	<u>48,691</u>	<u>41,990</u>	<u>43,476</u>
	(-8.5)	(-9.6)	(-9.1)	(-16.3)	(-13.9)	(-13.8)	(+3.5)
Private sector construction sites ⁽¹⁾	40,497	42,292	35,187	28,021	26,356	24,855	28,973
	(+3.6)	(+4.4)	(-16.8)	(-20.4)	(-5.9)	(-5.7)	(+16.6)
Public sector construction sites ⁽²⁾	41,793	32,070	32,378	28,533	22,334	17,135	14,503
	(-17.8)	(-23.3)	(+1.0)	(-11.9)	(-21.7)	(-23.3)	(-15.4)
<u>II. Construction work at locations other than sites</u>	<u>31,696</u>	<u>31,638</u>	<u>31,468</u>	<u>36,618</u>	<u>42,160</u>	<u>48,240</u>	<u>49,390</u>
	(-1.4)	(-0.2)	(-0.5)	(+16.4)	(+15.1)	(+14.4)	(+2.4)
General trades ⁽³⁾	20,669	20,583	19,886	23,587	28,485	36,289	37,422
	(-0.2)	(-0.4)	(-3.4)	(+18.6)	(+20.8)	(+27.4)	(+3.1)
Special trades ⁽⁴⁾	11,027	11,055	11,581	13,031	13,674	11,951	11,968
	(-3.7)	(+0.3)	(+4.8)	(+12.5)	(+4.9)	(-12.6)	(+0.1)

Notes:

- Includes projects commissioned by private developers. Projects under the Private Sector Participation Scheme are also included.
- Includes Projects commissioned by the Government of the Hong Kong Special Administrative Region, Mass Transit Railway Corporation, Kowloon- Canton

Railway Corporation and Airport Authority. Projects under the Home Ownership Scheme, which are commissioned by the Housing Authority, are also included.

- *General trades include decoration, repair and maintenance, and construction work at minor work locations such as site investigation, demolition, and structural alteration and addition work.*
 - *Special trades include carpentry, electrical and mechanical/lifting, plumbing and gas work etc.*
- () Figures in round brackets denote year-on-year% changes.*

Sources: *2001-2007 Reports on the Quarterly Survey of Construction Output, Census and Statistic Department, Hong Kong Government, Table 1A*

The shrinking of the construction industry has also been evident by the decline in the number of persons employed. According to Hong Kong Government statistics, the workforce in the 4th Quarter of Year 2008 was 49,448, representing a 21% drop over the same quarter in 2004. Such decline occurred in all sectors, including public, private, building and civil engineering.

Table 2.4: Construction workforce, 2004 – 2008

Year	Qtr	Public	Private	Building	Civil Eng.	Total	% change
2008	1	18965	31576	38410	12131	50541	0.87%
	2	18387	31169	36294	13262	49556	-1.95%
	3	18446	29698	36019	12125	48144	-2.85%
	4	19554	29894	37414	12034	49448	2.71%
2007	1	20569	29797	36517	13849	50366	-1.25%
	2	19232	31866	37667	13431	51098	1.45%
	3	18762	30411	36133	13040	49173	-3.77%
	4	18521	31582	37712	12391	50103	1.89%
2006	1	20014	30990	36406	14598	51004	-4.28%
	2	20485	32801	38849	14437	53286	1.94%
	3	19569	32704	38819	13454	52273	-4.78%
	4	21147	33750	40468	14429	54897	0.81%
2005	1	22586	31870	38769	15687	54456	-4.20%
	2	24306	32540	41250	15596	56846	-5.26%
	3	26454	33547	41293	18708	60001	-8.76%
	4	28704	37057	45449	20312	65761	11.55%
2004	1	25525	33426	39097	19854	58951	-5.65%
	2	26668	35814	42830	19652	62482	-6.13%
	3	27824	38741	47081	19484	66565	6.06%
	4	26034	36727	45428	17333	62761	0.94%

Source: Anson et al. (2008): p.8

In addition to the shrinking of construction output, the construction industry also suffers the effects of material cost fluctuations. Following the fall of the construction costs between 1997 and 2003, the average wholesale prices of all selected building materials, except the unglazed Mosaic tiles and uPVC pipes, had risen from 2004 to 2008 (Table 2.5). Some key materials, such as diesel fuel, hardwood, and steel, had had an increase of over 50% within the same period. Anson et al. (2008) suggest that the increasing trend of the cost of building materials is due to inflation and the

appreciation of Renminbi, as most construction materials are imported from China. This upsurge in material prices is believed to be attributed more to the general increase in commodity prices around the globe recently, than to the slow recovery of the construction market in Hong Kong (Anson et. al., 2008: p.12). This cost pressure inevitably has created more problems for the industry to solve.

Table 2.5: Average wholesale prices of selected building materials, 2004 - Mar 2008

MATERIAL		2004	2005	2006	2007	Mar-08
Aggregates		40	38	38	40	44
	(HK\$ per tonne)					
Bitumen		3800	4200	5400	5400	6467
	(HK\$ per tonne)					
Concrete blocks,		45	42	42	43	57
	100mm thick					
	For industrial use (light)	1108	1320	1568	1572	1964
Diesel fuel	(\$ per 200-litre drum)					
	For road use	664	770	886	874	990
	(HK\$ per 100 litre)					
Glass - Clear sheet glass, 5mm thick		81	81	81	87	97
	(HK\$ per square metre)					
Glazed ceramic wall tiles	White tiles,	66	63	69	77	91
	108mm*108mm					
	Colour tiles,	187	192	203	221	260
	200mm*200mm					
Hardwood	Sawn hardwood, 50*75	2284	3072	3218	3474	3607
	mm column					
	Non-slip tile,	69	72	86	98	131

MATERIAL		2004	2005	2006	2007	Mar-08
Homogeneous floor tiles	200mm*200mm					
	Steel plates	6283	6674	6771	7629	10021
	(HK\$ per tonne)					
Galvanised mild steel	Steel angles	6203	6568	7404	10047	14713
	(HK\$ per tonne)					
	Steel flats	6609	7212	9772	8541	9756
	(HK\$ per tonne)					
Metal formwork	Steel plate, 4mm thick	4438	4881	4588	5059	6979
	(HK\$ per tonne)					
	Unglazed tiles, 18mm*18mm	52	44	37	47	50
Mosaic tiles	Glass tiles, 25mm*25mm	25	27	22	27	29
	(\$ per square metre)					
	Glazed tiles, 45mm*45mm	58	55	58	61	73
	Emulsion paint	32	35	35	35	37
Paint	(HK\$ per litre)					
	Acrylic paint	34	35	34	34	36
	(HK\$ per litre)					
	Portland cement (ordinary)	491	511	517	516	524
	(HK\$ per tonne)					
	Sand	25	27	34	56	58
	(HK\$ per tonne)					
	Mild steel round bars,	3815	4101	4237	5275	7896
Steel reinforcement	6mm to 20mm					
	High tensile steel bars,	3668	3764	3877	5183	8406
	10mm to 40mm					
	Plywood, formwork,	60	67	61	64	64
Timber formwork	19mm thick					
	Sawn hardwood, 25mm	1504	2140	2023	2452	2666
	thick plank					
uPVC lined GMS pipes	20mm diameter pipes,	166	170	170	166	n.a.
	5.5 long					
uPVC pipes	32mm diameter pipes,	42	40	41	39	42

MATERIAL		2004	2005	2006	2007	Mar-08
	4m long (HK\$ per					

Note 1: Prices from January 2005 onwards are not directly comparable to those published which included delivery charges.

Note 2: Prices are based on June data from 2004 to 2007 and in Hong Kong dollars.

Source: Average Wholesale Prices of Selected Building Materials, Census and Statistics Department, Hong Kong SAR, p.12

While the local demand for real estate services in general has been restricted by Hong Kong's attenuating expenditures on new constructions, Hong Kong expertise in timely constructing of quality high-rise residential and commercial buildings remains internationally renowned and is in great demand in overseas markets, especially in the Chinese mainland and Macau. Until January 2006, the Hong Kong supervisory and managerial professional on construction sites in Macau had reached a record high of 7,540, up 560% year-on-year (Hong Kong Trade Development Council, 2007). Nevertheless, such increases do not last, as many construction projects in Macau have been stopped, as a result of the global financial crisis. With construction workers returning to Hong Kong, this only puts extra pressure on the local employment situation.

2.4 INDUSTRY DEVELOPMENT AND MARKET OUTLOOK (2010-2011)

Throughout the past five years (from Fiscal Year 2004-05 to 2009-10), the HKSAR Government has earmarked approximately HK\$29 billion per year, for public infrastructure projects (Legislative Council, 2009). Nevertheless, Hong Kong's economy currently has been under the effects of financial turmoil, stemming from the sub-prime mortgage crisis in the United States. Its impact on Hong Kong's construction industry has been immense, as the unemployment rate within the industry had soared from 6.1% in December 2008 to 12.7% in April 2009 (Census and Statistics Department, 2009). With the gradual return of construction workers from Macau and other Asian countries as construction projects in these areas have been stopped, the employment situation of the industry is expected to be even worse (Hong Kong Construction Association, 2009). In order to generate new momentum for the local construction industry, as well as to address the demands by construction professionals¹ in the midst of economic downturn, the HKSAR Government has hastened the progress of "The 10 Large-Scale Infrastructure Projects" (Table 2.6), as proposed in the *2007-08 Policy Address* by Chief Executive Donald Tsang, along with numerous new small-scale construction projects. 20,000 new construction jobs are

¹ During a meeting for the Panel on Transport Subcommittee on Matters relating to Railways on March 31, 2009, the Hong Kong Construction Association (HKCA), recommended the Panel to allow the engagement of MTR's West Island Line Contracts as soon as possible.

expected to be created in 2010/2011 alone and 250,000 jobs expected in total (South China Morning Post, Oct 11, 2007). Some of the major projects, including the North Lantau Highway Connection to the Hong Kong-Zhuhai-Macao Bridge and various Mass Transit Railway (MTR) projects, will be commenced shortly. It is expected that these public projects will help mitigate the effects, to a certain extent, of the recent global economic downturn on the construction sector.

Table 2.6: The 10 Large-scale Infrastructure Projects, as proposed by Chief Executive Donald Tsang in 2007

Project/Location	Probable Value (HK\$ B)	Contract Period
1. Kai Tak Cruise Terminal –Terminal will sit on 7.6 hectares with 2 along-side berths and non-domestic gross floor area of 50,000 sq. m. for commercial/office/retail facilities	2.4	2009-2011
2. Hong Kong-Zhu Hai & Macau Bridge –29.6km dual 6-lane carriageway in the form of bridge & tunnel structure comprising Zhujiang Section from the artificial island off Gongbei and 12.6km roadworks on Hong Kong side landing at San Shek Wan of Lantau Island	10	2010-2013
3. Regional Express Link (Tunnel & Station) –Construction of West Kowloon Station and running railways from Terminal to Futian Station. Approx. 30km running tunnel through Tai Mo Shan Country Park.	30	2009-2015
4. Tuen Mun Western Bypass, Tuen Mun-Chek Lap Kok –Construction of 8.4km dual two-lane Tuen Mun Western Bypass (TMWB) with 5.8km tunnel, Tuen Mun-Chek Lap Kok Link of 9km dual two-lane sea viaduct and 4km immersed tube tunnel	20	2010-2016
5. South Island Line Extension –Construction of 7km line connecting southern HK Island with MTR Network	8	2011-2015
6. Shatin Central Link –Line to connect Northeast New Territories and HK Island via East Kowloon, Route: 17km approx.	35	2010-2015
7. West Kowloon Cultural District –Plan to promote long-term development of arts, cultural and related facilities (about 40 hectares)	21	TBA
8. Joint Development of Lok Ma Chau Loop –Hong Kong and Shenzhen to set up high-level coordinating mechanism for cross-border plot measuring 1 sq. km. <i>Possible use for the area: Commercial/Office, Duty free area, Inland port/Logistics park, Tourism, Entertainment centre, manufacturing and high-tech base</i>	TBA	TBA
9. Hong Kong-Shenzhen Airport Co-operation –New rail link to connect airports, enabling them to complement each other	TBA	TBA
10. New Development Areas –Several new towns in the New Territories (Kwu Tung North, Fanling North and Ping Che/Ta Kwu Ling and the Hung Shui Kiu) to ease pressure on developed areas in city with population of 6.9m	TBA	TBA

Source: Planning Department

In addition to local construction projects, Hong Kong construction firms have actively participated in projects overseas as well, especially those in mainland China. Table 2.7 shows that in 2007, the export of Hong Kong's construction services reached HK\$2,699 million, constituting 0.4% of the total export of HK services. Also, export of Hong Kong's architectural, engineering and other technical services had risen significantly in recent years, from HK\$590 million in 2003 to HK\$1,933 million in 2007, which constitutes 0.3% of the total export of Hong Kong's services.

Table 2.7: Annual import/export of construction and consultancy services, 2003 - 2007

		Export of services			Import of Services			Net export of services
Major Service Group	Year	HK\$ million	Share ³ (%)	Year-on-year % change	HK\$ million	Share ³ (%)	Year-on-year % change	HK\$ million
CS ¹	2003	3968	1.1	48.2	3110	1.5	13.9	858
	2004	2941	0.7	-25.9	2697	1.1	-13.3	244
	2005	2436	0.5	-17.2	2122	0.8	-21.3	314
	2006	2083	0.4	-14.5	1872	0.7	-11.8	211
	2007	2699	0.4	29.6	2303	0.7	23.0	396
AEOTS ²	2003	590	0.2	74.0	207	0.1	32.7	383
	2004	929	0.2	57.5	246	0.1	18.8	683
	2005	1035	0.2	11.4	283	0.1	15.0	752
	2006	1191	0.2	15.1	306	0.1	8.1	885
	2007	1933	0.3	62.3	474	0.1	54.9	1459
Total exports of HK services	2003	362420	100	4.2	203400	100	0.4	159,020
	2004	429563	100	18.5	242507	100	19.2	187,056
	2005	495394	100	15.3	264237	100	9.0	231,157
	2006	565054	100	14.1	287900	100	9.0	277,154
	2007	660728	100	16.9	332240	100	15.4	328,488

¹Construction services (CS) include “general construction work (including new work, additions and alterations, repair and maintenance) and installation work at sites, buildings and structures that usually lasts for less than one year”.

²Architectural, engineering and other technical services (AEOTS) include “advisory architectural services; architectural design services; contract administration services; advisory and consultative engineering services; engineering design services for construction projects or industrial processes; and urban planning and landscape architectural services”.

³Share (%) is the share of exports in the total “exports of HK services”

Sources: Report on Hong Kong Trade in Services Statistics for 2005, and report for 2007, p.15

In this context, Hong Kong’s construction sector, especially the construction professionals, may have an advantage over foreign competitors in securing work on many major construction projects in Asia,

especially in Mainland China. Many Hong Kong contractors capture these opportunities by linking up with consultants to promote a package of design-and-build projects. Despite recent policy measures targeted to slow down its steaming building and construction market, China's demand for real properties remains strong. Currently, foreign involvement in real estate development in China has mostly focused on luxury office and apartment buildings, hotels and villas. With the commencement of the housing reform in July 1998, the demand for affordable housing for the public has been increasing, thus generating opportunities for Hong Kong developers, contractors and consultants to participate in the mainland's medium-cost housing programmes. Infrastructure development opportunities are plenty in most parts of the Chinese mainland, although Hong Kong companies tend to prefer the comparatively developed coastal regions. Beijing, Guangzhou and Shanghai have been targeted because of the direct and flow-on opportunities generated by the 2010 Asian Games, and the 2010 Shanghai World Expo.

The foreign companies participating in the Chinese construction industry have been mainly from Hong Kong. This is not only because of the geographical proximity, but also of the better understanding of the cultural traditions and current affairs in mainland China (Chen, 1997). For example, Hong Kong Chinese have an understanding of the importance of *guan xi*

(special relation) for doing business in China and maintain many *guan xi* with Chinese authorities themselves (Wills, 1992). Despite this, western companies also have their own advantages in doing business with China, based on their technology transfer and history. However, western companies are usually not familiar with Chinese affairs. They do not know psychologically how the Chinese think and what the Chinese expect from such a co-operation. As a result, they often do not fully exploit their advantages and this has resulted in extra difficulties for them in entering the Chinese market.

With the Chinese market becoming increasingly critical for the sustainable development of Hong Kong's construction companies, continuous co-operation between these companies and those from the Mainland are able to create a win-win situation. As stated above, Hong Kong's companies have the edge over foreign companies in terms of their familiarity with Chinese affairs and previous experiences in dealing with Chinese authorities. This leads to an advantage in exploring the immense market within the Chinese Mainland. On the other hand, the Chinese could benefit from the co-operation via the expertise from an established industry and the introduction of different, and potentially more efficient, management philosophies and business practices. Nonetheless, the multinational nature of Hong Kong's construction companies inevitably leads to interactions

between expatriate project managers and predominantly Chinese subordinates. The issue of understanding how these managers respond to such a working environment with regard to their leadership orientations has become both crucial and timely. This study, by studying the management styles of both local Hong Kong and expatriate managers, is expected to proffer some insights in this topic.

CHAPTER 3: LITERATURE REVIEW

3.1 INTRODUCTION

This chapter reviews critically, in two sections, the relevant literature related to the theory and research of varied leadership orientations and management styles, and their relationships with project success. Part 1 presents the issues of culture, cultural constructs, as well as traditional Chinese and Western cultural values. A model for contrasting maps of key leadership orientations and management styles between Chinese and Western expatriates which can be tested in multinational construction firms in Hong Kong is introduced. Part 2 reviews the literature on project success. Prior findings on the relationships between varied leadership orientations of project managers and the success of construction projects are discussed.

The title of this research is “Leadership Orientations for Project Success in the Hong Kong Multinational Construction Firms”. The purposes of this study are to provide an overview of the leadership orientations and management styles of local Hong Kong Chinese and Western expatriate project managers, and to investigate the relationship between the leadership orientations and the project success. The basic research questions include: “What are the leadership orientations of the local Hong Kong Chinese and Western expatriate project manager in multinational construction firms in

Hong Kong?” “Does intercultural adjustment exist among project managers in Hong Kong’s multinational construction firms?” and “Which leadership style is linked with the best performance of construction projects in Hong Kong?”

3.2 PART 1

3.2.1 What is ‘Culture’?

To understand the differences of leadership orientations and management styles between Western and non-Western, especially Eastern, cultures, it is necessary to first understand the meaning of culture, and the primary ways in which the cultures varied in the Western and Eastern worlds.

Over many decades, there have been debates on the definition of culture. Academics have defined culture in many different ways, and it is difficult to reach an agreed definition. According to the early work of Kroeber and Kluckhohn (1952), there exist more than 160 different definitions of ‘culture’. Kroeber and Kluckhohn (1952: 181) argue that culture consists of ‘patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment in artifacts’. They indicate that the essential core of culture consists of ‘traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may,

on the one hand, be considered as products of action, on the other, as conditioning elements of future action'. Fiske (2002: 85) considers culture as 'the source of ties that bind members of societies through an elusive socially constructed constellation consisting of such things as practices, competencies, ideas, schemas, symbols, values, norms, institutions, goals, constitutive rules, artifacts, modifications of the physical environment'. Hofstede (1991: 5) argues that culture is considered as 'the collective programming of the mind, which distinguishes the members of one group or category of people from those of another'.

As argued by Spradley (2000:22), there are three fundamental aspects of human experience to be dealt with in the study of culture: *what people do*, *what people know*, and *the things people make and use*. When each of these is learned and shared by members of some group, they speak of them as cultural behaviour, cultural knowledge, and cultural artifacts. Gardenswartz et al. (2003) point out that there exist three-level culture models, which posit three cultural influences at work in corporations: personal, national, and organizational culture. Hofstede (1980b) emphasized the importance of national culture because the thinking of citizens from different nations is partly conditioned by national culture. National culture is 'a shared understanding that comes from the combination of beliefs, values, attitudes, and behaviors that have provided the foundation for the heritage of a

country' (Connerley and Pedersen, 2005). Gardenswartz et al. (2003) indicated that for the interactions within organizations, culture is a mix of personal, national, and corporate culture. Hence, it is obvious that no matter how complex and profound the definition is, culture has the potential to vary dramatically across countries between societies or even from one organization to another.

According to Adler (1997), cultural values can affect the attitude of a person, which in turn affects his or her behaviours. The concept of culture incorporates the special ways a group or society develops in order to survive and be comfortable and successful. In other words, people's culture defines their values, attitudes and behaviours. The norm for a society is the most common and generally most acceptable pattern of values, attitudes and behaviours. In a society, the cultural orientation reflects the complex interaction of values, attitudes and behaviours displayed by its members (Figure 3.1).

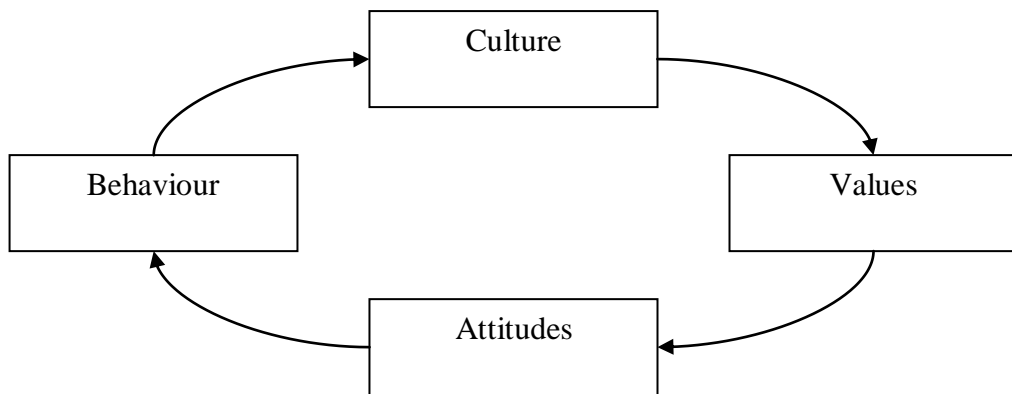


Figure 3.1 Influence of Culture on Behaviour

(Source: Adler, 1997: 16)

It is worth noting that the above framework views culture as static. Nonetheless, in an era of globalization and of international cooperation, people of differing cultural backgrounds are to get together in a variety of aspects. From this, culture has become a dynamic process, as cultural mixing is inevitable. Within the context of a workplace, such blending of cultures brings forth the latent intercultural adjustments of values and of subsequent behaviours. This is to be further discussed in later sections. But prior to that, how different cultural backgrounds shape leadership behaviours are to be presented first.

3.2.2 Leadership and Culture

Hofstede (1980a) proposed that ‘culture’ is an important variable which influences the views of leadership. Prior to the discussion of the impacts of ‘culture’ on leadership patterns, it is important to first define what is meant by ‘leadership’.

The definitions of leadership have been widely discussed over the last few decades. According to Kotter (1996, p. 25), leadership “defines what the future should look like, aligns people with that vision, and inspires them to make it happen despite the obstacles.” Bass (1990a) reviewed the conceptions of leadership in the literature, and summarized the definitions in twelve different ways. Gregoire and Arendt (2005) reported that the meanings of leadership have been evolved from a very simplistic definition of traits to a more complex process involving interpersonal relations, emotions, and learning. In a variety of models, leadership has been depicted as a social dynamic that is not only dyadic, shared, relational, strategic, global, but also complex (Avolio, 2007; Avolio et al., 2009; Yukl, 2006). Some other researchers (Chhokar et al., 2007; House et al., 2004) view leadership behaviors as one’s abilities to influence, motivate, and enable others to contribute toward the effectiveness and success of organizations, such as the accomplishment of goals (Yukl, 1994; Thomas, 2003). Such abilities resemble what DePree (1987, p. 131) defined as momentum, which

is the “feeling among a group of people that their lives and work are intertwined and moving toward a recognizable and legitimate goal.” He also opined that, leaders are responsible for effectiveness, which, unlike efficiency that could be delegated, they must address personally. In accordance with DePree (1987), effective leaders encourage different, or even contrary, opinions from fellow team members. Such empowerment of the subordinates for voicing their opinions and for broad-based action is one of the 8 stages to success in a changing environment, as proposed by Kotter (1996; 1999) and by Kotter & Rathgeber (2005).

The western theory of leadership generally divides leadership into four distinct streams, each with a dominant theoretical approach: trait (Thomas, 2003; Yukl, 1994; Stogdill, 1974), behavioral problem (Blake and Mouton, 1964; Blake and McCause, 1991; Thomas, 2002), contingency (Fiedler, 1967; Thomas, 2002), and implicit theories (Lord and Maher, 1991; Thomas, 2002). However, the majority of these leadership theories are subject to four constraints: external/internal interacting factors, interpersonal influence, organizational requirement for leadership development, and, leadership and associated activities embedded in organization (Fellows et al., 2003).

However, all these theories mentioned above proffer the understanding of leadership only from the perspectives of western nations/cultures. Whether or not the same set of theories can be applied to a workplace under a vastly different cultural setting (for instance, the Eastern culture) has been subjected to debate. Numerous studies have illustrated that leadership practices, by means of the use of superiority, power, and close supervision (Hofstede, 2001; House et al, 2004; Inglehart, 1995; Triandis, 2006; Van de Vliert, 2006; Emmerik, Euwema, and Wendt, 2008), are believed to be influenced significantly by cultural differences (Connerley and Pedersen, 2005; Porter and McLaughlin, 2006; Toor and Ofori, 2008). According to Ciulla (2003), leadership is a universal concept in that it occurs in all cultural contexts, and at the same time is open to interpretative differences and variations across multiple meaning-making and value-belief systems. Early national culture research by Hofstede (1983 and 1985) discovered that cultural values strongly influenced relationships both within and between organizational divisions. Four value-based factors were defined in analyzing culture: power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity. Although these four dimensions are very useful for diagnosing differences in outlook between people of different nationalities, these elements or dimensions of culture demonstrate the generalized cross-cultural 'etic' approach based on Western perspectives, instead of Eastern perspectives.

Further extensions and refinements of Hofstede's work (1980a and 1980b) have been conducted by other researchers (Trompenaars, 1994; Schwartz, 1994). For example, Trompenaars (1998) has identified six dimensions of cultural difference based on empirical studies. They include universalism/particularism (rules vs. relationships), diffuse/specific (the range of involvement), neutral/emotional (the range of feelings expressed), achievement/ascription (how status is accorded), face, and attributes to time. Redding (1980) also hypothesized that Easterners and Westerners have different cognitive behaviour. Another leadership study on national cultural dimensions was conducted by the GLOBE (Global Leadership and Organizational Behavior Effectiveness) Project Team. A total of nine cultural dimensions were constructed to distinguish one society from another. These have implications for managers (Javidan and House, 2001). Four new cultural dimensions were identified (assertiveness, performance orientation, humane orientation, and gender differentiation) and five of the GLOBE identified dimensions overlapped with Hofstede's dimensions (i.e. power distance, uncertainty avoidance, individualism/collectivism, future orientation, and in-group collectivism) (Connerley and Pedersen, 2005; Hofstede and Bond, 1988; and The Chinese Culture Connection, 1987).

The findings of Hofstede, Trompenaars, and Redding are important tools for categorizing cultural differences and analyzing effects of the perception of cultural conflicts, but should not be taken as facts. While the main contribution of their work is to describe and categorize cultural differences in a way that is meaningful to them as Westerners more than to Easterners, their findings categorized the cultural dimensions for diagnosing the cultural differences between Chinese and Westerners (i.e. American). People from the United States tend to place a higher value on individualism, whereas the Chinese tend to emphasize a more collective or group-oriented mentality. However, a number of scholars including Morris et al. (1998), Yamagishi et al. (1999) and Williams (1970) have argued that there is potential for cultural dimensions to change constantly. In view of this, the issue of how useful it is to have these cultural categories as ‘constants’ becomes a concern for the cross-cultural studies. Therefore, this might need to be reviewed critically again in the light of results of this study. With economic globalization, international corporate managers need to understand how enterprises are managed across diverse cultures. Also, every business has its own culture. It can be either fragmented or very cohesive. No matter weak or strong, culture has a major effect on the success of a business (Deal and Kennedy, 1982). However, conflicts of interest and of culture occur inevitably and there is no way that they can be eliminated entirely from the management scene. In the next section, the

conventional eastern/western cultural dichotomies within a business setting are to be discussed.

3.2.3 Key Cultural Attributes of the Easterners and Westerners

For conducting business research relating to cultural disparities, special attention has to be first paid to the traditional cultural dichotomies (in different aspects of management such as collectivism and individualism, power distance, task- and people-orientation) between Easterners and Westerners which are reviewed in the following sections:

Collectivism and Individualism

Collectivism and individualism are possibly the most important dimensions of cultural variations in explaining a diverse array of social behaviors (Triandis, 1995). A review of cross-cultural research revealed that one of the main dimensions of cultural variability which might have an impact on the behaviours of Easterners and Westerners in carrying out a business process in the workplace is associated with the cultural value of individualism-collectivism (for example: Brew and Cairns, 2004; Ting-Toomey & Oetzel, 2002; Neuliep, 2000; Hofstede, 1998; Gudykunst & Kim, 1997; Triandis, 1993; Matsumoto, 1991; Ting-Toomey, 1988; Hui, 1988).

Collectivism has been defined as ‘a set of feelings, beliefs, behavioural intentions, and behaviours related to solidarity, concern for others, cooperation among members of in-group and the desire to develop a feeling of groupness with other members’ (Kapoor et al., 2003:687). Adler (1997: 47) points out that collectivism is characterized by ‘tight social networks in which people strongly distinguish between their own group (i.e., in-groups, such as relatives, clans, and organizations) and other groups. People in collective cultures primarily hold common targets and objectives, instead of individual goals grounded on self-interest. A number of studies (Chan, 1963; Triandis, 1990; Tung, 1991) found that Chinese in general measure higher on collectivism as they emphasize cooperation, interdependence, and harmony. Interpersonal harmony and group orientation (collectivism) are emphasized in the traditional Confucianism (Kwan and Ofori, 2001). Personal relationships form the basis of social order and correct behaviour among the Chinese (Butterfield, 1983; and Pennett and Zhao, 1992). Continuous relationships are very important in Chinese society. These are, in part, based on family and other ties, such as clan, shared surname, home village, region, education or other shared experience (Jacobs, 1980). In making decisions, Chinese traditions emphasize ‘harmony with each other’ and the group as the optimization criterion. When seeking a resolution for differences, the Chinese tend to compromise in order to avoid any conflicts (Hsu, 1955). They are concerned with the consequences of their behaviours

on their in-group members and are more likely to sacrifice personal interest for the attainment of collective interests (Hofstede, 1983; and, Chan and Goto, 2003). In Chinese organizations, harmonious relationships between employees and employers, between the firm and its customers, and among businessmen are primarily based on honesty and integrity (Kwan and Ofori, 2001). According to Low (1998), collective responsibility stems from the tradition of distrusting formal rules and regulations, and the dislike of written contracts, both emphasizing ethical rather than legal norms of conduct. Nonetheless, due to the emphasis of 'group value', collectivists might have very different, sometimes even opposite, attitudes toward opponents (those outside the group) in conflicts. In these cases, according to Chan and Tse (2003), cultural differences could substantially damage the organization of an international construction project.

In contrast, individualism is a characteristic of cultures in which there is *'the tendency to view one's self as independent of others and to be more concerned about the consequences for one's self of a particular behaviour'* (Thomas, 2002, p.62). Waterman (1984) identifies four psychological qualities for individualism: (1) sense of personal identity, (2) striving to be one's true self, (3) internal locus of control, and (4) principled moral reasoning. Bond et al. (1985) argued that Westerners measure high on individualism as they are concerned with the relation of their behaviour to

their own needs, interests and goals more than community concerns, and tend to be less concerned with the consequences of their behaviours on people in the social environments. Chen and Partington (2004) found that the project managers in the UK considered themselves more as an individualist, whereas the project managers in China expressed a strong self-identity as a company employee (collectivist).

The distinction between collectivism and individualism, according to Hofstede's (2001) second cultural dimension, is uncertainty avoidance, which indicates the level of tolerance a culture has over ambiguity and uncertainty. A high level of uncertainty avoidance is likely to induce a comparatively more bureaucratic and controlling leadership; a more laissez-faire leadership, or transformation leadership (Shane et al., 1995), is likely to be formed in working environments with low uncertainty avoidance. On the other hand, Hofstede (2001) comments that, unlike individualists whom are concerned mostly about themselves and their immediate families, members of collectivist societies appear to rely on their organizations from an emotional standpoint and as a response, the organizations tend to assume greater responsibility for their members.

Power in Management and Power Distance

Prior to the discussion on the disparity in terms of power distance between Easterners and Westerners, the concept of power in management is to be briefly described. It is said in McClelland's pioneer publication *Power: The Inner Experience* that, as relationships between people are critical elements of an organizational structure, someone inside such organization (i.e. the management) "must pay attention to 1) getting people to work together, 2) dividing up the tasks, or 3) supervising the others' work." (McClelland, 1975, p. 253) The logical progression of such is what constitutes effective management with respect to power (and how to use such power). A later study conducted by McClelland and Burnham (1976) concludes that a top manager should possess a high need for power, i.e. a concern for influencing others. Yet, such need has to be disciplined and under control, which is used for the benefit of the institution in which the manager works. In addition, such need of power should be greater than the manager's need to be liked by the subordinates personally (also see McClelland and Boyatzis, 1982). Nonetheless, this is not always the case. In accordance with Winter (1979), the leadership motive raised by McClelland is only effective for managers in non-technical leadership capacities. Winter's viewpoint is actually supported by a recent study carried out by Chan and Chan (2005) on the leadership style of Hong Kong Chinese CEOs.

Besides the technical aspect of the tasks, disparity in culture and in value is believed to lead to difference use of power in management. One crucial dimension of such is the notion of power distance. Power distance is considered the degree of inequality in power between a subordinate and superior (Mulder, 1977). In other words, a higher power distance denotes a higher level of inequality between people of different ranks within an organizational structure, and vice versa. According to Brew and Cairns (2004), the level of communication between members of a company is primarily influenced by such dynamics in power relationship. For example, Chinese management philosophy has been known for its higher level of power distance (Scarborough, 1998), while Western managers value low power distance resulting in a more egalitarian approach (Hofstede, 1998).

For the Chinese, a critical element of their philosophy and culture is the concept of 'face', defined as a matter of maintaining one's public dignity and standing, and the 'face' components (i.e. '*Lieu*' and '*Mianzi*') refer to one's prestige attached to professional reputation, knowledge, wealth and success, in conducting business and daily management practices.. For over two thousand years in Chinese culture, 'face', grounded on the Confucian concept of filial piety, *Ren and Li*, emphasized clear social and structural relationships between superior and sub-ordinate (for instance, emperor and ministers), as well as between father and son, husband and wife, brothers,

and friends (Syu, 1994)., thus delineating and maintaining a person's social position (Fung, 1976). The application of '*Li*' has been extended to the management of organizations (Westwood, 1992) in which the head of an organization is the equivalent to the father figure in the family structure, and the employees the children (Tjosovold, 2002).

As such, unlike western management cultures in which mere contractual relationship between superiors and sub-ordinates exist, the relationship between that within the Chinese culture is more morally-based. Group solidarity, sharing duties and obligations are encouraged over personal freedom and individual preferences, and individuals within a collective are bound by affection and loyalty to one another (Chen and Partington, 2004). A direct result of this traditional practice is the greater acceptance of authority, along with hierarchy, in the Eastern culture, in comparison to that in Western culture (Leung, 1997; Smith et al., 1996). Besides, it is concluded by Bartlett and Ghoshal (2000) that personal relations are used more widely among managers in China to exchange information, negotiate with their counter-parts and accelerate decision making process compared to managers in the UK.

In summation, the characteristics of Western societies (for instance, the U.S. Western/Northern Europe, etc.) include individualistic, low power-distance,

low uncertainty avoidance and masculine. Hong Kong (and other Eastern societies) illustrates low individualism, large power-distance, low uncertainty avoidance and masculine (Hofstede, 1980). Also, in regards to cultural orientations, Western societies emphasize short-term orientation, whereas longer-term orientations appear to be the norm within Eastern societies, in accordance with Fellows, Liu and Cheung (2003). Such divergences in the fundamental values between Chinese and Western cultures provide the underlying conditions for the use of different styles in project management (Hofstede, 1998), namely task-oriented leadership and people-oriented leadership. This is to be discussed in the next section.

People-orientation and Task-orientation

According to Bass (1990a; 1990b), the disparities in management behaviours of the Chinese and Westerners can also be observed through their way of working with their subordinates, alongside individualism-collectivism and power distance; and it has been illustrated in the literature that the major distinction in management when different cultures are involved is the use of task- and people-orientation styles (Thomas, 2002; Ah Chong and Thomas, 1997; Ayman and Chemers, 1983; and Tscheulin, 1973).

On the one hand, task-oriented leaders focus on specific goals and the means to achieve them. Besides, such leadership emphasizes procedures and instructions so that the subordinates are able to work productively according to a variety of criteria set out by the leaders (Bass, 1990a; Misumi and Peterson, 1985). On the other, people-oriented leaders tend to maintain friendly and supportive relations with their followers (Misumi and Peterson, 1985).

Then, several researchers (Bass, 1990a; Misumi and Peterson, 1985; Fiedler, 1967) have stated that team members are clearly defined under a task-oriented leadership style. The objectives and the leader's desired outcomes are explained, patterns of organization and channels of communication established and ways to accomplish assignments pre-determined. Good performances are rewarded while bad performances are penalized (Bass, 1990b). In contrast, to leaders with strong people-orientation, a sense of trust in subordinates is the key. Unlike task-oriented leaders, a higher level of work flexibility is assigned to the subordinates and these leaders only need to provide general guidelines, instead of close supervisions and orders, to the subordinates (McGregor, 1960; Misumi and Peterson, 1985). Under these conditions, the interests of their employees are both broadened and elevated, as they are more aware of and accept the group's purposes and mission. They are encouraged to look beyond their

own self-interest, which is usually in the form of rewards when good performance is accomplished, for the benefit of the group (Bass, 1990b).

Lastly, under a task-oriented management structure, a project team is a temporary organization, created solely for the achievement of a specific task. Due to its temporary nature, relationships between leaders and subordinates are secondary to the task (Chen and Partington, 2004). For people-oriented management structures, however, leaders usually strive for personal relationships with the project team members. This is what Makilouko (2004) calls a 'synergy' approach in management.

In general, the literature indicates that Westerners tend to be task-oriented (Trompenaar, 1994; Harris and Moran, 1994; and Chen and Partington, 2004), while Chinese managers are comparatively people-oriented as they are concerned with both their relations with others, as well as the achievements of the team.

Communication and Conflict Resolutions

In addition to the aforesaid differences, research has further indicated that cultural differences can influence the use of different styles of communication and conflict resolution: the concept of high- and low-

context cultures (Hall, 1976, Connerley and Pedersen, 2005). It has been suggested that people in high-context cultures like Easterners emphasize indirect speech, ambiguity of expression and non-confrontational communication strategies, whereas people in low-context culture like Westerners place greater emphasis on more explicit and precise use of language for conflict resolutions (Brew and Cairns, 2004). It is argued that Chinese promote social relationships and concern for others, therefore requiring an essential politeness and diplomacy. They are likely to pay greater attention to group harmony, maintaining 'face', and relationships with all involved. Therefore, they would try to avoid direct debate or confrontation and solve conflicts quietly. By contrast, Westerners promote freedom of speech, truth, logical thinking and objectivity, leading to explicit speech (Brew and Cairns, 2004; Gao, 1998; Tang and Kirkbride, 1986; Yum, 1988). They encourage open discussions on disagreements and conflicts, when experiencing and solving conflicts, in order to solve the problems quickly (Chen and Partington, 2004; Bilbow, 1997). However, a study by Westwood & Leung, (1993) shows that Western managers are not very sensitive to face, from the perspective of Chinese employees, which may damage work and business relationships between those involved. Many Western managers do not seem to have full grasp of the significance of face and the importance of *guanxi* (relationships) in the workplace when they come to China (Belout and Gauvreau, 2004).

3.2.4 Intercultural Adjustment

Although these traditional cultural dichotomies provide stereotypical views towards the work management styles, communication and conflict resolution skills as well as power relationships of Western and non-Western cultures, recent research (Hermans and Kempen, 1998) has revealed that such dichotomies might not fully explain the changes brought about by the accelerating process of globalization and the rise in global organizational competitiveness (Hermans and Kempen, 1998; Karim, 2003). Globalization has led to a considerable number of businesses and other organizations crossing cultural boundaries (Brew and Cairns, 2004). Such development leads to an increasing number of people criss-crossing cultural boundaries and having to deal with workplaces in different cultures. Similarly, host national managers increasingly work on multinational projects and deal with culturally-diverse customers, counterparts and employees. According to Hermans and Kempen (1998), such moves draw people from different cultural orientations into close relationships. Besides, managers are likely to deploy various approaches, with respect to leadership and firm performances, in response to different cultural environments (Byrne and Bradley, 2007). These developments/adjustments have triggered a debate on the extent to which cultures around the world tend to be more ‘convergent’ or ‘divergent’ (Thomas, 2002).

Proponents of convergence argued that intensification of urbanization, and development of mass communication have sped up the formulation of a common economic orientation (Yang, 1988, and Eisenhardt, 1973) and ultimately, a consistent ideology (Kerr et al., 1960). Ralston et al. (1997) suggested that cultures will converge to the point that no difference in values, attitudes, beliefs, and behavior exists, and eventually, it leads to the adoption of Western ideological values when the economic development of a country is equated with Western capitalistic economic orientations. Empirical findings of Levin and Norenzayan (1999) reinforced Ralston et al's. argument and showed that people-oriented Easterners were as much focused on task performance and time deadline as the task-oriented Westerners. The objective of meeting deadlines is increasingly important to Easterners; possibly to some extent the host-national adopted the time efficiency techniques of their Western counterparts (Brislin and Kim, 2003). Although it has been observed in a study by Cheung and Chan (2008) that Hong Kong Chinese CEOs tend to utilize a style (the Chinese style, as stated in the article) vastly different from the conventional Western leadership orientations, convergence of leadership orientations in a workplace with prominent Eastern management philosophies has been the norm in response to globalization (Brew and Cairns, 2004). .

Apart from convergence, intercultural adjustment was conceived as a modification found in the expatriates in multicultural workplaces (Hammer, 2005; Halualani et al., 2004; Tucker et al., 2004; Savicki et al., 2004; Hermans and Kempen, 1998; Parker and McEvoy, 1993). According to Yoo et al. (2006), intercultural adjustment is the process in which one's behaviors or cognitions with respect to a different environment is altered, with the purpose of achieving the desired end goal through better interaction with the environment. Black and Gregerson (1991) pointed out that the intercultural adjustment was the degree of psychological comfort with various aspects of a host country. Ward and Kennedy (1993) classified intercultural adjustment into two levels: psychological and socio-cultural adjustment. While the former concerns stress and coping processes, the latter is based upon the learning of other cultures. Black (1988) suggested that the intercultural adjustment contains various related factors, including adjustment to job responsibilities, supervision, and performance expectations. Intercultural adjustment has been recognized as an ideal for cross-cultural success for sojourners (i.e. Guthrie and Zektick, 1967; Jones and Popper, 1972; Imahori and Lanigan, 1989) and is closely associated with intercultural communication competence (Wiseman et al., 1989). Cui and Awa (1992) stated that an expatriate can be effective at his/her job only if he or she adjusts well to the foreign cultures because the cross-cultural adjustment has a great influence on job performance. Studies by Brew and

Cairns (2004) found that Australian expatriates in East Asia modified their communicative and conflict behaviors towards the host culture when dealing with people from that culture. This was possibly the result of mindful response by the expatriates in adopting what they perceived was appropriate and effective ways of dealing with that particular cultural group (Brislin, 1981).

Nonetheless, according to Selmer (2002), the ways in coping with cultural differences could be different among cultural groups. Additionally, the impact of various coping strategies varies between expatriates from different cultures. As a result, some coping strategies appear to suit a particular cultural context more than others. In general, expatriates under similar circumstances are willing to approach problems in a more direct manner. In terms of the ways to approach these problems, Bloom et al. (1994) conclude that multicultural leaders should have characteristics such as attempts to manage international diversity, social responsibility for the employees, internal negotiation, general orientation for people, and attempts to manage between extremes to find a consensus in a multicultural environment.

Based on the literature review and the above concept, a model has been produced by the researcher to address the key leadership and management orientations between local Hong Kong Chinese and Western expatriate project managers, and the possible (intercultural) adjustments of their leadership and management principles as shown in Figure 3.2.

The model depicts a workplace which is predominantly Chinese, with local managers assumed to follow the management behaviours shown in the literature (i.e. people-oriented and high power distance). Globalization and internationalization bring forth the opportunities for the locals to both conduct business and to work with westerners, who conventionally emphasize task-oriented leadership and low power distance. However, although Hong Kong has been under western cultural influence, as a former British colony, for over 150 years, traditional Chinese culture, specifically Confucius values of *Ren and Li* as stated previously, are still prevalent in Hong Kong's society. It also applies to how Chinese management leads their project teams, at least among Chinese CEOs (Cheung and Chan, 2008). Nonetheless, the same might not be applicable to middle-level management such as project leaders, regardless of their origins. In a place where traditional Chinese and western cultures meet, adjustments in management philosophies are inevitable for both local and expatriate managers, in order to adapt to an increasingly globalized working environment. The question

is, do local Chinese managers adopt a certain degree of western leadership orientations in leading their subordinates? On the other hand, do western expatriate managers adjust their existing management styles in dealing with mostly Chinese subordinates, and to what extent? This model in particular looks at how potential adjustments in the forms of power distance and leadership orientations are at work within Hong Kong's construction companies.

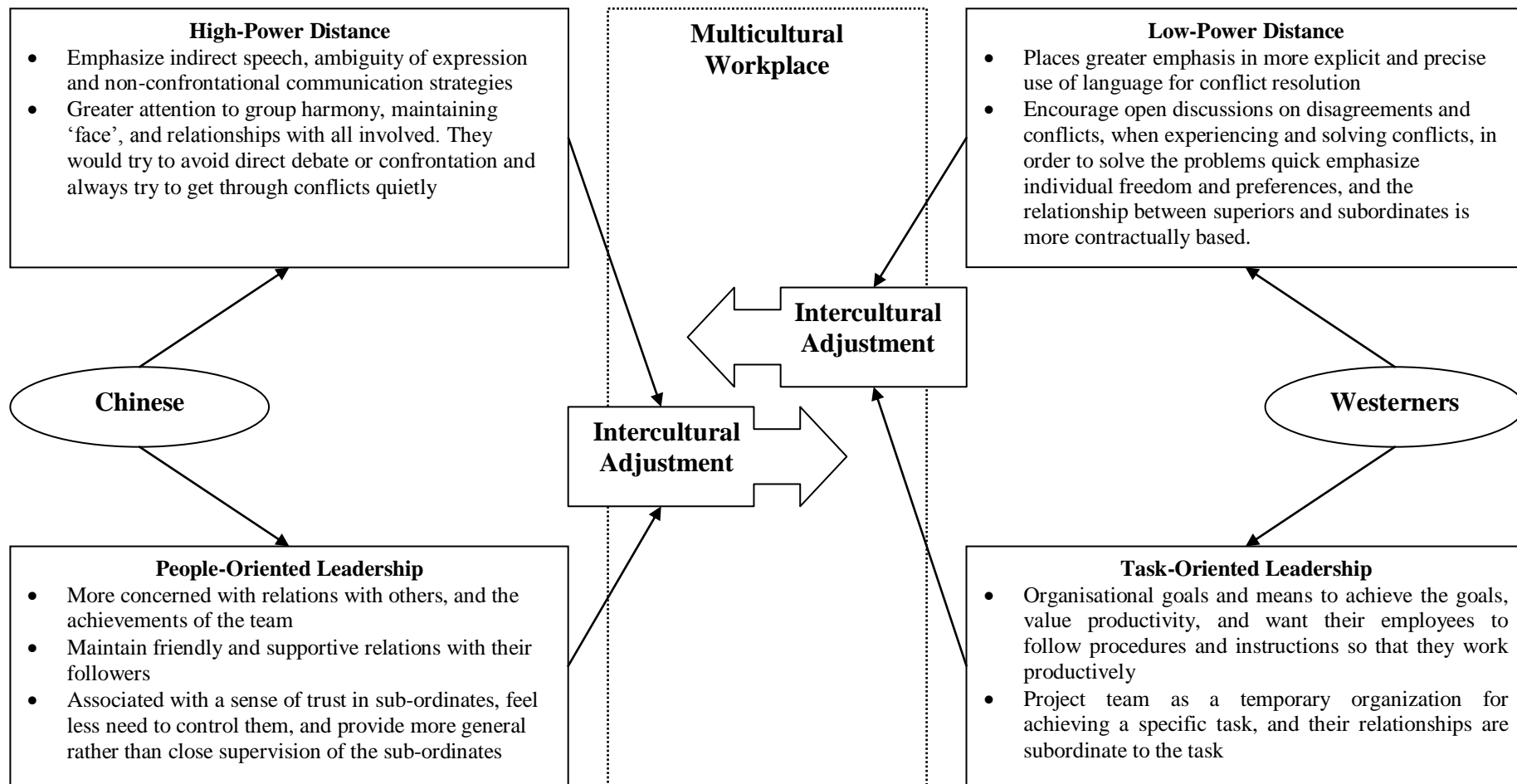


Figure 3.2: Proposed model of two contrasting leadership and management orientations and the possible intercultural adjustment between Chinese and Western expatriate project managers

3.3 PART 2

In Part 2, the literature on project success factors is to be reviewed. This study examines the relationship between different leadership/management orientations and the performance of construction projects, and the research problem is to investigate the project leadership and management styles which produce the most effective and successful project outcomes.

A review of project management literature found that some studies suggested that a manager's leadership style and competence is a key to successful performance in business. These studies have found a correlation between the leadership orientations and the performance of organizations and companies. A review of literature on project success factors has found that the role of the project manager and his/her leadership style or competence has seldom been researched in prior studies (Turner and Müller, 2005).

3.3.1 Project Management Literature on Project Success

Critical Success Factors in Project Management

According to Ogunlana et al. (2002, p. 387), it is quite a common practice to “analyze one’s previous experience and performance before a job is offered. Given the importance and demands of the project manager’s job, it is understandable that the employers will be very keen to know the performance of the projects previously managed by the prospective candidates. However, given the complex nature of the projects, a detailed evaluation of a project’s success or failure is a difficult task.” In light of this situation, prior to the investigation of the relationship between leadership orientations and project performance, it is necessary to find out what constitutes project success.

In project management, the concept of Critical Success Factors (CSF) was introduced by Rockart (1982); these are defined as factors which predict success on projects (Sanvido et al., 1992). By and large, there are five main groups of CSFs, namely human-related factors, project-related factors, project procedures, project management actions, and external environment (Chan et al., 2004). The human-related factors relate to project participants, such as project manager, client, contractor(s), consultants, subcontractor(s), supplier(s), and manufacturers, viewed by Chua et al. (1999) as key players contributing to the success of a project. Among these parties, the project

manager is a key stakeholder in a construction project, and his competence is regarded as one of the critical factors influencing various aspects of projects such as project planning, scheduling, and communication (Belassi and Tukel, 1996). Meanwhile, client-related factors, for instance, client characteristics, client type and experience, knowledge of construction project organization, project financing, client confidence in the construction team, owner's construction sophistication, well-defined scope, owner's risk aversion, client project management are perceived by some researchers as other critical success factors (Chan and Kumaraswamy, 1997; Songer and Molenaar, 1997; Dissanayaka and Kumaraswamy, 1999). Nonetheless, as a construction project involves many stakeholders other than project managers and clients, it requires team spirit, and thus team effort by the parties involved, namely owner, architect, construction manager, contractor, and subcontractors, is another important element for its successful completion (Hassan, 1995). Within the context of construction projects, seven project success factors, incorporating the aforesaid elements, have been identified by Ashley (1986), namely planning effort (construction), planning effort (design), project manager goal commitment, project team motivation, project manager technical capabilities, scope and work definition, and control systems.

However, possible issues in measuring project success, and in assessing the impact of these CSFs, have been recognized by researchers such as de Wit (1988), Belassi and Tukel (1996), Lim and Mohamad (1999), and Pinto and Slevin (1989). Generally speaking, three issues have been identified. The first issue is that project stakeholders have different perceptions as to project success and/or failure (also see Freeman and Beale, 1992). In the words of de Wit (1988), a project can be seen as successful by some but as utter failure by others.; second, the success or failure factors, as listed in previous studies, are not altogether the same; and the third reason is that the objectives and the priorities of each project stakeholder are set differently in various stages of a project and at different levels in the management hierarchy. One way of showing this obscurity of project success in previous studies is reflected in the debate of the role of the project manager as a project success factor, as shown in the following section.

Project Manager as Project Success Factor

Turner and Müller (2005) criticized the fact that rarely does the literature on project success factors specifically or overtly mention the project manager and his/her leadership style and competence. For example, in investigating the project pitfalls, Andersen et al. (1987) only suggest things that project managers might or might not do which increase the chance of

failure. The identified pitfalls are in the way that the project is established, planned, organised and controlled. In another study, Morris (1988) identifies success factors and failure factors, with different factors identified at successive stages of the project management cycles, and finds that poor leadership is only a failure factor during formation, build-up and close-out but not in execution. Pinto and Slevin (1988) and Pinto and Prescott (1988) only suggest that the thinking of the project manager was important to the project success. In general, many studies in the 1980s (Blaker et al., 1988; Pinto and Slevin, 1988; Pinto and Prescott, 1988) argue that personnel is not a success factor in construction projects. Even more recently, Mustapha and Naoum (1998) find little relationship between project success and the effectiveness of site managers in their investigation of the factors affecting the effectiveness of construction managers in the UK. It is reported by Belout and Gauvreau (2004) that, though there was a link between project success and personnel factors, the impact was insignificant.

One of the reasons as to why project managers' leadership style and competence have been overlooked in the earlier literature is that the mainstream paradigm of leaders in industries, such as the construction sector, has been both technology- and project-oriented (Pries et al., 2004). Management, which is a set of processes that "keep complicated system of

people and technology running smoothly (Kotter, 1996, p. 25),” has become the focus (Skipper and Bell, 2006), Despite the growth in the importance of leadership, the emphasis on management has “often been institutionalized in corporate cultures,” (Kotter, 1996, p. 27), and on-the-job experiences of those involved undermine their leading capabilities (Kotter, 1999). This, in addition to the conservative culture of the industry, has produced lots of project “managers”, instead of skilful project “leaders” (Toor and Ofori, 2008). Worse, from a functional standpoint, whether they are really project managers or just project coordinators entirely depends on the level of authority assigned to them by the clients (Odusami et al., 2003). A project manager is fully responsible for things from the selection of the professional team, the procurement system and contractor, to setting up the maintenance programme after commissioning. A project coordinator possesses even less delegated powers than a project manager. Regardless, both are usually not perceived as leaders (Russell and Stouffer, 2003). As a result, newer forms of leadership that emphasize innovations, exchanges of ideas and even power-sharing, might not fit into the daily operations of construction projects (Toor and Ofori, 2008).

The lack of support for the project manager as a factor of project success contradicts the preceding leadership as well as human resource management and organizational behaviour literature. Many of the

previously-cited authors asked project managers for their opinion, and it would seem that even these managers did not recognize themselves, their leadership style or their competence as a contributor to project success.

Yet, it has been argued by some researchers that some specific forms of knowledge do contribute to project success. For example, Lee-Kelley et al. (2003) set out to find out which project management knowledge areas are critical to project success and whether or not the project manager's leadership orientations influences his/her perception of control. Their study finds that there is a significant relationship between the leader's perception of project success and his/her personality and contingent experiences. Personality traits such as the inner confidence and self-belief from personal knowledge, along with experience, are likely to play critical roles in a manager's ability to deliver a project successfully (Lee-Kelley et al., 2003: 590). Also, according to Kloppenborg and Petrick (1999), project leaders have a role in developing team characteristics into a collective set of virtues including ethics, respect and trust for others, honesty, prudence, courage, responsible use and sharing of power. Moreover, it is more likely for project managers to face troubles in riskier projects that require greater trouble-shooting abilities. Such abilities to react are mainly grounded on the skills of the project team and manager (Belout and Gauvreau, 2004). Researches by Thamhain (2004), Hartman and Ashrafi (2002), Belassi and

Tukel (1996), and Skipper and Bell (2006) also suggest that the management and behavioral aspects of leaders are more significant than technical difficulties in affecting the performance of technology-intensive projects, such as those in the construction industry. From another perspective, Odusami et al. (2003) conclude that a significant relationship was observed between a project leader's professional qualification, his leadership style, team composition and overall project performance. Wang et al. (2005) evaluate the impacts of the charismatic leadership style of project leaders in Taiwan on the cohesiveness of a project team, and find that the team spirit and project performance were significantly affected by leadership. Besides the leader's personal attributes, Thamhain (2004) finds that the working environment within the project team has a significant impact on project success and therefore a role in fusing the team.

Project Success Factors and Project Success Criteria

In light of such ambiguity surrounding project success factors as illustrated in the previous section, some scholars have suggested the use of comprehensive success 'criteria', instead of success 'factors' which reflect these varying interests and views, in turn leading to a multidimensional, multi-criteria approach (Cooper and Kleinschmidt, 1987; Pinto and Mantel, 1990; Freeman and Beale, 1992). According to Cooke-Davies (2002), such a distinction between "success criteria" and "success factors" is crucial.

While the former are inputs to the management system that lead directly or indirectly to the success of the project or business, the latter are measures used in judging success or failure of a project.

Concerning project success criteria, it is defined a bit differently among researchers (Parfitt and Sanvido, 1993). For instance, Ashley et al. (1987) regard a project as successful as the results obtained are much better than expected (or normally observed) by means of cost, schedule, quality, safety, and the level of satisfaction among the participants; Tuman (1986) defines success for a project when things turn out as hoped, all project requirements are anticipated, and sufficient resources are available to meet needs in a timely manner. A relatively concise definition is provided by de Wit (1988, p. 164), in which he says that “The most appropriate criteria for success are the project objectives. The degree to which these objectives have been met determines the success or failure of a project.”

Specifically, researchers also have slightly different ideas as to what should be regarded as success criteria. For instance, Ashley (1986) identifies six project success criteria, which are budget performance, schedule performance, client satisfaction, functionality, contractor satisfaction, and project manager/team satisfaction; Sidwell’s (1983) criteria, which are very similar to Ashley’s, are time, cost, aesthetics, function and quality, client

satisfaction, and team members relationships; Freeman and Beale (1992) identify seven criteria. Five of which, according to Shenhar et al. (2002), are frequently used: technical performance, efficiency of execution, managerial and organizational implications (primarily customer satisfaction), personal growth, and manufacturer's ability and business performance; Pinto and Mantel (1990) set three project performance aspects as benchmarks for determining the success or failure of a project: 1) the implementation process, 2) the perceived value of the project, and 3) client satisfaction with the delivered project; more recently, Muller and Turner use the following as project success criteria: 1) Meeting project's overall performance (functionality, budget and timing), 2) Meeting user requirements, 3) Meeting the project's purpose, 4) Client satisfaction with the project results, 5), Reoccurring business with the client, 6) End-user satisfaction with the project's product or service, 7) Suppliers' satisfaction, 8) Project team's satisfaction, 9) Other stakeholders' satisfaction, and 10) Meeting the respondent's self-defined success factor.

According to de Wit (1988), these criteria should be divided into two types of success, project success and project management success, and not be confused with one another. On the one hand, the technical performance of the project, such as the three major objectives coined by Atkinson (1999) as the "iron triangle" or "golden triangle" -- such as completion on time,

completion within budget, completion at the desired level of quality or technical specification (Gobeli and Larson, 1987; Tukul and Rom, 2001; Xiao and Proverbs, 2003) -- should be considered project management success criteria; on the other hand, other criteria such as satisfaction of the stakeholders, for instance the clients (Jugdev and Müller, 2005) and the contribution to the strategic mission of the firm through the project (Cleland and Ireland, 2002), should be regarded as project success criteria.

3.3.2 Relationship between Project Success and Manager's Leadership

In recent years, many authors have investigated the appropriateness of leadership orientations on multicultural projects (see Turner and Muller, 2005 for detailed discussion). Generally, employees in countries with high power distance, prefer autocratic, persuasive, or the democratic majority-vote manager. Otherwise, a consultative manager, or one with decision-making traits resembling the transformational style of leadership is preferred (Hofstede, 2001). More specifically, Björkman and Schaap (1992), after studying expatriate managers in Western-Chinese joint ventures, say that expatriate managers generally adopt either a 1) Didactical, 2) Organization design, or 3) Culturally-blind management style in dealing with multicultural situations. Selmer (2002), through a

study on project management in China, suggests that the personality traits for coping with cultural differences consist of agreeableness, intellect, conscientiousness, openness/extroversion, and emotional stability. Mäkilouko (2004), in a study of the management styles of Finnish managers in joint ventures, argues that most project managers adopt task-oriented styles although they might be inappropriate in multicultural situations, and suggests that some project managers adopt two, more appropriate styles (people- and relationship-oriented). Still, the distinction in deploying these two management styles in multicultural projects lies in one's learning process of foreign cultures (Makilouko, 2004). According to Teerikangas et al. (2001), some personality traits are culturally-bound. For example, members of collectivist cultures typically behave more ethnocentrically because of their loyalty towards team members who share the same nationality (Boski et al., 1999). Also, project leaders choose to maintain or seek team division through task-oriented leadership in multicultural projects, owing to conflicts, perception defects, as well as cultural blindness. Makilouko (2004) stated that ethnocentrism is seemingly connected to a leader's task orientation and the favoured approach when it comes to multicultural team members, creating an in- and out-group structure with trustees and non-trustees in the process. Such ethnocentric management practices render the cross-cultural transfer of management processes less than successful. The findings by Chen and

Partington (2004) suggest that although both Chinese and Western Cultures (or any other combinations) are undergoing changes in an era of globalization (Chen, 1995), their respective cultural values and beliefs are not easily compromised. Instead, they are being revived and enhanced.

Although recent years have seen several empirical studies on the relationship between leadership style and project performance among building professionals or practitioners (for example: Turner and Müller, 2005; Chan and Chan, 2005; Odusami et al., 2003; Giritli and Oraz, 2004; Limsila and Ogunlana, 2008; Fellows et al., 2003; Rowlinson et al., 1993), as well as professionals in various other sectors (Madlock, 2008; Thite, 2000; Wang et al., 2005), findings from these studies are diverse. The disparity in leadership style selection between construction managers and other managers, according to Nguyen et al. (2004), is attributed to the uncertain nature of the construction industry, in addition to the projects' difficulties and dynamics, which induce problems for professionals on a daily basis. According to Harvey and Ashworth (1993), the construction industry has distinctive characteristics from other industries, in terms of its project characteristics, contractual arrangements, project life-cycle, along with environmental factors. Also, a construction project usually involves numerous organizations, sometimes even of conflicting cultural backgrounds, for a short-period of time for a specific task. When the

project is completed, it is time for the disbanding of the temporary organization. It is concluded by Giritli and Oraz (2004) that the project-based nature of the construction industry dictates the selection of managerial leadership orientations among professionals in the industry. Besides, insufficient understanding of the industry among social scientists and the lack of knowledge regarding social sciences for those within the construction industry only further add to the problem (Langford et al., 1995). As a result, little has been known about how the dynamics, in an increasingly-global and increasingly-complex sector such as the construction industry (Toor & Ofori, 2008), impact the relationship between leaders and stakeholders within a multi-cultural setting (Testa, 2009).

There has been no consensus in terms of which particular form of leadership leads to better performance within the construction industry itself, even though Odusami et al. (2003) suggested that there was a significant correlation between the preferred management style of site managers and project performance in Nigeria. For instance, the relationship-oriented leadership style was found to be more crucial than task-oriented style among construction project managers in both local projects (Ogunlana et al., 2002; Limsila and Ogunlana, 2008; Fellows et al., 2003; and among Dutch managers in Ozorovskaja et al., 2007) and in

multicultural projects (Chan and Chan, 2005). However, opposite conclusions have been reached in the literature as well (Giritli and Oraz, 2004), with the rationale being that masculine cultures such as construction are likely to be dominated by power relations and are results-oriented (Cartwright and Gale, 1995). Specifically, poor performance is associated with both low-task and low-people considerations, and high performance with high-task orientation (Lansley et al., 1974). This is further supported by some other studies, as task-oriented leadership behaviour is emphasized among site managers (Bryman, 1987) and seems more appropriate if a workplace mainly consists of subcontract labour (Bresnen *et al.*, 1986).

Some other studies point out that the better-performing site managers are more likely to prefer a combination of both people- and task-oriented leadership orientations (Odusami et al. (2003); Mustapha and Naoum, 1998; and among Lithuanian managers in Ozorovskaja et al., 2007). Yet, it is argued by Keegan and den Hartog (2004) and Muller and Turner (2007) that no single type of leadership could be demonstrated as the most effective way to achieve the best business performance. Instead, one's selection of leadership orientations is subject to the nature of the project itself (Fiedler, 1974; Crawford et al., 2005). In other words, there is no single leadership style suitable for every project situation. Instead, the selection of a particular style is subject to the complexity of the project,

skill set of team members, and phase of the project. For instance, task-oriented style (or transactional leadership) is preferable for projects that are behind schedule and budget, as well as when they are in the final stages (Thite, 2000). A similar conclusion has been reached in a study by Rowlinson et al. (1993) on Hong Kong's construction site managers, as they display not just one, but the full range of leadership behaviour styles in their practices.

Table 3.1: Summary of previous literature on leadership orientations and project performance

Author(s)	Interviewees	Findings
Bresnen et al. (1986)	Site managers in the UK and Wales	-An emphasis on relationships in site managers' leader orientations is more likely to enhance project performance than an emphasis on tasks. -Task-oriented leadership behaviour only seems more appropriate if a workplace mainly consists of subcontract labour.
Bryman et al. (1987)	Site managers in the UK and Wales	These managers have a stronger task orientation than other occupational groups who are typically located in relatively permanent organizations
Chan and Chan (2005)	Building professionals throughout Australia, Hong Kong, Singapore, and the U.K.	Transformational (relationship-oriented) leadership could augment transactional leadership (task-oriented) in producing greater amounts of performance and satisfaction.
Fellows et al. (2003)	Project quantity surveyors in Hong Kong and their subordinates	-In general, Project quantity surveyors in Hong Kong are relationship-oriented. -Specifically, the expressed preference for relationship orientation is stronger amongst contractors than consultants
Giritli and Oraz (2004)	Turkish construction managers	Authoritative (similar to task-oriented) leadership style is more frequently performed.
Keegan and den Hartog (2004)	Employees working under line managers and project managers	Although there is a significant correlation between the manager's leadership style and employees' commitment, motivation, and stress for line managers, there is no such correlation for project managers.
Limsila and Ogunlana (2008)	Construction project managers in Thailand	The transformational leadership style (relationship-oriented) has a positive association with work performance and organizational commitment of subordinates more than the transactional style (task-

		oriented).
Odusami et al. (2003)	Construction project leaders in Nigeria	The Consensus management style (high relationship/low task) is most preferred by the project leaders.
Ogunlana et al. (2002)	Construction project leaders in Bangkok, Thailand	Relationship-oriented leadership style is considered to be more important for the construction project managers than the task-oriented style.
Ozorovskaja et al. (2007)	Human Resource managers working for construction firms in the Netherlands and Lithuania.	-Dutch top managers seem to rely mostly on transformational (relationship-oriented) approaches. -Lithuanians prefer a combination of transformational (relationship-oriented) and transactional (task-oriented) leadership.
Muller and Turner (2007)	Line managers in 8 countries, including U.S., Australia, and six European nations, through a web-base questionnaire survey	Different leadership orientations are appropriate for different types of project.
Mustapha and Naoum (1998)	Site managers in UK construction firms	Site managers with high qualifications are more likely to choose a "9,9" (both high-task and people orientation) team management style.
Rowlinson et al. (1993)	Construction managers in Hong Kong	-Hong Kong managers are generally found to be much more relationship-orientated than their western counterparts -But, construction site managers display not just one, but the full range of leadership behaviour styles in their practices
Thite (2000)	Information Technology project managers	-A combination of transformational and technical leadership behaviours augment the effectiveness of transactional leadership leading to high project success. -However, task-oriented style (or transactional leadership) is preferable for projects that are behind schedule and budget, as well as when they are in the final stages.

As seen in the table above, there are inconclusive findings about the relationship between various management styles and project success within the construction industry in the literature. Hong Kong's historical development has further complicated our understanding of this particular topic. Hong Kong, before her handover to China in 1997, had been a British colony for over 150 years. Under the governance of the British, Hong Kong had not only adopted westernized business practices, but also their ideologies and values, such as rule by law, capitalist market economy, among others. However, with the vast majority of the Hong Kong populace being Chinese, conventional Chinese (eastern) cultural values were still deeply ingrained in their minds, in spite of western influences over the years. The economic and social integration between Hong Kong and the Mainland after the handover have only intensified such cultural connections. Considering this historical background, as well as the latent impact of the Mainland market on Hong Kong's economy, it is important to question if previous studies on management styles and intercultural adjustments still hold in understanding the management practices of multinational construction firms in Hong Kong.

This research aims to explore the interactions of management behaviours, including leadership orientations alongside other dimensions of management, between local Chinese project managers and expatriate

project managers in multinational construction companies under this setting. On the one hand, do Chinese managers fully adopt the western management styles despite their backgrounds, or do they combine the two management philosophies together in their practices? On the other, do expatriate project managers blend some Chinese (eastern) management philosophies in their original leadership orientations in adapting to this business environment, or do they simply ignore the cultural differences inside the workplace? A further important question is what is the relationship between leadership orientations/management aspects and project performance? Lastly, does a manager's prior overseas experience change his perception as to the aforesaid relationship? Three testable hypotheses are set specifically to address these questions. These are:

H1: There are no significant differences in terms of leadership orientations (i.e. Task Orientation and People Orientation) between local Hong Kong Chinese managers and Expatriate managers;

H2: There are no significant differences in terms of relationship cultures (i.e. Power Relationships with Subordinates and with Superiors & clients, and Communication & Conflict Resolutions) between local Hong Kong Chinese managers and Expatriate managers;

H3: The perceptions of project managers and of subordinates towards the manager's leadership orientations have no significant differences;

H4: The perceptions of project managers and of subordinates towards the manager's relationship cultures have no significant differences;

H5: There will be no differences for the project manager groups, when classified broadly by ethnicity and overseas experience, in the association between their espoused their leadership orientations and relationship culture and their assessment of project performance

H6: The relationship between leadership orientations/relationship cultures and project performance will not vary between the perceptions of project managers and of their subordinates

Further discussions of these hypotheses will be presented in the following chapter.

3.4 CONCLUSION

This chapter has discussed the concept of culture, and how one's cultural background dictates his/her ways of leading/managing projects. However, when it comes to a situation in which people of a variety of cultures join together, cultural mixing is inevitable, and to regard these cultural categories as 'constants' becomes problematic in cross-cultural studies. As discussed previously, the stark contrasts between Westerners and Chinese in various aspects of project management provide a unique opportunity for us to understand 1) if the western-based management theories are still applicable to a intercultural, yet predominantly Chinese, context; and 2) if

(and how) project managers (both Chinese and expatriates) adjust their styles of leadership when working with people from different cultural backgrounds. This study primarily focuses on task- and people-orientation, two distinctive styles of management identified with project management and conventionally believed to be employed by western managers and by Chinese managers, respectively. By studying of the linkage between leadership orientations and project performance, this research is expected to further our understanding of the significance of leadership to the success of the construction projects, as well as the intercultural adjustments at work among project managers in this rather unique business environment.

CHAPTER 4: RESEARCH FRAMEWORK & HYPOTHESES

4.1 INTRODUCTION

This chapter describes the methodology that was adopted in this research. The first part of this chapter provides a review and discussion of the philosophical aspects of research methodology. A theoretical framework is then developed from the literature findings, where the hypotheses are formulated for testing.

4.2 RESEARCH METHODOLOGY

According to Runeson and Skitmore (1999: 39), there are two meanings for '*methodology*'. The first meaning concerns the principles and procedures of orderly thought or processes applied to a particular scientific discipline, while the second meaning relates to the branch of logic that deals with the nature of such principles and processes. Hussey and Hussey (1997: 54) defined *methodology* as the overall approach to the research process, from the theoretical underpinning to the data collection and analysis. It provides the starting point for choosing an appropriate make up of theories, ideas, concepts and definitions of the topic. In this sense, all research and every

investigation has a distinct *methodology* which will vary from study to study (Edum-Fotwe *et al.*, 1996).

In choosing the research methodology, Leedy (1997) argues that research methodology is determined by two factors: *the problem for research* and *the nature of the data* which will best help answer the research problem. The type of research problem influences the choice of research methodology.

4.2.1 The Quantitative and Qualitative Paradigms

In social science or human research, the design of a research study should always commence with the selection of a research question or problem. This decision will then influence the research paradigm used in the study (Creswell, 1994:1). According to Oakley (1999: 155), paradigms are ways of ‘breaking down the complexity of the real world that tell their adherents what to do’. They help researchers to understand phenomena that advance assumptions about the social world, to improve understanding of how science should be conducted, and they tell them what legitimates problems, solutions, and criteria of “proof” (Creswell, 1994; Gioia and Pitre, 1990; Firestone, 1978; Kuhn, 1970). Phillips (1987) argues that paradigms encompass both theories and methods, although they are often contested

and they evolve and differ according to their discipline fields. A review of any standard research textbook (Blaxter *et al.*, 1996; Hussey and Hussey, 1997; Leedy, 1997; Creswell, 1994) suggests that methodologies can be split into two main research paradigms for collecting and analysing data: the *quantitative (or positivistic)*, and the *qualitative (or phenomenological) paradigms*.

The quantitative approach has been referred to as the traditional, the positivist, the experimental, or the empiricist approach (Leedy, 1997: 104). From the epistemological position, the quantitative positivist is concerned with the testing of theories, and this is best achieved through the scientific method. The positivist epistemology is based on the belief that the investigation of human behaviour should be conducted in a similar way to the way research is conducted in the natural sciences (Toulmin, 1972). Burns (1997:3) explains that quantitative or positivist research approaches are employed in the scientific empirical tradition in attempts to establish universally applicable laws and models. On the other hand, the qualitative approach has been regarded as the interpretative, the naturalistic, the constructivist, or the post-positivist approach (Leedy, 1997). The qualitative naturalist epistemology is concerned with the generation of theories. Loosemore *et al.* (1996) argue that the naturalist aims to

investigate the social world as naturally as possible, undisturbed by the researcher. According to this view, research should be carried out with sensitivity to the nature of the setting, and the primary aim should be to describe how those involved experience and perceive the actions of themselves and others (Loosemore *et al.*, 1996).

4.2.2 Philosophical Aspects of the Methodology

Creswell (1994) explains that understanding the philosophical foundation of the research is important as it improves understanding of the research designs and allows a choice of the most appropriate one to deal with a specific question. There are five important components of research philosophy, which are *ontological*, *epistemological*, *axiological*, *rhetorical*, and *methodological* aspects (Creswell, 1994:5). The philosophical basis of the two main research paradigms, i.e. positivistic and phenomenological paradigms, are summarised as follows (Creswell, 1994: 4-7; and Hussey and Hussey, 1997:48-50):

Ontology is concerned with the study of the reality. The ontological positions guide the way research questions are formulated and research is conducted. According to Hussey and Hussey (1997:49), quantitative researchers consider the world as ‘objective and external to the researcher’.

Something can be measured objectively by using a questionnaire or an instrument. For the qualitative researcher, the only reality is the one constructed by the individuals involved in the research situation (Creswell, 1994:4).

Epistemology relates to the study of knowledge. It is concerned with what is accepted as being valid knowledge (Hussey and Hussey, 1997). Positivists argue that only phenomena which are observable and measurable can be validly regarded as knowledge (Hussey and Hussey, 1997). They further believe that the researcher should maintain an independent and objective stance relative to the subject of research. In surveys and experiments, researchers attempt to control for bias, select a systematic sample, and be 'objective' in assessing a situation (Creswell, 1994). In contrast, phenomenologists view the subject matter of the social sciences as fundamentally different from the subject matter of the natural sciences. They attempt to minimise the distance between the researcher and the researched. Qualitative researchers interact with those they study, whether this interaction assumes the form of either living with/observing informants over a prolonged period of time, or actual collaboration (Creswell, 1994).

On the *axiological* issue, positivists believe that science and the process of research is value-free, detached from what they are researching, and regard the phenomena which are the focus of their research as objects (Creswell, 1994). They are interested in the interrelationships of the objects which they are studying. In contrast, phenomenologists consider that qualitative researchers have values even if they have not been made explicit. These values help to determine what are recognised as facts and the interpretations which are drawn from them.

Apart from these assumptions, the language of research ('rhetorical assumption') is also distinct within the two research paradigms. In qualitative studies, the language is personal, informal, and based on definitions that evolve during a study (Creswell, 1994). In contrast, when a quantitative researcher investigates a problem, the language should be impersonal and formal. Concepts and variables are well defined and drawn from existing theories developed in the literature which the paradigm relates to the research question or problem to be investigated. Since this study aims to investigate the management styles (people-oriented/task-oriented), among local Hong Kong Chinese and expatriate managers working in multinational construction firms in Hong Kong and their

subsequent impacts on project performance, the research problem lends itself to a positivist enquiry (or quantitative paradigm) grounded on the settled definitions and previous research in the field.

According to Creswell (1994:7), the relationship between the researcher and the researched subject, the role of values, and the rhetoric of the study has emerged a methodology. In the quantitative methodology, concepts, variables and hypotheses are chosen before the study begins and remain fixed throughout the study. The objective of the quantitative research is to develop generalisations that contribute to the theory and that enable one to predict, explain and understand some phenomenon better. These generalisations are enhanced if the information and instruments used are both valid and reliable. Quantitative research is concerned with ensuring that any concepts used can be operationalised, and described in such a way that they can be quantified (Hussey and Hussey, 1997:50). All collected data is coded and refined in such a way as to allow categorisation and quantification.

The main assumptions and features of the quantitative (positivistic) and qualitative (phenomenological) paradigms are summarised and illustrated in Table 4.1.

Table 4.1: Assumptions of the Quantitative and Qualitative Paradigms

Assumptions	Question	Quantitative (Positivist)	Qualitative (Phenomenological)
Ontological	What is the nature of reality?	<ul style="list-style-type: none"> • Reality is objective and singular, apart from the researcher 	<ul style="list-style-type: none"> • Reality is subjective and multiple as seen by participants in a study
Epistemological	What is the relationship of the researcher to that researched?	<ul style="list-style-type: none"> • Researcher is independent from that being researched 	<ul style="list-style-type: none"> • Researcher interacts with that being researched.
Axiological	What is the role of values?	<ul style="list-style-type: none"> • Value-free and unbiased 	<ul style="list-style-type: none"> • Value-laden and biased
Rhetorical	What is the language of research?	<ul style="list-style-type: none"> • Formal • Based on set definitions • Impersonal voice • Use of accepted quantitative words 	<ul style="list-style-type: none"> • Informal • Evolving decisions • Personal voice • Accepted qualitative words
Methodological	What is the process of research?	<ul style="list-style-type: none"> • Deductive process • Cause and effect • Static design-categories isolated before study • Context-free • Generalisations leading to prediction, explanation, and understanding • Accurate and reliable through validity and reliability 	<ul style="list-style-type: none"> • Inductive process • Mutual simultaneous shaping of factors • Emerging design-categories identified during research process • Context-bound • Patterns, theories developed for understanding • Accurate and reliable through verification

Source: Adapted from Creswell (1994:5)

4.3 RESEARCH MODEL AND THEORETICAL FRAMEWORK FOR INVESTIGATION

Having broadly established the literature findings as discussed in Chapter 3 and discussed the qualitative and quantitative research paradigms in the previous section, a theoretical framework for this research is developed with respect to the objectives set up for this research, which are:

- a) To investigate whether or not project managers of various ethnic/cultural backgrounds adjust their leadership orientations and relationship cultures (from the traditional Eastern-Western dichotomies in management) within multinational construction firms in Hong Kong;
- b) To explore if these managers show similarities in leadership orientations and in relationship cultures, in the event that adjustments take place
- c) To find out if project managers' own assessments of their leadership orientations (and relationship cultures) are different from the assessments of their subordinates; and,
- d) To assess the relationship between leadership orientations (and relationship cultures) and project performance, with the emphasis on the varying degrees of intercultural adjustments among project

managers derived from their previous overseas working (and/or living) experiences.

In order to address *these four objectives*, a quantitative research method is to be deployed. From an ontological standpoint, the research in this thesis investigates and identifies the leadership orientations, as well as the relationship cultures, of project managers, and the relationships between these two areas of project management and project performance in the multi-national construction firms in Hong Kong; it concerns the reality of processes in that setting rather than that constructed by the individuals involved in the research situation. In addition, from the epistemological perspective, various leadership orientations and relationship cultures, as documented in numerous project management studies, are observable and measurable which can be validly regarded as knowledge. Under this condition, the researcher should maintain an independent and objective stance relative to the subject of research; the ‘facts’ are reported impersonally; and the argument developed closely from the evidence gathered in the studies (i.e. the *axiological* perspective).

Besides the philosophical concerns, there are some practical ones behind the selection of a quantitative research method. The reason is twofold. First,

as discussed in Chapter 3, Section 3.3.1, many researchers (such as de Wit, 1988; Belassi and Tukel, 1996; Lim and Mohamad, 1999; and Pinto and Slevin, 1989) have recognized the issues both in measuring project success, and in assessing the impact of critical success factors on the eventual performance of construction projects. The paucity of standardized measures in qualitative methodologies, while providing a comparatively in-depth look at the ideas of those interviewed, makes comparisons between various parties involved in a construction project difficult. In addition, it is just as difficult to investigate the impact of elements such as intercultural adjustment in a multinational workplace, a key theme of this study. The second reason, which is an extension of the first reason, is that project stakeholders perceive project success and/or failure differently (Freeman and Beale, 1992). Within the context of this study, it is perceived that the stakeholders (i.e. project managers and subordinates) might have different perceptions not only on project success, but also on the leadership orientations and relationship cultures of the project managers. Therefore, the use of standardized, measurable (i.e. numerical) criteria, in assessing various aspects such as leadership orientations, relationship cultures, and project performance, not only renders comparisons between different parties involved possible, but also is deemed necessary for meeting the objectives set for the study.

After determining the research method and design, this study is to be divided into two parts. The first part examines and compares the leadership orientations, as well as relationship cultures, of local Chinese and Western expatriate project managers in the multinational construction firms in Hong Kong; and the second part is designed to explore and analyse the possible relationships between leadership orientations (and relationship cultures) of project managers and the performance of construction projects in which they were involved, from the perspectives of project managers and of their subordinates. The testable hypotheses of the study are to be discussed in the following section.

4.4 HYPOTHESES

The following six hypotheses are set out for testing the leadership orientations, as well as various aspects of relationship cultures, of local Chinese and Western expatriate project managers working in the multinational construction firms in Hong Kong.

The first two hypotheses (*H1* & *H2*) address the question as to whether or not there exists intercultural adjustments in the multicultural construction

workplace, by examining the leadership orientations (task-/people-orientation), as well as relationship cultures such as communication and conflict resolution (high/low-context culture), and power relationship behaviours (high/low power distance) of local Chinese and western expatriate project managers in the multinational construction companies in Hong Kong. Should intercultural adjustments indeed have taken place, it is expected that there would be no significant difference in these two areas, between these project managers, as in:

H1: There are no significant differences in terms of leadership orientations (i.e. Task Orientation and People Orientation) between local Hong Kong Chinese managers and Expatriate managers, and

H2: There are no significant differences in terms of relationship cultures (i.e. Power Relationships with Subordinates and with Superiors & clients, and Communication & Conflict Resolutions) between local Hong Kong Chinese managers and Expatriate managers

While *H1* & *H2* explore the project managers' leadership orientations and relationship culture, primarily from the managers' own perspectives, it is possible that due to their original cultural backgrounds or even their own pride (or 'face'), the managers might assess their leadership orientations

and relationship cultures in ways that are both self- and culturally-altered. Are their actual leadership orientations (and relationship cultures) the same as they perceive them to be? In order to address this issue, the perceptions of those who do not share the same self- and culturally-biased views as these managers, their subordinates, are to be introduced. Then, their views towards the managers' leadership orientations and relationship cultures are to be compared with their project managers' views for the testing of the third and fourth hypotheses (*H3 & H4*), as follows:

H3: The perceptions of project managers and of subordinates towards the managers' leadership orientations have no significant differences, and

H4: The perceptions of project managers and of subordinates towards the managers' relationship cultures have no significant differences

As discussed in Chapter 3, cross-cultural and international business research has recognized that different cultures support different sets of beliefs and practices towards management and leadership, particularly when those cultures reflect fundamentally different concepts of reality (Chen and Partington, 2004; Mäkilouko, 2004; Chan and Goto, 2003; Liang and Whiteley, 2003; and, Thomas, 2002; Loosemore and Lee, 2002; Leung and Chan, 1999; Mason and Spich, 1987; and, Hofstede, 1983). For

example, in general the Chinese are perceived as people-oriented, and are concerned with relationships, group harmony and 'face' in the workplace (Easterby-Smith et al., 1995). In contrast, Westerners are described as task-orientated, they value productivity, prefer employees to follow procedures and instructions so that they can work productively (Bass, 1990a; and, Misumi and Peterson, 1985). However, the rapid expansion of globalization and the upsurge in global organizational competitiveness has resulted in a growing number of people crossing cultural boundaries and working in a cultural environment different to that which they are accustomed to (Brew and Cairn 2004). These developments have led to an increased interconnection between cultures, but such moves have triggered academic interest in their effects on traditional cultural dichotomies (Parker and McEvoy, 1993; Herman and Kempen, 1998; and Connerley and Pedersen, 2005). Hermans and Kempen (1998) indicated that the 'conceptions of independent, coherent and stable cultures' becomes increasingly inappropriate in an increasingly interconnected world society. They further indicated that the increasing cultural connection has led to the emergence of cultural mixtures and the phenomenon of cultural hybridization. Ralston et al. (1997) suggest that cultures will converge to the point that no difference in values, attitudes, beliefs, and behaviour exists. The continuing interpenetration between the global and local further speeded up the process of developing interconnected cultures.

In the last three decades, Hong Kong has experienced rapid economic development. High demand for infrastructure development and the strong growth of the construction industry have attracted a large number of international construction companies and professionals. This has led to an increasing number of expatriates from Western countries working and interacting with local staffs, and thus formed a multicultural workplace. Prior research found that the increase in personal interactions may lead to intercultural adjustment or convergence in the multicultural workplace (Brew and Cairns, 2004). However, there has been a dearth of empirical research in local project management literature that focuses on the investigation of the impact of increasing interconnections between cultures on the traditional cultural dichotomies. In addition, although there is no lack of studies scrutinizing the leadership orientations of building professionals or practitioners (Giritli and Oraz, 2004; Fellows et al., 2003; Thite, 2000; Rowlinson et al., 1993), few studies have investigated the influence of the increase in multicultural interactions on the leadership perceptions of project leaders.

Recent years have seen several empirical studies on the relationship between leadership style and project performance among building

professionals or practitioners (for example: Turner and Müller, 2005; Chan and Chan, 2005; Odusami et al., 2003; Giritli and Oraz, 2004; Limsila and Ogunlana, 2008; Fellows et al., 2003; Rowlinson et al., 1993), as well as professionals in various other sectors (Madlock, 2008; Thite, 2000; Wang et al., 2005). However, there has been no consensus in terms of which particular form of leadership leads to better performance within the construction industry.

There are four different camps of ideas in this regard. While some studies have found that the relationship-oriented leadership style was found to be more crucial than task-oriented style among construction project managers in local projects (Ogunlana et al., 2002; Limsila and Ogunlana, 2008; Fellows et al., 2003; and among Dutch managers in Ozorovskaja et al., 2007) and in multicultural projects (Chan and Chan, 2005), some others have discovered that task-oriented style of management induces the best performance (Giritli and Oraz, 2004). In addition, the style which combines both people- and task-orientation styles is suggested by a number of studies to be the one which produce better performance (Odusami et al. (2003); Mustapha and Naoum, 1998; and among Lithuanian managers in Ozorovskaja et al., 2007). Yet, some researchers (e.g. Keegan and den Hartog, 2004 and Muller and Turner, 2007) have concluded that that no

single type of leadership could be demonstrated as the most effective way to achieve the best business performance.

There are a variety of reasons used by scholars to explain such disparity. For instance, it has been discovered that task-oriented style (or transactional leadership) is preferable for projects that are behind schedule and budget, as well as when they are in the final stages (Thite, 2000). Besides, this style of project management is also emphasized among site managers (Bryman, 1987) and seems more appropriate if a workplace mainly consists of subcontract labour (Bresnen *et al.*, 1986). In short, the project-based nature of the construction industry dictates the selection of managerial leadership orientations among professionals in the industry, as concluded by many researchers (Crawford *et al.*, 2005; Fiedler, 1974; Giritli and Oraz, 2004). Another reason is attributed to insufficient understanding of the industry among social scientists and the lack of knowledge regarding social sciences for those within the construction industry (Langford *et al.*, 1995).

As a result, little has been known about how the dynamics in an increasingly-global and increasingly-complex sector such as the construction industry (Toor & Ofori, 2008) impact the relationship between leaders and stakeholders within a multi-cultural setting (Testa, 2009). To

make the situation more complicated than it already was, there are varying degrees of intercultural adjustments among project managers. Besides working with people with different cultural backgrounds, another way for a Chinese project manager to be influenced by other cultures is through his/her prior overseas working (and/or living) experiences. This is a critical factor which is believed to provide the source for further intercultural adjustments that their Chinese counterparts without similar experiences abroad could obtain.

In response to the lack of consensus in the construction literature regarding the relationship between leadership perceptions and project performance and in how varying degrees of intercultural adjustment influence such perceptions, the final two hypotheses (*H5* & *H6*) of this study address this issue within multinational construction companies in Hong Kong, from the perspectives of the project managers and of their subordinates. The hypotheses tested are that cultural adjustment that is linked to project performance has taken place irrespective of ethnicity and experience and that it is perceived to have taken place by both managers and subordinates.

H5: There will be no differences for the project manager groups, when classified broadly by ethnicity and overseas experience, in the association

between their espoused their leadership orientations and relationship culture and their assessment of project performance

H6: The relationship between leadership orientations/relationship cultures and project performance will not vary between the perceptions of project managers and of their subordinates

4.5 SUMMARY

This chapter first described the notion of research methodology, and reviewed the two types of methodologies used in academic research: the *quantitative (or positivistic)*, and the *qualitative (or phenomenological)* paradigms. These two paradigms were then discussed in terms of their ontological, epistemological, axiological, rhetorical, and methodological aspects, followed by that of the issues of reliability and of validity.

After discussing the methodological background of academic research, the decision as to which method (i.e. quantitative or qualitative) was to be deployed for the study was discussed. Based upon the objectives set up for this investigation, it was decided that a quantitative (i.e. positivist) research method is to be used. From a ontological standpoint, the research in this thesis investigates and identifies the leadership orientations, as well as the relationship cultures, of project managers, and the relationships between

these two areas of project management and project performance in the multi-national construction firms in Hong Kong; it concerns the reality of processes in that setting rather than that constructed by the individuals involved in the research situation. In addition, from the epistemological perspective, various leadership orientations and relationship cultures, as documented in numerous project management studies, are observable and measurable which can be validly regarded as knowledge. The researcher, under this condition, should maintain an independent and objective stance relative to the subject of research. The ‘facts’ are to be reported impersonally, and the argument(s) developed closely from the evidence gathered in the studies from the *axiological* perspective.

From a practical standpoint, the issues in measuring project success and in assessing the impact of critical success factors on the eventual performance of construction projects were considered. The use of qualitative methodologies renders comparisons between various parties involved in a construction project difficult. It is also difficult to investigate the impact of elements such as intercultural adjustment in a multinational workplace, a key theme of this study. Also, project stakeholders perceive project success and/or failure (also the leadership orientations and relationship cultures of the project managers) differently. Therefore, the use of standardized and

measurable criteria (i.e. a positivist/ quantitative method), in assessing various aspects such as leadership orientations, relationship cultures, and project performance, is deemed necessary for meeting the objectives set for the study.

Once the research method used for this study had been determined, the testable hypotheses (six in total) were then discussed in the final section of this chapter.

CHAPTER 5: METHOD AND DESIGN

5.1 INTRODUCTION

This chapter focuses on the important issues to be considered in the selection of an adequate research design for the empirical study, and describes the research method and design of this study. As stated in Chapter 4, this study proposes a positivist approach as the research plan for data collection and analysis, and develops the survey method and questionnaire design.

After the objectives of research have been established in Chapter 3, the research design must then be developed. According to Zikmund (1997:48), research design is a master plan, specifying the methods and procedures for the collection of needed information and its subsequent analysis. It is considered a framework for the research plan of action. In any research, the researcher should ensure that the information collected is appropriate for solving the research problem. Researchers need to determine the type of data, the research techniques and the sampling method.

5.2 RELIABILITY AND VALIDITY

In either qualitative or quantitative research, any measure or observation taken by an instrument needs to provide an accurate assessment of the variable. In quantitative research, this requires that the measure is reliable and enables the researcher to draw inferences to a sample or population (i.e. be valid) (Creswell, 2002:180). Errors in measurement can distort the scores so that the observations do not accurately reflect reality (Hair *et al.*, 1995:8). The two key criteria for testing the value of measures are reliability and validity. Reliability is the ability of the research study to be replicated and, when replicated, generate similar results. Good measures should provide the same results each time they are used and regardless of who does the measuring. According to Martella *et al.* (1999: 64), the primary concern of quantitative researchers is the completeness and accuracy of their findings. They further argue that concepts of reliability and validity constitute not only the framework to guide the design and implementation of measurement procedures, but also the framework to judge the trustworthiness of the findings.

5.2.1 Reliability

According to Furlong et al. (2000: 66), a measurement device or procedure is considered reliable when it consistently assigns the same score to individuals or objects with equal values. Internal consistency refers to the tendency of different items to evoke the same response from any given participant on a single administration of the measurement device (Martella et al., 1999: 68). This type of reliability assessment is useful with tests that contain a series of items, intended to measure the same attributes (Furlong et al., 2000). The most popular test for inter-item consistency/reliability is the Cronbach's coefficient alpha, which is used for multipoint-scaled items. This procedure compares participants' response on each item with their responses on the other items on the test. If the items on the test are homogenous and measure a single attribute, these measures of inter-item consistency will be high. According to Sekaran (2000), reliabilities at less than 0.60 are considered poor, those in the 0.70 range are acceptable, and those over 0.80 are considered to be good.

The constructs to be tested in this research would be different leadership orientations and the project performance variables. Results for Cronbach's coefficient for inter-item consistency/reliability are provided with data analysis in Chapter 6.

5.2.2 Validity

Apart from being reliable, the measures must also be valid. Validity refers to the extent to which a measurement procedure actually measures what it is intended to measure rather than measuring something else (Leary, 2004). The typical types of validity are measurement validity, internal validity and external validity (Bryman, 2001). However, researcher errors, including faulty research procedures, poor samples, and inaccurate or misleading measurement, can undermine the level of research validity (Hussey and Hussey, 1997). The precision of measurement and the ability to be able to repeat experiment reliability are important in the establishment of validity, though in the positivist paradigm there is often a danger that validity will be very low (Hussey and Hussey, 1997:58).

Content validity (Furlong et al., 2000) ensures that the items of the test accurately represent the concept being measured. The more the scale items represent the domain or universe of the concept being measured, the greater the content validity would be. Content validity is a function of how well the dimensions and elements of a concept have been delineated. The measuring instruments have to be carefully designed to ensure that the questionnaires include an adequate set of representative items that tap into concept and that the questionnaire responses had content validity prior to

the pilot study. In this study, content validity has been maintained by employing elements of existing instruments, which have been tested and shown to be valid.

5.3 SURVEY DESIGN

5.3.1 Define the Target Population

In this research, the survey design consists of the six procedures. The first procedure defined the target population for this study, as well as the correspondent sampling method. Then, the questionnaire was to be designed and developed. In the third stage, a pilot study was conducted and subsequently reviewed as per the requirements by the Ethics Committee of the Curtin Business School. Having conducted the pilot study and reviewed the original questionnaire, it reached the fourth procedure in which revisions were made for the questionnaire. After that, the procedure of data collection took place; and the last procedure consisted of the processing and analysis of data, the interpretation and reporting of survey findings (See Figure 5.1).

Since this research aims at the investigation of whether cultural adjustments in terms of management styles took place in a multicultural workplace in construction firms of Hong Kong, only multinational

construction companies, with construction projects managed by a mix of local Hong Kong Chinese and Western expatriate project managers, were invited to take part in the research. Construction firms that are solely managed by local Hong Kong Chinese managers were excluded. Five of the biggest construction firms in Hong Kong were originally selected for this study, including Gammon Construction Limited, Hip Hing Construction, Dragages, Lighton Construction (Asia) Limited, and China State Construction Engineering Corporation Limited. The first four firms accepted the invitation, and participated in this survey. Together, these four construction companies comprise about 50% market share of Hong Kong's construction industry, which can be said as a good representation of the industry in general.

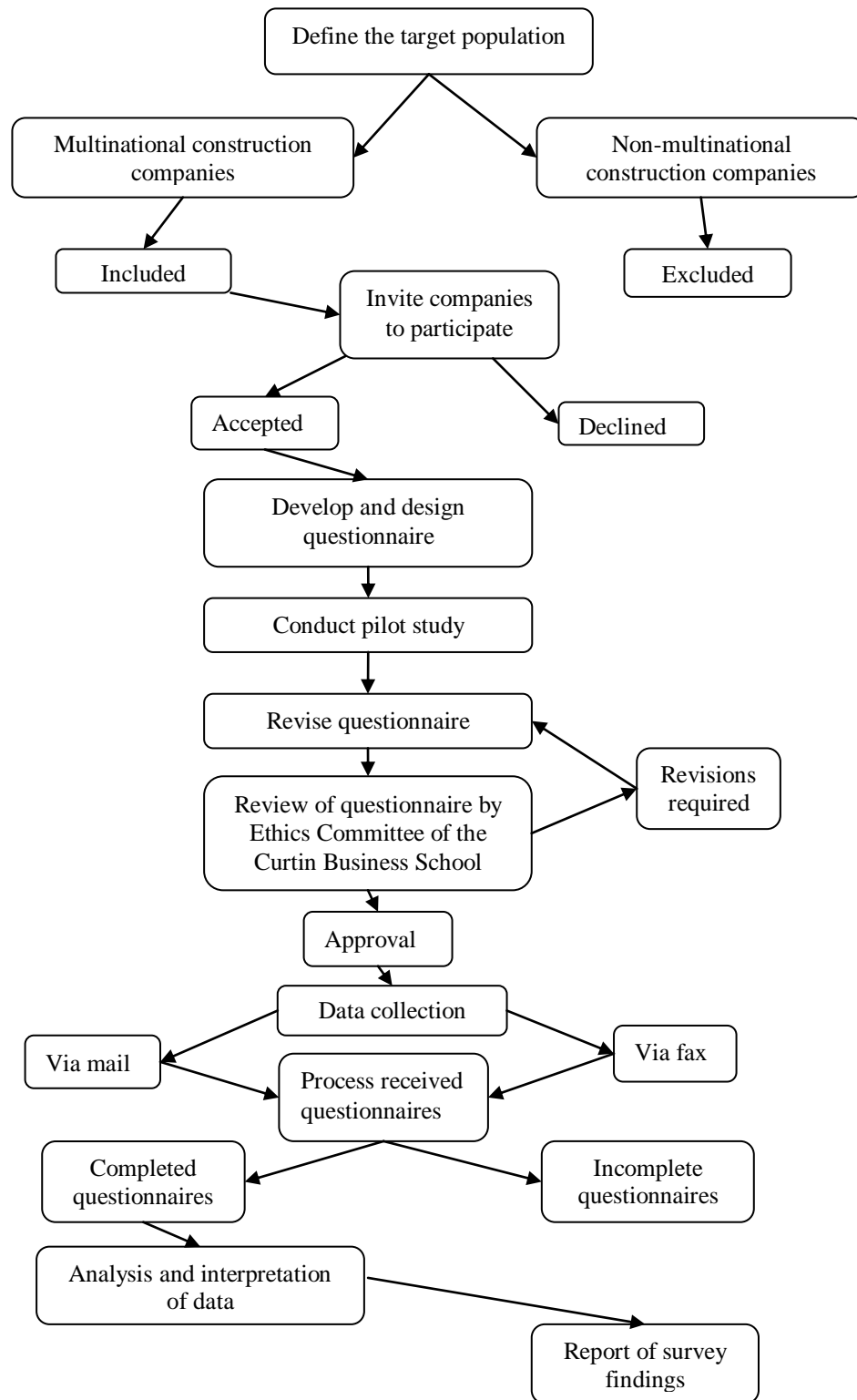


Figure 5.1: Survey Design for the Research

5.3.2 Design of Survey Questionnaires

For this research, two survey questionnaires were designed: one for project managers and the other for team members (subordinates).

Survey Questionnaire for Project Managers

The project managers' questionnaire consisted of two sections. The first section contained statements describing project managers in aspects such as "General Leadership Style", "Communication and Conflict Resolution", "Dealings with Subordinates/ Project Teams", "Dealings with Sub-contractors", as well as "Dealings with Superiors or Authorities (i.e. clients)". This was constructed based on prior empirical studies and literature (for example: Chen and Partington, 2004; Brew and Cairns, 2004; Chan and Goto, 2003; and, Kapoor et al., 2003). The statements included in the questionnaire for project managers are shown in the table below.

Table 5.1: Statements included in the original survey questionnaire for project managers (Leadership Orientations and Relationship Cultures)

Aspects of Project Management	Statements included
General Leadership Style	<ul style="list-style-type: none"> -Meeting project time deadlines and ensuring efficient task performance are more important than maintaining a friendly and supportive relationship with people that I work with. - I have strong concern for the team's goals and the means to achieve the goals -To me a project team is more a temporary organization for achieving a specific task. -I believe project tasks can only be accomplished if close relationships which are based on moral integrity within the project team are achieved. -Team achievement is more important than my own achievement.
Communication and Conflict Resolution	<ul style="list-style-type: none"> -I'd rather say "No" directly and forthrightly than risk being misunderstood -I'd rather use indirect speech codes to avoid conflicts with others -I openly express my feelings and emotions and show my disagreement with others in work. -I avoid an argument even when I strongly disagree with my team members. -I believe negotiation is a key to maintaining a good relationship and ensuring avoidance of conflict. -I believe that a good relationship is more important than a good contract to ensure avoidance of conflict.
Dealings with Subordinates/ Team members	<ul style="list-style-type: none"> -I emphasize hierarchy with my sub-ordinates. -I value long term cooperation and emphasize the need to maintain harmony with my sub-ordinates. -I feel no need to control the followers of my team. -I provide more general rather than close supervision of my sub-ordinates. -I like to confront issues up-front when dealing with sub-ordinates. -I do not like it if my sub-ordinates disagree or fail to respect my decisions. -I treat my sub-ordinates as friend-like, with respect, equality and trust.
Dealings with Sub-contractors	<ul style="list-style-type: none"> -I emphasize hierarchy with my sub-contractors. -I value long-term cooperation with sub-contractors for mutual benefits. -I like to confront issues up-front when dealing with sub-contractors. -I do not like it if my sub-contractors disagree or fail to respect my decisions. -I treat sub-contractors with respect, equality and trust.
Dealings with Superiors/Clients	<ul style="list-style-type: none"> -I emphasize hierarchy with the superiors/ the person in authority. -I consider the client as the 'boss' of the project rather than the 'provider' of project funds. -To me, making my superiors/ the person in authority happy is relatively more important than keeping them informed. -I consider it is important to develop both working and

	<p>personal relationships with my superiors/ the person in authority rather than keeping it at the level of working relationship alone.</p> <p>-I value long term cooperation with my superiors/ the person in authority for mutual benefits</p> <p>-I emphasize the need to maintain harmony with my superiors/ the person in authority for mutual benefits.</p> <p>-I am concerned to protect the 'face' of my superiors/ person in authority.</p> <p>-I like to be accurate when I communicate with my superiors/ the person in authority.</p> <p>-When I disagree with my superiors/ the person in authority, I express my disagreement.</p>
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The second section of the survey asked project managers of their evaluation of the performance of a specific construction project in which they were involved. The success criteria were developed from construction performance studies (Belout and Gauvreau, 2004, Cox et al., 2003, and Dvir et al., 2003), and took into account both project success criteria and project management success criteria as suggested by de Wit (1988). Seven statements were included for the managers' assessment, the first two of which being project success criteria and the remaining five being project management criteria (Table 4.2).

Table 5.2: Statements included in the original survey questionnaire for project managers (Project Performance)

	Statements included
Project Performance	<ul style="list-style-type: none"> -Project cost objectives were met -Profit margin objectives were met -Project schedules were adhered to -There were no quality problems related to project outputs -Accidents are avoided on site -The project was managed so as to satisfy the interests and challenges of the members of the project team. -Clients were satisfied with the project performance

As for the ranking of these statements, five-point Likert scales, arguably the most widely-used scale for survey research studies, facilitate the quantification of responses so that statistical analysis could be undertaken and differences between participants could be observed and generalized (Abdel-Kader, 2001). The reason for the selection of 5-point scales, rather than, say, 4- or 6-point scales, is that the use of 5-point scales allows the respondent to take a more neutral position in some of the questions, while the same cannot be said for the other two forms. In addition, even though 5-point and 7-point scales have been the most frequently-used scales in questionnaire research studies (Dawes, 2008), it is less time-consuming for the interviewers to read out all the choices, and for the respondents to complete the questionnaire. For the assessment of project managers' leadership orientations and relationship cultures, the five scales are "Never true (1)", "Seldom true (2)", "Occasionally true (3)", "Frequently true (4)", and "Always true (5)"; and for that of their project performance, the

respective scales are “Not achieved (1)”, “Minority achieved (2)”, “Partially achieved (3)”, “Majority achieved (4)”, and “All achieved (5)”.

Survey Questionnaire for Subordinates

To collect the data regarding staff perceptions of their project managers, the project managers interviewed were asked to provide the names of as many as five (5) of their subordinates involved in the project as stated in the questionnaire. Then, these subordinates were invited and asked to complete another questionnaire (i.e., a team member questionnaire). The design and questions of the subordinate survey were by and large similar to the project manager survey, but questions which are subjective in nature or unperceivable to subordinates were excluded. The statements included in the survey for subordinates, also using the five-point Likert scales, are illustrated in the table below (Table 4.3).

Table 5.3: Statements included in the original survey questionnaire for project managers (Leadership Orientations and Relationship Cultures)

Aspects of Project Management	Statements included
General Leadership Style	<p>-My manager is more concerned with meeting project time deadlines and ensuring efficient task performance, than maintaining a friendly and supportive relationship with people that he/she works with.</p> <p>-My manager has strong concern for the team's goals and the means to achieve those goals</p>
Communication and Conflict Resolution	<p>-My manager would rather say "No" directly and forthrightly than risk being misunderstood</p> <p>-My manager would rather use indirect speech codes to avoid conflicts with others</p> <p>- My manager openly expresses his/her feelings and emotions and shows his/her disagreement with others in work.</p> <p>-My manager avoids an argument even when he/she strongly disagrees with my team members.</p> <p>-My manager believes negotiation is a key to maintaining a good relationship and ensuring avoidance of conflict.</p>
Dealings with Subordinates/ Team members	<p>-My manager emphasizes hierarchy with me and other team members</p> <p>-My manager does not closely control me and my colleagues in our team. He/she provides general rather than close supervision of me and other colleagues</p> <p>-My manager respects decisions made by the majority in the team under his/her supervision.</p> <p>-My manager values long term cooperation and emphasize the need to maintain harmony with me and our team members</p> <p>-My manager likes to confront issues up-front when dealing with me and our team members.</p> <p>-My manager does not like it if our team members and I disagree or fail to respect his/her decisions</p> <p>-My manager treats me and our team members as friend-like, with respect, equality and trust.</p>
Dealings with Sub-contractors	<p>-My manager emphasizes hierarchy with the sub-contractors.</p> <p>-My manager values long-term cooperation with sub-contractors for mutual benefits.</p> <p>-My manager likes to confront issues up-front when dealing with sub-contractors.</p> <p>-My manager does not like it if the sub-contractors disagree or fail to respect my decisions.</p> <p>-My manager treats sub-contractors with respect, equality and trust.</p>
Dealings with Superiors/Clients	<p>-I emphasize hierarchy with the superiors/ the person in authority.</p> <p>-I consider the client as the 'boss' of the project rather than the 'provider' of project funds.</p> <p>-To me, making my superiors/ the person in authority happy is relatively more important than keeping them informed.</p> <p>-I consider it is important to develop both working and</p>

	<p>personal relationships with my superiors/ the person in authority rather than keeping it at the level of working relationship alone.</p> <p>-I value long term cooperation with my superiors/ the person in authority for mutual benefits</p> <p>-I emphasize the need to maintain harmony with my superiors/ the person in authority for mutual benefits.</p> <p>-I am concerned to protect the 'face' of my superiors/ person in authority.</p> <p>-I like to be accurate when I communicate with my superiors/ the person in authority.</p> <p>-When I disagree with my superiors/ the person in authority, I express my disagreement.</p>
Project Performance	<p>-Project cost objectives were met</p> <p>-Profit margin objectives were met</p> <p>-Project schedules were adhered to</p> <p>-There were no quality problems related to project outputs</p> <p>-Accidents are avoided on site</p> <p>-Clients were satisfied with the project performance</p>

In order to identify the responses from project managers and their project teams, an ID number was assigned to each team member and project manager. The matching of project managers and project teams were to be carefully administered, according to the names appearing on the project organization chart.

5.3.3 Pilot Study and Review of Questionnaire by Ethics Committee

Prior to the distribution of questionnaires, the first versions of the questionnaires were pre-tested via interviews with selected project managers along with their subordinates. These interviews served two purposes, which were 1) to pilot the questionnaire before it being sent out officially for the investigation, and 2) to ensure the suitability and

comprehensibility of the questionnaires. It aims to ensure that every question was stated appropriately so that respondents could clearly understand the concepts and questions. A debrief was given to the respondents to ensure that the questions are to be neither misinterpreted nor misunderstood. By the end of this consultation process, improvements were made to both questionnaires, based on the comments of interviewees. In the finalized questionnaire, a number of statements in the *Leadership Style* section were removed from the earlier version, for instance statements that asked the managers whether or not they “preferred to be self-reliant rather than depended on others in work”, “considered themselves as a manager of the project more than an employee of the company”, and “worked for company’s benefits more than their own career achievements and job satisfactions”. Added to these removals was the combination of two statements in the section of *Dealing with Superiors or Authorities* into one: “I valued long term cooperation with my superiors/the person in authority for mutual benefits” and “I emphasized the need to maintain harmony with my superiors/ the person in authority for mutual benefits”. The amended questionnaires (Appendices 16-17) were then prepared for data collection. Prior to conducting the actual research, the questionnaires were also passed to the Ethics Committee of the Curtin Business School for approval to ensure that it would conform to their ethical standards and abided by their guidelines.

5.3.4 Data Collection and Procedure

With the questionnaires revised and approved by the Ethics Committee, the data collection stage commenced. To search for industry participants, an invitation letter was prepared and mailed to the executives of the four selected multi-national construction firms in order to obtain their approval and assistance to assign their project managers for participating in this survey.

Participants were assured that their survey responses would be confidential and anonymous. Each questionnaire was marked with an identity code so as to allow easy matching between subordinate's ratings with those of his/her immediate project managers.

The questionnaires were distributed by mail and by fax. The response rates for managers and for subordinates were 58% and 59.6%, respectively. The data collected were then analysed using a positivist approach. All survey data collected were examined and analysed using a standard version of the Statistical Package for the Social Science (SPSS[®]).

5.4 SUMMARY

While Chapter 4 discussed the research paradigms, their philosophical aspects, and the rationale behind the use of the quantitative method for this study, this chapter concentrated on the issues regarding data collection and survey design. It began with the discussion of two aspects which are critical in the representativeness of research: validity and reliability.

Then, the different stages of the data-collecting procedures were described. First, the target population was decided to be project managers working in multinational construction companies in Hong Kong. This was followed by a presentation of the design of survey questionnaires for both project managers and for subordinates, the statements included, and the reason behind the use of five-point Likert scales. Then, the subsequent processes of pilot study and of the Ethics Committee review of the original questionnaires were described. Once these stages were cleared, the process of data collection (i.e. how these surveys were distributed and how the completed questionnaires were processed) was described.

CHAPTER 6: DATA ANALYSIS AND RESULTS

6.1 INTRODUCTION

This chapter analyses the data collected from the survey questionnaires as discussed in Chapter 5. The demographic data is first presented, followed by a discussion of the descriptive statistics for the research data. Then, the hypotheses developed for this study (also see Chapter 4) are to be tested. Lastly, the findings of the research are discussed.

6.2 DEMOGRAPHIC INFORMATION

The sample of project managers for this research was selected from four multinational construction firms currently operating in Hong Kong. This sample consists of a total of 80 project managers (45 Chinese managers and 35 Western expatriate managers) and 111 project team members (59 of whom worked under Chinese project managers and the remaining 52 under expatriate managers), in Hong Kong-based construction projects. Given that about 350-400 project managers are currently working in Hong Kong's construction industry, the sample size (approximately 20 per cent of the population) provides an appropriate representation of local Chinese and expatriate project managers in Hong Kong. The response rates in the

present study were affected by the reduced number of multi-national construction companies and expatriate project managers operating in Hong Kong as a result of the major construction recession in Hong Kong.

Other studies on leadership in construction have employed similar or smaller survey samples. For example, Giritli and Oraz (2004) invited a total of 43 construction professionals in their study of leadership orientations of managerial personnel in Turkey's construction industry; Rowlinson et al. (1993) included a sample of 28 design team leaders and 29 construction site staff in Hong Kong to investigate the local construction leadership orientations with their Western counterparts. In his study of leadership orientations of Finnish project managers, Mäkilouko (2004) included a sample of 47 project managers in his study. The demographic information of managers in the sample is illustrated in Appendix 1

The majority (57.6%) of the respondents are between 41 and 50 years old; 28.7 percent were 51 or older while only 13.7 percent were 40 and younger. The vast majority of these managers (70%) had more than 20 years' experience in the construction field suggesting that they are highly-experienced. In addition, 87.5% of these managers have obtained at least a Bachelor degree.

Regarding the managerial position, the demographic information revealed that 22.5% of them are at the executive management level, while senior management was 46.2% and middle management 27.5%.

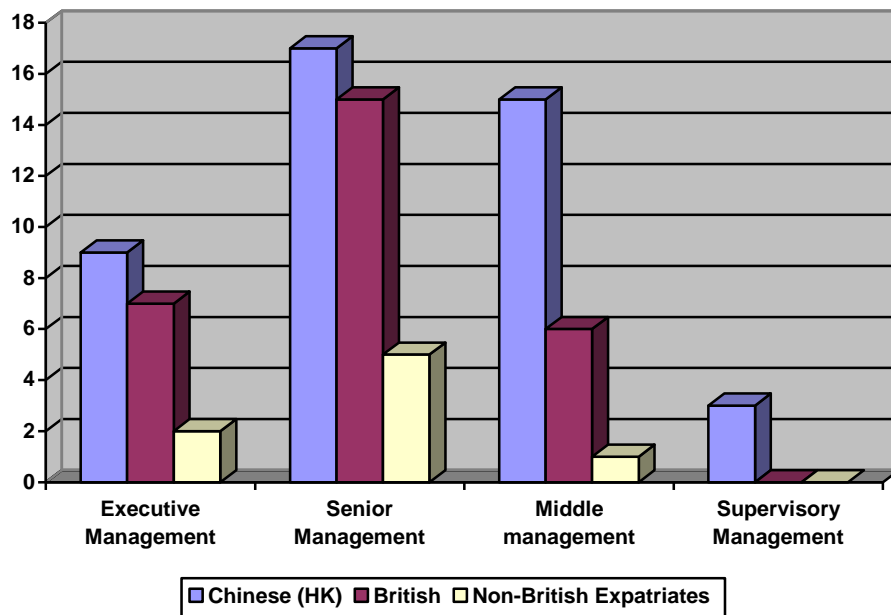
Table 6.1: Distribution of managers' position in their company

Manager's Position	Number of Managers	Percentage
Executive management	18	22.5
Senior management	37	46.2
Middle management	22	27.5
Supervisory management	3	3.8
Total	80	100.0

Of the 36 Western expatriate managers, 28 are from the U.K. and the remaining 8 from other nations (2 French, 2 Australian, 1 Swedish, 1 Central European, and 2 from other nations). These expatriate managers have been working in the construction industry, ranging from 6-28 years.

The characteristics of project managers in the sample are further investigated by means of crosstab analyses (see Figures 6.1a-e). First and foremost, in terms of managers' position in their respective companies, 26 out of 44 local Chinese managers are either senior management or executive management, as are 22 out of 28 British project managers; and besides the lone Swedish manager, all other non-British expatriate managers are either senior management or executive management.

Figure 6.1a: Position of project managers in company by ethnicity



In terms of project managers' positions by age, the crosstab analyses reveal that those in executive management positions are at least 41 years old or above. The largest proportion of senior managers and middle managers, as well as all of the supervisory project managers, are between 41 and 50 years old. In short, the age distribution of managers by level is as would be expected, with executive management more skewed to the older age groups than senior and middle management.

With regard to managers' educational attainment by ethnicity, 43.2% of local Hong Kong Chinese managers have obtained master degrees, which is higher than that of expatriate managers as a whole (36.1%). The majority

of master degree-holding managers are between 41 and 50 years of age (71.9%). Meanwhile, the age of bachelor degree-holding managers is quite evenly distributed between 36 and 55 years. However, all managers under 41 years held a degree or above.

Concerning managers' experience in the construction industry (Table 6.2b), the findings indicate that 72.7% of local Hong Kong Chinese managers possess more than 20 years of experience, as do 75% of British expatriate managers. As far as their overseas working/living experience is concerned (Table 6.2c), more than half of the local Chinese managers do not have overseas experience. Even for those who have had previous overseas living/working experience, the duration of that experience for the vast majority of them is less than 10 years (18 out of 20, i.e. 90%). Of expatriate managers, the vast majority of them have had less than 15 years of working/living experience in Hong Kong (30 out of 36 expatriate managers, or 83.3%). As might be expected, given the history of Hong Kong, British expatriate managers had the most experience of living and working in Hong Kong. All expatriates with more than 10 years experience were British.

Figure 6.1b: Project managers' experience in the construction industry by ethnicity

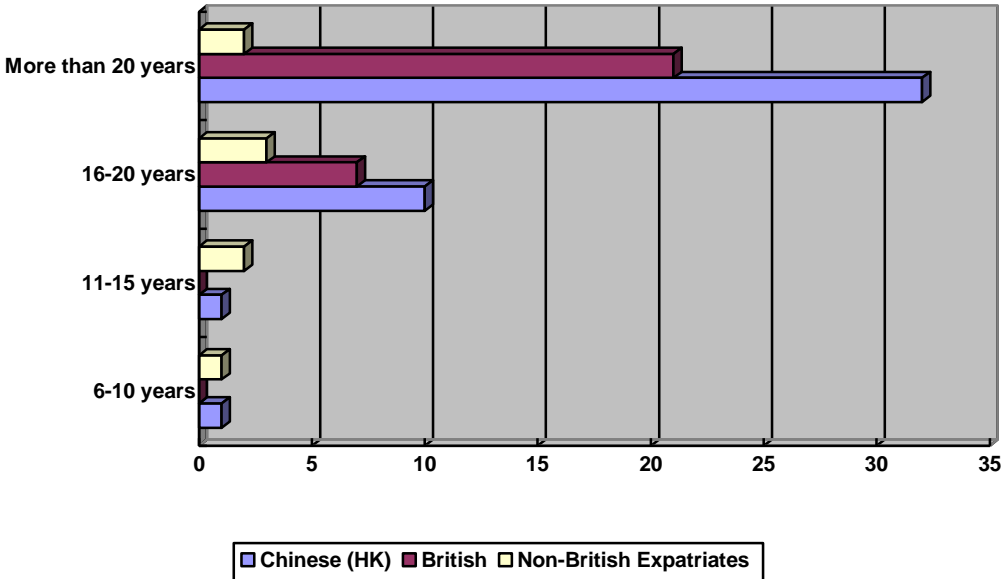
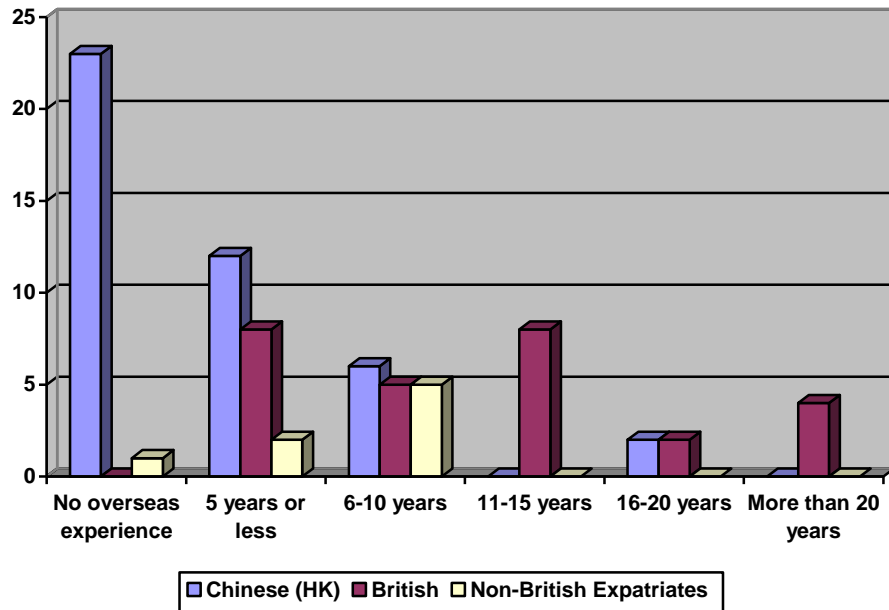
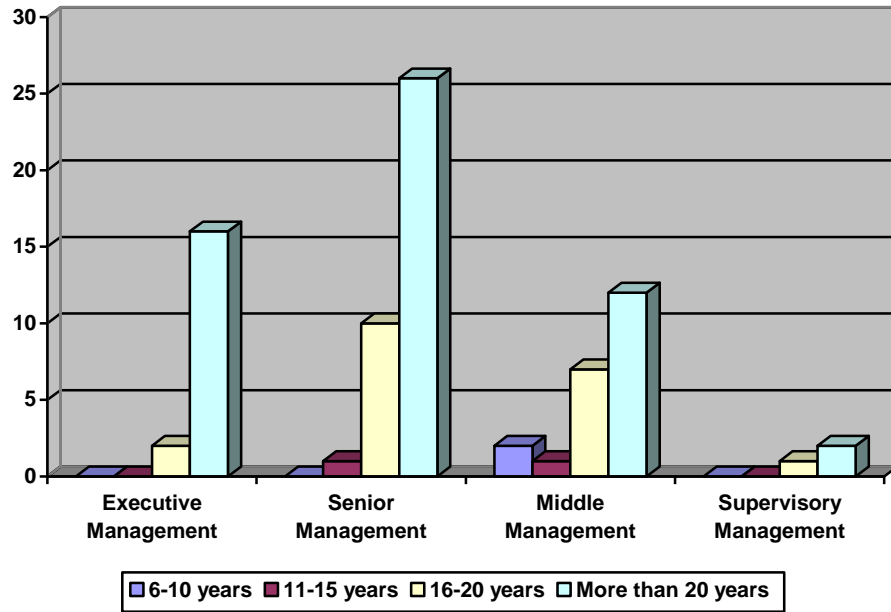


Figure 6.1c: Project managers' overseas working/living experience by ethnicity



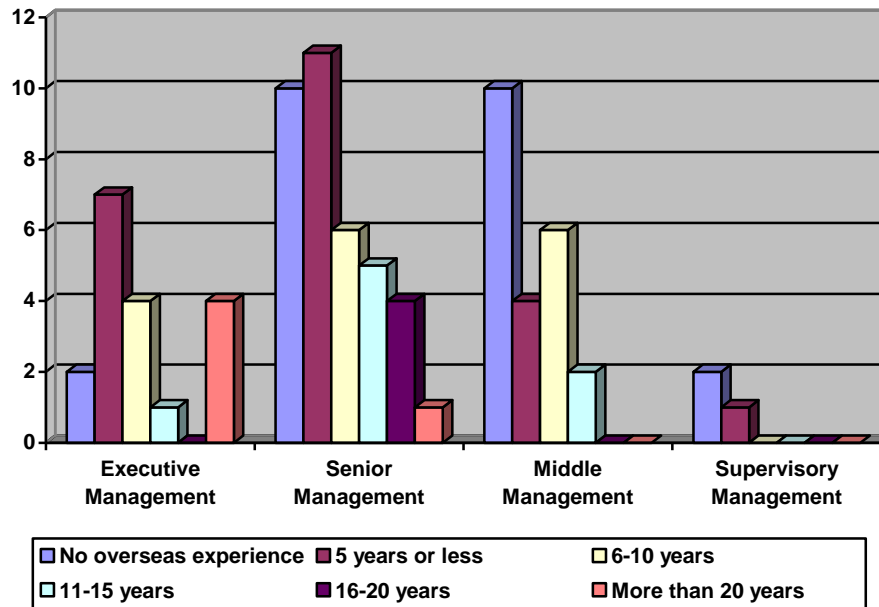
With regard to managers' position in the company by their experience in the construction industry, the table below illustrates that those managers mostly have had more than 20 years of working experience within the construction industry, regardless of their current position in their respective companies. This is particularly the case for executive management, as 88.9% of them have worked in the industry for at least 20 years.

Figure 6.1d: Project managers' position in company by working experience in the construction industry



Lastly, in terms of managers' position in their respective companies by previous overseas living/working experience (Figure 6.1e), the results point out that 88.9% of executive managers have had up to 20 plus years of overseas experience, and 73% of senior managers have had similar experiences aboard. Of middle managers and supervisory managers, none of them have had more than 15 years of prior experience in foreign countries.

Figure 6.1e: Project managers' position in company by overseas experience



6.3 DEFINING LEADERSHIP ORIENTATIONS & RELATIONSHIP CULTURES

In order to discuss whether or not there has been intercultural adjustment by project managers working in multinational construction companies in Hong Kong (*HI*, as discussed in Chapter 4), and how project managers behave in their leadership orientations (i.e. task-orientation and/or people-orientation) and relationship cultures (such as Communication & Conflict Resolutions, Power Relationship with Subordinates/Subcontractors, and Power Relationship with Superiors), five indices are created, grounded on

the statements depicting these different dimensions of project management in the questionnaire survey.

Since these indices are based upon the rankings of those statements, which are interval variables assumed to be continuous in nature (from 1 to 5), the resultant indices are therefore continuous variables as well, with a range between 1 and 5. For the computation of those indicators, separate factor analyses are to be carried out in order to define representative indices for the two aspects of leadership, and for the three dimensions of management among these project managers.

The purpose of factor analysis is to detect structure in the relationships between variables (StatSoft Electronic Statistics Textbook, 2010). In other words, this analysis aims for classifying variables. In this study, the Principal Components Analysis is used for the aforesaid task. In the questionnaire survey, even though managers (and subordinates) were being asked questions concerning a variety of topics that relate to their management styles, the results of some of the questions are highly related to one another, to the point where these questions are essentially referring to things of similar nature. As a result, the Factor Analysis is capable of extracting these variables and combining them into one factor (i.e. the

principal component) that is representative of a particular dimension (or concept), for instance leadership orientation.

The decision relating to the number of variables that should be extracted in order to create those principal components relies on the resultant eigenvalues. Usually, components with eigenvalues higher than 1 are retained and considered; this is known as the Kaiser Criterion (1960). Amongst those components, the one that explains the highest amount of variances (Factor 1) is selected as the representative factor for the five management styles indicators. For the selection of variables inside the component, those that have correlations of higher than 0.3 are grouped together in equal weighting in the formation of the five finalized management style indices (i.e. the average value of managers' rankings for them; see Appendices 1-4 for further details).

Table 6.2: Statements to be included for the computation of management style indices for project managers

Leadership Orientation Index	Statements included according to Factor Analysis
Task Orientation (TO)	<p>II.1) Meeting project time deadlines and ensuring efficient task performance are more important.</p> <p>II.3) To me a project team is more a temporary organization for achieving a specific task.</p> <p>II.4) I believe project tasks can only be accomplished if close relationships which are based on moral integrity within the project team are achieved.</p>
People Orientation (PO)	<p>III.2) I value long term cooperation and emphasize the need to maintain harmony with my sub-ordinates.</p> <p>III.3) I feel less need to control my subordinates.</p> <p>III.7) I treat my sub-ordinates as friend-like, with respect, equality and trust.</p> <p>III.9) I value long-term cooperation with sub-contractors for mutual benefits.</p> <p>III.12) I treat sub-contractors with respect, equality and trust.</p>

Relationship cultures Index	Statements included according to Factor Analysis
Communication and Conflict Resolution (CCR)	<p>II.7) I'd rather use indirect speech codes to avoid conflicts with others</p> <p>II.9) I avoid an argument even when I strongly disagree with my team members</p> <p>II.10) I believe negotiation is a key to maintaining a good relationship and ensuring avoidance of conflict.</p> <p>II.11) I believe that a good relationship is more important than a good contract to reduce conflict.</p>
Power Relationship with Team members/Sub-contractors (PRSS)	<p>III.1) I emphasize hierarchy with my subordinates.</p> <p>III.5) I like to confront issues up-front when dealing with subordinates.</p> <p>III.6) I do not like it if my subordinates disagree or fail to respect my decisions.</p> <p>III.8) I emphasize hierarchy with my sub-contractors.</p> <p>III.10) I like to confront issues up-front when dealing with sub-contractors.</p> <p>III.11) I do not like it if my sub-contractors disagree or fail to respect my decisions.</p>
Power Relationship with Superiors/Clients (PRCA)	<p>III.13) I emphasize hierarchy with the superiors/ the person in authority.</p> <p>III.14) I consider the client as the 'boss' of the project rather than the 'provider' of project funds.</p> <p>III.15) To me, making my superiors/ the person in authority happy is relatively more important than keeping them informed.</p> <p>III.17) I value long term cooperation with my superiors/ the person in authority for mutual benefits</p> <p>III.18) I am concerned to protect the 'face' of my superiors/ person in authority.</p>

As for subordinates, since the questionnaire survey designed for them is slightly different from the one for project managers, separate principal components factor analyses were conducted for the formation of these five management style indices. The findings of these factor analyses are shown in the table below (refer to Appendices 5-8 for details).

Table 6.3: Statements to be included for the computation of management style indices for subordinates

Leadership Orientation Index	Statements included according to Factor Analysis
Task Orientation (TO)	<p>II.1) My manager is more concerned with meeting project time deadlines and ensuring efficient task performance.</p> <p>II.2) My manager has strong concern for the team's goals and the means to achieve those goals</p>
People Orientation (PO)	<p>III.2) My manager does not closely control me and my colleagues in our team. He/she provides general rather than close supervision of me and other colleagues.</p> <p>III.3) My manager values long term cooperation and emphasizes the need to maintain harmony with me and our team members.</p> <p>III.6) My manager treats me and our team members as friend-like, with respect, equality and trust.</p> <p>III.8) My manager values long-term cooperation with sub-contractors for mutual benefits.</p> <p>III.11) My manager treats the sub-contractors with respect, equality and trust.</p>

Relationship cultures Index	Statements included according to Factor Analysis
Communication and Conflict Resolution (CCR)	<p>II.4) My manager would rather use indirect speech codes to avoid conflicts with others.</p> <p>II.6) My manager avoids an argument even when he/she strongly disagrees with me and our team members.</p> <p>II.7) My manager believes negotiation is a key to maintaining a good relationship and reducing conflict.</p>
Power Relationship with Team members/Sub-contractors (PRSS)	<p>III.1) My manager emphasizes hierarchy with me and other team members.</p> <p>III.4) My manager likes to confront issues up-front when dealing with me and our team members.</p> <p>III.5) My manager does not like it if our team members and I disagree or fail to respect his/her decisions.</p> <p>III.7) My manager emphasizes hierarchy with his/her sub-contractors.</p> <p>III.9) My manager likes to confront issues up-front when dealing with sub-contractors.</p> <p>III.10) My manager does not like it if the sub-contractors disagree or fail to respect his/her decisions.</p>
Power Relationship with Superiors/Clients (PRCA)	<p>III.13) From my observation, my manager tends to seek to keep clients happy rather than to keep clients informed.</p> <p>III.14) From my observation, my manager develops both working and personal relationships with client rather than just working relationships.</p> <p>III.15) My manager emphasizes the need to maintain harmony with the superiors/ the person in authority for mutual benefits.</p> <p>III.16) My manager is concerned to protect the 'face'</p>

	of the superiors/ the person in authority. III.17) My manager likes to be accurate when he/she communicates with the superiors/ the person in authority.
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In Tables 6.2 & 6.3, I show the statements included in the computation of these indices with respect to project managers' leadership orientations, as well as their relationship cultures. Of the indices portraying leadership orientations, for task orientation (TO), the index is based upon the idea that the goal of the construction projects themselves are prioritized over managers' relationship with project team members. In short, a higher index denotes a manager that deploys a more task-oriented leadership style. For people orientation (PO), a higher index indicates that the project manager is willing to give the subordinates more flexibility in carrying out their tasks, and to respect them for what they are.

Of the indices depicting relationship cultures, for communication and conflict resolution (CCR), as the selected statements address the issue of conflicts with project team members, a higher index suggests a manager with preference for the avoidance of conflicts in the workplace. In addition, for managers' power relationship with subordinates and subcontractors (PRSS), a higher index indicates a clearer sense of power distance between project managers and their subordinates/subcontractors, as shown by the emphasis on hierarchy with team members, managers' confrontational

attitudes towards them, as well as managers' responses to subordinates'/subcontractors' disagreements with their decisions. Lastly, for managers' power relationship with superiors (PRCA), a higher index reflects a clearer sense of power distance between project managers and their superiors.

6.4 RELIABILITY & VALIDITY

Prior to the discussion of the survey results, separate reliability analyses have been carried out, on the survey instruments for the managers and for the subordinates respectively, in order to find out if the statements in the questionnaire survey have internal consistencies. The resultant Cronbach's Alpha of those for the managers is 0.739, and of those for the subordinates is 0.764. Both coefficients indicate that the internal consistencies for both sets of survey instruments are regarded as acceptable, in accordance with Sekaran (2000).

Having established the indices for the various dimensions of project management, the convergent & discriminant validity of the statements included are to be tested. Separate correlation analyses are to be carried out for the convergent validity (i.e. the correlations among statements included

in a particular management dimension index) and for the discriminant validity (i.e. the correlations between statements included in different management dimension indices). The results are illustrated in the Appendices 10-13.

For convergent validity (Appendices 10 & 11), it can be said that the statements included in these management dimension indices both for project managers and for subordinates possess convergent validity, as reflected in the high correlations among them within a particular index. For discriminant validity (Appendices 12 & 13), statements from different management dimension indices are generally not highly correlated. There are several cases, however, in which significant correlations are observed between statements included in different indices. For instance, significant correlations are found between the statements included in TO and in PRSS (for both managers and subordinates), and the statements included in PO and in CCR (for subordinates). For the former, it can be said that it is a consensus among managers and subordinates that the manager's level of task orientation can be reflected by means of how confrontational the manager is when he deals with his subordinates (and/or subcontractors). For the latter, according to the subordinates, whether or not a project manager values long-term cooperation with various stakeholders (i.e. subordinates, subcontractors, clients, persons in authority, etc) can be

observed through his use of negotiation tactics in attempt to avoid conflicts with these various stakeholders. Nonetheless, since there are only a few instances of such high levels of correlations between specific statements, it can be regarded as exceptions rather than the norm. Hence, it is reasonable to say that these management dimensions have divergent validity from one another.

6.5 LEADERSHIP ORIENTATIONS AND RELATIONSHIP CULTURES OF PROJECT MANAGERS IN MULTINATIONAL CONSTRUCTION COMPANIES IN HONG KONG

In Chapter 4, it is argued that in a multicultural working environment, intercultural adjustments inevitably take place. As a result, there should be no significant differences as to the leadership orientations and relationship cultures employed by the project managers (Hypotheses 1 & 2). This section reports the findings obtained from the questionnaire surveys, for both project managers and their subordinates, with regard to the leadership orientations deployed by the former, as well as the corresponding management cultures.

Prior to the discussion of the findings, the control variables are to be introduced first. As stated in previous chapters, the objective of this study

is to investigate project managers' (both Chinese and expatriate) leadership orientations and relationship cultures in the multinational construction companies of Hong Kong, as well as the relationship between them and the eventual project performance. Besides the obvious ethnic disparities between these two manager groups, another key which could very well contribute to different management behaviors in the workplace is the notion of intercultural adjustments. It has been discussed in Chapter 3 that intercultural adjustment is more likely to take place in a working environment in which people of various ethnic backgrounds work together, and leads to management behaviors different from those of project managers without similar exposure to other cultures, both occupational and personal, in the workplace. It has been observed in numerous managerial studies that, project managers who are subjected to other cultures in the working place behave differently than other managers, in terms of leadership orientations and relationship cultures. In addition to the managers' leadership orientations and relationship cultures, this study also aims to explore how prior intercultural adjustments (through previous overseas living/working experience) shape the behaviors of project managers with regard to them. As a result, the study looks at these two aspects of project management of Chinese managers and expatriate managers, controlling for overseas experience (as an indicator showing the degree of intercultural adjustment to which the manager has been exposed

prior to his participation in the project). Technically speaking, four managerial groups should be divided, two for Chinese managers and the other two for expatriate managers. However, of the expatriate managers interviewed for this study, all of whom have stated that they indeed have had prior overseas experience (that is, that in Hong Kong prior to the project in which they took part). Therefore, the sample is to be divided into three groups, namely 1) Chinese managers with prior overseas experience (CMO), 2) local Chinese managers without prior overseas experience (CM), and 3) expatriate managers (EM). Similarly, the subordinate sample is also to be split into three groups corresponding to the managers under whom they were working for their projects.

6.5.1 Comparison between project managers

6.5.1.1 Leadership Orientations

The results in relation to individual items in the questionnaire with regard to project managers' leadership orientations are summarized in Table 6.4a below.

Table 6.4a: Comparison of project managers' leadership orientations

Statements	Chinese Managers with Overseas Experience (CMO)		Chinese Managers without Overseas Experience (CM)		Expatriate Managers (EM)	
	Mean	SD	Mean	SD	Mean	SD
Leadership Orientations						
<i>Task Orientation</i>						
Meeting project time deadlines and ensuring efficient task performance are more important than maintaining a friendly and supportive relationship with people that I work with.	4.14	.854	4.09	.793	3.83	1.028
To me, project team is more a temporary organization for achieving a specific task.	2.95	.973	3.35	1.229	2.67	.894
I believe project tasks can only be accomplished if close relationships within the project team are achieved.	4.29	.644	4.13	.626	4.03	.696
<i>People Orientation</i>						
I value long term cooperation and emphasize the need to maintain harmony with my sub-ordinates.	4.62	.498	4.26	.752	4.11	.622
I feel no need to control the followers of my team. I am more general rather than close supervision of them.	3.48	.680	3.35	.885	3.47	.696
I treat my sub-ordinates as friend-like, with respect, equality and trust.	4.33	.577	4.04	.638	4.19	.624
I value long term cooperation with sub-contractors for mutual benefits.	4.52	.602	4.22	.671	4.03	.971
I treat sub-contractors as friend-like, with respect, equality and trust.	4.10	.889	3.52	.898	3.64	.931

Statements	Between CMO and CM		Between CMO and EM		Between CM and EM	
	t-value	p-value	t-value	p-value	t-value	p-value
Leadership Orientations						
<i>Task Orientation</i>						
Meeting project time deadlines and ensuring efficient task performance are more important than maintaining a friendly and supportive relationship with people that I work with.	.225	.823	-1.164	.249	-1.006	.319
To me, project team is more a temporary organization for achieving a specific task.	-1.176	.246	-1.126	.265	-2.462**	.017
I believe project tasks can only be accomplished if close relationships within the project team are achieved.	.811	.422	-1.386	.171	-.574	.568
<i>People Orientation</i>						
I value long term cooperation and emphasize the need to maintain harmony with my sub-ordinates.	1.844*	.072	-3.189***	.002	-.831	.410
I feel no need to control the followers of my team. I am more general rather than close supervision of them.	.536	.595	-.021	.983	.602	.550
I treat my sub-ordinates as friend-like, with respect, equality and trust.	1.575	.123	-.832	.409	.898	.373
I value long term cooperation with sub-contractors for mutual benefits.	1.589	.120	-2.113**	.039	-.819	.416
I treat sub-contractors as friend-like, with respect, equality and trust.	2.126**	.039	-1.815*	.075	.478	.634

Note: *** denotes significance at 1%; ** at 5%; and * at 10%

The findings reveal that generally there is no significant difference between local Chinese managers and between Chinese managers with prior overseas experience (CMO) & expatriate managers (EM) in the task-orientation leadership style statements. However, between Chinese managers without

such overseas experience (CM) and expatriate managers, on one of the statements there is a significant difference. The CM ($M= 3.35$, $SD= 1.229$) is more likely perceive a project team as a temporary organization for achieving a specific task than the EM ($M= 2.67$, $SD= .894$) ($t\text{-value} = -2.462$, $p\text{-value} = 0.017$), which is different from our expectations from the literature.

As for the statements included in the people-orientation index, while there are no significant differences in this regard between EMs and CMs, two of the statements show significant differences between local Chinese managers, and three show significant differences between CMOs and EMs. For the former, the CMOs appear to view “long term cooperation and the need to maintain harmony with their sub-ordinates” ($M= 4.62$, $SD= .498$) much higher than their counterparts without similar experience abroad ($M= 4.26$, $SD= .752$) ($t\text{-value} = 1.844$, $p\text{-value} = 0.072$). Additionally, those CMOs tend more likely to see sub-contractors as friend-like, with respect, equality and trust (CMO: $M= 4.10$, $SD= .889$; CM: $M= 3.52$, $SD= .898$; $t\text{-value} = 2.126$, $p\text{-value} = 0.039$).

For the latter, expatriate managers ($M= 4.11$, $SD= .622$) do not value long-term cooperation and the need to maintain harmony with their sub-ordinates as much as Chinese managers who have had prior overseas

experience do (M= 4.62, SD= .498) (t-value = -3.189, p-value = 0.002). Besides, they (M= 4.03, SD= .971) value long-term cooperation with sub-contractors for mutual benefits much less than the CMOs do (M= 4.52, SD= .602) (t-value = -2.113, p-value = 0.039); and lastly, the EMs do not treat sub-contractors as friend-like, with respect, equality and trust as their Chinese managerial colleagues do (CMO: M= 4.10, SD= .889; EM: M= 3.64, SD= .931; t-value = -1.815, p-value = 0.075).

6.5.1.2 Relationship cultures

Table 6.4b: Comparison of the relationship cultures between project managers

Statements	Chinese Managers with Overseas Experience (CMO)		Chinese Managers without Overseas Experience (CM)		Expatriate Managers (EM)	
	Mean	SD	Mean	SD	Mean	SD
Relationship cultures						
<i>Communication and Conflict Resolution</i>						
I'd rather use indirect speech codes to avoid conflicts with others	3.10	.944	3.30	.765	2.44	.773
I avoid an argument even when I strongly disagree with my team members.	2.81	.814	2.91	1.041	2.53	.774
I believe negotiation is a key to maintaining a good relationship and ensuring avoidance of conflict.	3.52	.928	3.74	.752	3.56	.969
I believe that a good relationship is more important than a good contract to ensure avoidance of conflict.	3.62	.921	3.70	.765	3.39	1.022
<i>Power Relationship with Team Members/Sub-contractors</i>						
I emphasize hierarchy with my sub-ordinates.	3.00	.894	3.09	.949	2.56	.843
I like to confront issues up when dealing with my sub-ordinates.	2.48	1.327	2.78	.998	2.97	1.230
I do not like if my sub-ordinates disagree or fail to respect my decisions.	2.43	1.165	2.48	.947	2.06	.955
I emphasize hierarchy with sub-contractors.	3.33	.913	3.13	.815	2.78	1.222
I like to confront issues up when dealing with sub-contractors.	2.95	1.284	3.04	1.261	2.89	1.389
I do not like if the sub-contractors disagree or fail to respect my decisions.	2.62	.973	3.09	.996	2.44	.909
<i>Power Relationship with Superiors/Clients</i>						
I emphasize hierarchy with client/ the person in authority.	3.43	.746	3.43	.843	3.00	.926
I consider the client as the 'boss' of	2.95	.805	3.17	.834	2.94	1.013

the project more than the ‘provider’ of project funds.						
To me, making the clients/ the person in authority happy is relatively more important than keeping them informed.	2.95	.973	2.61	1.033	2.39	.903
I value long term cooperation with client/ person in authority	4.62	.498	4.26	.619	4.25	.554
I am concerned to protect the ‘face’ of my client/ person in authority.	3.95	.805	3.74	.689	3.19	.786

Statements	Between CMO and CM		Between CMO and EM		Between CM and EM	
	t-value	p-value	t-value	p-value	t-value	p-value
Relationship cultures						
<i>Communication and Conflict Resolution</i>						
I’d rather use indirect speech codes to avoid conflicts with others	-.811	.422	-2.826	.007	-4.186***	.000
I avoid an argument even when I strongly disagree with my team members.	-.365	.717	-1.301	.199	-1.628	.109
I believe negotiation is a key to maintaining a good relationship and ensuring avoidance of conflict.	-.849	.401	.121	.904	-.771	.444
I believe that a good relationship is more important than a good contract to ensure avoidance of conflict.	-.301	.765	-.850	.399	-1.234	.222
<i>Power Relationship with Team Members/Sub-contractors</i>						
I emphasize hierarchy with my sub-ordinates.	-.312	.757	-1.877*	.066	-2.248**	.028
I like to confront issues up when dealing with my sub-ordinates.	-.870	.389	1.426	.159	.620	.538
I do not like if my sub-ordinates disagree or fail to respect my decisions.	-.156	.877	-1.311	.195	-1.664	.102
I emphasize hierarchy with sub-contractors.	.779	.440	-1.808*	.076	-1.220	.227
I like to confront issues up when dealing with sub-contractors.	-.237	.814	-.171	.865	-.432	.667
I do not like if the sub-contractors disagree or fail to respect my decisions.	-1.573	.123	-.682	.498	-2.552**	.013
<i>Power Relationship with Superiors/Clients</i>						

I emphasize hierarchy with client/ the person in authority.	-.026	.980	-1.805*	.077	-1.820*	.074
I consider the client as the 'boss' of the project more than the 'provider' of project funds.	-.895	.376	-.031	.976	-.907	.368
To me, making the clients/ the person in authority happy is relatively more important than keeping them informed.	1.133	.264	-2.208**	.031	-.862	.392
I value long term cooperation with client/ person in authority	2.102**	.042	-2.515**	.015	-.070	.944
I am concerned to protect the 'face' of my client/ person in authority.	.947	.349	-3.481***	.001	-2.720***	.009

Note: *** denotes significance at 1%; ** at 5%; and * at 10%

Concerning the project managers' perceptions towards relationship cultures, there are significant differences in several aspects when we analyse the individual item responses. Within the context of communication and conflict resolution, the findings reveal significant differences in terms of the use of indirect speech codes to avoid conflict with others, between expatriate managers and both Chinese manager groups (CMO: t-value = -2.826, p-value = 0.007; CM: t-value = -4.186, p-value = 0.000).

Then, in terms of power relationship with subordinates (i.e. team members and subcontractors), two of the statements show significant difference between EMs and CMOs, and between EMs and CMs. For the former, western expatriate managers place less emphasis on hierarchy with subordinates than their Chinese colleagues do (t-value = -1.808, p-value = 0.076). The same can also be said for that with sub-contractors (t-value = -

1.808, p-value = 0.076). For the latter, western expatriates emphasize hierarchy with subordinates much less than the CMs do (t-value = -2.248, p-value = 0.028). In addition, they report less dislike to their sub-contractors who had disagreed with their decisions, in comparison to the CMs (t-value = -2.552, p-value = 0.013).

Lastly, regarding the project managers' power relationship with clients and authorities, the findings first reveal one significant difference between CMOs and CMs, as the former value long-term cooperation with client/person in authority much higher than the latter do (t-value = 2.102, p-value = 0.042). However, when compared with the perceptions among expatriate managers in this regard, numerous statements are found to be significantly different. Firstly, the EMs emphasize hierarchy with client/ the person in authority much less than both Chinese manager groups (CMO: t-value = -1.805, p-value = 0.077) (CM: t-value = -1.820, p-value = 0.074). Also, expatriate managers are much less concerned to protect the 'face' of their superiors and clients, in comparison with the local Chinese managers (CMO: t-value = -3.481, p-value = 0.001) (CM: t-value = -2.720, p-value = 0.009). In addition to these two statements, the EMs also display significant differences with CMO in two other aspects. Expatriate managers do not view making the clients/ the person in authority happy as something more important than keeping them informed, as compared to

CMOs (t-value = -2.208, p-value = 0.031). Further, the EMs do not value long term cooperation with client/ person in authority as much as the CMOs tend to do (t-value = -2.515, p-value = 0.015). These results are generally in line with what has been said in the literature regarding Chinese project managers and expatriate project managers.

6.5.2 Comparison between subordinates of their perceptions towards their project managers

6.5.2.1 Leadership Orientations

Table 6.5a: Comparison of project managers' leadership orientations relating to individual questionnaire items according to their subordinates

Statements	Subordinates under Chinese Managers with Overseas Experience (SCMO)		Subordinates under Chinese Managers without Overseas Experience (SCM)		Subordinates under Expatriate Managers (SEM)	
	Mean	SD	Mean	SD	Mean	SD
Leadership Orientations						
<i>Task Orientation</i>						
My manager is more concerned with meeting project time deadlines and ensuring efficient task performance.	3.87	.864	4.05	.805	3.73	1.125
My manager has strong concern for the team's goals and the means to achieve those goals	4.28	.647	4.43	.598	4.29	.713
<i>People Orientation</i>						
My manager does not closely control me and my colleagues in our team. He/she provides general rather than close supervision of me and other colleagues.	3.74	.880	3.00	1.095	3.84	.898
My manager values long term cooperation and emphasizes the need to maintain harmony with me and our team members.	4.13	.656	3.76	.700	3.96	.889
My manager treats me and our team members as friend-like, with respect, equality and trust.	3.69	.766	3.86	.727	4.37	.727
My manager values long-term cooperation with sub-contractors for mutual benefits.	4.13	.695	3.81	.680	3.94	.876
My manager treats the sub-contractors with respect,	3.69	.694	3.38	.590	3.73	1.016

equality and trust.						
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Statements	Between SCMO and SCM		Between SCMO and SEM		Between SCM and SEM	
	t-value	p-value	t-value	p-value	t-value	p-value
Leadership Orientations						
Task Orientation						
My manager is more concerned with meeting project time deadlines and ensuring efficient task performance.	-0.770	.445	-0.651	.517	-1.171	.246
My manager has strong concern for the team's goals and the means to achieve those goals	-0.859	.394	.065	.948	-0.769	.445
People Orientation						
My manager does not closely control me and my colleagues in our team. He/she provides general rather than close supervision of me and other colleagues.	2.862***	.006	.488	.627	3.341***	.001
My manager values long term cooperation and emphasizes the need to maintain harmony with me and our team members.	2.015	.049	-0.991	.324	.903	.370
My manager treats me and our team members as friend-like, with respect, equality and trust.	-0.809	.422	4.224***	.000	2.690***	.009
My manager values long-term cooperation with sub-contractors for mutual benefits.	1.707*	.093	-1.102	.274	.602	.549
My manager treats the sub-contractors with respect, equality and trust.	1.743*	.087	.222	.825	1.488	.141

Note: *** denotes significance at 1%; ** at 5%; and * at 10%

As shown in Table 6.5a, there are no significant differences concerning the subordinates' perceptions towards the managers' task orientations. Nonetheless, many statements are shown to be significantly different

between these three subordinate groups when it comes to the project managers' people orientations. For instance, the SCMs do not believe that their immediate superiors "do not closely control me and my colleagues in our team. He/she provides general rather than close supervision of them and other colleagues" as much as both the SCMOs (t-value = 2.862, p-value = 0.006) and the SEMs do (t-value = 3.341, p-value = 0.001); and subordinates who worked under western expatriate managers were more likely to think that their managers treated them and other team members as friend-like, with respect, equality and trust than the SCMOs (t-value = 4.224; p-value = 0.000) and the SCMs (t-value = 2.690; p-value = 0.009). Additionally, subordinates under both Chinese manager groups also view three other aspects of people orientation differently. For example, the SCMOs believe that their manager values long term cooperation and emphasizes the need to maintain harmony with them and other team members much higher than the SCMs do (t-value = 2.015; p-value = 0.049). Then, the former also perceive that their managers value long-term cooperation with sub-contractors for mutual benefits more than the latter see in their superiors (t-value = 1.707; p-value = 0.093). Lastly, the SCMOs are more likely to have the impression that their project managers treat the sub-contractors with respect, equality and trust than the SCMs do (t-value = 1.743; p-value = 0.087).

6.5.2.2 Relationship cultures

Table 6.5b: Comparison for individual items of project managers' relationship cultures according to their subordinates

Statements	Subordinates under Chinese Managers with Overseas Experience (SCMO)		Subordinates under Chinese Managers without Overseas Experience (SCM)		Subordinates under Expatriate Managers (SEM)	
	Mean	SD	Mean	SD	Mean	SD
Management Styles						
<i>Communication and Conflict Resolution</i>						
My manager would rather use indirect speech codes to avoid conflicts with others	3.54	.942	3.48	.814	3.18	1.149
My manager avoids an argument even when he/she strongly disagrees with me and our team members.	3.31	.893	3.24	1.136	2.86	1.190
My manager believes negotiation is a key to maintaining a good relationship and reducing conflict.	3.67	.955	4.00	.707	3.57	1.061
<i>Power Relationship with Team members/Sub-contractors</i>						
My manager emphasizes hierarchy with me and other team members.	3.05	.916	2.90	.944	2.67	1.088
My manager likes to confront issues up-front when dealing with me and our team members.	2.31	.832	3.48	.814	3.10	1.327
My manager does not like it if our team members and I disagree or fail to respect his/her decisions.	2.38	.815	2.86	.964	2.39	1.115
My manager emphasizes hierarchy with his/her sub-contractors.	3.41	.850	3.38	.805	3.10	.918
My manager likes to confront issues up-front when dealing with sub-contractors.	2.46	.913	3.43	.870	3.12	1.184
My manager does not like it if the sub-contractors disagree or fail to respect his/her decisions.	2.62	.907	3.29	.902	2.73	1.016
<i>Power Relationship with</i>						

<i>Superiors/Clients</i>						
From my observation, my manager tends to seek to keep clients happy rather than to keep clients informed.	3.54	.854	3.43	.978	3.35	1.110
From my observation, my manager develops both working and personal relationships with client rather than just working relationships.	3.82	.756	3.71	.644	3.69	1.045
My manager emphasizes the need to maintain harmony with the superiors/ the person in authority for mutual benefits	4.08	.703	4.05	.498	4.08	.731
My manager is concerned to protect the 'face' of the superiors/ the person in authority.	3.77	.777	3.62	.669	3.41	.762
My manager likes to be accurate when he/she communicates with the superiors/ the person in authority.	4.26	.715	4.00	.447	4.31	.683

Statements	Between SCMO and SCM		Between SCMO and SEM		Between SCM and SEM	
	t-value	p-value	t-value	p-value	t-value	p-value
Management Styles						
<i>Communication and Conflict Resolution</i>						
My manager would rather use indirect speech codes to avoid conflicts with others	.256	.799	-1.556	.123	-1.057	.294
My manager avoids an argument even when he/she strongly disagrees with me and our team members.	.261	.795	-1.964*	.053	-1.244	.218
My manager believes negotiation is a key to maintaining a good relationship and reducing conflict.	-1.403	.166	-.437	.663	-1.694*	.095
<i>Power Relationship with Team members/Sub-contractors</i>						
My manager emphasizes hierarchy with me and other team members.	.585	.561	-1.734*	.087	-.847	.400

My manager likes to confront issues up-front when dealing with me and our team members.	-5.228***	.000	3.261***	.002	-1.197	.236
My manager does not like it if our team members and I disagree or fail to respect his/her decisions.	-2.009**	.049	.015	.988	-1.678*	.098
My manager emphasizes hierarchy with his/her sub-contractors.	.130	.897	-1.616	.110	-1.206	.232
My manager likes to confront issues up-front when dealing with sub-contractors.	-3.976***	.000	2.871***	.005	-1.066	.290
My manager does not like it if the sub-contractors disagree or fail to respect his/her decisions.	-2.736***	.008	.574	.568	-2.147**	.035
<i>Power Relationship with Superiors/Clients</i>						
From my observation, my manager tends to seek to keep clients happy rather than to keep clients informed.	.452	.653	-.888	.377	-.292	.771
From my observation, my manager develops both working and personal relationships with client rather than just working relationships.	.545	.588	-.636	.527	-.083	.934
My manager emphasizes the need to maintain harmony with the superiors/ the person in authority for mutual benefits	.169	.866	.031	.976	.194	.847
My manager is concerned to protect the 'face' of the superiors/ the person in authority.	.748	.457	-2.190**	.031	-1.099	.276
My manager likes to be accurate when he/she communicates with the superiors/ the person in authority.	1.490	.142	.332	.741	1.883*	.064

Note: *** denotes significance at 1%; ** at 5%; * at 10%

With respect to the relationship cultures, there is one statement which shows significant disparities between SCMOs and SEMs and between SCMs and SEMs, respectively. For the former, the SCMOs report a higher score in the statement “my manager avoids an argument even when he/she strongly disagrees with me and our team members” than SEMs do (t-value = -1.964; p-value = 0.053). For the latter, a higher score is reported by the SCMs in the statement “my manager believes that negotiation is a key to maintaining a good relationship and reducing conflict” than by the SEMs (t-value = -1.694; p-value = 0.095).

As for the managers’ power relationship with team members and with sub-contractors, remarkable differences have been observed in this regard between the three subordinate groups under study. For instance, the SCMOs are noticeably less likely to think that their superiors like to confront issues up-front when dealing with them, in comparison to the SCMs (t-value = -5.228; p-value = 0.000), and to the SEMs (t-value = 3.261; p-value = 0.002). The same can also be said concerning the confrontational attitudes by the project managers when dealing with sub-contractors (between SCM/SCMO: t-value = -3.975, p-value = 0.000; between SCM/SEM: t-value = 2.871, p-value = 0.005). Meanwhile, it is much more likely for the SCMs to believe that their managers do not like it if the subordinates disagree or fail to respect their decisions than SCMOs

(t-value = -2.009; p-value = 0.049) and SEMs (t-value = -1.678; p-value = 0.098). Similar conclusions can be reached for the project managers' attitude if the sub-contractors disagree or fail to respect their decisions (between SCM/SCMO: t-value = -2.736, p-value = 0.008; between SCM/SEM: t-value = -2.147, p-value = 0.035). The last noticeable difference is found between the perception towards the project managers' emphasis on hierarchy with the subordinates, between SCMOs and SEMs (t-value = -1.734; p-value = 0.087).

Lastly, for the subordinates' opinions of their immediate superiors' power relationship with clients and persons in authority, one of the statements is found to be significantly different between SCMOs and SEMs, and between SCMs and SEMs, respectively. For the former, the SCMOs believe that their managers are more concerned to protect the 'face' of the superiors/ the person in authority than the SEMs do (t-value = -2.190; p-value = 0.031); and for the latter, it is more likely for SEMs to think that their project managers like to be accurate when he/she communicates with the superiors/ the person in authority than SCMs do (t-value = 1.883; p-value = 0.064). The findings are in line with the expectations based on cultural stereotypes.

6.5.3 Perceptions of Project Managers' Leadership Orientations & Relationship Cultures

Having presented the individual items of the indices with respect to project managers' leadership orientations and relationship cultures for the managers themselves and for their subordinates, the five indices are to be compared by T-test in order to see if there are significant differences in these scores between the three project manager groups and between the three subordinate groups. The results are shown in the Tables 6.6a-b below (and for the histograms of these indices, refer to Appendices 10 & 11), and discussed in the following sections.

6.5.3.1 Between Project Managers

Table 6.6a: T-test results of the five leadership orientation/relationship cultures indices for project managers

	CMO		CM		EM	
	Mean	SD	Mean	SD	Mean	SD
Leadership Orientations						
TO	3.79	.511	3.86	.680	3.51	.594
PO	4.21	.417	3.88	.521	3.89	.535
Relationship cultures						
CCR	3.26	.599	3.41	.611	2.98	.628
PRSS	2.80	.785	2.93	.649	2.62	.729
PRCA	3.58	.442	3.44	.529	3.16	.499

	Between CM and CMO		Between CMO and EM		Between CM and EM	
	t-value	p-value	t-value	p-value	t-value	p-value
Leadership Orientations						
TO	-.336	.738	-1.834*	.072	-2.061**	.044
PO	2.313**	.026	-2.356**	.022	.075	.940
Relationship cultures						
CCR	-.827	.413	-1.667	.101	-2.616**	.011
PRSS	-.616	.541	-.903	.371	-1.709*	.093
PRCA	.930	.358	-3.231***	.002	-2.111**	.039

Note: *** denotes significance at 1%; ** at 5%; * at 10%

The project managers' assessment of their own leadership orientations and relationship cultures show some significant differences when classified into Expatriate Managers (EM), Chinese Managers (CM), and Chinese Managers with overseas experience (CMO). Concerning their leadership orientations, both CMOs and CMs are shown to have a significantly greater task-orientation than expatriate managers, at 10% level. This seems to suggest certain degrees of intercultural adjustments, as either the Chinese managers adopt the conventional western task-oriented leadership philosophy in the workplace; or expatriate managers adjust their degree of task-orientation in order to fit into the predominantly Chinese working

environment. Meanwhile, the CMOs appear to be significantly more people-oriented (PO) than both CM and EM, at 5% levels.

With regard to relationship cultures, the CMs report a much higher score than that of EMs for CCR and PRSS, at the 10% significant level. For the former, it means that the CMs perceive themselves to be much more indirect in their speech codes in order to avoid conflicts with project team members, while at the same time having a higher sense of power relationship/distance with them, than EMs. In addition, both Chinese project manager groups (i.e. CM and CMO) report significant higher scores for PRCA than do expatriate managers, at 5% level. This indicates that Chinese managers perceive themselves to have maintained a higher level of power distance between them and their superiors and clients. Both sets of findings are in line with the literature.

6.5.3.2 Between Subordinates

Table 6.6b: T-test results of the five leadership orientation/management aspects indices for subordinates

	Subordinates of Chinese Managers with Overseas Experience (SCMO)		Subordinates of Chinese Managers without Overseas Experience (SCM)		Subordinates of Expatriate Managers (EM)	
	Mean	SD	Mean	SD	Mean	SD
Leadership Orientations						
TO	4.08	.613	4.24	.645	4.01	.718
PO	3.88	.565	3.56	.550	3.97	.649
Relationship cultures						
CCR	3.50	.729	3.57	.724	3.20	.915
PRSS	2.71	.611	3.22	.599	2.85	.757
PRCA	3.89	.479	3.76	.413	3.77	.482

	Between SCMO and SCM		Between SCMO and SEM		Between SCM and EM	
	t-value	p-value	t-value	p-value	t-value	p-value
Leadership Orientations						
TO	-.954	.344	-.458	.648	-1.248	.216
PO	2.079**	.042	.687	.494	2.503**	.015
Relationship cultures						
CCR	-.341	.734	-1.670*	.099	-1.632	.107
PRSS	-3.147***	.003	.995	.323	-1.979*	.052
PRCA	1.054	.296	-1.212	.229	.045	.964

Note: *** denotes significance at 1%; ** at 5%; * at 10%

Concerning how the subordinates view their managers' leadership orientations and relationship cultures, it is observed that a much lower score for PO is recorded among SCMs, in comparison of that among SCMOs and SEMs, significant at 5% level. In contrast, SCMs believe that their immediate superiors have a much higher sense of power relationship with them (that is, the subordinates) than do the other two subordinate groups, significant at 10%.

Additionally, a significantly higher index for Communication & Conflict Resolution (CCR) is reported by subordinates who worked under CMOs than that by those who worked under EMs (at 10%), indicating that these managers prefer to avoid conflicts in the workplace with the use of indirect speech codes and are less confrontational with their subordinates when disagreements arise between them. However, the lack of significant disparities in their perceptions towards the project managers' TO and PRCA do not correspond to those of the managers themselves (see Section 6.5.3.1). Two reasons may contribute to such disparity, namely 1) the different perspectives between managers and subordinates, even towards the same task within the same environment; and 2) project managers' views as to how they behave in these aspects, may reflect their perceptions of the style they aspire to rather than their actions as reflected in the subordinates observations.

Based upon the findings, it seems as if intercultural adjustments of project managers are even more pronounced from the perspectives of the subordinates. Meanwhile, the significant disparities in TO, CCR, and PRCA, as reported by the project managers indicate a more conservative estimation of the degree of intercultural adjustments, as these managers appear to have behaved in ways similar to those previously stated in business management studies, or at least to perceive themselves to have

behaved in such a manner. This begs the question as to whether or not there exist differences in the perceptions of project managers' leadership orientations (and relationship cultures) between the managers themselves and their subordinates, which are the third and the fourth hypotheses of this study. They are to be tested in the next section.

6.5.3.3 Between Project Managers and Subordinates

In Chapter 4, it has been discussed that the project managers themselves could have their own self- and cultural-biased views when they assess their leadership orientations and relationship cultures, due to their cultural backgrounds and even their pride (or 'face'). Because of that, their perceived styles of leadership/management might differ from their actual styles. Introducing the subordinates' perspectives in this matter, this section tests for Hypotheses 3 & 4 proposed for this study, which are:

H3: The perceptions of project managers and of subordinates towards the manager's leadership orientations have no significant differences; and

H4: The perceptions of project managers and of subordinates towards the manager's relationship cultures have no significant differences

Similar to the previous section, t-tests are carried out on their respective leadership orientations and management aspects indices, to see if what was reported by the project managers is significantly different from that of their subordinates. The results are illustrated in Tables 6.6a-c below.

6.5.3.3.1 Between Chinese Project Managers & their Subordinates

Table 6.6c: T-test results of the managers' leadership orientations and relationship cultures according to local Chinese managers (with and without previous overseas experience) and their subordinates

	CMO		SCMO		t-value	p-value
	Mean	SD	Mean	SD		
Leadership Orientations						
TO	3.79	.511	4.08	.613	1.806*	.076
PO	4.21	.417	3.88	.565	-2.369**	.021
Relationship cultures						
CCR	3.26	.599	3.50	.729	1.303	.198
PRSS	2.80	.785	2.71	.611	-.527	.600
PRCA	3.58	.442	3.89	.479	2.466**	.017

Note: *** denotes significance at 1%; ** at 5%; * at 10%

	CM		SCM		t-value	p-value
	Mean	SD	Mean	SD		
Leadership Orientations						
TO	3.86	.680	4.24	.645	1.912*	.063
PO	3.88	.521	3.56	.550	-1.959*	.057
Relationship cultures						
CCR	3.41	.611	3.57	.724	.787	.436
PRSS	2.93	.649	3.22	.599	1.522	.136
PRCA	3.44	.529	3.76	.419	2.211**	.033

Note: *** denotes significance at 1%; ** at 5%; * at 10%

Three of the management dimensions under study (i.e. TO, PO, and PRCA) show significant differences among both local Chinese manager groups and their respective subordinates. Firstly, a higher score, significantly different at the 10% level has been reported by the subordinates in terms of the task-

orientation of their immediate superiors than the managers' own assessment in this regard. Meanwhile, these subordinates also perceive their project managers significantly less people-oriented (5% level) than local Chinese managers think of themselves in this regard. In other words, from the subordinates' perspectives, their immediate superiors behave more like a conventional western project managers, despite the managers themselves perceiving to the contrary. Lastly, according to the subordinates, their local Chinese managers have an even clearer sense of power relationship with the clients (and with the managers' own superiors), as compared to the managers' own perceptions, significant at the 5% level. There are not significant differences between Managers and subordinates on other aspects of relationship cultures. These findings offer further proof pointing to the prominence of the traditional Chinese concept of 'face' at least on the upper level of construction companies.

6.5.3.3.2 *Between Expatriate Project Managers & their Subordinates*

Table 6.6d: T-test results of the managers' leadership orientations and relationship cultures according to expatriate managers and their subordinates

	EM		SEM		t-value	p-value
	Mean	SD	Mean	SD		
Leadership Orientations						
TO	3.51	.594	4.01	.718	3.403***	.001
PO	3.89	.535	3.97	.649	.592	.555
Relationship cultures						
CCR	2.98	.628	3.20	.915	1.271	.207
PRSS	2.62	.729	2.85	.757	1.455	.149
PRCA	3.16	.499	3.77	.482	5.695***	.000

Note: *** denotes significance at 1%; ** at 5%; * at 10%

Two of the indices (i.e. TO & PRCA) show significant disparities between expatriate managers' perceptions of their own leadership/management behaviours and their subordinates' perceptions of such. Firstly, the expatriate managers believe that they are less task-oriented (significant at the 1% level) than their subordinates think they are. In short, what the subordinates see is a textbook western management behaviour shown by their superiors during the course of the projects, while the managers' score seems to indicate that some degree of intercultural adjustments have taken place as they do not see themselves as task-oriented as they are supposed to be.

Nonetheless, it does not mean that the subordinates do not detect any kind of intercultural adjustments at all. In fact, their much higher score for PRCA indicates that intercultural adjustment has indeed taken place inside

the multicultural construction companies of Hong Kong. Yet, rather than becoming more people-oriented, the subordinates observe a significantly (at the 1% level) clearer sense of power relationship between the expatriate project managers and their superiors and clients. To put it differently, similar to local Chinese managers, the idea of 'face' in the workplace is so ingrained that even expatriate managers have to adapt to it in their management practices, and to answer to their superiors and clients. The remarkably lower PRCA reported by the expatriate managers themselves seems to suggest that, due to their cultural backgrounds, their own pride may not allow them to admit the relationship dynamics between themselves and their clients and superiors. In short, it is a sign of them protecting their own 'face'. Regardless, the management indices of both expatriate managers and their subordinates do point out certain levels of intercultural adjustments in the workplace, albeit in different aspects.

6.5.4 Summary of Findings

To sum up the findings of Section 6.5, it can be said that the significant differences are generally in line with what would be expected from the literature with regard to cultural differences. Nonetheless, it can also be observed that project managers would adjust various aspects of their leadership in order to adapt to a workplace that is different from the conventional pure-western/pure-Chinese ones. The disparity between how

the managers view their own management practice and how the subordinates view the managers' practice nonetheless also highlights some points of integration of western style and Chinese style of management in Hong Kong's multicultural construction firms. For instance, it appears that the local Chinese managers generally have adopted a more task-oriented style of project management, while a much clearer sense of power relationship has been established between expatriate project managers and their superiors/clients. Based on the findings, it can be said that both Hypotheses 1 & 2 are rejected.

For Hypotheses 3 & 4, it appears that, due to the project managers' sense of cultural grounding and perhaps their own 'face', they do not seem to acknowledge the changes in their leadership orientations and their power relationship with clients and superiors which are recognized by their subordinates. As a result, Hypothesis 3 is rejected, whereas Hypothesis 4 is partly supported due to the paucity of significant differences between project managers and subordinates within the context of communication & conflict resolution and of power relationship with subordinates.

6.6 RELATIONSHIP BETWEEN LEADERSHIP ORIENTATIONS (AND RELATIONSHIP CULTURES) AND PROJECT PERFORMANCE

It is argued in Chapter 4 that, while intercultural adjustments take place in a multicultural working environment, the degree of such intercultural adjustments could vary among project managers sharing the same cultural background (i.e. local Chinese managers). Besides working with foreigners in projects, some of the managers could have been influenced by western culture, owing to their prior living and/or working experience abroad. Such experience proffers another source for intercultural adjustments not shared by their Chinese counterparts without similar types of experience, which may have implications as to their perceptions of the relationship between leadership orientations, different aspects of management, and project performance. In addition, the majority of construction management studies have concentrated on the relationship of leadership orientations and project performance, only from the perspective of the project managers. This section addresses this issue, by testing the fifth and the sixth (*H5* & *H6*) hypotheses developed for this study, which is:

H5 predicts that *‘there will be differences for the project manager groups, when classified broadly by ethnicity and overseas experience, in the*

association between their espoused their leadership orientations and relationship culture and their assessment of project performance; and

H6 predicts that “the relationship between leadership orientations/relationship cultures and project performance will not vary between the perceptions of project managers and those of their subordinates”

6.6.1 Project Performance

Prior to the testing of Hypotheses 5 & 6, the findings as to the managers' assessments of their project performance, along with their subordinates' assessments of such, are to be presented in the following paragraphs.

6.6.1.1 Project Performance as Assessed by Project Managers

T-tests have been carried out for all three project manager groups, and the results are presented in the table below.

Table 6.7a: Comparison of project managers' assessment of project performance

Statements	Chinese Managers with Overseas Experience (CMO)		Chinese Managers without Overseas Experience (CM)		Expatriate Managers (EM)	
	Mean	SD	Mean	SD	Mean	SD
Project Performance						
Project cost objectives were met	3.49	.890	3.57	.799	3.90	.856
Profit margin objectives were met	3.80	.696	3.80	.682	3.92	.693
Project schedules were adhered to	4.14	.695	3.71	.908	4.03	.842
There were no quality problems related to project outputs	4.01	.681	3.75	1.003	4.00	.751
Accidents are avoided on site	3.75	.493	3.61	.767	3.88	.827
The project was managed so as to satisfy the interests and challenges of the members of the project team.	4.10	.576	3.66	.718	3.75	.725
Clients were satisfied with the project performance	4.05	.672	3.74	.529	4.13	.622

Statements	Between CMO and CM		Between CMO and EM		Between CM and EM	
	t-value	p-value	t-value	p-value	t-value	p-value
Project Performance						
Project cost objectives were met	-.318	.752	1.658	.104	1.396	.169
Profit margin objectives were met	.000	1.000	.582	.563	.587	.560
Project schedules were adhered to	1.662	.105	-.495	.623	1.246	.219
There were no quality problems related to project outputs	.968	.339	-.060	.953	1.007	.319
Accidents are avoided on site	.674	.504	.647	.521	1.167	.249
The project was managed so as to satisfy the interests and challenges of the members of the project team.	2.127**	.040	-1.809*	.077	.420	.677
Clients were satisfied with the project performance	1.635	.110	.450	.655	2.337**	.024

Note: *** denotes significance at 1%; ** at 5%; and * at 10%

The results report a number of significant differences between CMOs, CMs, and EMs. First, it is found that CMOs rated much higher in the statement “The project was managed so as to satisfy the interests and challenges of the members of the project team” than both CMs (t-value = 2.127, p-value = 0.040) and EMs (t-value = -1.809, p-value = 0.077) did. This seems to indicate that the former, at least in their minds, were more aware of the other non-monetary needs of their fellow team members, than the latter two groups of project managers. Meanwhile, the EMs rated noticeably higher in terms of the clients’ satisfaction of their project’s performance than the

CMs (t-value = 2.337, p-value = 0.024) did, indicating that the EMs (and to a lesser extent, the CMOs) adopted a more client-oriented approach in their project management, in comparison to local Chinese managers without prior overseas experience.

6.6.1.2 Project Performance as Assessed by Subordinates

Similar to the comparison of project managers' assessed project performance, T-tests have been carried out for all three groups of subordinates, and the results are presented in the table below.

Table 6.7b: Comparison of subordinates' assessment of project performance

Statements	Subordinates of Chinese Managers with Overseas Experience (SCMO)		Subordinates of Chinese Managers without Overseas Experience (SCM)		Subordinates of Expatriate Managers (SEM)	
	Mean	SD	Mean	SD	Mean	SD
Project Performance						
Project cost objectives were met	3.90	.844	3.88	.392	3.82	1.060
Profit margin objectives were met	4.11	.810	3.89	.504	3.73	1.152
Project schedules were adhered to	3.79	.937	3.88	.714	3.88	.875
There were no quality problems related to project outputs	3.79	.908	3.73	.447	3.90	.957
Accidents are avoided on site	3.96	.957	3.68	.787	4.06	.904
Clients were satisfied with the project performance	4.07	.608	4.01	.527	4.33	.801

Statements	Between SCMO and SCM		Between SCMO and SEM		Between SCM and SEM	
	t-value	p-value	t-value	p-value	t-value	p-value
Project Performance						
Project cost objectives were met	.086	.932	-.309	.759	-.241	.811
Profit margin objectives were met	1.082	.285	-1.509	.136	-.633	.529
Project schedules were adhered to	-.388	.699	.418	.677	-.013	.990
There were no quality problems related to project outputs	.317	.752	.469	.641	.798	.428
Accidents are avoided on site	1.114	.271	.426	.672	1.643	.106
Clients were satisfied with the project performance	.359	.722	1.442	.154	1.639	.106

Note: *** denotes significance at 1%; ** at 5%; and * at 10%

By and large, there is no statistically significant difference between the three subordinate groups within the context of the six project performance indicators. However, it should be noted that subordinates of the EMs, by scoring the statement “Clients were satisfied with the project performance” higher (although not significantly so) than subordinates under local Chinese managers, corroborated with their immediate superiors’ viewpoint in this regard.

6.6.2 Regression Analysis for testing H5 & H6

For this task, six separate multiple linear regression analyses, three for project managers (i.e. EM, CMO, and CM) and the other three for subordinates (i.e. SEM, SCMO, and SCM), are carried out in the

investigation of the relationship between the leadership orientations/relationship culture indicators and project performance, controlling for the managers' prior overseas experience.

6.6.2.1 The Dependent Variable

The dependent variable used for the testing of Hypotheses 5 & 6 is project performance. Similar to the five indices discussed in previous sections, it is represented by an index generated by the Principal Components Factor Analysis. The results indicate that all statements relating to project performance in the questionnaire survey are to be included. In short, the average value of all 7 statements for project managers (and all 6 for subordinates) in this regard is a proxy for their perceptions as to their project's general performance (see Table 6.8a-6.8b). For the interpretation of this index, the higher it is (ranging from 1 to 5), the better the project performance is perceived to be. Comparisons of the project performance indicators and indices among project managers themselves and between project managers and their subordinates are illustrated in Tables 6.9a-6.9c below. The histograms of the indices are included in Appendices 10 & 11.

Table 6.8a: Statements to be included for the computation of the project performance index based on Factor Analysis (Project Managers)

Project Managers	Statements included according to Factor Analysis
Project Performance (PP)	IV. 1) Project cost objectives were met IV. 2) Profit margin objectives were met IV. 3) Project schedules were adhered to IV. 4) There were no quality problems related to project outputs IV. 5) Accidents are avoided on site IV. 6) The project was managed so as to satisfy the interests and challenges of the members of the project team. IV. 7) Clients were satisfied with the project performance

Table 6.8b: Statements to be included for the computation of the project performance index based on Factor Analysis (Subordinates)

Subordinates	Statements included according to Factor Analysis
Project Performance (PP)	IV. 1) Project cost objectives were met IV. 2) Profit margin objectives were met IV. 3) Project schedules were adhered to IV. 4) There were no quality problems related to project outputs IV. 5) Accidents are avoided on site IV. 6) Clients were satisfied with the project performance

Table 6.9a: Project Performance Index (PP) reported by project managers

	Chinese Managers with Overseas experience (CMO)		Chinese Managers without Overseas experience (CM)		Expatriate Managers (EM)	
	Mean	SD	Mean	SD	Mean	SD
PP	3.91	.447	3.70	.533	3.94	.467

	Between CMO and CM		Between CMO and EM		Between CM and EM	
	T-value	p-value	T-value	p-value	T-value	p-value
PP	1.344	.187	.283	.778	1.728*	.090

Table 6.9b: Project Performance Index (PP) reported by subordinates

	Subordinates of Chinese Managers with Overseas Experience (SCMO)		Subordinates of Chinese Managers without Overseas Experience (SCM)		Subordinates of Expatriate Managers (SEM)	
	Mean	SD	Mean	SD	Mean	SD
PP	3.96	.548	3.85	.402	3.95	.701

	Between SCMO and SCM		Between SCMO and SEM		Between SCM and SEM	
	T-value	p-value	T-value	p-value	T-value	p-value
PP	.836	.407	-.070	.944	.652	.517

Table 6.9c: T-test results of Project Performance Index (PP) reported by project managers and by subordinates

	Between CMO and SCMO		Between CM and SCM		Between EM and SEM	
	T-value	p-value	T-value	p-value	T-value	p-value
PP	.395	.695	1.013	.317	.070	.944

The findings (Table 6.9a) illustrate that, the CMs tend to score their projects' performances lower than the other two manager groups do. Nonetheless, with the only exception of the reported PP between expatriate managers and CM, which is significantly different at 10% level, the disparities between the PP of local Chinese managers (CMO and CM), and between that of CMOs and EMs, are not statistically significant. As for the subordinates (Table 6.9b), the SCMs report a slightly lower PP, as compared to that by the SCMOs and the SEMs. However, the differences between any combinations of the three are not statistically significant. Lastly, the comparison between managers and subordinates, in terms of PP, yields no significant results (Table 6.9c). These results lend support to the stability of the Project Performance (PP) measurement.

6.6.2.2 The Explanatory Variables

As for the explanatory variables, the five indices depicting project managers' leadership orientations and relationship cultures are selected. However, it should be noted that they are significantly correlated with one another (see Tables 6.10a-b) and including all of them into the models

might raise concerns of multicollinearity, from a statistical point of view. However, these indicators 1) are critical elements in the testing of Hypotheses 5 & 6; and 2) capture different dimensions of project management (i.e. leadership orientations and relationship cultures such as communication & conflict resolution, and power relationship; see the Factor Analysis results as previously reported), rather than depicting essentially identical features as would be assumed in conventional collinearity situations. In addition, it is only in situations in which two independent variables are perfectly correlated with one another that one of the assumptions for multiple regression models is violated (Baltagi, 2008, p. 74). Because of these reasons, all of the selected management style indices are to be kept in the regressions. The findings are reported in Table 6.10.

Table 6.10a: Correlation Matrix of selected independent variables for regression models (Chinese Managers; Control Variable: Overseas Experience)

	TO	PO	CCR	PRSS	PRCA
TO	1	.136	.190	.078	.150
PO		1	.299	-.033	.119
CCR			1	.236	.273
PRSS				1	.637**
PRCA					1

Note: *** denotes significance at 1%; ** at 5%.

Table 6.10b: Correlation Matrix of selected independent variables for regression models (Expatriate Managers)

	TO	PO	CCR	PRSS	PRCA
TO	1	.103	.487**	.634**	-.278
PO		1	-.035	-.022	.213
CCR			1	.469**	-.050
PRSS				1	.071
PRCA					1

Note: *** denotes significance at 1%; ** at 5%.

6.6.3 Relationship between Leadership Orientations (and Relationship cultures) and Project Performance according to Project Managers

The findings of the multiple regression models for the project managers are displayed in Table 6.11 below.

Table 6.11: Multiple linear regression results on the impact of various management style indicators on project performance, reported by project managers

	Chinese Managers with Overseas Experience (CMO)	T-statistics	Chinese Managers without Overseas Experience (CM)	T-statistics	Expatriate Managers (EM)	T-statistics
Constant	3.444**	2.243	3.194***	4.175	2.953**	2.792
TO	-.110	-.499	.585***	4.611	-.033	-.134
PO	-.221	-.797	.094	.561	.062	.270
CCR	.165	.930	-.513***	-3.565	.087	.466
PRSS	-.377*	-1.815	.296*	1.802	.038	.191
PRCA	.650**	2.226	-.353*	-1.831	.162	.710
R-square	.339		.693		.069	
F-statistic	1.434		6.332		.340	

Notes: 1) TO (Leadership Orientation Index); PO (People Orientation Index); CCR (Communication & Conflict Resolution Index); PRSS (Power Relationship Index with subordinates/subcontractors); PRCA (Power Relationship Index with clients and persons in authority); 2) Note: *** denotes significance at 1%; ** at 5%; * at 10%.

As seen in Table 6.11, none of the selected variables are significant in explaining project performance from the perspectives of the expatriate project managers, and the resultant R-square is low.

By contrast, a number of variables are found to be significant in relation to project performance, for the two local Chinese manager groups (controlled for overseas experience). The resultant R-squares for these two models are much higher as a result. As shown in Table 6.10, significant positive correlations are discovered between task orientation (TO) and the project performance index (PP) among the CMs. Project managers who considered themselves to be task-oriented are also be more likely to have rated performance for their project higher than other less task-oriented managers had.

Nonetheless, the findings also show remarkable differences between the two Chinese project manager groups from the perspective of relationship cultures. For instance, the CMs that rated themselves as being more direct in terms of the speech codes they use, and relatively more argumentative when they disagree with fellow team members had rated their project performance relatively higher, as indicated by the negative, significant relationship between CCR and PP. For the CMOs, however, whether or not the manager is direct in expressing his/her own viewpoint is not significant in relation to the level of project performance.

The manager's power relationship with subordinates and with superiors and clients has a significant relationship with project performance in both

local Chinese manager samples, albeit with opposite results. For the CMs, a negative correlation is observed between PP and PRCA, suggesting that project managers who rated higher levels of project performance, considered the power relationship with superiors and clients should be lower. The positive correlation between PP and PRSS indicates that managers who considered they had a higher power distance between themselves and subordinates also considered they had achieved a higher level of performance. Yet, those CMOs who believe they have a clearer sense of power relationship with clients and superiors actually also rated their project's performance higher, while lower power distance between the managers and the subordinates is significantly related to better project performance.

To sum up, within the context of leadership orientations, neither task-oriented nor people-oriented style of leadership was statistically correlated with the level of project performance, of the EMs and the CMOs. To a certain extent, this finding is similar to the argument that no single type of leadership could lead to better business performance (Keegan and den Hartog, 2004; Muller and Turner, 2007). The possible reason is that a project manager would decide his/her style of management, subject to the project's own nature and possibly the constitution of their subordinate group. Nonetheless, for CMs, there is a significant positive relationship

between managers' rating of their project performance and the level of task-orientation, which is in line with Giritli and Oraz (2004) and with the conventional belief of the leadership orientation of western managers.

In terms of the relationship between project performance and communication and conflict resolution, the CMs believe that a manager should be more direct and argumentative when it comes to disagreements with the subordinates. The idea is that, when orders are given through indirect speech codes, and when a project manager tries to avoid confrontations with his/her subordinates for the sake of a harmonic working environment, subordinates are not able to grasp what the manager is actually requiring them to do for the task. This could lead to speculations on the part of the subordinates and even misunderstandings as to the true intent of the project manager, resulting in lower project performance. This somewhat resembles the practice of textbook western project managers in this regard.

As for the power relationship with subordinates/subcontractors and with superiors/clients, the correlations of these two factors are exact opposites for CMs and CMOs. The CMs appear to endorse the traditional western style of power relationship with their immediate superiors and clients (i.e. low power distance), while maintaining the conventional Chinese style of

power relationship when it comes to their dealing with subordinates (i.e. high power distance). Meanwhile, to the CMOs, within the same working environment, a client (or superior)-oriented approach in their project management is positively associated with project performance. This may be because the managers perceive they must effectively respond to the need of clients and assign the work to their subordinates to fulfil client's expectations (Simkoko, 1992). The managers may be project leaders, but the clients are the ones who ultimately decide what has to be achieved in a project.

It can be said that Hypothesis 5 (*H5*), which predicts that '*There will be no differences for the project manager groups, when classified broadly by ethnicity and overseas experience, in the association between their espoused leadership orientations and relationship culture and their assessment of project performance*' is not supported by the findings.

The findings show that the perceptions of different managerial groups as to the relationship between leadership orientations/relationship cultures and project performance differ. One possible reason may be attributed to the difference in the *level* of intercultural adjustments experienced by these managers. For those who do not have any prior overseas experience (CMs),

they are exposed to other cultures either through western business management theories, and to a lesser extent, in previous collaborations with foreigners. Since a major part of working in a multicultural workplace is to interact with people from various nations, they tend to perceive the textbook western style of management (i.e. task-oriented leadership and low power distance with superiors and clients) as the key to better project performance. On the other hand, the CMOs, with all the prior experience working/living abroad, have a better (or at least a more personal) grasp of western cultural values, inside and outside the workplace, than merely textbook knowledge. They appear to see things similar to the EMs, as reflected by their perception that there is no definitive leadership orientation which conditions better project performance in a multicultural workplace. Instead, how the manager leads a construction project depends on the nature of the project, and on the nature of the host culture. Yet, unlike the EMs, the CMOs emphasize the importance of high power distance with superiors and client, which is textbook Chinese business practice, and of low power distance with subordinates, which is textbook western business practice. In other words, the level of intercultural adjustment appears to affect a manager's perception of the effectiveness of different management practices (i.e. leadership orientations and relationship cultures) on the eventual performance of construction projects in a multinational workplace.

6.6.4 Relationship between Leadership Orientations (and Relationship cultures) and Project Performance according to Subordinates

This section reports the findings concerning the subordinates' perceptions of the relationship between the project managers' leadership orientations and relationship cultures. The findings are shown in Table 6.12 below.

Table 6.12: Multiple linear regression results on the impact of various management style indicators on project performance, reported by subordinates

	Subordinates of Chinese Managers with Overseas Experience (SCMO)	T-statistics	Subordinates of Chinese Managers without Overseas Experience (SCM)	T-statistics	Subordinates of Expatriate Managers (SEM)	T-statistics
Constant	6.156***	4.494	3.306***	4.108	.044	.043
TO	.268*	1.758	.022	.158	.316*	1.882
PO	-.022	-.100	.697***	4.403	.409*	1.932
CCR	-.010	-.060	-.409***	-3.825	-.098	-.709
PRSS	-.395**	-2.502	.029	.195	.000	-.003
PRCA	-.520*	-1.729	-.179	-.871	.350*	1.718
R-square	.410		.669		.385	
F-statistic	2.915		6.077		4.252	

Notes: 1) TO (Leadership Orientation Index); PO (People Orientation Index); CCR (Communication & Conflict Resolution Index); PRSS (Power Relationship Index with subordinates/subcontractors); PRCA (Power Relationship Index with clients and persons in authority); 2) Note: *** denotes significance at 1%; ** at 5%; * at 10%.

The results reflect a much different set of perceptions, as to the relationship between project managers' leadership orientations (and relationship cultures) and the eventual project performance. Firstly, from the perspective of the SCMOs, three of the five independent variables, namely

TO, PRSS, and PRCA (alongside the constant term), are significant at 10% level. The positive coefficient of the TO variable indicates that, a manager, who is more task-oriented in his/her leadership, is perceived to have achieved a higher level of project performance. However, the negative correlations for both PRSS and PRCA suggest that the project manager also needs to have a lower sense of power relationship with his subordinates, and with his clients and superiors, in order to obtain better performance in a construction project.

Meanwhile, two different variables, PO and CCR, are significantly correlated with project performance, according to the SCMs. The positive correlation between PO and PP points out that, from their perspective, a better-performing project manager tends to be more people-oriented. Yet, they also believe that the manager has to be more direct in his/her speeches in order for better performance in construction projects to be achieved.

As for the SEMs, three of the variables are significant at the 10% level. Similar to the SCMOs, the SEMs believe in the positive correlation between the performance of a construction project and task-oriented leadership; and similar to the SCMs, they also believe in the importance (positive) of the people-oriented leadership to the resultant project performance. Nonetheless, unlike the SCMOs, the SEMs perceive that

better-performing project managers in Hong Kong should maintain a relatively higher sense of power relationship, rather than lower, with their clients and superiors.

Interestingly, the constant term for both SCMOs and SCMs are significant at 1% level, while that for the SEMs is not. Such a finding seems to reflect that the subordinates of local Chinese managers do have some innate judgments of their immediate superiors, regardless of the latter's leadership orientations and relationship cultures. This is particularly the case when it comes to the SCMOs. In comparison, the constant terms for the project manager groups, although are all significant at least at 5% level, their coefficients are very similar. The finding, in this regard, among the subordinates of the Chinese manager groups might have an implication, which is that local Chinese managers who have had previous overseas experience, are perceived to perform better than those without similar experience, under any circumstances.

Based upon the findings, it can be said that Hypothesis 6 (*H6*), which states that *'The relationship between leadership orientations/relationship cultures and project performance will not vary between the perceptions of project managers and of their subordinates'* is not supported

Similar to the previous section, as intercultural adjustment takes place inside a multinational workplace, it alludes to the notion of a unified set of project management behaviors (in this study, by means of leadership orientations and relationship cultures) which could help produce a higher level of project performance. Under such circumstances, the perception of project managers and of subordinates as to the relationship between leadership orientations/relationship cultures and project performance should not be noticeably different. However, the findings illustrate that all three subordinate groups perceive the correlation between these two aspects of management and project performance not only differ among themselves, but also between them and their immediate superiors. Reasons contributing to such a disparity could be : 1) their respective positions in the project and hence the different perspectives incurred; 2) the subordinates' innate judgment of project managers based upon their ethnic and cultural backgrounds, which might not necessarily relate to the latter's actual behaviours in leadership orientations and relationship cultures or 3) project managers' perceptions of their own leadership orientations/relationship cultures styles reflecting normative judgment of what they 'should' reflect. The results reflect the findings discussed in section 6.5.3.3 in respect of differences between managers and subordinates around leadership orientations and relationship cultures.

6.7 CONCLUSION

The first part of this study has compared and contrasted the local (Hong Kong) Chinese and Western expatriate project managers in terms of leadership orientations, communication and conflict resolution, and power distance with subordinates and with superiors. In contrast with the dichotomised predictions (as seen in Chen and Partington, 2004; Mäkilouko, 2004; Chan and Goto, 2003; Loosemore and Lee, 2002; Leung and Chan, 1999; Mason and Spich, 1987; and Hofstede, 1983), this study reveals that the leadership orientations and relationship cultures of local Chinese and expatriate project managers working in a multicultural workplace have various degrees of disparities. For instance, significant differences in the level of task-orientation, of people-orientation, and of power relationship with clients and superiors are found between CMOs and EMs; significant differences are also found between CMs and EMs in their respective assessments of the level of task-orientation, of communication and conflict resolutions, of power relationship with subordinates/subcontractors, and of power relationship with clients and superiors. Our findings reinforced Orton's (2000) study, in which he found that Westerners are not completely oriented to being task-driven, as they tended to build a more people-focused corporate culture and to adopt a rational approach. Our findings further reveal that both the local Chinese manager groups (i.e. CMOs and CMs), while showing similar assessments

in their level of task-orientation, of communication & conflict resolution, and of power relationship with both subordinates/subcontractors and clients/superiors, assessed their own level of people-orientation quite differently, that is, CMOs viewed themselves as more people-oriented than CMs' evaluation of themselves in this regard.

The reasons behind their management behaviours could be explained in the following two ways. The first possibility is the 'intercultural adjustment' of expatriate managers (McEvoy and Parker, 1995). Prior studies suggest that intercultural adjustment is recognized as an ideal way for cross-cultural success for sojourners (Guthrie and Zektick, 1967; Jones and Popper, 1972; and Brew and Cairns, 2004). For example, in the study by Brew and Cairns (2004), they found that Australian expatriates modified their communication and conflict behaviours toward the host culture (East Asia) when dealing with members of that culture. Schneider and Barsoux (2003) suggested that the expatriate managers have to depend on local management and employees to achieve their objectives, and therefore, the ability to form relationships with local employees helps them integrate into the social fabric of the host culture. Successful expatriates need to be less task-oriented since a strong task-orientation can interfere with the need to build relationships and trust (Kohls, 1979). This suggests that expatriate managers need to adjust and adapt to the host-national culture (or to be

‘localized’) in order to be successful in their ‘international’ management (Imahopri and Laniganm 1989; and Abdul-Aziz, 1993).

The second possibility is that, referring to the viewpoint of Hall (1976) and Kapoor et al. (2003), all cultures have both individualism/collectivism, and high/low power relationship in them, because of demographic, regional, class, and other differences within the culture (Kapoor et al., 2003). For example, Chen and Partington (2004) concluded that a higher value on relationship is not unique to Chinese managers; British managers also consider good relationships at work to be crucial. In this study, the Hong Kong Chinese managers rated themselves higher on ‘task-orientation’ and ‘individualism’ than Westerners. This can be explained by the argument developed by Levine and Norenzayan (1999), and Brew and Cairns (2004), as modernization and economic development perhaps have led many Asians to focus on work schedule as much as Westerners do. With increasing contact with Western cultures and people, many Asians have become more ‘westernized’ (Bond and King, 1985; and Ralston et al., 1993). In the study of Bond and King (1985), they found that 79% of Hong Kong people they sampled felt that they are westernized in some respects. Ralston et al. (1993) suggested that the thinking of Hong Kong Chinese managers is influenced by both Eastern cultural heritage and their exposure to Western business practices. This may support why local Chinese

managers rated themselves the way they did. The findings imply that a 'third leadership style', which equally considers the importance of task performance and interpersonal relationships (Makilouko, 2004), might also exist in the multinational construction firms in Hong Kong. Leaders under this style do not attempt team building or especially to develop interaction between team members. Instead, they act as a link between team members according to cultural division.

The findings of the present study suggest that both local (Hong Kong) Chinese and expatriate project managers are experiencing a certain degree of intercultural adjustments. Interestingly, rather than the convergence of management style, which implies a unified set of practices which might be applicable to all project managers within an multicultural workplace, project managers adjust different aspects of their existing practices. For example, local Chinese managers appear to adopt the conventional western task-oriented leadership style. Meanwhile, expatriate managers are comparatively less task-oriented than they are generally perceived to be.

In addition, owing to the managers' own cultural grounding (or their pride/'face'), they do not seem to acknowledge such changes in their management behaviours that are recognized by the subordinates. There are several findings in this regard. For instance, subordinates of Chinese

project managers (both with and without prior overseas experience) viewed their immediate superiors as more task-oriented, less people-oriented, and having a higher sense of power distance with clients and superiors; and subordinates of expatriate project managers viewed these managers as having a much clearer sense of power distance between them and their superiors/clients. It results in not only the significant disparities in the perceptions of leadership orientations (and relationship cultures) among the project managers themselves, but also between project managers and subordinates.

Still, the survey also reveals that some dominant deep-rooted cultural values and beliefs are not easily altered (Chen and Partington, 2004). This study confirms that relationship cultures are predominant among local Chinese project managers. The Hong Kong Chinese project managers are concerned with preserving the face of superiors and clients but not that of subordinates. They also tend to dislike their subordinates if they disagree or fail to respect their decisions. This implies that the concept of 'face' and a clear social and structural relationship between superior and subordinate(s) is still important in Hong Kong's business culture (i.e. between team members & project managers, and between project managers & clients/superiors). Similarly, the concepts of individual freedom and equal relationship between superiors and subordinates are also deep-rooted to

Western expatriate managers. Western expatriate managers place less emphasis on long-term cooperation and harmony with subordinates. In this regard, our findings are similar to those of Lee and Rogan (1991) who reported that the Koreans (Asians) are more confrontational, as power and status increase, than Americans.

The second part of this study examined the linkages between leadership orientations (and relationship cultures) and project performance in multinational construction companies in Hong Kong. Here we looked at three categories of manager determined by a combination of ethnicity and experience. These were Expatriate Managers (EM), Chinese Managers with overseas experience (CMO), and Chinese Managers without overseas experience (CM). Somewhat different results are derived for managers. For the CMs, those who perceived that they implemented a task-orientated leadership style also reported better performance in a construction project. This is also supported by the subordinates of CMOs (SCMO) and the subordinates of EMs (SEM). A positive relationship between people orientation and project performance is found in two of the subordinates' models, namely SCM and SEM. However, these two leadership orientation indicators are not found to be significant indicators of better performance according to the results for CMOs and the EMs, which implies that no definitive leadership orientation is significantly correlated to better project

performance. One possible explanation is that the construction industry is mainly project-based and most construction projects are one-off in nature (Palaneeswaran et al., 2006).

With regard to the roles of the project manager's relationship cultures on project performance, the CMs who report that they 1) are more direct in communication and conflict resolution (supported by the SCMs), 2) have a lower power distance with the superiors and clients (supported by the SCMOs), but a higher power distance with subordinates, also report better performance on their construction project. Yet, for the CMOs, better reported project performance is associated with higher power distance with superiors and clients (supported by the SEMs), while having a lower power distance with subordinates (supported by the SCMOs). Among the managers, the disparities lie in their varying degrees of intercultural adjustments (i.e. previous working/living experience abroad plus current working experience in the multinational workplace); and between project managers and subordinates, the difference is believed to be caused by 1) their respective positions in the project and hence the different perspectives incurred, 2) the subordinates' innate judgment of project managers based upon their ethnic and cultural backgrounds, regardless of their actual behaviours in leadership orientations and relationship cultures, or 3) project

managers' perceptions of their own leadership orientations/relationship cultures styles reflecting normative judgment of what they 'should' reflect.

The result allows for a better understanding of the relationships between project performance and different leadership dimensions in multinational construction firms in Hong Kong, and how varying degrees of intercultural adjustments affect these factors. It facilitates the organizations to consider and undertake the appropriate measures in order to balance the issues of internal harmony and task delivery objectives, for the improvement of the performance of construction projects.

CHAPTER 7: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

This chapter summarises the results and findings of the previous chapters. The theoretical and empirical findings are first discussed. This is followed by a brief summary of the major points of the thesis. Achievements and contributions of this research, both to the literature and the industry, are presented. To conclude, the limitations of the research together with the areas of future research are addressed.

7.2 CONCLUSIONS

This research consists of two parts. The first part of this study investigates the leadership orientations and power relationships of both Chinese and Western expatriate project managers in Hong Kong multi-national construction firms; while the second part focuses on the relationship between different leadership orientations and construction project performance in the multinational construction companies in Hong Kong.

The first part of this study has compared and contrasted the local (Hong Kong) Chinese and Western expatriate project managers in terms of leadership orientations, communication and conflict resolution, and power relationship with subordinates and with superiors. In contrast with the dichotomised predictions (as seen in Chen and Partington, 2004; Mäkilouko, 2004; Chan and Goto, 2003; Loosemore and Lee, 2002; Leung and Chan, 1999; Mason and Spich, 1987; and, Hofstede, 1983), this study reveals that the leadership orientations and relationship cultures of local Chinese and expatriate project managers working in a multicultural workplace have various degrees of disparities. For instance, significant differences in the level of task-orientation, of people-orientation, and of power relationship with clients and superiors are found between Chinese Managers with overseas experience and Expatriate Managers; significant differences are also found between Chinese Managers without prior overseas experience and Expatriate Managers in their respective assessments of the level of task-orientation, of communication and conflict resolutions, of power relationship with subordinates/subcontractors, and of power relationship with clients and superiors. Our findings reinforced Orton's (2000) study, in which he found that Westerners are not completely oriented to being task-driven, as they tended to build a more people-focused corporate culture and to adopt a rational approach. Our findings further reveal that both the local Chinese manager groups (i.e.

CMOs and CMs), while showing similar assessments in their level of task-orientation, of communication & conflict resolution, and of power relationship both with subordinates/subcontractors and with clients/superiors, assessed their own level of people-orientation quite differently, that is, Chinese Managers with overseas experience viewed themselves as more people-oriented than Chinese Managers without overseas experience evaluation of themselves in this regard.

The reasons behind their management behaviours could be explained in the following two ways. The first possibility is the 'intercultural adjustment' of expatriate managers (McEvoy and Parker, 1995). Prior studies suggest that intercultural adjustment is recognized as an ideal way for cross-cultural success for sojourners (Guthrie and Zektick, 1967; Jones and Popper, 1972; and Brew and Cairns, 2004). For example, in the study by Brew and Cairns (2004), they found that Australian expatriates modified their communication and conflict behaviours toward the host culture (East Asia) when dealing with members of that culture. Schneider and Barsoux (2003) suggested that the expatriate managers have to depend on local management and employees to achieve their objectives, and therefore, the ability to form relationships with local employees helps them integrate into the social fabric of the host culture. Successful expatriates need to be less task-oriented since a strong task-orientation can interfere with the need to

build relationships and trust (Kohls, 1979). This suggests that expatriate managers need to adjust and adapt to the host-national culture (or to be 'localized') in order to be successful in their 'international' management (Imahopri and Laniganm 1989; and Abdul-Aziz, 1993).

The second possibility is that, referring to the viewpoint of Hall (1976) and Kapoor et al. (2003), all cultures have both individualism/collectivism, and high/low power relationship in them, because of demographic, regional, class, and other differences within the culture (Kapoor et al., 2003). For example, Chen and Partington (2004) concluded that a higher value on relationship is not unique to Chinese managers; British managers also consider good relationships at work to be crucial. In this study, the Hong Kong Chinese managers rated themselves higher on 'task-orientation' and 'individualism' than Westerners. This can be explained by the argument developed by Levine and Norenzayan (1999), and, Brew and Cairns (2004), as modernization and economic development perhaps have led many Asians to focus on work schedule as much as Westerners do. With increasing contact with Western cultures and people, many Asians have become more 'westernized' (Bond and King, 1985; and Ralston et al., 1993). In the study of Bond and King (1985), they found that 79% of Hong Kong people they sampled felt that they are westernized in some respects. Ralston et al. (1993) suggested that the thinking of Hong Kong Chinese

managers is influenced by both Eastern cultural heritage and their exposure to Western business practices. This may support why local Chinese managers rated themselves the way they did. The findings imply that a 'third leadership style', which equally considers the importance of task performance and interpersonal relationships (Makilouko, 2004), might also exist in the multinational construction firms in Hong Kong. Leaders under this style do not attempt team building or especially to develop interaction between team members. Instead, they act as a link between team members according to cultural division.

The findings of the present study suggest that both local (Hong Kong) Chinese and expatriate project managers were undergoing a certain degree of intercultural adjustments. Interestingly, rather than the convergence of management style, which implies a unified set of practices which might be applicable to all project managers within an multicultural workplace, project managers adjust different aspects of their existing practices. For example, local Chinese managers appear to adopt the conventional western task-oriented leadership style. Meanwhile, expatriate managers are comparatively less task-oriented than they are perceived to be. In addition, owing to the managers' own cultural grounding (or their pride/'face'), they do not seem to acknowledge such changes in their management behaviours that are recognized by the subordinates. There are several findings in this

regard. For instance, subordinates of Chinese project managers (both with and without prior overseas experience) viewed their immediate superiors as more task-oriented, less people-oriented, and having a higher sense of power distance with clients and superiors; and subordinates of expatriate project managers viewed these managers as having a much clearer sense of power distance between them and their superiors/clients. It results in not only the significant disparities in the perceptions of leadership orientations (and relationship cultures) among the project managers themselves, but also between project managers and subordinates.

Still, the survey also reveals that some dominant deep-rooted cultural values and beliefs are not easily altered (Chen and Partington, 2004). This study confirms that the relationship culture is predominant among local Chinese project managers. The Hong Kong Chinese project managers are concerned with preserving the face of superiors and clients but not that of subordinates. They also tend to dislike their subordinates if they disagree or fail to respect their decisions. This implies that the concept of 'face' and a clear social and structural relationship between superior and subordinate(s) are still important in Hong Kong's business culture (i.e. between team members & project managers, and between project managers & clients/superiors). Similarly, the concepts of individual freedom and equal relationship between superiors and subordinates are also deep-rooted to

Western expatriate managers. Western expatriate managers place less emphasis on long-term cooperation and harmony with subordinates. In this regard, our findings are similar to those of Lee and Rogan (1991) who reported that the Koreans (Asians) are more confrontational, as power and status increase, than Americans.

The second part of this study examined the linkages between leadership orientations (and relationship cultures) and project performance in multinational construction companies in Hong Kong. Somewhat different results are derived for managers. Chinese Managers who perceive that they implement a task-oriented leadership style also rate their project performance better. This viewpoint is also supported by the Subordinates of Chinese Managers with prior overseas experience and the Subordinates of Expatriate Managers. Meanwhile, the positive relationship between people orientation and project performance is found in two of the subordinates' models, namely Subordinates of Chinese Managers without prior overseas experience and Subordinates of Expatriate Managers. However, these two leadership orientation indicators are not found to be significant according to the Chinese Managers with prior overseas experience and the Expatriate Managers, which implies that no definitive leadership orientation could guarantee a better project performance.

With regard to the roles of the project manager's relationship cultures on project performance, Chinese Managers without prior overseas experience tend to believe that a project manager who is 1) more direct in communication and conflict resolution (also supported by their subordinates), 2) having a lower power distance with the superiors and clients (supported by the subordinates of Chinese Managers with prior overseas experience), but a higher power distance with subordinates, would perform better in a construction project. Yet, for Chinese Managers with prior overseas experience, a more successful project manager should instead have a higher power distance with superiors and clients (supported by the subordinates of Expatriate Managers), while having a lower power distance with subordinates (supported by their subordinates). Among the managers, the disparities lie in their varying degrees of intercultural adjustments (i.e. previous working/living experience abroad plus current working experience in the multinational workplace); and between project managers and subordinates, the difference is believed to be caused by 1) their positions in the project and hence the different perspectives incurred, 2) the subordinates' innate judgment of project managers based upon their ethnic/cultural backgrounds regardless of the latter's leadership orientations and relationship cultures, or 3) project managers' perceptions of their own leadership orientations/relationship cultures styles reflecting normative judgment of what they 'should' reflect.

From a practical perspective, the findings allow for a better understanding of the relationships between project performance and leadership orientations/relationship cultures in multinational construction firms in Hong Kong, and of how varying degrees of prior overseas experience affect the way these managers adjust these two aspects of management within this setting. It facilitates the organizations to consider and undertake the appropriate measures in order to balance the issues of internal harmony and task delivery objectives, for the improvement of the performance of construction projects.

7.3 LIMITATIONS

This research has several limitations that must be acknowledged. One limitation is the possibility of unbalanced representation of ethnic groups in the sample. The expatriate sample consisted of mostly managers from the United Kingdom. Additionally, as the majority of these British managers have had more than 20 years of working/living experience in Hong Kong, it is hard to say that the managers in this sample truly represent the western style of project management. Meanwhile, since Hong Kong had been a British colony for more than 150 years before her handover to China, she has been subjected to a lengthy period of cultural mixing and integration.

As a result, it is possible that the sample of local Chinese managers used in this study, despite being representative of Hong Kong's construction industry, does not altogether represent the Chinese style of management. A more balanced representation of managers, which includes Chinese managers from non-multinational firms and expatriate managers from companies outside Hong Kong, should be allowed in further study for examining and comparing the potential differences of leadership perceptions and power relationships of managers of various cultural backgrounds.

This study was based on a restricted sample size and research scope. The small sample size may have led to a non-response bias. These results can only be generalized to the project managers from the local multi-national construction firms. It solely examined the impact of leadership style on multinational construction firms in Hong Kong, and the generalization of research findings to other organizational settings in the construction industry cannot be sustained.

This study has adopted a quantitative approach. The use of a research questionnaire on leadership behaviours is open to self-reporting respondents providing responses which suggest what they see as desirable

characteristics, rather than realistic answers. Future research should not only investigate a larger sample, but also extend the study to a wider construction workplace such as sub-contractors, consultancies, and development firms.

Second, despite the assurance of confidentiality and anonymity, the sensitiveness of survey data might have forced some of the respondents to withdraw or to be less candid in their responses to the questionnaire. In addition, to capture a wider and better picture of the leadership-performance relationship, future study is needed to collect more data from a larger sample size.

This research focuses on the leadership orientations of project managers in multinational construction companies. Although it does provide a better understanding in this regard within Hong Kong's construction industry, the relationship between leadership orientations and project success is far more complex than expected. According to Oschieng and Price (2010), communications among those in multicultural projects can be effective should project managers be aware of cultural variations. As a result, managers' leadership orientations vary from culture to culture (Smith and Peterson, 1988; Randeree and Chaudhry 2007). Nonetheless, as individual

projects are usually short-term, one question arises: Are such adjustments in managers' leadership orientations long-term changes or one-time only? In other words, do expatriate managers return to their original, western style of leadership when they are involved in another project within their home country? Besides, would local Chinese project managers revert to the conventional Chinese style of leadership in projects that only involve local Chinese team members? Future studies on these issues would provide a more in-depth understanding of project management.

In addition, Phua and Rowlinson (2003, 2004) analyzed the cooperative behaviours of project managers and their impact on project performance in Hong Kong's construction industry, and found that the ingroup/outgroup mentality further complicates both leadership orientations and project success of construction organizations. The individual behavioural differences of project managers, in terms of collectivism/individualism, may be a moderating factor for inter-organizational co-operation, which serves as a mechanism that affects project success. In addition, different criteria might be utilized for the assessment of a project's success among managers, and between managers and subordinates. As regards the latter, besides the elements which have been covered in this study, other factors, such as the subordinates' perceptions towards the working environment, and even the project managers' themselves, might lead to disparate results

in the assessment of the success of the same project. Future studies in this area could also prove to be very useful in the field of project management research.

There are two possible viewpoints with regard to project success: macro and micro (Lim and Mohamed, 1999). The macro viewpoint addresses the question of, “Is the original project concept achieved?” The users and stakeholders usually focus on project success from the macro perspective viewpoint. It was explained by Lim and Mohamed (1999) that the micro viewpoint usually concerns the project construction phase and related construction parties involved in the project. During the construction phase, project management goals such as time, cost, quality, safety are concerns of the contractual parties. This research is leaning towards the micro-viewpoint. Nonetheless, how the other stakeholders, for example top management, contractors, and clients perceive project success, whether from a micro or macro perspective, suggests some directions for future studies.

From a broader perspective, this thesis solely emphasizes the general categories in the evaluation of project success, from a project-related standpoint and from a human-resources-related standpoint. Other categories for project evaluation have been used in previous studies as well,

such as project procedures, external environment, project management system, and structural factors (Toor and Ogunlana, 2009).

7.4 RECOMMENDATIONS

There are numerous other issues that have been providing challenges for the construction industry. For instance, the constantly-changing socio-economic and cultural environments have been getting more complicated and globalization, not only in general, but also of the construction industry has induced a variety of challenges to the stakeholders regardless of their levels (Lewis, 2006; Ofori, 2007; Raftery et al., 1998). Globalization, in particular, has caused a situation in which the social, economic, technical and political aspects in society are no longer predictable (Judy et al, 2004). In response to that, businesses have had to adopt alternative management systems to in order to manage the risks derived from such uncertainties while retaining their competitiveness (Jefferies et al., 2006). On the other hand, globalization has also created an expanded construction market that has generated enormous demand for large scale construction and infrastructure projects that in turn creates new opportunities for the construction industry around the globe (Toor and Ogunlana, 2009).

As a result, newer forms of co-operation have been introduced in order to address such changes. For instance, according to Jefferies et al. (2006), Project Alliancing is one of those procurement and management tools implemented within the construction industry as well as in other industries. By definition, Project Alliances are an agreement between two or more entities to be cooperative. They share both the project risk and reward for the achievement of mutually-agreed outcomes, grounded on principles of good faith and trust, along with an open-book approach towards costs (Kwok and Hampson, 1996; Abrahams and Cullen, 1998). Then, in accordance with Walker et al. (2000), the involved parties develop an alliance charter describing targets on program and cost, the requirements of performance and the arrangements of risk and reward. The Alliance group then works as a unit to fulfill the alliance charter based on elements such as a win-win attitude, trust, commitment and innovation for the project's delivery (Green and Lenard, 1999).

In addition to cooperative arrangements, sustainability has become a critical and timely topic in development. The most well-known definition of sustainable development originated from the Brundtland Report (WCED, 1987), as it "meets the needs of the present without compromising the ability of the future generations to meet their own needs". To see how important this issue has become, according to a report by the World

Wildlife Fund, if we still consume in the same manner that we have been, at least three planets would be needed to support our demands (Hails 2006).

Yet, within the context of the construction industry, confusion about sustainable construction has been prominent and professionals have shown varied attitudes toward it (Chong et al., 2009). The same situation has been observed in the academic field as well. For example, Ofori (1998) listed a number of deficiencies in the fundamentals and principles of Sustainable Construction (SC) suggested by Hill and Bowen (1997). On the practical front in construction, while Kibert's (1994) SC emphasized minimization of resources and reuse, utilization of renewable and recyclable resources, minimizing environmental footprint, creation of a healthy and nontoxic environment, and the pursuit of better quality built environment, Vanegas and Pearce's (2000) SC was developed upon the depletion and degradation of resources, the impact on built environment, in addition to human health. Adding to the complexities is that the need for sustainability differs between the developed world and the developing world (Ofori, 1998). Even within a society, sustainable culture changes over time (Yip & Poon, 2009).

Regardless, because the built environment directly influences all human activities, the construction industry has to come to terms with the broader

environmental and social agenda that is presented by the concept of sustainable development (Curwell and Cooper, 1998).

All these issues have proffered some other directions for future researches. Firstly, the cooperative managerial practice known as Project Alliancing is rather new within construction industries on an international level, e.g. Australia (Essex, 2009). Would this kind of partnership be working in a place that features a mixture of deep-rooted Chinese management culture and western business influences such as Hong Kong? How would this cooperative practice affect project performance, in comparison to other forms of management styles? In addition, within the context of Hong Kong's construction industry, discussions on sustainable construction cannot be any timelier, considering Hong Kong's extremely limited natural and land resources. In this regard, what are the opinions of industry professionals towards reuse and the financial feasibility of such environmental-friendly practices? Also, what more could the government do to facilitate sustainable construction in Hong Kong? Besides, global warming has become an alarming issue in a variety of aspects, which includes construction. Since construction affects all human activities, how would industry professionals address this situation with regard to construction materials, designs, among others? Lastly, within Hong Kong's construction industry, most project managers are over the age of 45 and

possess lots of previous experiences. How would they respond to these aforementioned challenges and new practices is worth further academic investigations as well.

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Appendix 1: Demographic Information of project managers

Table 1: Age distribution of managers

Age	Number of Managers	Percentage
31-35	1	1.2
36-40	10	12.5
41-45	23	28.8
46-50	23	28.8
51-55	13	16.2
55 or above	10	12.5
Total	80	100.0

Table 2: Distribution of managers' ethnicities

Ethnicity	Number of Managers	Percentage
Chinese (HK)	44	55.0
British	28	35.0
Australian	2	2.5
Sweden	1	1.2
French	2	2.5
Central European	1	1.2
Others	2	2.5
Total	80	100.0

Table 3: Distribution of managers' educational attainment

Educational Attainment	Number of Managers	Percentage
High school graduate	3	3.8
Diploma	7	8.8
Bachelor degree	36	45.0
Master degree	32	40.0
Others	2	2.5
Total	80	100.0

Table 4: Position of project managers in company by age

	Executive management	Senior management	Middle management	Supervisory management	Total
31-35	0	0	1	0	1
36-40	0	5	5	0	10
41-45	5	9	7	2	23
46-50	4	12	6	1	23
51-55	6	6	1	0	13
55 or above	3	5	2	0	10

Table 5: Educational attainment of project managers by ethnicity

	High school graduate	Diploma	Bachelor degree	Master degree	Others	Total
Chinese (HK)	1	3	21	19	0	44
British	1	4	11	10	2	28
Non-British Expatriates	1	0	4	3	0	8

Table 6: Education attainment of project managers by age

	High school graduate	Diploma	Bachelor degree	Master degree	Others	Total
31-35	0	0	0	1	0	1
36-40	0	0	7	3	0	10
41-45	1	0	9	13	0	23
46-50	1	3	9	10	0	23
51-55	0	1	8	2	2	13
55 or above	1	3	3	3	0	10

Appendix 2a: Component Matrices for Leadership Orientation Index (Managers), as generated by the Factor Analysis

Notes: 1) Only statements with correlation higher than 0.3 are selected for the computation of the final management style index (as illustrated in *); 2) Due to a higher Eigenvalue, Component 1 is preferred to Component 2 for the computation of the index.

	Component	
	1	2
II.1: Meeting project time deadlines and ensuring efficient task performance are more important than maintaining a friendly and supportive relationship with people that I work with.	.779*	-.195
II.2: I have strong concern for the team's goals and the means to achieve the goals	.276	-.771
II.3: To me, project team is more a temporary organization for achieving a specific task	.717*	.275
II.4: I believe project tasks can only be accomplished if moral and close relationships within the project team are achieved.	.486*	.108
II.5: Team achievement is more important than my own achievement.	.179	.643*

Appendix 2b: Eigenvalues and variance explained by components

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.465	29.303	29.303	1.465	29.303	29.303
2	1.134	22.673	51.976	1.134	22.673	51.976
3	.967	19.333	71.309			
4	.821	16.421	87.730			
5	.613	12.270	100.000			

Extraction Method: Principal Component Analysis.

Appendix 3a: Component Matrices for Communication & Conflict Resolution Index (Managers), as generated by the Factor Analysis

Notes: 1) Only statements with correlation higher than 0.3 are selected for the computation of the final management style index (as illustrated in *); 2) Due to a higher Eigenvalue, Component 1 is preferred to Component 2 for the computation of the index.

	Component	
	1	2
II.6: I'd rather say "No" directly and forthrightly than risk being misunderstood	-.202	.612*
II.7: I'd rather use indirect speech codes to avoid conflicts with others	.593*	-.315
II.8: I openly express my feelings and emotions and show my disagreement with others in work.	-.382	.560*
II.9: I avoid an argument even when I strongly disagree with my team members.	.742*	-.080
II.10: Negotiation first and last. No claims are made in order to avoid conflict and to maintain a good relationship.	.794*	.282
II.11: A good relationship is more important than a good contract to avoid conflict.	.640*	.562*

Appendix 3b: Eigenvalues and variance explained by components

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.129	35.484	35.484	2.129	35.484	35.484
2	1.189	19.811	55.295	1.189	19.811	55.295
3	.895	14.912	70.207			
4	.767	12.791	82.998			
5	.625	10.408	93.406			
6	.396	6.594	100.000			

Extraction Method: Principal Component

Analysis.

Appendix 4a: Component Matrices for Power Relationship Index with team members/subcontractors Index (Managers), as generated by the Factor Analysis

Notes: 1) Only statements with correlation higher than 0.3 are selected for the computation of the final management style index (as illustrated in *); 2) Due to a higher Eigenvalue, Component 1 is preferred to Component 2 for the computation of the index.

	Component				
	1	2	3	4	5
III.1: I emphasize hierarchy with my subordinates.	.428*	-.146	.737*	-.082	.156
III.2: I value a long-term cooperation and emphasize the need to maintain harmony with my subordinates.	.149	.561*	.102	-.027	-.332
III.3: I feel less need to control the followers of my team. I am more general rather than close supervision of them.	-.123	.431*	-.301	.358*	.530*
III.4: It is important for me to respect decisions made by the majority in the team that I supervise.	.139	.142	-.061	-.489	.759*
III.5: I use confrontational techniques when dealing with my subordinates.	.659*	-.008	-.148	-.602	-.170
III.6: I dislike my subordinates if they disagree or do not respect my decision.	.752*	-.062	-.347	.212	-.116
III.7: I treat my subordinates as friend-like, with respect, equality and trust.	-.124	.773*	-.004	-.127	-.229
III.8: I maintain status differences or power distance with sub-contractors.	.495*	-.333	.510*	.307*	.069
III.9: I value a long term cooperation with sub-contractors for mutual benefits.	.128	.794*	.350*	.181	.149
III.10: I use confrontational techniques when dealing with sub-contractors.	.852*	.135	-.145	-.199	.020
III.11: I dislike sub-contractors if they disagree or do not respect my decision.	.734*	-.045	-.261	.490*	.077
III.12: I treat sub-contractors as friend-like, with respect, equality and trust.	.185	.762*	.090	.043	-.069

Appendix 4b: Eigenvalues and variance explained by components

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.817	23.471	23.471	2.817	23.471	23.471
2	2.486	20.716	44.187	2.486	20.716	44.187
3	1.269	10.577	54.763	1.269	10.577	54.763
4	1.206	10.051	64.814	1.206	10.051	64.814
5	1.125	9.371	74.185	1.125	9.371	74.185
6	.885	7.374	81.559			
7	.658	5.480	87.040			
8	.524	4.363	91.403			
9	.441	3.678	95.081			
10	.239	1.992	97.073			
11	.204	1.700	98.773			
12	.147	1.227	100.000			

Extraction Method: Principal Component Analysis.

Appendix 5a: Component Matrices for Power Relationship Index with clients/superiors Index (Managers), as generated by the Factor Analysis

Notes: 1) Only statements with correlation higher than 0.3 are selected for the computation of the final management style index (as illustrated in *); 2) Due to a higher Eigenvalue, Component 1 is preferred to Component 2 for the computation of the index.

	Component		
	1	2	3
III.13: I emphasize hierarchy with client/ person in authority.	.655*	-.111	.368*
III.14: I consider the client as the 'boss' of the project more than the 'provider' of project funds.	.591*	.180	.294
III.15: To me, making the clients happy is relatively more important than keeping them informed.	.625*	.031	-.339
III.16: This is important to develop working and personal relationships with clients than the working relationship alone.	.287	.498*	-.611
III.17: I value a long term cooperation and emphasize the need to maintain harmony with client / person in authority for mutual benefits	.320*	.643*	-.245
III.18: I am concerned to protect the 'face' of my client / person in authority.	.764*	-.193	.131
III.19: I like to be accurate when I communicate with client / person in authority.	.016	.606*	.633*
III.20: When I disagree with client / person in authority, I express my disagreement	-.393	.671*	.152

Appendix 5b: Eigenvalues and variance explained by components

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.094	26.173	26.173	2.094	26.173	26.173
2	1.561	19.518	45.691	1.561	19.518	45.691
3	1.210	15.124	60.815	1.210	15.124	60.815
4	.883	11.038	71.853			
5	.729	9.108	80.961			
6	.610	7.619	88.580			
7	.531	6.643	95.223			
8	.382	4.777	100.000			

Extraction Method: Principal Component

Analysis.

Appendix 6a: Component Matrices for Leadership Orientation Index (Subordinates), as generated by the Factor Analysis

Notes: 1) Only statements with correlation higher than 0.3 are selected for the computation of the final management style index (as illustrated in *).

	Component
	1
II.1) My manager is more concerned with meeting project time deadlines and ensuring efficient task performance.	.804*
II.2) My manager has strong concern for the team's goals and the means to achieve those goals	.804*

Appendix 6b: Eigenvalues and variance explained by components

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.292	64.578	64.578	1.292	64.578	64.578
2	.708	35.422	100.000			

Extraction Method: Principal Component

Analysis.

Appendix 7a: Component Matrices for Communication & Conflict Resolution Index (Subordinates), as generated by the Factor Analysis

Notes: 1) Only statements with correlation higher than 0.3 are selected for the computation of the final management style index (as illustrated in *); 2) Due to a higher Eigenvalue, Component 1 is preferred to Component 2 for the computation of the index.

	Component	
	1	2
II.3) My manager would rather say "No" directly and forthrightly than risk being misunderstood.	-.036	.807*
II.4) My manager would rather use indirect speech codes to avoid conflicts with others.	.827*	.007
II.5) My manager openly expresses his/her feelings and emotions and shows his/her disagreement with others in work.	.259	.706*
II.6) My manager avoids an argument even when he/she strongly disagrees with me and our team members.	.867*	-.219
II.7) My manager believes negotiation is a key to maintaining a good relationship and reducing conflict.	.666*	.045

Appendix 7b: Eigenvalues and variance explained by components

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	1.947	38.937	38.937	1.947	38.937
2	1.200	23.991	62.928	1.200	23.991	62.928
3	.880	17.591	80.518			
4	.641	12.829	93.348			
5	.333	6.652	100.000			

Extraction Method: Principal Component Analysis.

Appendix 8a: Component Matrices for Power Relationship Index with team members/sub-contractors (Subordinates), as generated by the Factor Analysis

Notes: 1) Only statements with correlation higher than 0.3 are selected for the computation of the final management style index (as illustrated in *); 2) Due to a higher Eigenvalue, Component 1 is preferred to Component 2 for the computation of the index; 3) Two indices are created based on Component 1. The reason is that two mutually-exclusive sets of variables opposite to one another (as reflected by one set with large positive correlation which are marked by * and the other with large negative correlation which are marked by #), indicating two leadership elements that have no relation with one another..

	Component		
	1	2	3
III.1) My manager emphasizes hierarchy with me and other team members.	.573*	.041	.627*
III.2) My manager does not closely control me and my colleagues in our team. He/she provides general rather than close supervision of me and other colleagues.	-.394#	.154	.516*
III.3) My manager values long term cooperation and emphasizes the need to maintain harmony with me and our team members.	-.658#	.408*	.240
III.4) My manager likes to confront issues up-front when dealing with me and our team members.	.451*	.728*	-.272
III.5) My manager does not like it if our team members and I disagree or fail to respect his/her decisions.	.578*	.373*	-.100
III.6) My manager treats me and our team members as friend-like, with respect, equality and trust.	-.657#	.417*	-.164
III.7) My manager emphasizes hierarchy with his/her sub-contractors.	.442*	.302*	.553*
III.8) My manager values long-term cooperation with sub-contractors for mutual benefits.	-.642##	.439*	.213
III.9) My manager likes to confront issues up-front when dealing with sub-contractors.	.490*	.692*	-.218
III.10) My manager does not like it if the sub-contractors disagree or fail to respect his/her decisions.	.705*	.251	.056
III.11) My manager treats the sub-contractors with respect, equality and trust.	-.717##	.462*	-.048

Appendix 8b: Eigenvalues and variance explained by components

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.746	34.052	34.052	3.746	34.052	34.052
2	2.075	18.863	52.914	2.075	18.863	52.914
3	1.232	11.200	64.114	1.232	11.200	64.114
4	.893	8.114	72.228			
5	.787	7.151	79.379			
6	.709	6.448	85.827			
7	.413	3.756	89.583			
8	.386	3.511	93.094			
9	.319	2.900	95.994			
10	.280	2.549	98.543			
11	.160	1.457	100.000			

Extraction Method: Principal Component

Analysis.

Appendix 9a: Component Matrices for Power Relationship Index with superiors/clients (Subordinates), as generated by the Factor Analysis

Notes: 1) Only statements with correlation higher than 0.3 are selected for the computation of the final management style index (as illustrated in *); 2) Due to a higher Eigenvalue, Component 1 is preferred to Component 2 for the computation of the index

	Component		
	1	2	3
III.12) My manager emphasizes hierarchy with the superiors/ the person in authority.	-.099	-.464	.642*
III.13) From my observation, my manager tends to seek to keep clients happy rather than to keep clients informed.	.562*	-.440	-.242
III.14) From my observation, my manager develops both working and personal relationships with client rather than just working relationships.	.648*	.055	-.456
III.15) My manager emphasizes the need to maintain harmony with the superiors/ the person in authority for mutual benefits.	.775*	.165	.068
III.16) My manager is concerned to protect the 'face' of the superiors/ the person in authority.	.548*	-.363	.449*
III.17) My manager likes to be accurate when he/she communicates with the superiors/ the person in authority.	.363*	.537*	.510*
III.18) When my manager disagrees with the superiors/ the person in authority, he/she expresses his/her disagreement.	.068	.618*	.152

Appendix 9b: Eigenvalues and variance explained by components

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.784	25.481	25.481	1.784	25.481	25.481
2	1.242	17.747	43.228	1.242	17.747	43.228
3	1.169	16.699	59.927	1.169	16.699	59.927
4	.902	12.887	72.814			
5	.783	11.190	84.004			
6	.643	9.191	93.195			
7	.476	6.805	100.000			

Extraction Method: Principal Component

Analysis.

Appendix 10: Convergent Validity Analysis results for Project Managers

		II1	II3	II4
II1	Pearson Correlation	1	.314**	.148
	Sig. (2-tailed)		.005	.191
	N	80	80	80
II3	Pearson Correlation	.314**	1	.157
	Sig. (2-tailed)	.005		.164
	N	80	80	80
II4	Pearson Correlation	.148	.157	1
	Sig. (2-tailed)	.191	.164	
	N	80	80	80

Convergent Validity of statements included in the Task Orientation (TO) Index
 (Note: ** denotes significant at 1%; * at 5%)

		III2	III3	III7	III9	III12
III2	Pearson Correlation	1	.127	.394**	.329**	.255*
	Sig. (2-tailed)		.260	.000	.003	.022
	N	80	80	80	80	80
III3	Pearson Correlation	.127	1	.205	.281*	.122
	Sig. (2-tailed)	.260		.068	.012	.283
	N	80	80	80	80	80
III7	Pearson Correlation	.394**	.205	1	.469**	.444**
	Sig. (2-tailed)	.000	.068		.000	.000
	N	80	80	80	80	80
III9	Pearson Correlation	.329**	.281*	.469**	1	.642**
	Sig. (2-tailed)	.003	.012	.000		.000
	N	80	80	80	80	80
III12	Pearson Correlation	.255*	.122	.444**	.642**	1
	Sig. (2-tailed)	.022	.283	.000	.000	
	N	80	80	80	80	80

Convergent Validity of statements included in the People Orientation (PO) Index
 (Note: ** denotes significant at 1%; * at 5%)

		II7	II9	II10	II11
II7	Pearson Correlation	1	.353**	.230*	.181
	Sig. (2-tailed)		.001	.040	.107
	N	80	80	80	80
II9	Pearson Correlation	.353**	1	.450**	.271*
	Sig. (2-tailed)	.001		.000	.015
	N	80	80	80	80
II10	Pearson Correlation	.230*	.450**	1	.537**
	Sig. (2-tailed)	.040	.000		.000
	N	80	80	80	80
II11	Pearson Correlation	.181	.271*	.537**	1
	Sig. (2-tailed)	.107	.015	.000	
	N	80	80	80	80

Convergent Validity of statements included in the Communication and Conflict Resolution (CCR) Index

(Note: ** denotes significant at 1%; * at 5%)

		III1	III5	III6	III8	III10	III11
III1	Pearson Correlation	1	.209	.162	.439**	.162	.120
	Sig. (2-tailed)		.063	.152	.000	.151	.289
	N	80	80	80	80	80	80
III5	Pearson Correlation	.209	1	.380**	.104	.686**	.178
	Sig. (2-tailed)	.063		.000	.357	.000	.114
	N	80	80	80	80	80	80
III6	Pearson Correlation	.162	.380**	1	.158	.494**	.701**
	Sig. (2-tailed)	.152	.000		.160	.000	.000
	N	80	80	80	80	80	80
III8	Pearson Correlation	.439**	.104	.158	1	.312**	.339**
	Sig. (2-tailed)	.000	.357	.160		.005	.002
	N	80	80	80	80	80	80
III10	Pearson Correlation	.162	.686**	.494**	.312**	1	.510**
	Sig. (2-tailed)	.151	.000	.000	.005		.000
	N	80	80	80	80	80	80
III11	Pearson Correlation	.120	.178	.701**	.339**	.510**	1
	Sig. (2-tailed)	.289	.114	.000	.002	.000	
	N	80	80	80	80	80	80

Convergent Validity of statements included in the Power Relationship with Team members/Sub-contractors (PRSS) Index
 (Note: ** denotes significant at 1%; * at 5%)

		III13	III14	III15	III17	III18
III13	Pearson Correlation	1	.299**	.202	.084	.395**
	Sig. (2-tailed)		.007	.073	.458	.000
	N	80	80	80	80	80
III14	Pearson Correlation	.299**	1	.220*	.016	.312**
	Sig. (2-tailed)	.007		.050	.890	.005
	N	80	80	80	80	80
III15	Pearson Correlation	.202	.220*	1	.162	.340**
	Sig. (2-tailed)	.073	.050		.151	.002
	N	80	80	80	80	80
III17	Pearson Correlation	.084	.016	.162	1	.176
	Sig. (2-tailed)	.458	.890	.151		.119
	N	80	80	80	80	80
III18	Pearson Correlation	.395**	.312**	.340**	.176	1
	Sig. (2-tailed)	.000	.005	.002	.119	
	N	80	80	80	80	80

Convergent Validity of statements included in the Power Relationship with Superiors/Clients (PRCA) Index

(Note: ** denotes significant at 1%; * at 5%)

Appendix 11: Convergent Validity Analysis results for Subordinates

		II1	II2
II1	Pearson Correlation	1	.292**
	Sig. (2-tailed)		.002
	N	110	110
II2	Pearson Correlation	.292**	1
	Sig. (2-tailed)	.002	
	N	110	110

Convergent Validity of statements included in the Task Orientation (TO) Index
 (Note: ** denotes significant at 1%; * at 5%)

		III2	III3	III6	III8	III11
III2	Pearson Correlation	1	.284**	.287**	.262**	.239*
	Sig. (2-tailed)		.003	.002	.005	.012
	N	111	111	111	111	111
III3	Pearson Correlation	.284**	1	.512**	.593**	.580**
	Sig. (2-tailed)	.003		.000	.000	.000
	N	111	111	111	111	111
III6	Pearson Correlation	.287**	.512**	1	.392**	.578**
	Sig. (2-tailed)	.002	.000		.000	.000
	N	111	111	111	111	111
III8	Pearson Correlation	.262**	.593**	.392**	1	.650**
	Sig. (2-tailed)	.005	.000	.000		.000
	N	111	111	111	111	111
III11	Pearson Correlation	.239*	.580**	.578**	.650**	1
	Sig. (2-tailed)	.012	.000	.000	.000	
	N	111	111	111	111	111

Convergent Validity of statements included in the People Orientation (PO) Index
 (Note: ** denotes significant at 1%; * at 5%)

		II4	II6	II7
II4	Pearson Correlation	1	.619**	.290**
	Sig. (2-tailed)		.000	.002
	N	111	111	111
II6	Pearson Correlation	.619**	1	.437**
	Sig. (2-tailed)	.000		.000
	N	111	111	111
II7	Pearson Correlation	.290**	.437**	1
	Sig. (2-tailed)	.002	.000	
	N	111	111	111

Convergent Validity of statements included in the Communication and Conflict Resolution (CCR) Index

(Note: ** denotes significant at 1%; * at 5%)

		III1	III4	III5	III7	III9	III10
III1	Pearson Correlation	1	.176	.241*	.427**	.194*	.359**
	Sig. (2-tailed)		.064	.011	.000	.041	.000
	N	111	111	111	111	111	111
III4	Pearson Correlation	.176	1	.430**	.228*	.806**	.324**
	Sig. (2-tailed)	.064		.000	.016	.000	.001
	N	111	111	111	111	111	111
III5	Pearson Correlation	.241*	.430**	1	.193*	.340**	.585**
	Sig. (2-tailed)	.011	.000		.043	.000	.000
	N	111	111	111	111	111	111
III7	Pearson Correlation	.427**	.228*	.193*	1	.305**	.348**
	Sig. (2-tailed)	.000	.016	.043		.001	.000
	N	111	111	111	111	111	111
III9	Pearson Correlation	.194*	.806**	.340**	.305**	1	.379**
	Sig. (2-tailed)	.041	.000	.000	.001		.000
	N	111	111	111	111	111	111
III10	Pearson Correlation	.359**	.324**	.585**	.348**	.379**	1
	Sig. (2-tailed)	.000	.001	.000	.000	.000	
	N	111	111	111	111	111	111

Convergent Validity of statements included in the Power Relationship with Team members/Sub-contractors (PRSS) Index
 (Note: ** denotes significant at 1%; * at 5%)

		III13	III14	III15	III16	III17
III13	Pearson Correlation	1	.298**	.171	.254**	-.059
	Sig. (2-tailed)		.001	.072	.007	.537
	N	111	111	111	111	111
III14	Pearson Correlation	.298**	1	.361**	.047	.056
	Sig. (2-tailed)	.001		.000	.624	.556
	N	111	111	111	111	111
III15	Pearson Correlation	.171	.361**	1	.302**	.276**
	Sig. (2-tailed)	.072	.000		.001	.003
	N	111	111	111	111	111
III16	Pearson Correlation	.254**	.047	.302**	1	.105
	Sig. (2-tailed)	.007	.624	.001		.272
	N	111	111	111	111	111
III17	Pearson Correlation	-.059	.056	.276**	.105	1
	Sig. (2-tailed)	.537	.556	.003	.272	
	N	111	111	111	111	111

Convergent Validity of statements included in the Power Relationship with Superiors/Clients (PRCA) Index

(Note: ** denotes significant at 1%; * at 5%)

Appendix 12: Discriminant Validity Analysis results for Project Managers

		III2	III3	III7	III9	III12
II1	Pearson Correlation	.027	-.029	.026	.070	.174
	Sig. (2-tailed)	.813	.799	.816	.535	.123
	N	80	80	80	80	80
II3	Pearson Correlation	-.047	.198	.097	.074	.073
	Sig. (2-tailed)	.679	.078	.394	.512	.518
	N	80	80	80	80	80
II4	Pearson Correlation	.090	.016	.066	.044	.118
	Sig. (2-tailed)	.425	.888	.563	.701	.296
	N	80	80	80	80	80

Discriminant Validity between statements included in TO and in PO
 (Note: ** denotes significant at 1%; * at 5%)

		II7	II9	II10	II11
II1	Pearson Correlation	.213	.278*	.194	-.051
	Sig. (2-tailed)	.058	.012	.085	.651
	N	80	80	80	80
II3	Pearson Correlation	.301**	.270*	.270*	.126
	Sig. (2-tailed)	.007	.015	.015	.264
	N	80	80	80	80
II4	Pearson Correlation	.051	.194	.213	.178
	Sig. (2-tailed)	.656	.085	.057	.115
	N	80	80	80	80

Discriminant Validity between statements included in TO and in CCR
 (Note: ** denotes significant at 1%; * at 5%)

		III1	III5	III6	III8	III10	III11
II1	Pearson Correlation	-.003	.342**	.395**	.118	.387**	.305**
	Sig. (2-tailed)	.981	.002	.000	.299	.000	.006
	N	80	80	80	80	80	80
II3	Pearson Correlation	.055	.252*	.337**	.082	.237*	.239*
	Sig. (2-tailed)	.630	.024	.002	.472	.034	.032
	N	80	80	80	80	80	80
II4	Pearson Correlation	-.026	.050	-.052	.086	.022	-.151
	Sig. (2-tailed)	.818	.661	.650	.449	.848	.180
	N	80	80	80	80	80	80

Discriminant Validity between statements included in TO and in PRSS

(Note: ** denotes significant at 1%; * at 5%)

		III13	III14	III15	III17	III18
II1	Pearson Correlation	.177	.031	-.048	-.063	.109
	Sig. (2-tailed)	.117	.788	.673	.577	.335
	N	80	80	80	80	80
II3	Pearson Correlation	.058	-.052	.087	.121	.099
	Sig. (2-tailed)	.610	.644	.444	.286	.383
	N	80	80	80	80	80
II4	Pearson Correlation	-.117	-.024	.098	-.017	-.104
	Sig. (2-tailed)	.300	.835	.388	.884	.358
	N	80	80	80	80	80

Discriminant Validity between statements included in TO and in PRCA

(Note: ** denotes significant at 1%; * at 5%)

		II7	II9	II10	II11
III2	Pearson Correlation	.132	.167	.219	.199
	Sig. (2-tailed)	.244	.139	.051	.076
	N	80	80	80	80
III3	Pearson Correlation	.053	.060	.000	-.143
	Sig. (2-tailed)	.638	.599	1.000	.204
	N	80	80	80	80
III7	Pearson Correlation	.116	.101	.092	-.001
	Sig. (2-tailed)	.307	.373	.419	.990
	N	80	80	80	80
III9	Pearson Correlation	.040	-.055	.151	.014
	Sig. (2-tailed)	.724	.629	.180	.900
	N	80	80	80	80
III12	Pearson Correlation	-.046	.057	.247*	.100
	Sig. (2-tailed)	.685	.613	.027	.375
	N	80	80	80	80

Discriminant Validity between statements included in PO and in CCR
(Note: ** denotes significant at 1%; * at 5%)

		III1	III5	III6	III8	III10	III11
III2	Pearson Correlation	.064	.110	.126	-.083	.105	.009
	Sig. (2-tailed)	.574	.330	.266	.463	.356	.935
	N	80	80	80	80	80	80
III3	Pearson Correlation	-.203	-.193	-.044	-.143	-.042	.076
	Sig. (2-tailed)	.071	.087	.699	.205	.710	.502
	N	80	80	80	80	80	80
III7	Pearson Correlation	-.143	.037	-.103	-.298**	-.035	-.149
	Sig. (2-tailed)	.205	.742	.363	.007	.757	.187
	N	80	80	80	80	80	80
III9	Pearson Correlation	.186	-.095	-.025	-.050	.139	.071
	Sig. (2-tailed)	.099	.402	.824	.660	.218	.530
	N	80	80	80	80	80	80
III12	Pearson Correlation	-.103	.049	.001	-.070	.311**	.082
	Sig. (2-tailed)	.365	.664	.995	.534	.005	.472
	N	80	80	80	80	80	80

Discriminant Validity between statements included in PO and in PRSS

(Note: ** denotes significant at 1%; * at 5%)

		III13	III14	III15	III17	III18
III2	Pearson Correlation	.012	-.006	.043	.465**	.287**
	Sig. (2-tailed)	.917	.957	.703	.000	.010
	N	80	80	80	80	80
III3	Pearson Correlation	-.142	-.065	.017	.229*	.098
	Sig. (2-tailed)	.208	.570	.878	.041	.387
	N	80	80	80	80	80
III7	Pearson Correlation	-.060	.109	-.126	.418**	.143
	Sig. (2-tailed)	.597	.337	.266	.000	.207
	N	80	80	80	80	80
III9	Pearson Correlation	.017	.200	.123	.483**	.199
	Sig. (2-tailed)	.881	.075	.277	.000	.077
	N	80	80	80	80	80
III12	Pearson Correlation	-.074	.079	.003	.348**	.184
	Sig. (2-tailed)	.511	.484	.980	.002	.103
	N	80	80	80	80	80

Discriminant Validity between statements included in PO and in PRCA

(Note: ** denotes significant at 1%; * at 5%)

		III1	III5	III6	III8	III10	III11
II7	Pearson Correlation	.048	.079	.444**	.138	.166	.353**
	Sig. (2-tailed)	.675	.489	.000	.224	.140	.001
	N	80	80	80	80	80	80
II9	Pearson Correlation	.063	.279*	.175	.173	.175	.141
	Sig. (2-tailed)	.578	.012	.120	.126	.120	.212
	N	80	80	80	80	80	80
II10	Pearson Correlation	.053	.463**	.289**	-.056	.447**	.168
	Sig. (2-tailed)	.642	.000	.009	.620	.000	.137
	N	80	80	80	80	80	80
II11	Pearson Correlation	-.067	.195	.217	.077	.147	.111
	Sig. (2-tailed)	.554	.083	.053	.499	.192	.325
	N	80	80	80	80	80	80

Discriminant Validity between statements included in CCR and in PRSS

(Note: ** denotes significant at 1%; * at 5%)

		III13	III14	III15	III17	III18
II7	Pearson Correlation	.123	-.013	.081	.094	.377**
	Sig. (2-tailed)	.278	.906	.475	.405	.001
	N	80	80	80	80	80
II9	Pearson Correlation	.173	.068	.071	.026	.275*
	Sig. (2-tailed)	.125	.546	.530	.816	.014
	N	80	80	80	80	80
II10	Pearson Correlation	.091	.069	-.026	.226*	.062
	Sig. (2-tailed)	.424	.545	.818	.044	.586
	N	80	80	80	80	80
II11	Pearson Correlation	.122	-.159	.143	.307**	-.093
	Sig. (2-tailed)	.283	.160	.207	.006	.409
	N	80	80	80	80	80

Discriminant Validity between statements included in CCR and in PRCA

(Note: ** denotes significant at 1%; * at 5%)

		III13	III14	III15	III17	III18
III1	Pearson Correlation	.497**	.355**	.162	.215	.248*
	Sig. (2-tailed)	.000	.001	.150	.056	.027
	N	80	80	80	80	80
III5	Pearson Correlation	.242*	.142	-.182	.128	.094
	Sig. (2-tailed)	.031	.208	.106	.260	.406
	N	80	80	80	80	80
III6	Pearson Correlation	.252*	.092	.201	.136	.209
	Sig. (2-tailed)	.024	.416	.073	.229	.062
	N	80	80	80	80	80
III8	Pearson Correlation	.419**	.079	.157	-.015	.231*
	Sig. (2-tailed)	.000	.486	.163	.898	.039
	N	80	80	80	80	80
III10	Pearson Correlation	.264*	.181	-.055	.124	.248*
	Sig. (2-tailed)	.018	.107	.625	.273	.027
	N	80	80	80	80	80
III11	Pearson Correlation	.298**	.162	.220*	.002	.256*
	Sig. (2-tailed)	.007	.152	.050	.984	.022
	N	80	80	80	80	80

Discriminant Validity between statements included in PRSS and in PRCA
(Note: ** denotes significant at 1%; * at 5%)

Appendix 13: Discriminant Validity Analysis results for Subordinates

		III2	III3	III6	III8	III11
II1	Pearson Correlation	.027	-.074	-.135	.108	.103
	Sig. (2-tailed)	.776	.440	.161	.262	.285
	N	110	110	110	110	110
II2	Pearson Correlation	.167	.218*	.237*	.316**	.315**
	Sig. (2-tailed)	.082	.022	.013	.001	.001
	N	110	110	110	110	110

Discriminant Validity between statements included in TO and in PO

(Note: ** denotes significant at 1%; * at 5%)

		II4	II6	II7
II1	Pearson Correlation	.148	.141	.272**
	Sig. (2-tailed)	.124	.141	.004
	N	110	110	110
II2	Pearson Correlation	.156	.048	.256**
	Sig. (2-tailed)	.103	.615	.007
	N	110	110	110

Discriminant Validity between statements included in TO and in CCR

(Note: ** denotes significant at 1%; * at 5%)

		III1	III4	III5	III7	III9	III10
II1	Pearson Correlation	.190*	.473**	.348**	.172	.417**	.246**
	Sig. (2-tailed)	.047	.000	.000	.072	.000	.010
	N	110	110	110	110	110	110
II2	Pearson Correlation	-.106	.073	-.088	.008	.075	-.037
	Sig. (2-tailed)	.271	.447	.360	.935	.436	.704
	N	110	110	110	110	110	110

Discriminant Validity between statements included in TO and in PRSS

(Note: ** denotes significant at 1%; * at 5%)

		III1	III13	III14	III15	III16	III17
II1	Pearson Correlation	.190*	-.006	.062	.008	.288**	.229*
	Sig. (2-tailed)	.047	.954	.523	.938	.002	.016
	N	110	110	110	110	110	110
II2	Pearson Correlation	-.106	.038	.141	.178	-.049	.287**
	Sig. (2-tailed)	.271	.693	.140	.062	.611	.002
	N	110	110	110	110	110	110

Discriminant Validity between statements included in TO and in PRCA

(Note: ** denotes significant at 1%; * at 5%)

		II4	II6	II7
III2	Pearson Correlation	.184	.148	.078
	Sig. (2-tailed)	.054	.120	.413
	N	111	111	111
III3	Pearson Correlation	.379**	.365**	.465**
	Sig. (2-tailed)	.000	.000	.000
	N	111	111	111
III6	Pearson Correlation	.151	.185	.379**
	Sig. (2-tailed)	.113	.052	.000
	N	111	111	111
III8	Pearson Correlation	.260**	.191*	.430**
	Sig. (2-tailed)	.006	.044	.000
	N	111	111	111
III11	Pearson Correlation	.216*	.230*	.468**
	Sig. (2-tailed)	.023	.015	.000
	N	111	111	111

Discriminant Validity between statements included in PO and in CCR
(Note: ** denotes significant at 1%; * at 5%)

		III1	III4	III5	III7	III9	III10
III2	Pearson Correlation	.030	-.118	-.177	-.047	-.110	-.219*
	Sig. (2-tailed)	.752	.219	.064	.623	.250	.021
	N	111	111	111	111	111	111
III3	Pearson Correlation	-.270**	-.151	-.178	-.022	-.139	-.225*
	Sig. (2-tailed)	.004	.114	.062	.815	.145	.018
	N	111	111	111	111	111	111
III6	Pearson Correlation	-.450**	-.016	-.235*	-.169	.002	-.302**
	Sig. (2-tailed)	.000	.867	.013	.076	.984	.001
	N	111	111	111	111	111	111
III8	Pearson Correlation	-.174	-.020	-.171	-.091	-.106	-.349**
	Sig. (2-tailed)	.068	.836	.074	.342	.268	.000
	N	111	111	111	111	111	111
III11	Pearson Correlation	-.343**	.005	-.194*	-.221*	-.097	-.349**
	Sig. (2-tailed)	.000	.955	.041	.020	.312	.000
	N	111	111	111	111	111	111

Discriminant Validity between statements included in PO and in PRSS

(Note: ** denotes significant at 1%; * at 5%)

		III13	III14	III15	III16	III17
III2	Pearson Correlation	.031	.128	.132	.018	.034
	Sig. (2-tailed)	.744	.179	.167	.854	.726
	N	111	111	111	111	111
III3	Pearson Correlation	.040	.171	.480**	.132	.145
	Sig. (2-tailed)	.673	.073	.000	.167	.128
	N	111	111	111	111	111
III6	Pearson Correlation	-.066	.197*	.329**	-.096	.174
	Sig. (2-tailed)	.490	.038	.000	.318	.068
	N	111	111	111	111	111
III8	Pearson Correlation	.070	.240*	.407**	.107	.368**
	Sig. (2-tailed)	.464	.011	.000	.264	.000
	N	111	111	111	111	111
III11	Pearson Correlation	-.072	.218*	.326**	.075	.361**
	Sig. (2-tailed)	.451	.022	.000	.431	.000
	N	111	111	111	111	111

Discriminant Validity between statements included in PO and in PRCA

(Note: ** denotes significant at 1%; * at 5%)

		III1	III4	III5	III7	III9	III10
II4	Pearson Correlation	.059	-.072	-.108	.048	-.018	-.062
	Sig. (2-tailed)	.539	.450	.261	.620	.849	.515
	N	111	111	111	111	111	111
II6	Pearson Correlation	.028	.035	-.102	-.015	.080	-.071
	Sig. (2-tailed)	.774	.719	.285	.876	.406	.462
	N	111	111	111	111	111	111
II7	Pearson Correlation	-.280**	.226*	.012	-.111	.168	-.122
	Sig. (2-tailed)	.003	.017	.897	.247	.078	.201
	N	111	111	111	111	111	111

Discriminant Validity between statements included in CCR and in PRSS
(Note: ** denotes significant at 1%; * at 5%)

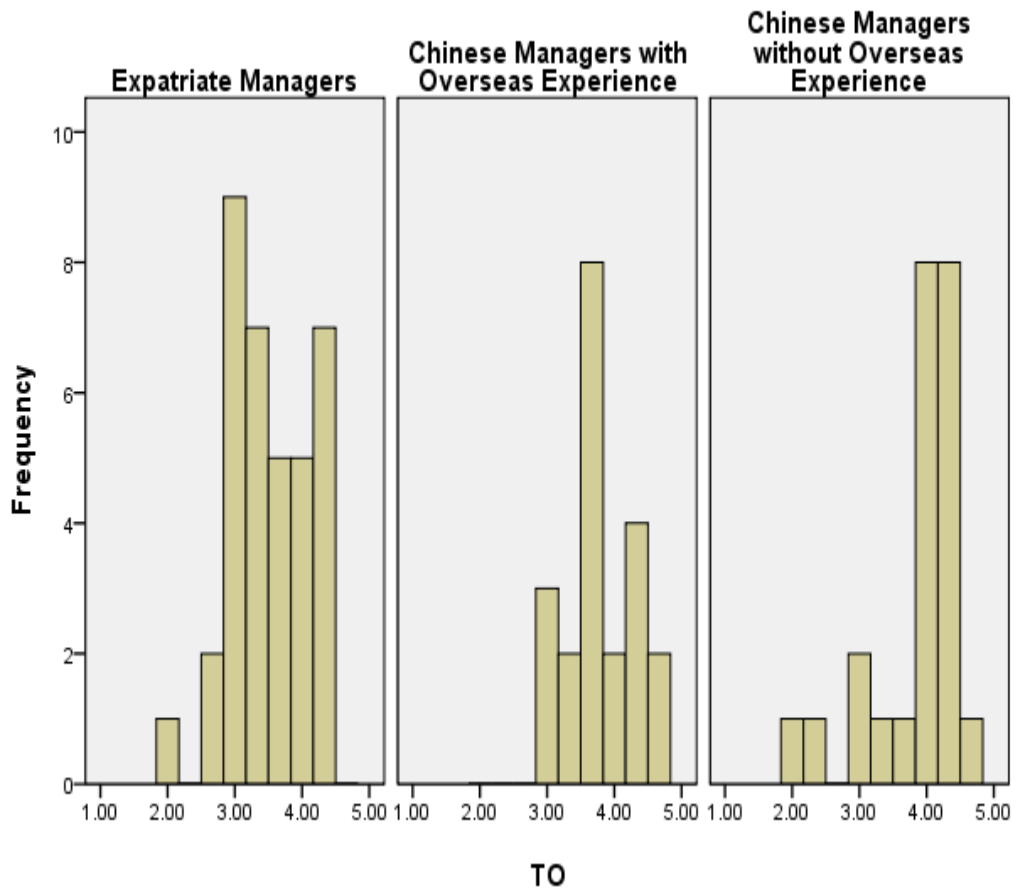
		III13	III14	III15	III16	III17
II4	Pearson Correlation	.172	.142	.176	.201*	.092
	Sig. (2-tailed)	.071	.138	.065	.034	.335
	N	111	111	111	111	111
II6	Pearson Correlation	.170	.166	.162	.207*	-.141
	Sig. (2-tailed)	.074	.081	.090	.029	.141
	N	111	111	111	111	111
II7	Pearson Correlation	.041	.115	.330**	.227*	.238*
	Sig. (2-tailed)	.672	.228	.000	.016	.012
	N	111	111	111	111	111

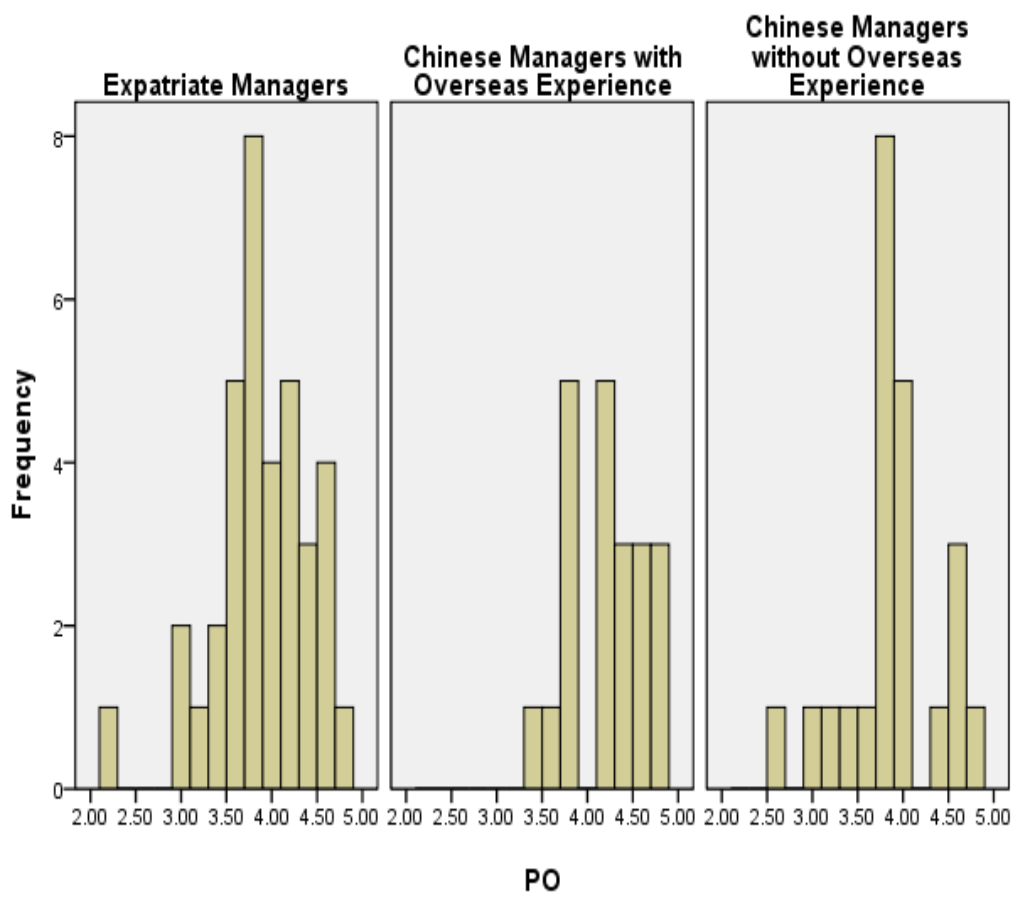
Discriminant Validity between statements included in PO and in PRCA
(Note: ** denotes significant at 1%; * at 5%)

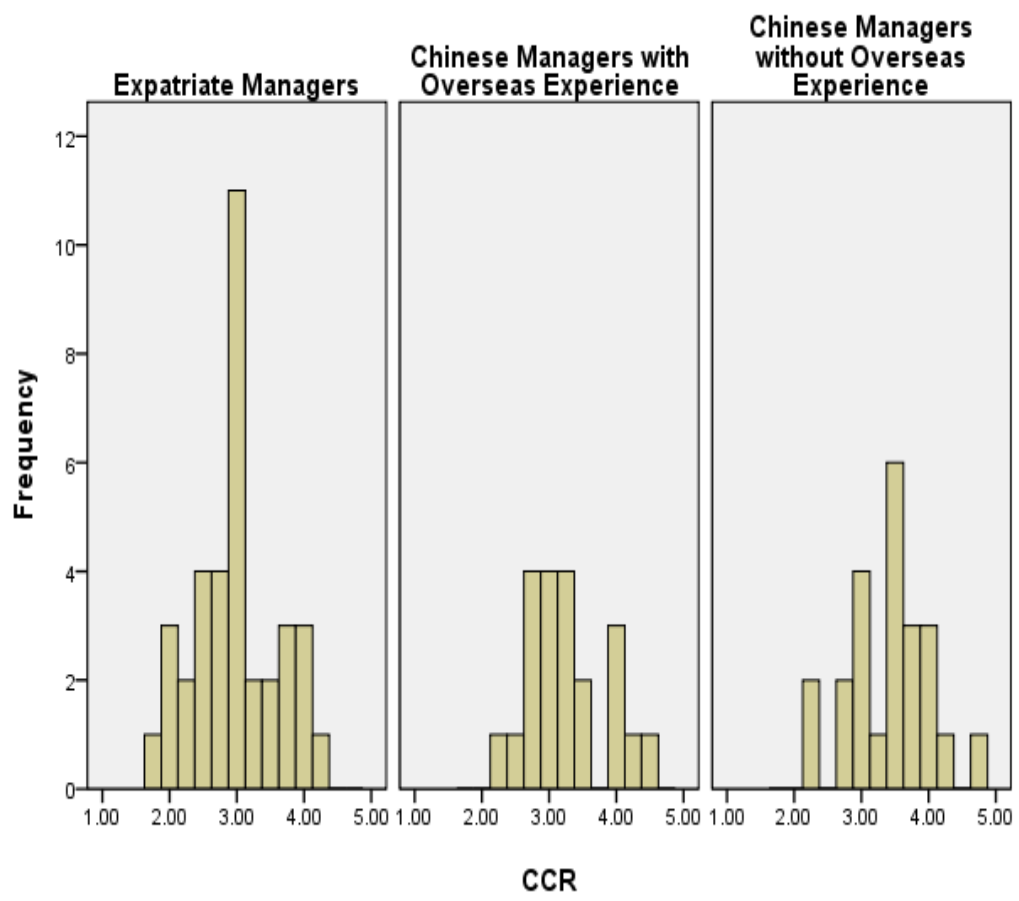
		III13	III14	III15	III16	III17
III1	Pearson Correlation	.045	-.084	-.194*	.101	-.072
	Sig. (2-tailed)	.636	.379	.041	.293	.450
	N	111	111	111	111	111
III4	Pearson Correlation	-.053	-.059	-.001	.184	.134
	Sig. (2-tailed)	.582	.541	.991	.053	.160
	N	111	111	111	111	111
III5	Pearson Correlation	-.052	-.063	.079	.352**	-.026
	Sig. (2-tailed)	.585	.511	.408	.000	.790
	N	111	111	111	111	111
III7	Pearson Correlation	-.019	-.141	-.118	.328**	.039
	Sig. (2-tailed)	.843	.141	.216	.000	.686
	N	111	111	111	111	111
III9	Pearson Correlation	-.125	-.041	-.043	.131	.078
	Sig. (2-tailed)	.190	.670	.651	.169	.416
	N	111	111	111	111	111
III10	Pearson Correlation	.043	-.138	-.056	.190*	-.115
	Sig. (2-tailed)	.653	.150	.557	.046	.228
	N	111	111	111	111	111

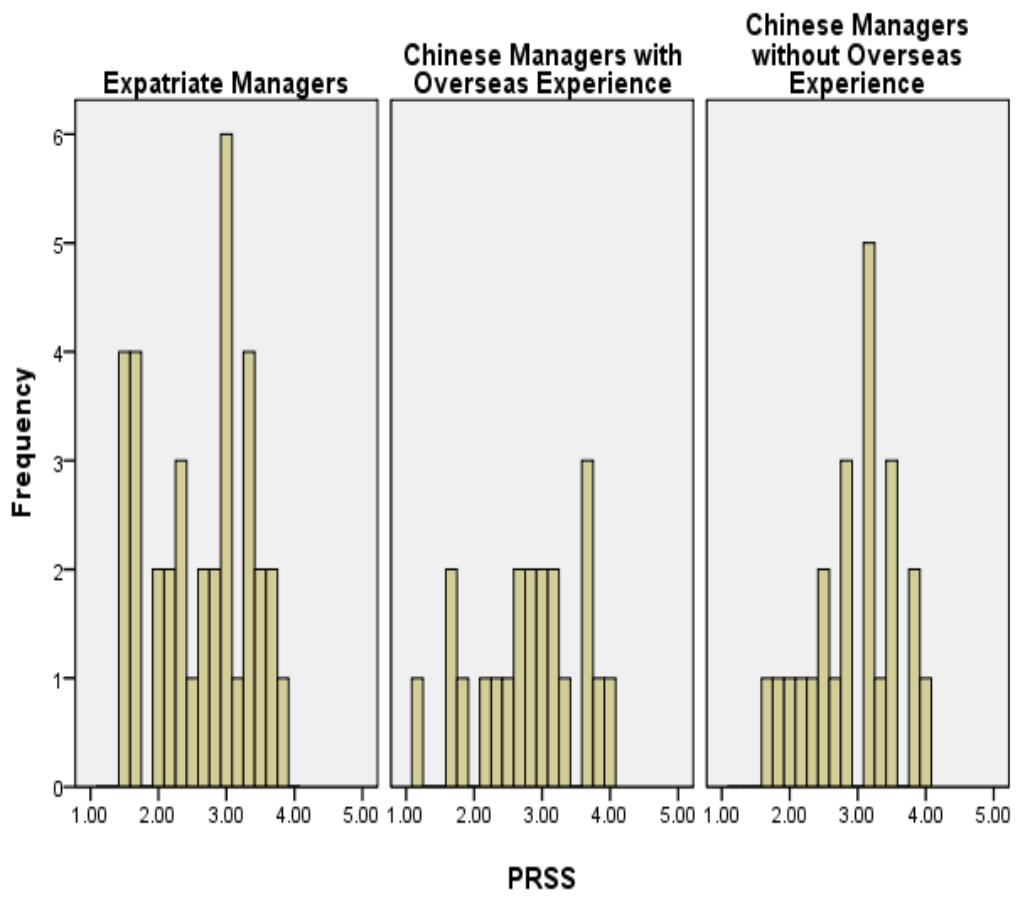
Discriminant Validity between statements included in PRSS and in PRCA
(Note: ** denotes significant at 1%; * at 5%)

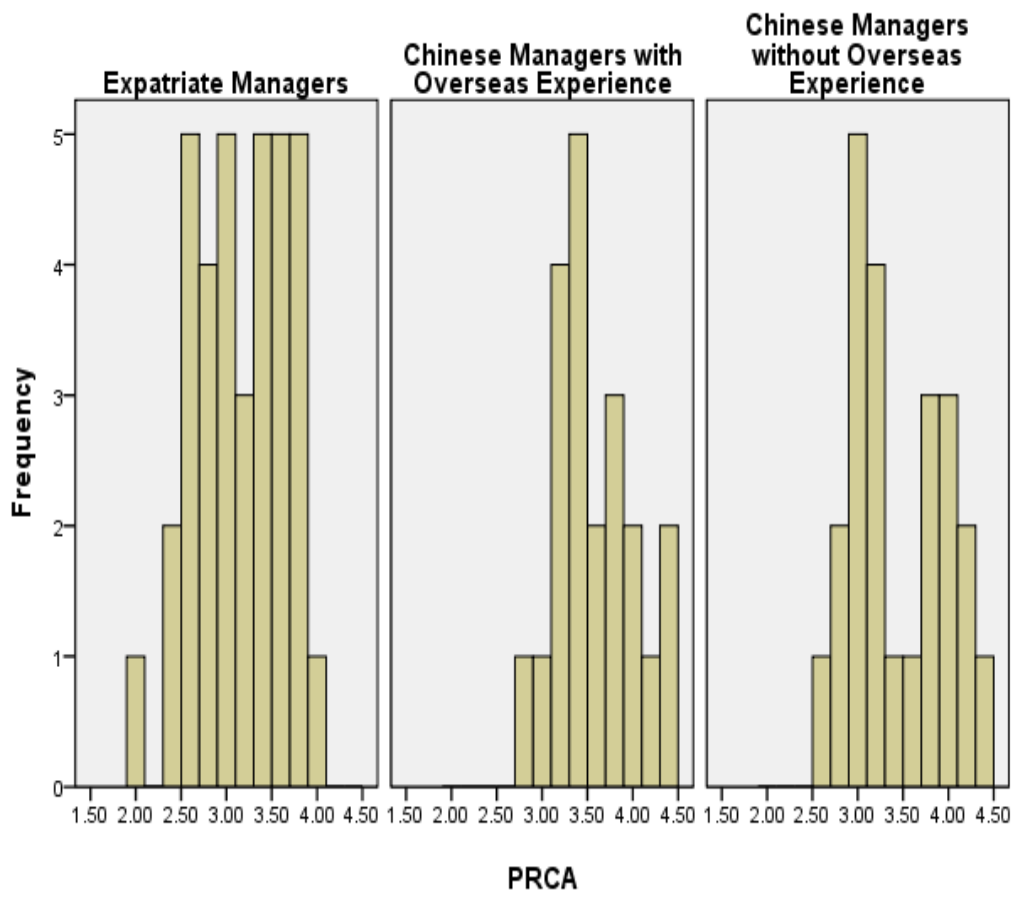
Appendix 14: Histograms of the Management Style Indices & Project Performance Index (Managers)

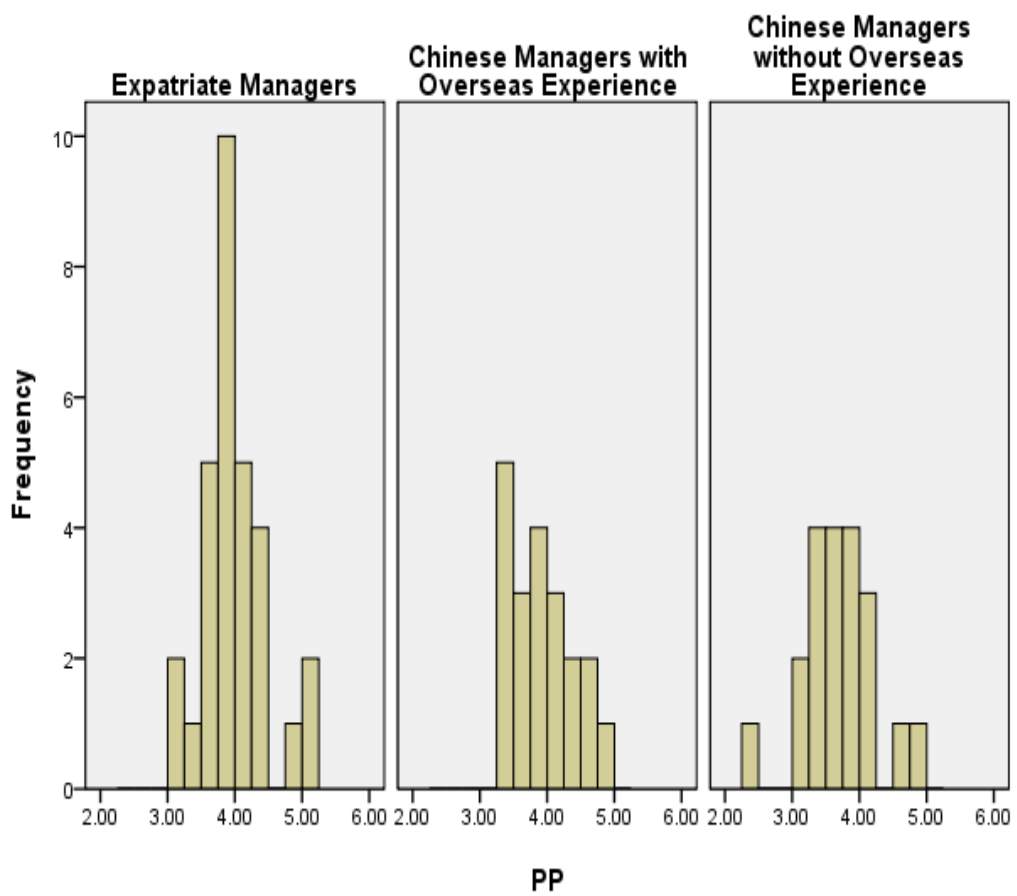




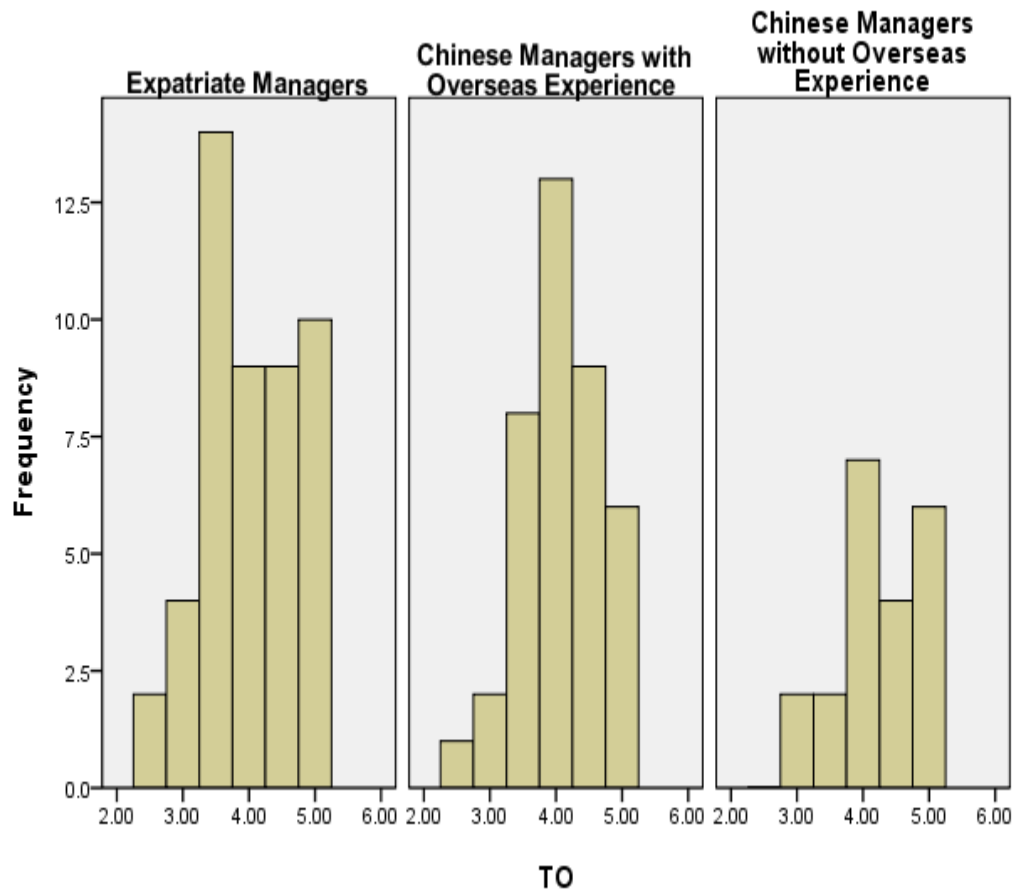


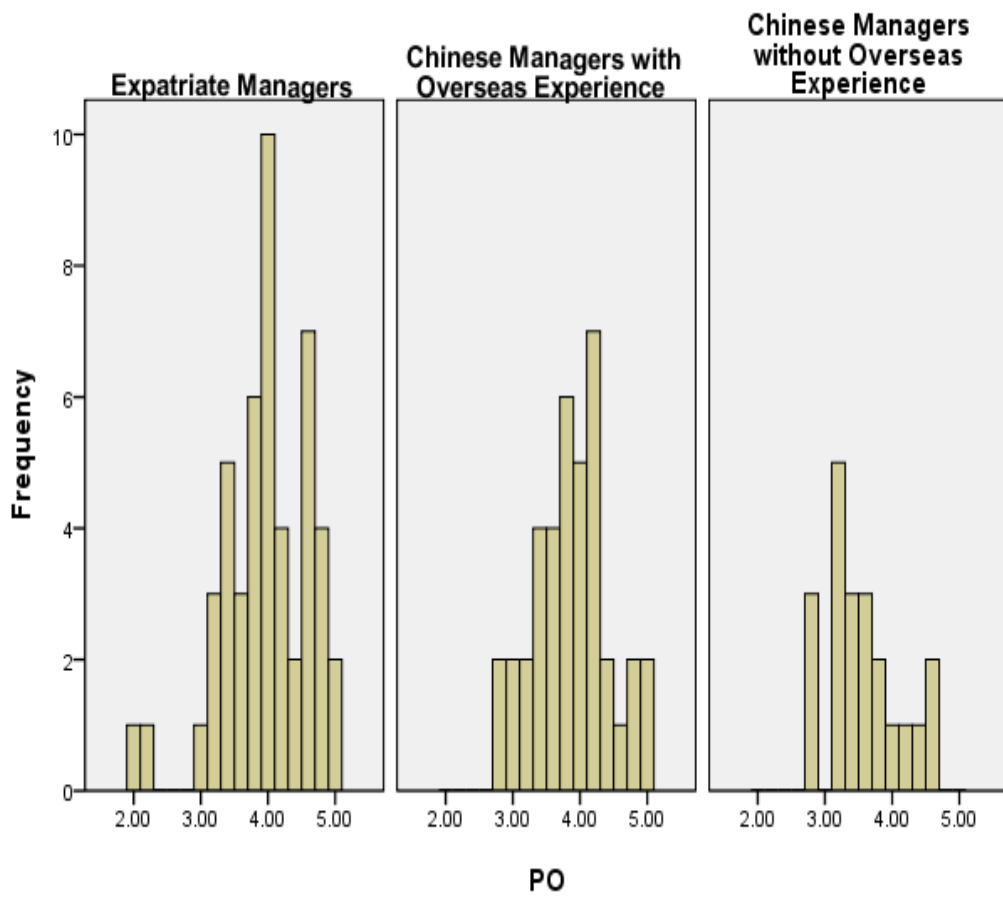


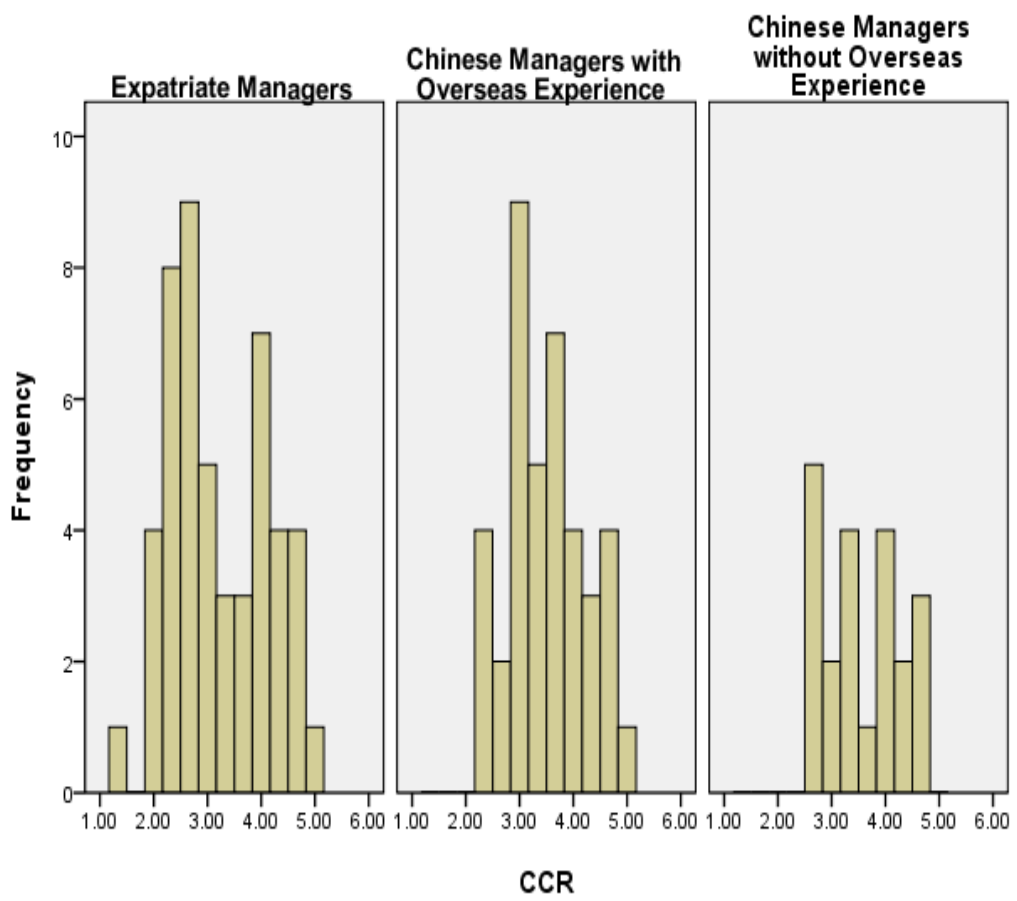


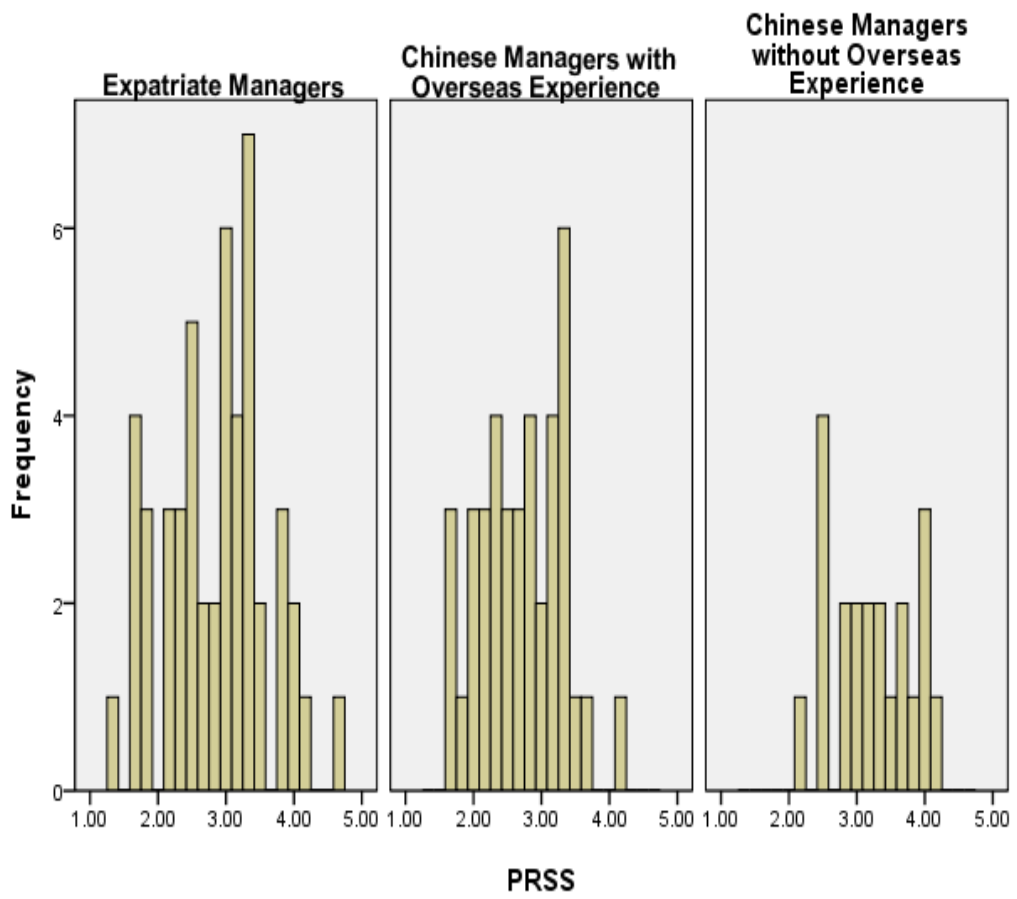


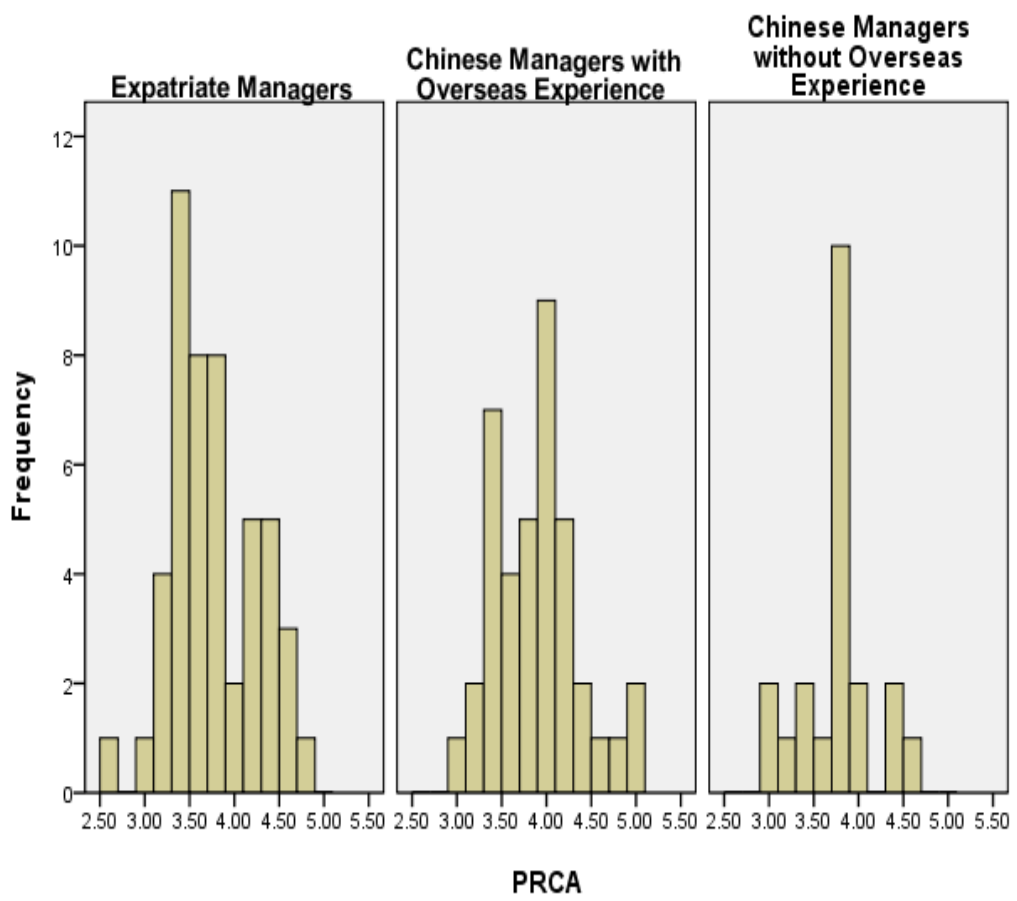
Appendix 15: Histograms of Management Style Indices and Project Performance Index (Subordinates)

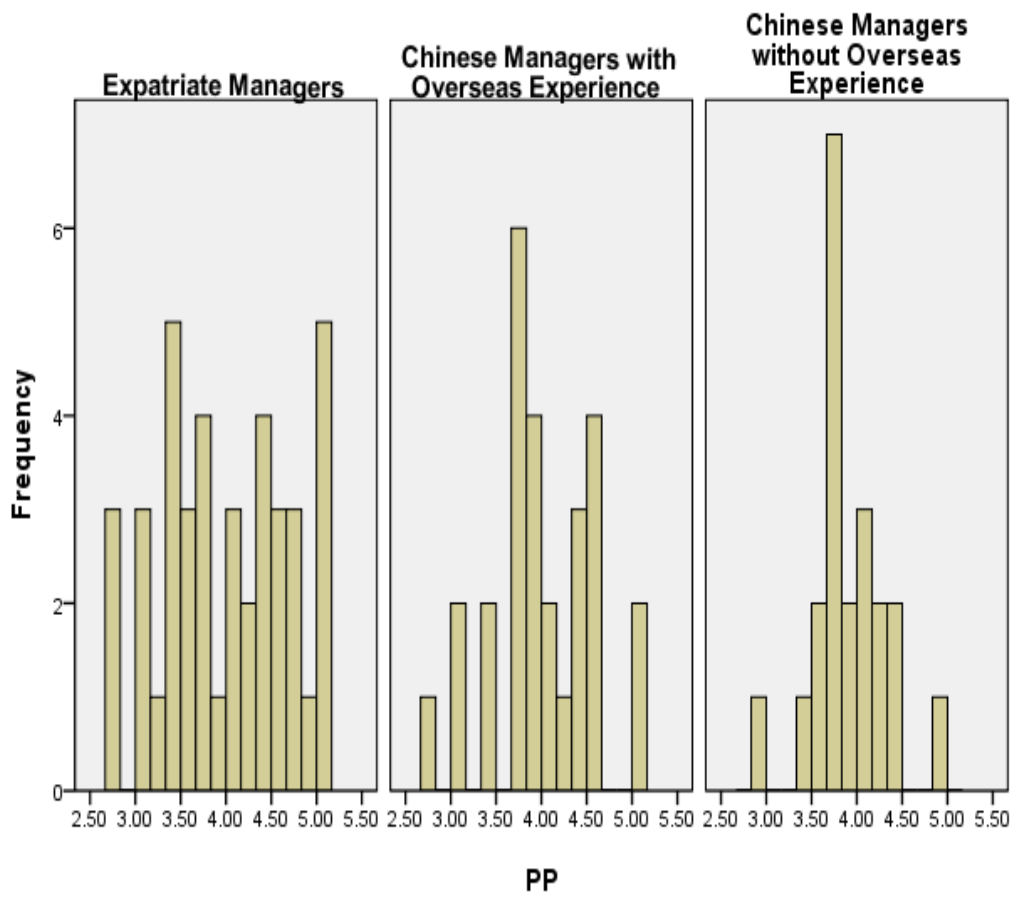












Questionnaire Survey for Managers

**Leadership Style of Chinese and Expatriate Managers
in Multi-national Construction Companies in Hong Kong**

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INTRODUCTION

This survey intends to identify the leadership orientations of managers and to investigate the relationship between different leadership orientations and the construction project performance in multi-national construction companies in Hong Kong. The research of which this questionnaire is a part is being undertaken as doctoral research under the auspices of Lingnan University and Curtin University of Technology, Perth. The data collected will be held strictly in confidence and will only be used in an aggregated form to develop overall patterns.

Your participation is strictly voluntary. However, the researcher expects that the results will contribute to improving leadership within the industry and thus to the industry's viability and prosperity. The researcher sees your input as extremely valuable. Therefore, it would be much appreciated if you could spend around 20 to 25 minutes to complete and return this questionnaire using the attached envelope **within 10 days**. Should you have any queries, please feel free to contact Ms. Gloria Lee at 2616 8167 or gloria@ln.edu.hk (email).

PART I: PERSONAL PROFILE

Please read through each question carefully and tick in the box (☒) which describes your own characteristics.

1. **Gender:** Male Female
2. **Age group:** 21-25 26-30 31-35 36-40
 41-45 46-50 51-55 55 or above
3. **Ethnic group:** Chinese
 Caucasian, please specify country: _____
 Negroid, please specify country: _____
 Asian, please specify country: _____
 Other(s), please specify country: _____
4. **Place of birth:** Hong Kong Overseas, please state the country:

5. **Have you resided in any country other than Hong Kong?** Yes No

If your answer is 'Yes', please state where, and how long did you reside overseas?

Place: _____ Year(s): _____

6. Were you educated in any country other than Hong Kong? Yes No

If your answer is 'Yes', please state where, and for how long were you educated overseas?

Place: _____ Year(s): _____

7. How long have you been working in Hong Kong (For expatriate managers):

_____ year(s)

8. Highest academic qualification obtained:

- High school graduate Diploma Bachelor degree
 Master degree Doctorate degree Other(s), please specify:

9. Years of experience in the construction industry: Less than 3 years 3 to 5 years

to 15 years

6 to 10 years 11

20 years

16 to 20years More than

10. Your position in the management structure of your organization:

- Executive management Senior management Middle management
 Supervisory management Junior management Administrative staff

11. Your role description: _____

12. Please name the construction project on which you will base answers for 'Part IV: Project Performance' of this questionnaire:

13. Please name five (5) subordinates who work for you in the project mentioned in Q.12 to take part in the subordinate survey (This aims to collect a view on your leadership style)

a. _____

b. _____

c. _____

d. _____

e. _____

PART II: LEADERSHIP STYLE

This part contains statements about leadership style beliefs. Please read through each question carefully and tick in the box (☒) for the number from 1 (*never true*) to 5 (*always true*) which best describes your style.

Statements	Scale				
	Never true	Seldom true	Occasionally true	Frequently true	Always true
	1	2	3	4	5

General Leadership Style

- II.1) Meeting project time deadlines and ensuring efficient task performance are more important.
- II.2) I have strong concern for the team's goals and the means to achieve the goals
- II.3) To me a project team is more a temporary organization for achieving a specific task.
- II.4) I believe project tasks can only be accomplished if close relationships which are based on moral integrity within the project team are achieved.
- II.5) Team achievement is more important than my own achievement.

Communication and Conflict Resolution

- II.6) I'd rather say "No" directly and forthrightly than risk being misunderstood
- II.7) I'd rather use indirect speech codes to avoid conflicts with others
- II.8) I openly express my feelings and emotions and show my disagreement with others in work.
- II.9) I avoid an argument even when I strongly disagree with my team members.
- II.10) I believe negotiation is a key to maintaining a good relationship and ensuring avoidance of conflict.
- II.11) I believe that a good relationship is more important than a good contract to reduce conflict.

PART III: RELATIONSHIP CULTURE

This part contains statements about relationship with subordinates, sub-contractors, and superiors.

Statements	Scale				
	Never true	Seldom true	Occasionally true	Frequently true	Always true
	1	2	3	4	5

Dealing with Subordinates/ Project Teams

- III.1) I emphasize hierarchy with my subordinates.

- | | | | | | | |
|--------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| III.2) | I value long term cooperation and emphasize the need to maintain harmony with my subordinates. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.3) | I feel less need to control my subordinates. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.4) | I provide more general rather than close supervision of my subordinates. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.5) | I like to confront issues up-front when dealing with subordinates. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.6) | I do not like it if my subordinates disagree or fail to respect my decisions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.7) | I treat my subordinates as friend-like, with respect, equality and trust. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Dealing with Sub-contractors

- | | | | | | | |
|---------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| III.8) | I emphasize hierarchy with my sub-contractors. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.9) | I value long-term cooperation with sub-contractors for mutual benefits. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.10) | I like to confront issues up-front when dealing with sub-contractors. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.11) | I do not like it if my sub-contractors disagree or fail to respect my decisions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.12) | I treat sub-contractors with respect, equality and trust. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Dealing with Superiors or Authorities

- | | | | | | | |
|---------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| III.13) | I emphasize hierarchy with the superiors/ the person in authority. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.14) | I consider the client as the 'boss' of the project rather than the 'provider' of project funds. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.15) | To me, making my superiors/ the person in authority happy is relatively more important than keeping them informed. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.16) | I consider it is important to develop both working and personal relationships with my superiors/ the person in authority rather than keeping it at the level of working relationship alone. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.17) | I value long term cooperation with my superiors/ the person in authority for mutual benefits | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.18) | I emphasize the need to maintain harmony with my superiors/ the person in authority for mutual benefits | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.19) | I am concerned to protect the 'face' of my superiors/ person in authority. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.20) | I like to be accurate when I communicate with my superiors/ the person in authority. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.21) | When I disagree with my superiors/ the person in authority, I express my disagreement. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

PART IV: PROJECT PERFORMANCE

The following is a list of performance measures. Please indicate your answers **based on the project you mentioned in Q.12 of Part I.**

Items	Scale
-------	-------

	Not achieved	Minority achieved	Partially achieved	Majority achieved	All achieved
	1	2	3	4	5
IV.1) Project cost objectives were met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.2) Profit margin objectives were met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.3) Project schedules were adhered to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.4) There were no quality problems related to project outputs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.5) Accidents are avoided on site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.6) The project was managed so as to satisfy the interests and challenges of the members of the project team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.7) Clients were satisfied with the project performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you have any further comments, would you like to add any information or feel we have not asked about an important issue, please use the space below to tell us.

Thank you for completing the questionnaire. We appreciate your time.

- END -

20 years

16 to 20 years

More than

PART II: MANAGERS' LEADERSHIP STYLE

This part contains statements about leadership style beliefs. Please read through each question carefully and tick in the box () for the number from 1 (*never true*) to 5 (*always true*) which best describes the style of your immediate manager.

Statements	Scale				
	Never true	Seldom true	Occasionally true	Frequently true	Always true
	1	2	3	4	5
General Leadership Style					
II.1) My manager is more concerned with meeting project time deadlines and ensuring efficient task performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II.2) My manager has strong concern for the team's goals and the means to achieve those goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication and Conflict Resolution					
II.3) My manager would rather say "No" directly and forthrightly than risk being misunderstood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II.4) My manager would rather use indirect speech codes to avoid conflicts with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II.5) My manager openly expresses his/her feelings and emotions and shows his/her disagreement with others in work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II.6) My manager avoids an argument even when he/she strongly disagrees with me and our team members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II.7) My manager believes negotiation is a key to maintaining a good relationship and reducing conflict.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PART III: MANAGERS' RELATIONSHIP CULTURE

This part contains statements about relationship of your immediate manager with project teams (i.e. yourself), sub-contractors, and superiors.

Statements	Scale
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	Never true	Seldom true	Occasionally true	Frequently true	Always true
	1	2	3	4	5
Dealing with Project Teams					
III.1) My manager emphasizes hierarchy with me and other team members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III.2) My manager does not closely control me and my colleagues in our team. He/she provides general rather than close supervision of me and other colleagues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III.3) My manager values long term cooperation and emphasizes the need to maintain harmony with me and our team members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III.4) My manager likes to confront issues up-front when dealing with me and our team members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III.5) My manager does not like it if our team members and I disagree or fail to respect his/her decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statements	Scale				
	Never true	Seldom true	Occasionally true	Frequently true	Always true
	1	2	3	4	5
III.6) My manager treats me and our team members as friend-like, with respect, equality and trust.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dealing with Sub-contractors

III.7) My manager emphasizes hierarchy with his/her sub-contractors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III.8) My manager values long-term cooperation with sub-contractors for mutual benefits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III.9) My manager likes to confront issues up-front when dealing with sub-contractors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III.10) My manager does not like it if the sub-contractors disagree or fail to respect his/her decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III.11) My manager treats the sub-contractors with respect, equality and trust.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dealing with Clients or Authorities

III.12) My manager emphasizes hierarchy with the superiors/ the person in authority.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III.13) From my observation, my manager tends to seek to keep clients happy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

rather than to keep clients informed.

- | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| III.14) From my observation, my manager develops both working and personal relationships with client rather than just working relationships. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.15) My manager values long-term cooperation with the superiors/ the person in authority for mutual benefits/ My manager emphasizes the need to maintain harmony with the superiors/ the person in authority for mutual benefits | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.16) My manager is concerned to protect the 'face' of the superiors/ the person in authority. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.17) My manager likes to be accurate when he/she communicates with the superiors/ the person in authority. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| III.18) When my manager disagrees with the superiors/ the person in authority, he/she expresses his/her disagreement. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

PART IV: GENERAL PROJECT PERFORMANCE

The following is a list of performance measures. Please answer the following questions based on the performance of project XXX. Indicate your answer by ticking the relevant box (☒)

Items	Scale				
	Not achieved 1	Minority achieved 2	Partially achieved 3	Majority achieved 4	All achieved 5
IV.1) Project cost objectives were met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.2) Profit margin objectives were met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.3) Project schedules were adhered to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.4) There were no quality problems related to project outputs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.5) Accidents are avoided on site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV.6) Clients were satisfied with the project performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PART V: PERSONAL FEELINGS OF PROJECT

Please consider the truth of the following statements and indicate the extent to which you agree and disagree with them in describing your feelings of the project XXX. Indicate your agreement and disagreement by ticking the relevant box (☒)

Statements	Scale
------------	-------

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
V.1) I felt enthusiastic in my work because of the good team spirit on this project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V.2) I suffered from low morale because of the pressure or unhappiness caused by the project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you have any further comments, would you like to add any information or feel we have not asked about an important issue, please use the space below to tell us.

Thank you for completing the questionnaire. We appreciate your time.

- END -