TOWARDS BETTER CROSS-CULTURAL ADJUSTMENT:
FROM CULTURAL DISTANCE TO CULTURAL INTELLIGENCE

Presented By

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Master of Education (The University of Melbourne)
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Certificate of Authorship

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Zhang Ying

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Faculty of Business
Charles Sturt University
September 2013
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23rd August 2010

Ying Zhang
Faculty of Business
Charles Sturt University
Wagga Wagga

Dear Ying Zhang,

The School of Business Ethics Committee has approved your proposal “Measuring dimensions and efforts of cultural distance asymmetry and cultural intelligence for better cross-cultural adjustment: A comparative study of Australian expatriates working in China and Chinese expatriates working in Australia” for a six month period from 23rd August.

The protocol number issued with respect to this project is 209/2010/05. Please be sure to quote this number when responding to any request made by the Committee.

Please note that the Committee requires that all consent forms and information sheets are to be printed on School of Business letterhead. Students should liaise with their Supervisor to arrange to have these documents printed.

You must notify the Committee immediately should your research differ in any way from that proposed.

You are also required to complete a Progress Report form, which can be downloaded from www.csu.edu.au/research/forms/ehrc_anarep.doc, and return it on completion of your research project or by 23rd August 2012 if your research has not been completed by that date.

The Committee wishes you well in your research and please do not hesitate to contact Dr Pamela Mathews on extension 32575 or email pmathews@csu.edu.au if you have any enquiries.

Yours sincerely,

[Signature]

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Ethics Committee
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During the final stage of the preparation of this thesis the services of Kerry Davies, Principal of Academic Editorial Publishing Services - ABN: 63 983 631 395 - Queensland was used. Ms Davies’ current or former academic specialisation had no relevance to the thesis. Her professional service consisted of punctuation, grammar, and style, and conformed to Australian Standard for Editing - Completeness and Consistency. At no stage did Ms Davies’ editing alter or improve the substantive content or conceptual organisation of the thesis.

Ying Zhang
Faculty of Business
Charles Sturt University
September 2013
Abstract

An important human resource management implication of globalization is the increasing use of expatriates for international assignments, an increase of two-thirds in the total number over the last five years according to Mercer’s (2012) global survey on expatriates. The ability of expatriates to adjust cross-culturally both across and within cultural and national boundaries is an issue of critical significance, which has been discussed in the international management literature since the 1990s (Hofstede, 2001; Molinsky, Davenport, Iyer, & Davidson, 2012; Trompenaars & Hampden-Turner, 1997; Ward & Kennedy, 1993a).

Despite the importance of expatriate cross-cultural adjustment, literature is limited by focusing on either macro or micro antecedents of this construct, which is largely responsible for the absence of an overall panorama of cross-cultural adjustment processes. This research proposed a holistic model which unfolds across both macro and micro levels by probing into the cultural distance that expatriates face at the national cultural level, the placement authorisation that expatriates are assigned at the organisational mechanism level and, at the individual level, expatriate personal cultural intelligence (Earley, 2002). Why some expatriates adjust more quickly and effectively than others in cross-cultural heterogeneous circumstances is an important question addressed in this thesis.

The validation of the model developed in the study was done by collecting survey data and using structural equation modelling methods to test two-way flow sample groups of Australian expatriates in China and of Chinese expatriates in Australia. Critical consideration is given to the effects of cultural distance asymmetry. The test results demonstrate motivational cultural intelligence is strongly related to both socio-cultural and psychocultural adjustment, and behavioural cultural intelligence is a significant predictor of socio-cultural adjustment. Interestingly, it was found that cultural distance asymmetry moderates the relationship between job position and expatriate adjustment such that the relationship between
position level and adjustment is stronger when the direction of cultural flow is from a less authoritarian to a more authoritarian cultural environment. In particular, non-managerial expatriates exhibit better cross-cultural adjustment than expatriates in managerial roles in the sample group of Australian expatriates assigned to China, while expatriate managers have better cross-cultural adjustment experiences than non-managerial expatriates among Chinese expatriates working in Australia.

In terms of scope and originality, this research is the first attempt to integrate the central relational constructs of cultural distance, organizational position status and individual cultural intelligence on cross-cultural adjustment in one comprehensive model. This systemic cross-level study contributes to our understanding of the importance of cross-cultural adjustment and its role in effective personal and business interactions in culturally heterogeneous environments. The research has important implications not only for different expatriate groups in Australia and China who are coping with another culture, but also for all expatriate managers and non-managers wishing to gain insights into the expatriation process on two-way flow transfers between any countries. Findings of this research will interest academics, researchers, human resource practitioners and organizational managers responsible for the selection, preparation and professional development of expatriates for international adventures.
**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ACCC</td>
<td>Australian Chinese Chamber of Commerce</td>
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<tr>
<td>AusChn</td>
<td>Australian Expatriates in China</td>
</tr>
<tr>
<td>AusCham</td>
<td>Australian Chamber of Commerce</td>
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<td>BEH</td>
<td>Behavioural Cultural Intelligence</td>
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<td>CCA</td>
<td>Cross-Cultural Adjustment</td>
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<td>CD</td>
<td>Cultural Distance</td>
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<td>CDA</td>
<td>Cultural Distance Asymmetry</td>
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<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
</tr>
<tr>
<td>ChnAus</td>
<td>Chinese Expatriates in Australia</td>
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<td>COG</td>
<td>Cognitive Cultural Intelligence</td>
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<td>CQ</td>
<td>Cultural Intelligence</td>
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<td>EQ</td>
<td>Emotional Intelligence</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>HCN</td>
<td>Host Country National</td>
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<td>HR</td>
<td>Human Resources</td>
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<td>HRD</td>
<td>Human Resource Development</td>
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<td>HRM</td>
<td>Human Resource Management</td>
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<td>IA</td>
<td>International Assignment</td>
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<td>IHRM</td>
<td>International Human Resource Management</td>
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<td>IM</td>
<td>International Management</td>
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<td>IMP</td>
<td>Internationally Mobile Professionals</td>
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<td>L&amp;D</td>
<td>Learning and Development</td>
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<td>MC</td>
<td>Meta-Cognitive Cultural Intelligence</td>
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<td>MNC</td>
<td>Multinational Corporation</td>
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<td>MNE</td>
<td>Multinational Enterprise</td>
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<td>MNO</td>
<td>Multinational Organization</td>
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<td>MOT</td>
<td>Motivational Cultural Intelligence</td>
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<td>OCB</td>
<td>Organizational Citizenship Behaviour</td>
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<td>PCA</td>
<td>Psycho-Cultural Adjustment</td>
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<tr>
<td>PCN</td>
<td>Parent Company National</td>
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<tr>
<td>SCA</td>
<td>Socio-Cultural Adjustment</td>
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<tr>
<td>SEM</td>
<td>Structural Equation Modelling</td>
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<td>SLT</td>
<td>Social Learning Theory</td>
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<td>TCN</td>
<td>Third Country National</td>
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<tr>
<td>TNC</td>
<td>Transnational Corporations</td>
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<td>WTO</td>
<td>World Trade Organization</td>
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CHAPTER ONE: INTRODUCTION

1.1 Chapter Overview

Growing international assignments in modern economies entails the global mobility of professionals. This has made effective expatriation an essential issue in international human resource management. While the trend of expatriation is on the rise, expatriate failures are emerging. The cross-cultural adjustment problem has been highlighted as the critical reason for expatriate failure (Hutchings, 2003; Molinsky, 2007; Selmer & Lauring, 2011). Therefore, there is a need for a greater insight into the nature of adjustment process so as to maximize the potential of each expatriate. The focus of this research, thus, is expatriates’ cross-cultural adjustment. This study attempts to empirically examine the antecedent effect of cultural intelligence and the moderation effect of cultural distance asymmetry for developing socio-cultural and psycho-cultural adjustment leading to overall cross-cultural adjustment of expatriates.

This chapter is a prelude that describes the background of the study (Section 1.2); discusses the research problem and research design (Section 1.3); illustrates the research questions and objectives (Section 1.4); discusses the research significance and research design (Section 1.5); introduces the methodology (Section 1.6); and presents key assumptions and explains delimitations of research scope (Section 1.7). The overall organization of this thesis is outlined at the end of this chapter (Section 1.8).
1.2 Background of the Study

International ventures are on the rise. As overseas marketing venturing is expanding at a rapid rate, the world is now one big marketplace with over 900,000 global organizations (Odell & Spielman, 2009). An attractive and important staffing strategy adopted by global organizations to support increased international business activities is to send employees to work as expatriates to undertake international work assignments away from their home countries. This has led to an increasingly globalized business environment, growing mobility within the global workforce, and a “flattening” world (Friedman, 2005). In this sense, managing expatriation has become an important aspect in multinational and transnational corporations and organizations. For example, the most recent report from Mercer’s (2012) Global Expatriates Survey covers 288 multinational companies worldwide, which, all together, have 119,000 expatriates, and the reported number of expatriates on international assignments has increased by two-thirds since 2008–2009. Similarly, the Global Relocation Trends Report (2008) also indicates that a large proportion of multinational firms (68%) expected an increase beyond current growth trends in both expatriate population and international assignments, despite the economic downturn of the late 2000s.

The term expatriates is used in the international management literature to label a workforce employed by multinational corporations to work on different types of foreign work assignments (Richardson & Mallon, 2005). As conditional and motivational factors may differ, such individuals should be differentiated from sojourners and other travellers such as refugees,
immigrants, and vacationers. An expatriate, for the purposes of this study is defined as someone sent by an organization to manage or cooperate with others on international assignment for at least six months. Expatriates include both managerial and non-managerial types of workers from a wide professional coverage. The expatriate sample used for this study consists mainly of parent country nationals (PCNs: employees native to the parent country and assigned to its foreign subsidiaries) from multinational corporations or enterprises (MNCs or MNEs), multinational organizations (MNOs), transnational corporations (TNCs), and smaller companies conducting international business in Australia and China. This study selects the two-way flow expatriation between Australia and China as the research context. To operationalize the conceptual model, Australia has been chosen as one of the two countries in the sample because of its economic standing in the Asia–Pacific region and its prevalence as a research site. China has been chosen because of its strong trade position with Australia, which makes it ideal as a comparative anchor vis-à-vis Australia. Hence, a mirror study of Chinese nationals adapting to Australian culture, and Australian nationals adapting to Chinese culture is planned in order to draw comparisons between the sample groups of Australian expatriates in China (AusChn) and Chinese expatriates in Australia (ChnAus).

Ralston et al. (2011) note that expatriates who can function effectively are more likely to be valuable assets for the purposes of generating competitive advantage for organizations. That is, the effectiveness of international assignments requires not only effective global business and human resource
systems, but also globally competent people. The human factor here is the very core element in the process, because “people” are the actual entities that represent organizations and carry out assigned tasks. As Klein and Kozlowski (2000) suggest, organizations do not behave, people do. Expatriates must often adjust to not only geographical distance but also hidden cultural distance; an adjustment that requires cultural intelligence. Cultural intelligence can be understood as the capability to comprehend new cultural surroundings and the ability to relate and work effectively across cultures (Earley & Ang, 2003). Thus, the process is not simply a geographic and functional transfer, and there are critical cultural and mindset boundaries that must also be crossed (Fang, 2010). The individuals who work on behalf of organizations in foreign locations must function well across both national and cultural boundaries for organizations to succeed.

Although expatriation represents the most common and possibly most attractive staffing strategy for firms to venture into foreign markets, cultural diversity in globalization presents great challenges for organizations, and constantly tests if they have selected and developed globally competent employees (Ralston, et al., 2011). In the process of expatriation, as individuals step into foreign settings, there is an immediate requirement for them to deviate from accustomed behaviour reflected in their native culture and to adjust to new cultural repertoires (Harzing, 2009). Expatriates regularly encounter work and non-work settings involving cultural differences that test their capability to function effectively in their new circumstances. Indeed, their comfort with new cultural value orientations can be continuously tested (Molinsky, 2007). The problem, however, is that
business people acting as expatriates are sometimes not sure how to deal with their innate value orientations and self concepts rooted in their origin when confronted with the “otherness” of people, their cultures or indeed ethnic groups (Crossland & Hambrick, 2011).

A review of prior studies identifies the major cultural challenges facing the global workforce that create certain behavioural dilemmas for: (i) individual paradoxes (Osland & Osland, 2005); (ii) professionals in overseas work assignments (Bhaskar-Shrinivas, Harrison, Shaffer, & Luk, 2005); (iii) domestic culturally diverse workgroups (Tsui & Gutek, 1999); (iv) multinational workgroups (Earley & Gibson, 2002); and (v) leaders’ cross-border careers (Van Dyne & Ang, 2006).

In confronting these challenges, expatriate failures are emerging. For example, Hofstede (2001), Adler (2002), and Avril and Magnini (2007) each indicate that expatriates have difficulty communicating, functioning, and understanding host country realities in response to temporal and cultural situational contexts. Dowling (2008, p. 9) further notes that many firms underestimate the complexities involved in international operations, and that “there has been consistent evidence to suggest that business failures in the international arena are often linked to poor management of human resources”.

Ever since Tung’s (1982) study reported a soaring premature return rate of American expatriate managers from international assignments, the
international management literature has drawn great attention to the investigation of early return rates as a critical predictor to expatriate failure. *Expatriate failure* is often defined as the premature return of an expatriate, which means that expatriates either quit or return to their home countries before completing their overseas assignments (Avril & Magnini, 2007). Studies of incidences of expatriate failure rates vary, but have been frequently cited as ranging from 16% to 40% of personnel for early return to developed countries (Harzing, 2009). The financial loss to multinational companies due to premature return of expatriates on foreign work assignments was estimated as ranging from US$250,000 to US$2.5 billion dollars annually (Hill, 2001; Lissy, 1993) with additional costs enumerated as market share loss, reduction in productivity, damage to relationships with foreign companies, and damage to relationships with foreign governments (Andreason, 2003; Storti, 2001). It is quoted that the average cost to the multinationals may be as high as US$200,000 per employee failure in direct costs (Porter & Tansky, 1999).

Worse than premature return, many expatriates maintain their positions without being effective in their international assignments. Some scholars (Harzing, 2009; Hutchings, 2003, 2005; Hutchings & Murray, 2002) have offered the view that, apart from premature return, expatriate failure also includes low performance and lack of intercultural effectiveness caused by adjustment problems, because adjustment difficulties indeed highlight the most potentially damaging effects for expatriates, organizations, and international operations. A more salient observation in the literature is that the potential damage and loss caused by the marginal performances from
poorly adjusted expatriates who do not return early are greater than the
direct costs associated with a premature return (Black & Gregersen, 1999;
Guimaraes-Costa & Cunha, 2009). The indirect costs associated with
adjustment problems have been reported to include the psychological and
social affect on expatriates and their families in terms of diminished self-
confidence, impaired relationships, loss of prestige among peers, loss of
reputation, and interrupted careers (Andreason, 2003; Guimaraes-Costa &
Cunha, 2009; Howe-Walsh & Schyns, 2010). Each has the potential to
create loss, damage, and cost resulting from non-adjustment or
ineffectiveness of expatriates, and all together would place considerable
overall constraints on international organizations. Although Harzing (1995)
and Harzing and Christensen (2004) imply that the expatriate failure rate
might have been exaggerated in the literature and “failure” may not have
been accurately portrayed, the loss and damage caused by expatriate
maladjustment problems are far too expensive for organizations to afford in
the long run (Dowling, 2008). The occurrence of expatriate failure or non-
adjustment eventually carries a direct cost or indirect loss.

There are many reasons why expatriates encounter non-adjustment, remain
ineffective or return early from their international assignments. These
reasons have been observed and enumerated as: (i) dual career concerns; (ii)
difficulties with new assignment; (iii) lack of technical competence; (iv)
inability to cope with larger overseas responsibility; (v) languages barriers;
(vi) communications problems; (vii) personal and emotional immaturity;
(viii) poor spouse adjustment; (ix) inadequate children’s education; (x)
family issues; (xi) homesickness; (xii) lack of leisure activities; (xiii) daily hassles; (xiv) low tasks; (xv) contextual performance; and (xvi) inadequate living conditions (Bhaskar-Shrinivas, et al., 2005; Dessler, 1997).

Among all the reasons for addressing expatriate failures, cross-cultural adjustment (CCA) has been suggested to be a crucial determinant of expatriate success in global business (Templer, Tay, & Chandrasekar, 2006; Ward & Kennedy, 1996). An extensive body of research has recognized and highlighted CCA as a key reason for expatriate ineffectiveness and expatriate failure (eg. Andreason, 2003; Black & Gregersen, 1999; Hutchings, 2003, 2005; Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006). In this environment, CCA has become an issue of critical significance and a considerable amount of attention has been given to identifying the factors that influence cross-cultural adjustment.

The research on expatriate cross-cultural adjustment has been developing since the 1970s. In the literature, researchers have explored the effect of cultural values on individuals (eg. Hofstede, 1980, 2001; Ralston, et al., 2011; Trompenaars & Hampden-Turner, 1997); the impact of distance between the host and home cultures (eg. Manev & Stevenson, 2001; Ward & Chang, 1997); work, societal, and family factors (eg. Mendenhall, Jensen, Black, & Gregersen, 2003; Rosenbusch & Cseh, 2012; Shaffer & Harrison, 1998); isolation caused by language barriers (eg. Molinsky & Perunovic, 2008; Selmer, 2006b); and individual differences in adapting to foreign cultures (eg. Caligiuri, 2006; MacNab, Brislin, & Worthley, 2012; Shaffer, et al., 2006; Trompenaars, 1994).
Seminal studies, such as those of Black and Mendenhall (1991) and Bhaskar-Shrinivas et al. (2005), have reflected on a broad context and concentrated on possible contextual and individual variables effecting change over time on cross-cultural adjustment. Black and Mendenhall (1991) posited Social Learning Theory (SLT) as a way of understanding the process of expatriate adjustment, and concluded that an SLT perspective on the expatriate experience is consistent with either a “U-curve” or linear process of adjustment pattern. Bhaskar-Shrinivas et al.’s (2005) meta-analysis of research on the adjustment process added an “S-curve” model, the general form of which is quite similar to the traditional U-shaped curve, calling for more research on adjustment of the early months’ experience (see detailed discussion on “U-curve” and “S-curve” adjustment in Chapter Two, section 2.3).

Further, since time is required to identify inappropriate behaviour and learn from host cultures in the cross-cultural adjustment process, the term *acculturation* is generally used in reference to the process of change that occurs as a consequence of continuous, first-hand contact between two or more cultural groups (Berry, 1999; Berry, Segall, & Kagitcibasi, 1999; Ward & Kennedy, 1993a). It is suggested that there are ascending phases of acculturating stress associated with foreign culture involvement (Berry, et al., 1999), and that valuing both acculturation to home and host cultures may be crucial for most favourable adjustment (Berry, et al., 1999).
Essentially, the literature highlights cross-cultural differences as a key to enhancing efficiency in international operations, and calls for greater insight into the understanding of cross-cultural adjustment and further investigation into the diverse nature of the expatriate adjustment process.

1.3 Research Problem and Research Design

A careful review of the international management literature identifies several gaps relating to expatriate cross-cultural adjustment research. These gaps are summarized below.

The first gap identified is that, most of the literature on cross-cultural adjustment has tended to emphasize either a macro (cultural context) or a micro (individual difference) perspective (Klein, Dansereau, & Foti, 1994; Klein & Kozlowski, 2000). The macro perspective is rooted in a sociological foundation. It postulates that there are significant regularities in social behaviour that go beyond the visible variations among social actors. Macro perspective scholars (eg. Laurent, 1983; Manev & Stevenson, 2001; Selmer, Randy, & Oded, 2007) focus on contextual factors at higher levels that restrain and moderate lower level individual adjustment phenomena. In contrast, the micro perspective is based on psychological perspectives and focuses on variations in individual characteristics that affect individual reactions, and it recognizes that a focus on aggregates is likely to mask important individual differences that are meaningful in their own right (Klein & Kozlowski, 2000). Micro perspective scholars (eg. Margolis & Molinsky, 2008; McCrae & Costa, 1987; Molinsky, 2007; Ward, 1997; Ward & Kennedy, 1993b) have each addressed individual characteristics
and psychological factors in the process of adjusting to foreign cultures.

Nevertheless, single-level perspectives related to either macro or micro circumstances alone can hardly present an overall panorama of cross-cultural adjustment processes. There is a risk of superficiality to a pure macro or pure micro perspective, because the macro perspective may neglect the means by which individual behaviour, perceptions, and interactions give rise to higher level phenomena; whereas pure micro perspectives may overlook contextual factors that can extensively manipulate the effects of individual differences that cause collective responses, which ultimately add up to macro phenomena (House, Rousseau, & Thomas-Hunt, 1995; Klein, et al., 1994; Klein & Kozlowski, 2000).

Importantly, Black et al. (1991, p. 293) argue that the tendency for adjustment research is “anecdotal in nature and few scholars have rigorously investigated the phenomenon, empirically or theoretically.” Similarly, in more recent literature, Newman (2000), Suutari and Burch (2001), and Avril and Magnini (2007) have each offered their critiques against existing research, calling for a deeper and more integrated understanding of poor adjustment and systemic perspectives on associated issues. Micro phenomena are set deeply in the macro context. The macro context embraces and comes into view through the interaction and dynamics of lower level micro phenomenal elements. It is, therefore, crucial for international human resource management practitioners and scholars to adopt integrated approaches to further our understanding of effective cross-
cultural adjustment and to investigate how organizations could maximize the business and career potential of each expatriate.

The present study attempts to respond to this need and develop a systemic typology that identifies principles that enable a more integrated understanding of the adjustment process by incorporating the effects of three key constructs. First, individual differences, represented by cultural intelligence (CQ) from the micro individual perspective; second, job position authorization at the meso level analysis of organizational mechanism; and third, cultural distance asymmetry (CDA) perspectives, at the macro context level. The cross-level analysis will provide more comprehensive propositions towards deeper insights into the multifaceted nature of expatriates’ cross-cultural adjustment process.

The second gap identified is that, research shows that individuals’ personal characteristics have a profound effect on the cross-cultural adjustment process (Ang & Inkpen, 2008; Church, 2000; Ward, 1997); however, previous adjustment research seems to focus primarily on personality factors rather than other factors, such as motivation and actual behaviours in the target culture (eg. Caligiuri, 2000; McCrae & Costa, 1987; Tett & Burnett, 2003; Ward & Chang, 1997). In this respect, the four-factor model of CQ advanced by Earley and Ang (2003) is important, as it covers meta-cognitive, cognitive, motivational, and behavioural factors to investigate individual characteristics (Earley & Ang, 2003). The present study intends to incorporate the use of the four-dimensional measure of CQ, thus
providing a more comprehensive coverage of expatriate individual differences.

The third gap identified is that, in examining the relevant CQ and adjustment literature, most studies centre mainly on the correlations between CQ and socio-cultural adjustment. Research on the relationship between CQ and psycho-cultural adjustment is sparse. Cross-cultural adjustment has two distinctive facets: (i) socio-cultural adjustment, including the three dimensions of work adjustment, general living condition adjustment, and host country nationals interaction adjustment (Black, et al., 1991); and (ii) psycho-cultural adjustment (Ward & Kennedy, 1996), which concentrates on attitudinal factors of the adjustment process, and connects with subjective wellbeing such as individuals’ emotional state, cognitive perceptions, and personal characteristic variables. These two facets may be theoretically interconnected but hold distinct nuances. A recent seminal study by Templer et al. (2006) on CQ and adjustment found there was a positive relationship between motivational CQ and the three components of socio-cultural adjustment – work adjustment, general living condition adjustment, and host-country national interaction adjustment (Templer, et al., 2006). This study is noteworthy because the researchers provide initial evidence of the discriminant validity and practical significance of CQ. In the study, the researchers employed the motivation facet of CQ to represent individual differences to develop a cross-cultural model of adaptation. They also investigated the relationships between CQ, realistic job preview, and realistic living conditions and their relationship to socio-cultural adjustment.
The sample for the study consisted of expatriates in Singapore, the majority of whom (56%) were from Southeast Asian countries. Further research is necessary to determine if the same relationship holds true for expatriates’ psycho-cultural adjustment and also if it is true for expatriates from broader cultural boundaries. Therefore the present study intends to expand the previous model of cross-cultural adaptation (Templer, et al., 2006) by including the examination of all four dimensions of CQ (Earley & Ang, 2003) and the psycho-cultural adjustment (Ward & Kennedy, 1996) component in CCA, and their relationships in new cultural contexts.

The fourth gap identified is that, current literature implicitly assumes a symmetric impact of cultural distance on expatriate adjustment, but as noted by Shenkar (2001) and Selmer (2007), the literature has neglected the direction of the adjustment required by the assignment. Admittedly, cultural distance between home and host cultures plays a significant role in the expatriate adjustment process (Hofstede, 2001; Manev & Stevenson, 2001), but whether the impact of cultural distance is symmetric is subject to verification when using cultural distance as a predictor of adjustment. For example, the question that whether an Australian expatriate in China faces the same hurdles as a Chinese expatriate in Australia needs further exploration. Nevertheless, a considerable body of the research on expatriate adjustment (eg. Adler, 2002; Howe-Walsh & Schyns, 2010; Manev & Stevenson, 2001; McNulty, De Cieri, & Hutchings, 2009; Osland, Mendenhall, & Osland, 2006) implicitly assumes a remarkably similar theoretical positioning that increasing cultural distance will increase adjustment difficulties. This positioning rests on a presumption of cultural
distance symmetry, which lacks both theoretical and practical evidence to justify itself (Selmer, et al., 2007; Shenkar, 2001).

In view of the existing critics of the unsupported assumption of cultural distance symmetry, the current research proposes to test, for the purpose of better understanding the impact of cultural distance on expatriate adjustment, the proposition that such impact is asymmetric. In other words, the impact of cultural distance is contingent on the direction of the assignment; that is, the cultural distance experienced by an Australian expatriate in China would not be the same as that of a Chinese expatriate working in Australia. This is because the home and host environments are variably situated in the cultural space. Hence, individuals need to adjust to their environment rather than the other way around (Selmer, et al., 2007). The concept of CDA is further refined and proposed to be a moderator of individual cultural intelligence, organizational position status and cross-cultural adjustment relationships.

The fifth gap identified is that, the concept of CDA in Selmer et al.’s (2007) study was tested on two countries, the United States and Germany, the cultural characteristics of which do not show distinct variation. According to Hofstede’s (2001) cultural dimensional indices, the US and Germany have notable similarity in terms of cultural characteristics; for example, both being individualistic countries (indices between 91 and 67) with low power distance (indices between 40 and 35) and short-term orientation (indices between 29 and 31). However, national cultural dissimilarity plays an
important role in comparing the two-way flow transfers of expatriates (Brewster, Lundmark, & Holden, 1993; Hofstede, 2001). Culturally distant countries can serve as better comparative sites in comparative cross-cultural studies. This study intends to overcome the limitation of Selmer et al.’s (2007) study and test the CDA concept on two geographically distant countries (i.e. Australia and China) that also have distinctively different cultural characteristics. By including participants on reciprocal transfers adapting to the target cultures with a remarkable cultural distance, a much clearer and likely more complete picture should emerge of the CDA effects on the interaction of individual differences and cross-cultural adjustment.

The sixth gap identified is that, previous expatriate adjustment research and CQ studies (eg. Ang et al., 2007; Ascalon, Schleicher, & Born, 2008; Terry, Pelly, Lalonde, & Smith, 2006), more often than not, used international students as the sample dataset, assuming that international students go through the same levels and the same stages of hardship, adjustment, and development as those experienced by business expatriates. This possibly oversimplifies the problem. To avoid this potential deficiency, the sampling approach of real-life expatriates planned by this research should provide a more accurate validation of CQ and CCA research. By doing so, the validity and reliability of the self-report questionnaires of CQ (i.e. CQ Scale) and CCA (i.e. Socio-Cultural Adjustment Scale and General Health Questionnaire) will be further examined and will add to the international business literature that has employed the same measures (eg. Alon & Higgins, 2005; Elenkov & McMahan, 2005; Messarra, Karkoulian, & Younes, 2008; Templer, et al., 2006). Using a more appropriate sampling
frame, this study will make an important contribution to examining the constructs, the instruments, and causal relationships among the variables.

The seventh gap identified is that, most existing literature on cultural adjustment has been written from the perspectives of the Western business community, and many of the theories and models attributing for adjustment (eg. Andreason, 2003; Black & Gregersen, 1999; Hall & Hall, 1990; Laurent, 1983) can only be applied to managers from the West. The existing research on Eastern business communities is thin and unsystematic. Leading figures in this area have been Jan Selmer and Kate Hutchings. Selmer has published twenty articles and Hutchings nine articles on Western expatriates working in China since 2002. Another leading researcher is Adler (2002) who applied Hofstede’s (1980, 2001) cultural dimensions and their impact on Western expatriates’ adjustment and performances in China.

A possible explanation for the paucity of research on the Eastern business communities relates to the observation that expatriate operations traditionally tended to move from the better-off and more advanced countries to the impoverished and developing nations. The concept of expatriation, which became a well-accepted, integrated approach in developed Western countries decades ago, was still in an embryonic stage in many developing countries (Adler, 2002). However, in recent decades, the flow of expatriates has become global and multifaceted. For instance, since China’s accession to the World Trade Organization (WTO) in 2001, it has been increasing its foreign direct investment (FDI) in the world, and
Australia is of particular strategic importance to China for expanding its Asia–Pacific operations. China’s FDI in Australia has grown 90% per annum since 2006, and reached A$20 billion and a market share of 4% in 2011 in the areas of architecture, banking, consulting, transporting, education, medical and health services, mineral processing, and environmental products and services, and so on; this exceeds Australian FDI into China of A$16.8 billion (DFAT, 2012).

Even so, research relative to Eastern expatriates working in the West, is almost nonexistent, especially in English-language countries. In particular, even less attention has been given to analyzing the cross-cultural adjustment of expatriate population sent from developing countries. The increasing importance of developing countries to the world economy demands a separate investigation into expatriate adjustment relationships in developing countries rather than mere replication of studies conducted in the West. There seems to be no reference in the literature to any study specifically focused on expatriate adjustment with a detailed analysis of the effects of their position status and cultural distance environment for any developing country. This study proposes to expand the scope of research geographically and socially by looking into the relatively under-researched group of expatriates sent from China, an Eastern developing country. This could offer a broader research base and thereby further enhance our understanding of the overall cross-cultural adjustment process for the Eastern expatriates working in the Western cultures.
The eighth, and final gap identified is that, the antecedents covered in the conceptual model of this study (i.e. four dimensions of CQ, CDA, position status, socio-cultural adjustment and psycho-cultural adjustment) are almost absent or have very limited presence in a few sporadic studies on expatriate adjustment in Australia and China; thus, testing whether the inter-relationships among these constructs, as proposed in the conceptual model, hold in that research context is of utmost importance. Since Australia and China are relatively new contexts for CCA research, it is difficult to predict how expatriates would behave in the context of two-way flow adjustment. It is hoped that an understanding of the dynamics of the two-way flow expatriate adjustment between developed (Australia) and developing (China) countries in the current study will provide a basis for future research in two-way flow expatriation between advanced economies and countries in transition.

1.4 Research Questions

Based on the research opportunities discussed in the previous section, the broad research question of the current study is why some individuals adjust more quickly and easily than others cross-culturally. In particular, the following specific research questions have been developed.

The first research question of this study is: Is there a significant relationship between each of the four dimensions of CQ and expatriate adjustment process socio-culturally or psycho-culturally?
The second question is: *Is expatriate adjustment dependent on the position levels in the organization?*

The third question is: *Does the macro level CDA have an impact on CQ, position levels in the organization and expatriate adjustment process?*

The fourth is: *How does cultural distance affect the relationships between CQ and cross-cultural adjustment?*

The fifth is: *How does cultural distance affect the relationships between position level and cross-cultural adjustment?*

### 1.5 Research Significance

It is increasingly evident that a holistic and multi-dimensional approach is required if we are to fully comprehend the process of expatriate adjustment. This study proposes a research framework that intends to cover the gaps and weaknesses identified in the literature. As described in the previous section, the general research question driving the present research is to investigate whether individual differences and organizational authorization are related to cross-cultural adjustment and how cultural heterogeneity comes into play in the relationship between these constructs in the expatriate adjustment process. Therefore, this research is important for both theoretical and practical considerations.

On the theoretical side, this study aims to contribute to the existing body of knowledge in cross-cultural research. It may help to further explain how the
macro level cultural factors, organization level positions, and micro level individual differences matter in the process of expatriate cross-cultural adjustment. The research expects to extend the model of cross-cultural adaptation (Templer, et al., 2006) by empirically testing the CQ model’s four dimensions and socio-psycho adjustment variables under new circumstances, using structural equation modelling techniques. Thus, the results will offer a theoretical framework that future scholars may use, replicate and test so as to further our understanding of the relationship between cross-cultural theories and expatriate adjustment theories. In addition, the examination of Australian and Chinese expatriates on two-way flow transfers may be particularly evocative due to the significant cultural distance between the two countries. The research findings will provide scholars with deepened insights into the most crucial issues related to expatriate effectiveness on assignment transfers between countries of remarkable cultural distances. Indeed, current Chinese and Australian expatriates’ understanding of and experience with the local business cultures is an exceptionally important part of knowledge building in the subject area. This study, which makes a pioneering effort in the context of a two-way flow expatriate adjustment between a developed country and a developing country, will contribute towards filling the research gaps in the cross-cultural adjustment field and may be a reference point for future research of its kind.

On the practical side, many organizations express the need for expatriates who are capable of adjusting quickly to multiple cultures and who can
function well in multinational teams but, unfortunately, most organizations do not necessarily have a pool of suitable expatriate candidates that is large enough to take care of the increasing international operations (Carmel & Nicholson, 2005; Rao, 2004). This research will present valuable information on the extent and nature of the adjustment barriers to which Australian and Chinese expatriates are exposed, and include discussions on how such potential problems may be dealt with. The research will form the basis of a proposed pragmatic model that reflects cross-cultural adjustment between the two countries, and prove a useful application tool for expatriate training and professional development that facilitates the cross-cultural adjustment process. Findings of the current study will benefit both managers generally and human resource practitioners more specifically by making constructive implications available for the selection and training of employees for foreign assignments.

Individuals can also benefit by having a greater understanding of themselves, including the levels of their own CQ, the effects of cultural distance and the impact of their position status in the host countries. Expatriates will be able to identify how to work to compensate for personal differences while on a variety of overseas assignments in new cultural environments. This will help expatriates prepare to take greater ownership of their careers. These wider applications of this research towards IHRM and HRD practice can reduce the huge costs associated with expatriate failure, premature return or ineffective performance that are caused by maladjustment, and serve as valuable inputs in developing future training and promotional strategies.
1.6 Research Methodology

Method

With a view to address the research questions of this study, a positivist quantitative research method is adopted, using a cross-sectional survey questionnaire designed to test the proposed hypotheses and relationships between various variables with Structural Equation Modelling (SEM) approach.

Sampling Frame

The population of interest for the research relates to Australian expatriates in China (AusChn) and Chinese expatriates in Australia (ChnAus), all of whom have experienced a cross-border assignment. The sampling frame and potential respondents will be sourced from the databases of the Australian Chamber of Commerce (AusCham) and Australian Chinese Chamber of Commerce (ACCC). The sample respondents would be expatriates with multi-industry backgrounds. Respondents will be guaranteed their anonymity, and no specific data that might personally identify the participants will be elicited.

The proposed sampling frame is used to select participants who are best placed to provide the required information. Australian is defined as employees who are Australian citizens or permanent residents who have
spent over five years in Australia. *Chinese* is defined as employees who are Chinese citizens or permanent residents who have spent over five years in China. An *expatriate*, for the purposes of this study, is defined as someone managing or cooperating with others on an international assignment for at least six months.

*Instruments*

Black and Stephens’s (1989) 14-item socio-cultural adjustment scale will be employed to assess socio-cultural adjustment. This instrument has been used extensively to measure expatriates’ adjustment to a new culture. Consistent with most previous studies, the three subconstructs of the Socio-Cultural Adjustment Questionnaire (work, general living condition, and host-country national interaction) are incorporated to measure the overall state of socio-cultural adjustment.

The personal psycho-cultural adjustment portion of the instrument is based on the short version of the General Health Questionnaire (GHQ-12; Goldberg, 1972). The 12 items employ an ascending four-point Likert-type scale. This questionnaire has been widely used as a measure of subjective wellbeing, and also extensively employed to measure the adjustment and wellbeing of expatriates in overseas assignments (Forster, 2000).

Data on the individual differences of cultural intelligence is proposed to be collected using an instrument developed by Ang, Van Dyne, Koh, and Ng (2004). The instrument has been pretested and used in several studies, and it contains 20 items in a seven-point Likert-type scale covering the four facets
of CQ. Four items measure the meta-cognitive facet, six the cognitive, and five items each measure the motivational and behavioural facets. Ang et al. (2007) cross-validated the instrument using samples from Singapore and the United States and found it to be highly reliable. It has also been used in recent research projects published in peer-reviewed journals (Templer, et al., 2006).

Prior to the main survey, a draft version of a Chinese questionnaire will be pretested and a pilot study will be conducted with at least 30 expatriates to validate the instrument in the context of the Chinese business environment, where English is not widely understood or spoken. The translation and interpretation of the questionnaire will then be revised on the basis of their input and feedback. The questionnaires will be delivered to specific contacts at each organization.

*Control Variables*

This study utilizes specific control variables because certain respondents’ conditions are beyond the control of this researcher. Therefore, based on previous research in this field (eg. Black, et al., 1991; Hechanova, Beehr, & Christiansen, 2003; Molinsky & Perunovic, 2008; Stahl & Caligiuri, 2005), factors that may have an effect on the statistical results such as gender, age, previous time spent in the host country, spouse support, education, local language ability, and prior international assignment experience are employed as control variables. Information for these variables will be gathered from the demographic portion of the instrument.
1.7 Key Assumptions and Delimitations of Scope

Since the instruments used for this study employ a self-reporting format, it is assumed that study participants will be forthcoming and truthful in their responses.

This research also makes the assumption that countries are cultural carriers. Countries are political as well as cultural units, which have relentlessly been changing over time; and countries may have nationwide cultures and sub-national cultures (e.g. multilingual and multi-ethnic societies as in Australia and China). Although there are convergent arguments against using countries in cultural studies, practical circumstances, the relative consistency of cultural patterns, and certain cultural characteristics of different countries justify that countries are important comparative elements for cross-cultural research. For example, expatriate activities such as HR activities, marketing and general management activities in the host country often are based on a value system peculiar to that country's culture. Therefore, while national differences do not necessarily represent all cultural differences and the milieu of individuals in a culture can be diverse with many coexisting subcultures, understanding the broad tendencies of “core cultures” carried by “countries” of this world can help us inform and educate expatriates on how to better facilitate communication between individuals of differing countries.

Another assumption underlying the research is that distances between national cultures are stable over time, and national cultural differences
between the home and host countries create a distance that, in turn, influences the psychological and socio-cultural adjustment of the expatriate in the international arena.

The limited length and narrow focus of this thesis also compels a discussion of its delimitations. First, the conceptualization of ideas into categories is often necessary for practical purposes to narrow the research focus. This study limited its examination of individual differences to the difference of CQ as the topmost level of cross-cultural ability. Individual differences such as personality traits are not examined.

Second, this thesis is limited with regard to the consideration of how culture is conceptualized. Organizational cultures and firm-level cultures, moderated by common corporate practices, have been found to have a large influence on norms and expectations of adjustment, as does national culture. However, this study is limited to a review of national-level variables (i.e. CDA) and does not look at other moderation effects of organizational or firm-level cultures and how they are assessed.

Third, the definition, conceptualization and measurement of CQ used in this study is based on the multi-dimensional model advanced by Earley and Ang (2003), and alternative models of CQ (eg. Offermann & Phan, 2002; Thomas & Inkson, 2004; Thomas et al., 2008) are comparatively similar to Earley and Ang’s (2003) four-factor model. Therefore this study refers the presumption of CQ conceptualization to the four-dimensional model during
the general discussion, and construct validity tests of four-dimensional model of CQ will be conducted during the data analysis stage. It is assumed that CQ can be measured by an ability measurement.

Finally, while research regarding expatriate performance, work effectiveness, expatriate pre-departure training, career issues and related concepts are used during the development of hypotheses of expected relationships between constructs, specific performance outcomes, training and preparation, job satisfaction, organizational commitment, conflict resolution, turnover intent and other measures of effectiveness are not within the scope of this study and are therefore not examined.

1.8 Chapter Summary and Thesis Outline

Globalization has contributed to rapid increases in workforce mobility in the last decade, and is unlikely to abate in the foreseeable future. Coping with cultural differences, and recognizing how and when these differences are relevant, is a constant challenge. Cross-cultural adjustment is a difficult and costly exercise if not carried out successfully. Management of the expatriate adjustment process may benefit by narrowing the gaps in our understanding of how personal differences, organizational position authorization, and cultural contexts of home and host countries, relate to cross-cultural adjustment both socio-culturally and psycho-culturally. To aid in these tasks, this more focused study should make useful contributions.

There are five chapters in this thesis:
This current chapter, Chapter One, serves as an introduction to the thesis and identification of the topic, introduces the background of this research, and presents an overview of the research problem, research questions, and research significance. It then provides a brief justification for the research method selection, outlines the thesis structure, and subsequently discusses delimitations and key assumptions of this research.

Chapter Two provides a review of the literature and presents the theoretical background of the study. It selectively reviews the parent disciplines of cultural dimensions and classification models, followed by a critical analysis of the literature that is most relevant to the primary research problem of the immediate discipline; that is, expatriate cross-cultural adjustment. Specifically, it integrates current theories of cross-cultural adjustment (CCA), cultural distance asymmetry (CDA), and cultural intelligence (CQ), with particular attention to the linkages across these domains. The chapter concludes by outlining a comprehensive cross-cultural adjustment model based upon the literature review, a model that provides a clear conceptual framework for the empirical research and analysis. The development of research hypotheses for the study is also presented.

Chapter Three then begins with an overview and rationale for the use of a positivist quantitative research methodology. Various related issues are addressed, including the role of the researcher, ethical considerations, the selection of the research participants, research sites and procedures, questionnaire development, and descriptions of measures of independent and
dependent variables. This is followed by a detailed discussion of the data collection methods and the data analysis plan.

Chapter Four presents, interprets and discusses the research findings based on the data gathered through participant responses to the survey questions, and discusses results of the statistical analysis, including a discussion of the empirical testing of the hypotheses. It also addresses reliability and validity issues of the research design. The inferential analysis designed to test the hypotheses of this study are described, and the analytical results of structural equation modelling using AMOS (20.0 version) are summarized, including assessing the fit of the hypothesized structural model and a refined new model. The interpretation of the research results and findings are presented along with the data analysis, including tests of hypotheses developed in Chapter Two.

Chapter Five offers a discussion of the findings, key contributions and limitations resulting from the data analysis. It concludes the thesis with a discussion of its implications for scholarship, public and private sector policy, and management practice. Limitations of the study are summarized and future research directions are proposed.
CHAPTER TWO: LITERATURE REVIEW AND THEORY

DEVELOPMENT

2.1 Chapter Overview

This chapter provides the research context and outlines the theoretical foundation for the posited hypotheses. The focus of this chapter is twofold. A primary goal is to conduct a coherent literature review related to the primary concepts being explored. The first section outlines different theoretical perspectives stimulated by national culture frameworks and dimensionality theory (Section 2.2). The following section presents the implications of contextual differences and cultural distances between Australia and China (Section 2.3). Then seminal cross-cultural adjustment theories are summarized, and the socio-cultural and psycho-cultural adjustment constructs are discussed (Section 2.4). This is followed by a review of the nature and conceptualization of cultural intelligence (CQ), and an overview of previous empirical studies on the construct (Section 2.5).

A secondary goal of this chapter is to present the development of the hypotheses and conceptual model to be tested. The theory and hypotheses development section (Section 2.6) examines the relationships between components of a multi-dimensional CQ model and adjustment, with critical consideration given to the moderation effects of cultural distance asymmetry through a systemic perspective. Chapter summary and conceptual model are provided at the end of this chapter (Section 2.7).
2.2 Culture and Dimensions of Culture

Culture has an important role in business relationships, as Hofstede (2001, p. 6) puts it: “The business of international business is culture”. Before considering particular aspects of expatriates’ cross-cultural adjustment in international business management, it is necessary to conduct an investigation into seminal cultural frameworks and approaches applied in business, and to provide an examination of contextual variables, such as cultural differences and situational contexts of the sample countries.

2.2.1 Culture

Culture refers to a set of attitudes, beliefs, values, and behaviours that are shared by a group of people and are communicated from one generation to the next (Hall, 1981; Hofstede, 2001). Culture can be studied at different levels, such as individual, national, regional, ethnical, organizational, gender, generation and social class. Culture, in particular national culture, provides important insights into business management behaviour and has been increasingly employed in the management literature (eg. Adler, 2002; Hofstede, 2001; Kogut & Singh, 1988; Steenkamp & Geyskens, 2012; Trompenaars & Hampden-Turner, 1997; Trompenaars & Woolliams, 2003).

The dominant force shaping individuals’ values, beliefs, and attitudes are rooted more in national core cultures, than economic ideology or technological growth (Hofstede, 2001; Laurent, 1983). Given the variation of values and beliefs deeply rooted in diversified national cultures, cross-cultural adjustment should not be expected to be exactly the same universally. Indeed, earlier scholars (eg. Schneider, 1988) have noted that
national culture often plays a stronger role than organizational culture in explaining conventionality and conformity at work. Hence, this research proposes that different national cultures may have important implications for the interface of expatriate adjustment in new cultures.

2.2.2 Comparison of Cultural Dimension Models

One approach that has been developed and refined by many researchers to investigate national cultural differences is the detection and examination of cultural dimensions (Dickson, Den Hartog & Mitchelson, 2003). Cultural dimensions are value constructs, such as orientation to time, space, communication, competitiveness, power etc., which can be used to describe a specific culture. Specific cultures and cultural flows will have specific codes of behaviour for expatriate adjustment. Drawing from the fields of anthropology, sociology and psychology, a number of cross-cultural studies (eg. Hall, 1981; Hofstede, 2001; House, Javidan, Dorfman, & Gupta, 2004; Schwartz, 2006; Trompenaars & Hampden-Turner, 1997) investigated the consequences of different national level cultures and value differences among cultures using a dimensional approach. Hofstede (2001), Hall (1981) and Schwartz (2006) have each applied this methodology to elucidate cultural differences at the national level. These three models are among the most widely cited and utilized sources in the international business research literature (Nardon & Steers, 2009; Sandergaard, 1994). The following section seeks to compare and analyze these three influential cultural models.

Each of the culture models (i.e. Hofstede, 2001; Hall, 1981; Schwartz, 2006) contributes a well-reasoned set of cultural dimensions along which
dive
crse cultures can be compared
and analyzed in continuums. While the
milieu of individuals in a culture can be diverse and not all individuals can
be portrayed by a rigorous stereotype, the broad dimensions of cultures and
general tendencies of a particular culture will inform and educate us on how
to better facilitate adjustment in differing cultures. Rather than advocating
one model over another, all of the models provide significant contributions
to our understanding of culture as it relates to international business. Even
though no single model can comprehensively cover all aspects of a culture,
it is possible to draw out the fundamental cultural characteristics through a
comparative analysis.

Table 2.1 summarizes the shared themes from the three cultural dimension
models that communally epitomize the primary variations between cultures.

<table>
<thead>
<tr>
<th>Shared Cultural Dimensions</th>
<th>Hofstede’s Cultural Typology</th>
<th>Hall’s Taxonomy of Context Orientations</th>
<th>Schwartz’s Fundamental Dimensions of Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution of Power &amp; Authority</td>
<td>(i) High vs. Low Power Distance</td>
<td>(i) High vs. Low Context</td>
<td>(i) Hierarchy vs. Egalitarianism</td>
</tr>
<tr>
<td>Relationships with Social &amp; Natural Environment</td>
<td>(ii) High vs. Low Uncertainty</td>
<td>-</td>
<td>(ii) Mastery vs. Harmony</td>
</tr>
<tr>
<td>Focus on We vs. Me</td>
<td>(iii) Collectivism vs. Individualism</td>
<td>-</td>
<td>(iii) Conservatism vs. Autonomy</td>
</tr>
<tr>
<td>Gender</td>
<td>(iv) Masculinity vs. Femininity</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Egalitarianism &amp; Assertiveness</td>
<td>Time Perception</td>
<td>Short-term Orientation vs. Monochromatic Time Orientation</td>
<td></td>
</tr>
</tbody>
</table>

Notably, as shown in table 2.1, one distinctive common dimension, i.e.
distribution of power and authority, is addressed in all models. Hall’s (1981) conception of high vs. low context culture appears to be correlated to Hofstede’s power distance dimension in that, formal and indirect ways of communication derive from hierarchical and relationship-oriented traditions and reflects a greater willingness to accept power distances and vice versa. Schwartz’s (2006) notion of hierarchy vs. egalitarianism is virtually identical to Hofstede’s power distance dimension, as greater tolerance towards unequal distribution of power and authority is available in hierarchical societies, hence hierarchy can be interpreted as high power distance, and egalitarianism as low power distance. Therefore, it can be concluded that the distribution of power and authority is a fundamental value dimension across cultural dimension models. Other influential researchers have also discussed the theorization of the critical cultural dimension of power distance. For example, Trompenaars and Hampden-Turner (1997) termed this dimension as achievement vs. ascription, and House et al.’s (2004) “The GLOBE” study used the exact same terminology of power distance as Hofstede’s (1980, 2001).

According to studies on this core cultural dimension (i.e. Hall, 1981; Hofstede, 1980, 2001; House, et al., 2004; Schwartz, 2006; Trompenaars & Hampden-Turner, 1997), in high power distance countries (e.g. Asian, Arab, and Latin American countries), the unequal distribution of power, authority, roles and resources is legitimate, and it is natural for some members of a group or society to exercise extensive power and control over their subordinates. Subordinates are expected to do what they are told and
comply with obligations and roles with a minimum amount of questions. More often than not, this control is not abusive or offensive; instead, it can be benevolent as members of the group are taken care of through the strong master’s control (House et al. 2004). In low power distance cultures (e.g. American, Oceania, northern and western European cultures), social and organizational structures exercise egalitarian and participative approaches. Individuals are seen as moral equals and habituated to voluntary cooperation with others. Subordinates are expected to be consulted on key issues that have an effect on them. Strong leaders will be accepted to the extent that they advocate democratic principles (Schwartz, 2006).

Based on this assessment, the core cultural dimension of power distance reflects its centrality and commonality in these research models. Seeking commonalities among the existing models in the current review is part of the contribution to the advancement of the cross-cultural management research.

2.3 Contextual Difference and Cultural Distance

Another important contribution of this study is the examination of whether the extent of expatriate adjustment is limited in some way by the contextual factors. Cultural and situational contexts serve to constrain and encapsulate the broader meaning within the conceptual framework. Cultural distance occurs when there is a distance between the home and host country in terms of culture, economic systems and business practices. Australia and China are interesting research contexts, with Australia being a low context, low power distance, individualistic and a developed Anglo-Saxon country; while
China, being a high context, high power distance, collectivistic and rapidly growing developing economy, a consequence of increasing globalization and adopting market economy principles. These two countries are culturally, politically, historically and geographically distant, but have strong trade relationships.

### 2.3.1 An Overview of the Socio-economic Contexts

Data from the Australian Bureau of Statistics (ABS) and the International Monetary Fund (IMF) shows that China was Australia’s second largest trading partner in 1999, but has overtaken Japan as Australia’s largest trade partner since 2007 (Austrade, 2011a). According to China’s World Trade Statistics reported by the US-China Business Council, the two-way trade volume between Australia and China reached 78.135 billion Australian dollars in 2011. The Chinese government has approved over 160 proposals for Chinese investment in Australian business with total investment of around A$60 billion in 2010 (USCBC, 2012). China is Australia’s largest trading partner mainly due to China’s strong demand for iron ore, coal and liquefied natural gas. China has one of the largest foreign reserves in the world and has the financial capital which Australian mining corporations require to invest in energy and mineral exploration for exports to meet China’s hunger for economic development, energy demands and infrastructure development (Austrade, 2011b). China records among the highest rate of expatriate assignments for Australians compared to other countries in the world (DFAT, 2012), and Chinese firms are also very active in the Australian economy including areas of transportation, consulting,
banking, medical and health services, mineral processing and environmental products and services (ABS, 2012).

According to the most recent data available from Australian Embassy reports (2012), total Australian investment in China reached A$6.9 billion in 2009, and grew by a remarkable 53.5% in 2011, taking the economic relationship to new highs. Major Australian investment projects are in banking, educational, resources, mining and wine sectors. This demonstrates that Australian businesses are preparing to commit to a deeper engagement in China, and more opportunities for Australian investment will open up as China’s services sector expands (Asialink, 2012). However, despite the obvious rising worth of China to Australian organizations, a large proportion of Australian expatriate managers assigned to work in China do not succeed in their tasks. Stuttard (2000) estimates that the expatriate failure rate in China could be twice that of other countries with only around 20 percent of the expatriates sent to China being successful. China is frequently regarded as the most foreign of all foreign places from a Western perspective (Lauring & Selmer, 2010). In the ranking of the most challenging places for expatriates to relocate to, China is at the top of the list, and China is also the country with the highest rate (22%) of assignment failures (Walser, 2009).

In particular, research (eg. Hutchings, 2002; 2003) suggests that Australian organizations should pay more attention in the expatriate selection process to cross-cultural preparation and adaptability. Australian managers have been ranked poorly in their cross-cultural skills, and have been reported to
have a high return rate from an overseas assignment compared with managers from United States, United Kingdom, Germany and Japan (Hutchings, 2003). Many Australian business operations failed because Australians did not understand Chinese culture, or the Chinese way of doing business (Blackman, 2000; Sheehan, 2008; West, 2000). Anecdotal evidence suggests that cultural distance between the two countries is a major contributing factor to expatriate maladjustment and ineffectiveness (Hutchings, 2005; Hutchings & Murray, 2003).

Because the current study focuses primarily on the two-way flow transfers of expatriates’ cross-cultural adjustment, a description of the overall picture of the two chosen countries’ cultural environment is required. Hence, the dynamics of Australian and Chinese business cultural contexts are identified in the following section with the goal of providing a socio-cultural and psychological background for the two-way flow expatriate adjustment.

2.3.2 The Oriental Chinese Way vs. Occidental Australian Mind

The amount of comparative literature between China and Australia is astonishingly limited in investigating the effect of cultural differences on expatriate transfers. In many aspects, Chinese people act in different ways with abundant deep-rooted differences in philosophy, political systems, and social habits from Australian mainstream culture. Hsü (2000) refers to this state as the Chinese Way. This section attempts to summarize the few existing studies that examine how and why the two business cultures differ, and the following discussion will illustrate three key variances between the Oriental Chinese way and the Occidental Australian mind, albeit from a
(i) **What is said vs. what is not said.** According to Hofstede’s, Hall’s and Schwartz’s cultural models, people from Australia (a low context culture) tend to use a direct verbal expression style, whereas in China (a high context culture), people tend to use an indirect style by employing ambiguous language and talking around the point, as direct expression may run into the risk of hurting the interlocutor’s face (Chen & Starosta, 2000). Communication in Australia is often stated directly and clearly. In such a low context culture, an explicit understanding between interlocutors is much desired; if one makes a request, she or he is expected to be as direct as possible (Hutchings, 2005). However, for a Chinese person, meaning does not stop at words; rather Chinese believe “meaning lies beyond words” (意在言外) or “meaning lies in what is not said” (意在不言中). By not being straightforward in expressing oneself, a Chinese person leaves room for others to experience and ponder, thus the ability to ponder, apprehend, draw connections and read between lines is essential for correct interpretations of messages (Gao & Ting-Toomey, 1998; Yao, 2000). That is why messages in Chinese culture often are implied rather than stated explicitly for the sake of relational harmony and face maintenance. It is also observed by Ting-Toomey, in her milestone book *An Intercultural Journey* (1997), that Chinese are not forthright enough, so Westerners often perceive them as insincere and untrustworthy and would be annoyed by the Chinese way of beating around the bush.
(ii) **We vs. me.** Chinese collectivistic culture is characterized by a rigid social framework in which self-concept is not emphasized; differences of age, generation and status are maximized, and people are expected to show conformity to the group’s norms and values (Gao & Ting-Toomey, 1998). A “we” identity and an in-group affiliation is emphasized. The collectivistic value system supports the Chinese “self” concept, which is embedded in relations with others in the Confucian framework (Shen, 2001). Australians, however, make clear distinctions between personal views and group views, and stress a “me” identity and individual autonomy (Gao & Ting-Toomey, 1998). This “self” concept indicates individual and private ownership rights form the foundation of relationships in individualistic frameworks, where the self, personal achievement and personal goals sometimes supercede group goals (Johnson, 2006).

Tsui and Windsor (2001) drew on Hofstede’s (1980) cultural dimensional typology to show that Australians are more individualistic, have higher reasoning scores, display more personal steadiness and retain more equal relationships among people than Chinese. This finding is consistent with the differences in thinking patterns and social action in Hofstede’s cultural typology. In essence, Chinese people and their cultural characteristics offer a number of examples that prompt a powerful impetus of alternative cognitive processes, such as their synthetic and non-probabilistic way of thinking and their event–not substance–oriented epistemology, which contrasts to an Australian’s analytical and probabilistic mindset (Hofstede 2001). The problem that derives from this difference is that Chinese may
find Australians draw a lot of attention to themselves and thus perceive them as being self-centered, whereas Australians tend to attribute the Chinese style to a lack of personal opinion and self-confidence (Hutchings, 2005).

(iii) Confucianism vs. Egalitarianism. Chinese society truly attests to Gesteland’s (1999) observation of Guanxi, which is a clear reflection of Confucianism. Guanxi, meaning relationship focus in Confucian thought, is a system broadly used by Chinese people to build relationships. Guanxi-oriented social and business customs are relationship focused. More to the point, Confucianism, as the most profound and dynamic Chinese thought system for thousands of years, directs social and organizational structure and hierarchical differences. Evidence in the literature suggests that Chinese society remains deeply attached to the Confucian tradition in hierarchical and filial piety status, in spite of the introduction of Communism (Su & Littlefield, 2001). Empirical research (Ralston, Egri, Stewart, Terpstra, & Yu, 1999) also shows that business and organizational structures observe Confucian ethical values and adopt a Confucian-type hierarchical structure.

In contrast, Australian culture is predisposed by the distinctive topography of the Oceania continent, the migrating history, and a prominent Anglo-Celtic heritage. The diverse input of aboriginals and waves of multi-ethnic migrants from more than 200 countries after the Second World War have diverged Australian culture considerably, forming friendly and open frameworks. Johnson (2006) commented on the uniqueness of Australian culture and indicated that Australia, being a distinct egalitarian culture, has
served as a melting pot for the assimilation of immigrants into the Australian culture.

2.3.3 Cultural Distance between China and Australia

A review of the broader international management literature provides an important construct, cultural distance (CD), to explore cultural differences. CD refers to the extent to which the cultural norms in a host country subsidiary company differ from those of its parent company in the home country (Kogut & Singh, 1988). The concept measures the degree to which cultural values in one country are different from those in another country (Shenkar, 2001); and it signifies sources of conflict between cultural systems that potentially undermine the cross-cultural interaction between diverse individuals and organizations (Hutzschenreuter, Voll, & Verbeke, 2011).

Kogut and Singh (1988) popularized the concept of CD on the basis of Hofstede’s (1980) work to examine the magnitude of differences in national culture. Beginning with Kogut and Singh’s (1988) work, the CD construct has gained broad acceptance in the international business management and human resource management literature. For instance, it has been applied to a variety of research questions, such as explanations of foreign market selection and subsidiary performance (Hutzschenreuter, et al., 2011), overseas expansion strategy and entry mode choice (Broughers & Broughers, 2000), international diversification and level of control (Tihanyi, Griffith, & Russell, 2005) and MNE performance (Shenkar, 2001). Essentially, many
researchers (eg. Black, et al., 1991; Selmer, et al., 2007; Shenkar, 2001) call for further investigation into the diverse nature of cultural distance and greater insight into the understanding of its effects on individual differences and the adjustment process. Indeed, Hofstede (2001), Laurent (1983) and Kim et al. (2006) have each argued that, the dominant force in shaping the values, beliefs, and attitudes of expatriates, is not economic ideology or technological growth, but rather, cultural distance. Researchers such as Harzing and Christensen (2004) and Trompenaars and Hampden-Turner (1997) also assert that the overall maladjustment rate may rise due to lack of attention to the marked distance between cultures. Therefore, international business strategy should aim to gain differentiated positions and advantages based upon more sophisticated understandings of specific cultural distance between home and host countries.

With a view to quantify the specific cultural differences between the two sample countries in the study, table 2.2 outlines the index of cultural distance ratings between Australia and China based on Hofstede’s (2001) typology of the cultural dimensions.

<table>
<thead>
<tr>
<th>Cultural Dimensions</th>
<th>Power distance index</th>
<th>Uncertainty avoidance index</th>
<th>Individualism index</th>
<th>Masculinity index</th>
<th>Long-term orientation index</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Australia</strong></td>
<td>Low (36)</td>
<td>Medium (51)</td>
<td>High (90)</td>
<td>Medium (61)</td>
<td>Low (31)</td>
</tr>
<tr>
<td><strong>China</strong></td>
<td>High (80)</td>
<td>Low (30)</td>
<td>Low (20)</td>
<td>Medium (66)</td>
<td>High (118)</td>
</tr>
<tr>
<td><strong>World Average</strong></td>
<td>55</td>
<td>64</td>
<td>40</td>
<td>50</td>
<td>45</td>
</tr>
</tbody>
</table>

**Source:** adapted from Hofstede's (2001, p. 500) 5-D Country Index Scores

As shown in table 2.2, Australia and China exhibit distinctive characteristics that are far from each other on four of Hofstede’s (2001) five measures of...
cultural dimensions, namely, (i) power distance: the score of China on this cultural dimension is over twice that of Australia, which indicates that China is a highly centralized country whereas Australia is relatively decentralized; (ii) uncertainty avoidance: Chinese tend to have a much higher level of tolerance for uncertainty than Australians; (iii) individualism: Australia demonstrates strong individualist values while China is ranked as having very low individualism (i.e., strong collectivism); (iv) long term orientation: Australia has a short-term orientation in contrast to China’s long-term orientation. The masculinity score is the only dimension on which no diametrically opposite values were found for the two countries.

Based on the above analysis, of note is the difference of power distance ranking between the two countries. At an index score of 80, China rests upon a high ranking, compared to the world average of 55. The significant higher score is indicative of a high level of inequality of power and wealth within the society. That is, the unequal distribution of authority and resources are more readily acceptable in China. This hierarchical condition is not necessarily forced upon the people, but rather accepted by the society as Chinese cultural heritage (Harzing, 2009), hence in such cultures there are fewer defences against power abuse; individuals are influenced by formal authority and sanctions; subordinate-superior relationships tend to be polarized; and employees tend to seek detailed planning and guidance, and prefer strong leadership that is more authoritarian and directive (Osland, et al., 2006). This means where there is cultural difference in attitudes and
values, the diversity may influence management, thus to be effective in a high power distance culture, it is most likely the case that management ought to be authoritative and directive (Dickson, Den Hartog, & Mitchelson, 2003).

In contrast, Australia scores low on the power distance dimension. With an index of 36, it is indicative of a greater egalitarianism between societal organisms in Australia, including government, organizations, and even family units. Tsui and Windsor (2001) note that, within Australian organizations, hierarchy is established for convenience; superiors are usually reachable; managers rely on individual employees for their proficiency and expertise; both managers and subordinates are expected to be consulted; communication is generally direct, informal and participative; information is transparent and shared normally. The slow processes of problem-solving and decision-making are suggested to be a consequence of egalitarianism in Australian organizations, as the co-determination system values commitment and consent of each individual equally, and the mainstream cultural environment underlines a cooperative interaction across power levels (Johnson, 2006).

Cultural distance plays an important role in comparing the two-way flow transfers of expatriates in the adjustment process (Hofstede, 2001; Ward et al., 2009). That is, culturally distant countries can serve as better comparative sites for expatriates’ adjustment processes. Hofstede (2001) remarks that when there is little difference between nations’ index scores and rankings, the outcome will not convey a meaningful difference between
social cognitions and business cultures. It is only by comparing subjects from cultures with significant dimensional differences that an outcome may offer new insights. The dissimilarity of cultural dimensions between Australia and China makes them ideal comparative sites.

2.3.4 Cultural Distance Asymmetry

In exploring the research question as to what role CD at the macro level would play in the adjustment process, the common speculation held by many scholars currently in the IM field is that, greater dissimilarity between home and host cultures will increase intercultural ineffectiveness.

Particularly, a considerable body of the research on expatriate adjustment (eg. Church, 2000; Mendenhall & Oddou, 1985; Osland, et al., 2006) implicitly assumes the similar theoretical positioning that, growing CD will increase adjustment difficulties. For example, Eriksson, Majkgard, and Sharma (2000) argue that the greater the cultural distance between home and host countries, the less knowledge about the new environment is likely to be available, because the task of identifying and interpreting incoming signals is more difficult. Likewise, Manev and Stevenson (2001) suggest that growing cultural dissimilarities between host and home cultures would increase the severity of culture shock and adjustment difficulties. Sousa and Bradley (2006) also note that similarity in national cultures or smaller cultural distances facilitates interaction; whereas dissimilarity or larger cultural distances hinders it. Indeed, various researchers (eg. Eriksson, et al., 2000; Manev & Stevenson, 2001; Peppas & Yu, 2005; Stahl & Caligiuri, 2005; Zeitlin, 1996) have assumed increasing challenges exist when
individuals attempt to adjust to a culture that is significantly different from their own. The assumption is mainly based on the following theoretical beliefs.

First, the greater the cultural distance of the foreign country from the home country, the less knowledge about the new environment is likely to be available. For example, Eriksson, Majkgard, and Sharma (2000) point out that a large cultural distance between the home and the foreign country makes the task of identifying and interpreting incoming signals more difficult. Second, cultural distance can act as a barrier to interaction among people, and preconceptions of countries at a great cultural distance will affect the individual’s perception of those countries. Zeitlin (1996) suggests that the severity of culture shock is related to the cultural distance between the home and the host country. Third, similarity in national culture facilitates interaction, whereas dissimilarity hinders it, because similarity in national culture could not only result in economic relationships but also manifest itself in more intensive cultural and social interactions (Manev & Stevenson 2001). Cultural differences can barely be leveraged, resulting in a differentiation in positions and advantages of business strategies, and growing cultural dissimilarities between host and home cultures will increase adjustment difficulties and intercultural ineffectiveness (Kim et al., 2006). In addition, the overall expatriates’ failure rates may actually be much higher as intercultural ineffectiveness results from increasing marked distance between cultures (Harzing, 2009). Thus, the traditional supposition in the literature has been that greater CD can lead to increasing cross-cultural misunderstandings, hence greater adjustment difficulties.
It has been argued, however, that this seemingly simple and standardized supposition is based on a series of illusions and unsupported assumptions (Shenkar, 2001), among which cultural differences are considered of the same impact regardless of the direction of cultural flow (Selmer, et al., 2007). In fact, this theoretical assumption neglects a large number of cases where the cultural distance over which expatriates are assigned on reciprocal transfers is identical, but cross-cultural adjustment difficulties faced by expatriates are utterly diverse (Selmer, 2006b, 2007; Williams, 2008).

Shenkar (2001) notes that, “distance” connotes “symmetry”, which in the cultural application conceals the different roles of the home and host environments, and confuses firm and environment as “presumably interchangeable”. That is, many current scholars in the field rest on an unjustified presumption of symmetric CD impact, for example, the assumption that an Australian expatriate in China faces the same hurdles as a Chinese expatriate working in Australia.

If the symmetrical assumption of “growing cultural dissimilarities will increase adjustment difficulties” holds true, there would be no difference in the extent of socio-cultural and psycho-cultural adjustment of business expatriates on reciprocal transfers, because business expatriates from country A assigned to country B, would have the same cultural distance to bridge as those transferred from country B to country A. Nevertheless, the
existing empirical evidence does not seem to support the symmetric assumption on cultural distance.

Brewster, Lundmark and Holden’s (1993) qualitative study examined British and Swedish management culture using a sample of British expatriate managers in Sweden and Swedish expatriate managers in Britain. The qualitative data collected from interviews, focus groups and case studies revealed that Swedish expatriate managers found it easy to adjust to a more authoritarian culture in the UK, whereas British expatriate managers stated they had difficulties adjusting to a less autocratic style of management in Sweden and that the consultative style of the Swedes was inefficient. It has certain face validity to many expatriate managers from their personal experience to adjust to cultures of various degrees of authoritarianism in two-way transfers (Brewster, et al., 1993). That is, the degree of adjustment achieved among the expatriate managers on reciprocal transfers is not identical, and is affected by the degree of authoritarianism in the host environment.

Selmer’s (2007) quantitative study also endorsed a similar asymmetric positioning as in Brewster et al.’s (1993) qualitative study. Selmer et al.’s (2007) study used a two-flow sample of US expatriates in Germany and German expatriates in the USA. The study found that there were considerable between-group differences for all the adjustment variables in the sample groups. German expatriates in the USA were better adjusted, both socio-culturally and psychologically, than American expatriates in Germany. Controlling for the length of assignment and using the same
cultural distance between Germany and America, their univariate F-tests found that German expatriates in America experienced better adjustment than American expatriates in Germany. Their results were reported as general adjustment (p < .05), interaction adjustment (p < .001), work adjustment (p < .10), and psychological adjustment (p < .10). The significant between-group differences of the American and German expatriate adjustment call into question previous arguments that greater cultural distance would increase adjustment difficulties. The results offered immediate evidence against the symmetric assumption of the impact of CD on expatriate adjustment, though Selmer (2007) noted, more rigorous replications of the highly exploratory study are urgently needed to establish whether the result holds true for expatriates from different cultures.

To summarize, Shenkar (2001) and Selmer et al. (2007) each challenged the unsupported symmetric measure of cultural distance, indicating that by using cultural distance as a predictor of adjustment, many researchers have neglected the direction of the adjustment required by the assignment. In other words, the direction of cultural flow should be taken into account when considering the effect of cultural differences. Drawn from previous theories and studies, the construct of cultural distance asymmetry is further refined and conceptualized in the current study as the asymmetrical impact of cultural distance that is contingent on the direction of cultural flows of the expatriates’ foreign assignment. This asymmetry hypothesis predicts that the direction of cultural flow matters in the adjustment process. Hence, there is every reason to note different magnitudes in cultural differences; and as a
result, different levels of expatriate adjustment.

2.4 Cross-Cultural Adjustment

Cross-cultural adjustment (CCA) used to be deemed as synonymous with expatriate effectiveness on the job (Shaffer, et al., 2006), but systemic perspectives have now been developed to encompass various complex models to describe the mechanism of cross-cultural adjustment both as “state” and “process”. CCA involves the “state” of uncertainty reduction and the change “process” through which expatriates start to feel more comfortable with the new culture and begin to harmonize with it (Black, et al., 1991). Culturally adjusted expatriates are more likely to be open to the host cultures, and capable of adding new behaviours, cultural norms, and social rules to their existing cultural foundation pool (Church, 2000). Maladjusted expatriates are not capable at doing so, and negative feelings or failure experiences in the host cultures can increase expatriates’ anxiety and uncertainty in other international assignments.

This section will examine the prominent theoretical bases in the CCA literature; identify the major research studies conducted with regard to the individual and environmental factors contributing to expatriates’ socio-cultural and psycho-cultural adjustment; and delineate the trends in this field of research.

2.4.1 A Review of Cross-Cultural Adjustment Theories

The research on expatriates’ cross-cultural adjustment has been developing since the 1970’s. One of the principal research questions in the adjustment
literature is why some individuals adjust more quickly and easily than others cross-culturally. Some researchers have explored the effect of cultural values on individuals (e.g. Hofstede, 1980, 2001; Trompenaars & Hampden-Turner, 1997), on the impact of distance between the host and home cultures (e.g. Ward & Chang, 1997; Manev & Stevenson, 2001), on work, societal and family factors (e.g. Black & Gregersen, 1991; Bhaskar-Shrinivas et al., 2005), on isolation caused by language barriers (e.g. Selmer, 2006a); while other studies have addressed individual differences in adapting to foreign cultures (e.g. McCrae & Costa, 1987; Caligiuri; 2000; Adler, 2002; Ang et al., 2007). The general research on cross-cultural adjustment (e.g. Berry, 1990; Black, 1988; Black & Mendenhall, 1991; Black, et al., 1991; Caligiuri, Hyland, Joshi, & Bross, 1998) employs a number of different theoretical frameworks. A brief overview of the most prevalent and relevant cultural adjustment theories underlying current expatriate research will provide a foundation for understanding the subject of expatriates’ cross-cultural adjustment.

2.4.2.1 Three-dimensional Model of Adjustment

Black et al’s (1991) three-dimensional model of adjustment is one of the most widely cited models of cross-cultural adjustment in the expatriate literature. Black (1988) advocates that expatriates’ cross-cultural adjustment should have more domains than merely adjustment in the work domain. Therefore, Black and his colleagues established the CCA concept as a multi-dimensional construct that encompasses three domains (Black et al, 1991).
The first dimension in Black’s multi-dimensional model is general adjustment, which refers to the ease of expatriate adjustment to general living conditions and the living environment such as transportation, food, and weather in the host country. The second dimension is host country national interaction adjustment, which involves the expatriates’ comfort level and cross-cultural capabilities when interacting with host country nationals both at work and after work, such as interpersonal skills in dealing with communication differences and language barriers. The third dimension is work adjustment, which is adjustment to a variety of jobs and assignments, including ability to undertake new assignments and to manage business relationships (Black, 1988; Black et al., 1991).

Takeuchi, Yun, & Tesluk (2002) adds to Black’s adjustment model and proposes that the three dimensions of adjustment may have impact on each other (including within-domain effects, spillover effects, and crossover effects), such that adjustment in one dimension or lack thereof may influence adjustment in other dimensions. For example, greater familiarity with the transportation system in the host country may assist expatriates’ psychological adjustment (within-domain effects); or maladjustment to general living conditions may hinder work adjustment (spillover effects); or the spouse adjustment may have impact on the cross-cultural adjustment of an expatriate (crossover effects). Takeuchi et al. (2002) proposes that all these three effects interactively play a role in cross-cultural adjustment.

2.4.2.2 The U-Curve Model of Adjustment

Black’s (1988) adjustment model however, does not offer explanations for
any time issues in cultural adjustment; hence, based on the work of Lysgaard (1955) and Oberg (1960), Black and Mendenhall (1991) advanced the previous model to take in the chronological aspect of cross-cultural adjustment, depicting that cross-cultural adjustment takes place over time. Their model portrays a U-shaped curve (as shown in figure 2.1), in which four different stages of adjustment are presented: honeymoon, culture shock, adjustment and mastery stages (Black & Mendenhall, 1991; Lysgaard, 1955; Oberg, 1960).

![Figure 2.1 The U-Curve Model of Adjustment](image)

Source: Black and Mendenhall (1991, p. 225)

In the honeymoon stage, which may last up to two months, expatriates experience initial tourist-like interest and excitement about starting the new assignment in a foreign country. Then, in the culture shock stage period, which usually lasts two to six months, expatriates strive to adjust to the new cultural environment and may experience frustration and confusion in the unfamiliar culture, where culture shock and disorientation begin. During the
third adjustment phase, which generally starts in the sixth month and lasts until the twenty-fourth month, expatriates gradually begin to recognize cultural differences, as they learn to cope with the new assignment and settle into the pace of daily life in the new cultural environment, and behave according to different social norms. At this stage, expatriates build up a level of comfort interacting and working with host country nationals and develop greater familiarity with and better adjustment towards the host country cultural environment. Finally, expatriates enter the mastery stage, which usually takes place from the twenty-fourth month onwards. Expatriates in this stage normally are able to function appropriately in the foreign culture nearly as well as at home, and they level off to a steady state psychologically, and are completely adjusted to their new environments (Black & Mendenhall, 1991).

Bhaskar-Shrinivas et al. (2005) examined the U-curve model using data from 8,474 expatriates in 66 studies. Their results strongly support Black and Mendenhall’s (1991) U-curve model, and extend the adjustment model to be more of an S-shaped curve. Their study modified the length of time that the expatriate spends in each of the stages and suggested that the honeymoon stage finishes at 12 months, culture shock ends at 3 years, and adjustment and mastery come about after 3 years.

However, the theorizing of the U-curve adjustment model has been criticized as being based on retrospective and anecdotal data, and comprehensive reviews of the U-curve model only found weak, limited, and over-generalized support. For example, Ward et al. (1998) revisited the
model in a longitudinal study of 35 overseas students from Japan studying in New Zealand, and their reported results invalidated the U-Curve Model. Another more recent longitudinal study conducted by Bikos et al. (2007) examined 32 expatriate spouses on their psychological functioning at just-arrived, three month, six month, nine month, and one year stages, and the results also did not support the U-curve models.

2.4.2.3 Theory of Acculturation

A review of seminal cross-cultural theories would not be complete without a discussion of Berry’s (1990) theory of acculturation in the literature. The research on acculturation has been adapted for various expatriate populations by scholars in the expatriate field (Chai & Rogers, 2004). Acculturation refers to the process of change that occurs as a consequence of contact between different individuals or groups of people when exchanging aspects of their cultures (Berry, 1990). Berry’s theory of acculturation concentrates on two essential questions that are often used by expatriates to determine how well their cross-cultural adjustment is. These two questions are: (i) is it considered to be valuable to maintain one’s own home country cultural identity and characteristics? and (ii) is it considered to be valuable to build up relationships in the host country society? From these two questions, a two-dimensional model of the acculturation process was proposed in Berry’s research. The first dimension is cultural maintenance, which concerns maintaining the main characteristics of individuals’ home country cultural identity. The second dimension is contact and participation with the host country culture, which involves the
level of association and immersion in the host country, and the inclination to attach to host country nationals’ cultural groups or expatriates’ own cultural groups in the host country.

According to Berry’s (1990) model, there is acculturating stress related to foreign culture involvement. When this stress reaches a level of crisis, individuals would adopt one of the four different acculturation strategies (Berry, 1990).

<table>
<thead>
<tr>
<th>Table 2.3 Demonstration of Berry’s (1990) Model of Acculturation</th>
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<tbody>
<tr>
<td><strong>Acculturation Dimensions</strong></td>
</tr>
<tr>
<td>Contact and Participation (host culture)</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Source: adapted from Berry (1990)

The four possible acculturation strategies or outcomes (demonstrated in table 2.3) theorized in Berry’s model are: (i) *assimilation*, in which individuals choose to relinquish their own cultural identity and strive for high levels of identification with the host culture; (ii) *separation*, in which individuals avoid interaction with the host culture but keep a high identification with their own home culture and cultural identity; (iii) *integration*, which refers to high levels of identification with both home and host cultures, for example, individuals who manage to maintain their home cultural identity while also actively participating with the host culture to create a wider social network; and (iv) *marginalization*, in which individuals do not try to maintain their home cultural identity nor do they show interest in interaction with the host culture, and consequently result in weak identification with both home and host cultures. Further, Berry (1999) indicates that high identification with both home and host cultures may be
vital for and signifies most successful cross-cultural adjustment.

The major criticisms of Berry’s (1990) model of acculturation relate to the scepticism about the linear nature of acculturation models. For example, dialogical theorists Hermans and Kempen (1998) assert that acculturation should be considered as a dialogical “mixing and moving” system rather than a simple linear movement from home country culture to host country culture. In addition, Bhatia and Ram (Bhatia & Ram, 2001) are critical of Berry’s model of acculturation, and noted that the acculturation process should not be uniform for all cultures, rather, there should be more deviation depending on the host country destination.

2.4.2.4 Systems Theory

Some recent research is turning towards a more systemic consideration of cross-cultural adjustment (eg. Caligiuri, et al., 1998; Fok-Trela, 2011; Stanton, 1999; Suutari & Burch, 2001). Systems theory holds that a living organism and active mechanism exist in the ecosystem; hence, in understanding the complex processes of cross-cultural adjustment, we should be conscious of a mixture of multi-faceted factors that influence life in the ecosystem and contemplate how these factors at different levels interact with one another (Stanton, 1999; Fok-Trela, 2011).

Drawn from Stanton’s (1999) research on global assignment effectiveness and cross-cultural adjustment, which employed a tripartite analysis methodology, three main focal points in systems theory have been
identified: (i) micro-level individual factors, including psychobiology, neuropsychology, cognitive development, individual development and personality; (ii) meso-level interpersonal dynamics, including object relations, within-organization relations, networks and social status; and (iii) macro-level environmental factors, including culture, socio-economy, education, the physical environment, religion and community. These three levels of factors have a major impact on cross-cultural adjustment in various ways.

2.4.2 Socio-Cultural and Psycho-Cultural Adjustment

The previously discussed models of adjustment underlie the dominant theoretical bases of the mainstream research in the subject area. Further, the distinction between socio-cultural and psycho-cultural adjustment has often been made in the expatriates’ cross-cultural literature (Searle & Ward, 1990; Ward & Kennedy, 1993b, 1996). These two facets are theoretically interconnected but hold distinct nuances.

2.4.3.1 Socio-Cultural Adjustment

The socio-cultural notion of adjustment is based on cultural learning theory and highlights social behaviour and practical social skills underlying strategy factors (Black, 1988; Black & Mendenhall, 1991; Molinsky, 2007). This type of adjustment has been associated with variables that promote and facilitate culture learning and acquisition of social skills in the host culture (Searle & Ward, 1990). Black et al. (1991) argue that the degree of socio-cultural adjustment should be treated as a multidimensional concept rather than as a unitary phenomenon (see also Oberg, 1960).
As mentioned previously, in Black et al.’s (1991) expatriate adjustment model, a distinction between three interrelated aspects were proposed: (i) work adjustment (WA), which refers to capabilities to function successfully on the job and the degree of comfort regarding different performance standards, expectations and work values; (ii) general living condition adjustment (GL), which refers to the degree of comfort when adapting to everyday living conditions with regard to various aspects of the host culture environment, such as food, transport, medical care, cost of living and housing conditions; and (iii) host country nationals interaction adjustment (HCN), which refers to the degree of comfort regarding different communication and interpersonal styles used in the host culture when interacting with people in the country where assigned. Together, these three facets of expatriate socio-cultural adjustment encompass the work and non-work domains of the expatriation experience, and find support in several empirical studies on American expatriates and their spouses (McEvoy & Parker, 1995).

2.4.3.2 Psycho-Cultural Adjustment

Black et al.’s (1991) three-dimensional model of socio-cultural adjustment was predominant in leading the research on CCA and a majority of scholars focus on the socio-cultural aspect of adjustment alone; while only a small number of researchers have treated cultural barriers as a psychological construct when addressing cross-cultural issues (Selmer, 2001). Noticeably, there is a large body of evidence that cultural differences create substantial psychological barriers for business expatriates (eg. Molinsky, 2007; Selmer,
2001; Shaffer, et al., 2006). The theory of cross-cultural psychology has been well developed, especially in relation to work and work environment characteristics (Anderzen & Arnetz, 1999), and consideration should be given to its application to the field of expatriation.

The notion of psychological adjustment encompasses a problem-oriented view (Searle & Ward, 1990), and it is pertinent to individuals’ emotional state, cognitive perceptions, personal characteristic variables, subjective well-being or satisfaction in the new environments (Ward & Kennedy, 1996). Following Ward and Kennedy (1996), a more applicable construct, psycho-cultural adjustment refers to individuals’ psychological state, potential health and mental adjusting process, including both their variability and invariance under diverse cultural conditions. It concentrates on attitudinal factors of the adjustment process, and can be measured by assessing self-reported psychological symptoms and perceived distress (Ward & Kennedy, 1996). The psycho-cultural adjustment in individuals can be exemplified by high levels of self-esteem, a sense of environmental mastery, and perceived autonomy with higher levels of perceived social support (Safdar, Lay, & Struthers, 2003). These factors will combine to define the level of vulnerability of expatriates to their experiences in their new culture. They can also be viewed as elements of resilience (Ryff, Singer, Love, & Essex, 1998), or hardiness (Dion, Dion, & Pak, 1992), that would protect the individual expatriate within the acculturation process.

Psycho-cultural adjustment focuses on an individual’s cultural perception and helps distinguish behaviours driven by culture from behaviours specific
to an individual. The conceptualization of psycho-cultural adjustment is based on cross-cultural and cultural psychology theories and relates to the interaction and adaptation of psychological and cultural factors in the individual’s personality or in the characteristics of a group (Ward & Kennedy, 1996, 2001). Cultural Psychology is the branch of psychology that suggests that human behaviour is significantly influenced by cultural differences, meaning that psychological phenomena can only be compared with each other across cultures to a very limited extent; while cross-cultural psychology includes a search for possible universal rules in behaviour and mental processes (Berry, et al., 1999). The concept of psycho-cultural adjustment focuses on adjustment processes that reflect cultural variance in behaviour, language and meaning; and is interdisciplinary in its approach at the intersection of psychology and culture with an emphasis on cultural factors as a central element.

The distinction between socio-cultural and psycho-cultural adjustment is consistent with the distinction of behaviour from attitudinal acculturation (Jun, Lee, & Gentry, 1997). In the acculturation literature (e.g. Searle and Ward 1990), the facets of psychological, socio-cultural and work adjustment have been identified. Berry (1990) describes the change that results from continuous, first-hand contact between two distinct cultures, and lists several physical and psychological changes that are likely to occur. For example, physical changes in housing, increased population density, pollution; and second, biological changes, due to differences in types of food. However, the most crucial changes are psychological. Psychological
changes occur when cultural, political, economic, technical, linguistic, religious and social institutions become altered as new ones take effect; interpersonal and intrapersonal relationships become established (Berry, 1990). Such psychological and behavioural changes always take place in the physical and mental health status of individuals or groups undergoing acculturation (Berry, et al., 1999).

To sum, the “personal wellbeing” (psycho-cultural) construct (Ward & Kennedy, 1996) and the “willingness to interact” (socio-cultural) construct (Black et al., 1991) in the adjustment process are deeply rooted in cross-cultural adjustment theories over the last two decades. Nonetheless, the potential of these two sets of critical adjustment variables have not been fully explored for their far-reaching business implications.

2.4.3 Limitations of Previous Cross-Cultural Adjustment Theories

Based on the previous overview of cultural adjustment theories underlying current expatriate research, the trend in the field is summarized and several limitations of previous CCA literature are identified below.

Research on expatriates’ cross-cultural adjustment has been developing for nearly forty years. The trend in the field can be seen as achieving general breadth but not depth, as many studies have covered a great variety of topics, but about which most research has been exploratory and anecdotal in nature (Black et al., 1991). In more recent literature (eg. Chang, 2009; Hechanova, et al., 2003; Ramalu, Chuah Chin, & Rose, 2011; Rosenbusch & Cseh, 2012), these scholars each offered their critiques of existing research, calling for a deeper and more precise understanding of adjustment.
and more empirical studies of cross-cultural adjustment and its associated issues. Therefore, there is ample scope for scholars to further explore the knowledge base and address the literature gaps in the CCA field.

A salient observation from the review is that, most literature on CCA has tended to focus on either cultural context factors (i.e. macro-level perspective) or individual difference factors (i.e. micro-level perspective) (Klein & Kozlowski, 2000), and only a few recent researchers in this field have taken a systems perspective (Fok-Trela, 2011). Macro perspective scholars (e.g. Laurent, 1983; Manev & Stevenson, 2001; Selmer, et al., 2007) focus on contextual factors at higher levels which restrain and moderate lower level individual adjustment phenomena; whereas micro perspective scholars (e.g. Margolis & Molinsky, 2008; McCrae & Costa, 1987; Molinsky, 2007; Ward, 1997; Ward & Kennedy, 1993b) concentrate on addressing individual differences in the adjustment process and variations in individual characteristics that affect individual reactions. However, single-level perspectives alone can barely present an overall panorama of cross-cultural adjustment processes. There is a risk of superficiality and worthlessness innate to pure macro, meso, or micro perspectives (Klein & Kozlowski, 2000). Pure macro perspectives may neglect the means by which individual behaviour, perceptions and interactions give rise to higher level phenomena; whereas pure micro perspectives may overlook contextual factors that can extensively manipulate the effects of individual differences that cause collective responses which ultimately add up to macro phenomena (House, et al.,
This study makes an attempt to fill this gap by proposing a holistic typology with cross-level analysis for deeper insights into the multi-faceted nature of expatriates’ cross-cultural adjustment process.

Figure 2.2 Systemic Typology of Current Study with Cross-Level Analysis

Specifically, this research takes an integrated systemic approach (as shown in figure 2.2) through unfolding across micro-level individual factors, meso-level job position authorization, and macro-level national cultural distance and examining their integrated impact on overall expatriates’ cross-cultural adjustment. Micro phenomena are set deeply in cultural and organizational contexts, while the macro cultural context embraces organizational contexts and comes into view through the interaction and dynamics of lower level meso and micro phenomena elements. Individual factors (micro-level) reveal the psychological mechanism that individuals go through in day-to-day experience when acting in their job positions within the organizations (meso-level), whilst cultural dimensions (macro-level) reflect the solution that societies use to regulate individual behaviours and actions. These three levels of analysis are theoretically interdependent and intertwined.

Another major limitation of previous adjustment research is that, rather than investigating factors of motivation and actual behaviours in the target
culture, most research to date focus primarily on personality factors, such as the Big Five personality traits (McCrae & Costa, 1987: extroversion, agreeableness, conscientiousness, neuroticism and openness). Although the Five Factor model (i.e. Big Five personality traits model) has received criticism (cf. Block, 1995), it is still the most dominant measurement of individual differences in the literature in search of CCA predictors. For example, in various studies openness has been reported to be positively correlated with successful adjustment (Smith & Bond, 1999), while neuroticism seems to impede adjustment (Gao & Gudykunst, 1990). Other research linked to individual values (McGuire, Garavan, O’Donnell, Saha, & Cseh, 2008) have also considered this issue.

Admittedly, there is a profound effect of individuals’ personal characteristics on the cross-cultural adjustment process (Ward, 1996; Church, 2000; Ang & Inkpen, 2008; Ward et al., 2009). Nevertheless, individual differences in terms of cognitive capabilities, attitudinal factors, actual behaviours and actions in the target culture deserve better and closer examination in considering their impact on expatriates’ cross-cultural adjustment. This undoubtedly is another major gap in an era of growing expatriation practice that should be addressed and the current study intends to do that.

In this respect, the concept of cultural intelligence (CQ) is pertinent to the research. Earley and Ang (2003) advanced CQ as a basis for explaining individual differences in capability to function in intercultural settings.
Cultural intelligence provides the framework for an innovative method in understanding cultural adjustment, social identity, global management and intercultural communication (Earley & Ang, 2003). The multi-dimensional model of CQ covers meta-cognitive, cognitive, motivational and behavioural factors to investigate individual characteristics, and thus can provide a more comprehensive approach for conducting CCA research. The present study intends to incorporate the use of the multi-dimensional approach of CQ to investigate personal differences in the CCA process, and thus provides insights as to why some expatriates adjust to host cultures more effectively than others.

2.5 Cultural Intelligence

As a fledgling research area, CQ reflects a broad and deep capability for comprehending the new surroundings and holds great promise for potential improvements to expatriation (Ang & Inkpen, 2008). Basically, CQ draws from various disciplines including cross-cultural psychology, anthropology, and sociology. Its conceptualization is based on several valued theories in the psychological sciences including Stryker’s Identity Theory (Stryker, 1987); Erez and Earley’s Cultural Self-Representation Theory (Erez & Earley, 1993), Bandura’s Social Learning Theory and Self-efficacy theories (Bandura, 1977, 1986), and Triandis’s work in Analysis of Subject Culture (Triandis, 1972). Researchers have begun to explore the nature of CQ over last ten years (Earley & Ang, 2003; Earley & Mosakowski, 2004; Thomas & Inkson, 2004). For example, Soon Ang has established a research centre in Singapore for the study of cultural intelligence with its U.S. counterpart, the Cultural Intelligence Centre based in Michigan.
2.5.1 The Nature of CQ

Culture and intelligence are closely intertwined (Sternberg, 2004; Sternberg & Detterman, 1986). For instance, attitudes and behaviours that are considered appropriate and highly intelligent in one culture may be improper and inappropriate in another. The first definition of intelligence derives from the study of Francis Galton in 1879 as an intellectual ability that could be measured by mental tests. Intelligence quotient (IQ) tests are broadly used in educational, business, and military settings due to their efficacy in predicting behaviours of different individuals. IQ is found to be significantly correlated with many important social outcomes, such as successful training, more years of education, higher status jobs, higher income and performance; and it is an ideal predictor of successful job performance (Gottfredson, 2002). There is now growing awareness that supports Sternberg and Detterman’s (1986) remark that intelligence should be applied to research areas beyond the classroom.

The increasing attention given to intelligence research has led to the categorization of intelligence into various domains, each focusing on a specific intelligence aspect. Going beyond the book-learning academic skills of IQ, Earley and Mosakowski (2004) described cultural intelligence as a concept that focuses primarily on a specific domain of intelligence, that is, intelligence in intercultural settings. To elucidate the nature of CQ, the following discussion focuses on the clarification of differences between CQ and potentially confounding concepts of (i) emotional intelligence (EQ:
Goleman, 1995), (ii) social intelligence (SQ: Marlowe, 1986), and (iii) personality.

The cognitive and behavioural aspects of CQ share similarity with emotional intelligence (EQ) in that they both describe individual differences about how people may conform and be flexible according to situation demands and social cues. Earley and Mosakowski (2004) explain that, unlike CQ, EQ does not include adaptation across cultures. EQ refers to the ability to perceive emotions, and to generate and regulate emotions for effective social interactions (Goleman, 1995). However, the ability to encode and decode emotions in the home culture does not automatically transfer to unfamiliar cultures, because what is meaningful in one culture may not apply in another (Earley & Ang, 2003). That is, an emotionally intelligent person in one cultural context may not be emotionally intelligent in another. Individuals who have high levels of EQ but do not have cultural sensitivity may suffer from cross-cultural adaptation due to culturally inappropriate understanding and interpretation of culture-specific situational information. In contrast, CQ is a general set of capabilities that have relevance to situations characterized by cultural diversity. Indeed, though waiting to be empirically tested, the current study proposes that CQ may have a negative relationship with EQ: that is, emotionally intelligent individuals in their home cultures can be entirely incapable at functioning across new cultural settings, because high levels of EQ reflect deep immersion in one’s home culture, but strong home country cultural identity would not help open attitudes, and is likely to hinder the development of CQ.
A second concept that can be a source of confusion is social intelligence (SQ). SQ is defined as an ability to understand the feelings, thoughts and behaviours in interpersonal situations and to act appropriately on the basis of this understanding (Marlowe, 1986). Socially intelligent people are able to easily adapt their behaviour to a variety of social situations (Marlowe, 1986). However, because rules for social interactions vary from culture to culture, SQ does not necessarily translate into effective CCA (Earley & Mosakowski, 2004). That is, high SQ individuals who are able to interact effectively with others in a particular culture may not necessarily be able to do so in a different cultural environment characterized by a different set of social norms, but high CQ individuals are able to interact in culturally diverse settings. SQ is culturally bound (Kihlstrom & Cantor, 2000), and because cultures differ, SQ cannot adequately explain effective interpersonal behaviour across cultures (Earley & Mosakowski, 2004).

Finally, personality can be another source of confusion. Despite of criticism (cf. Block, 1995), the Big Five personality traits (McCrae & Costa, 1987: extroversion, agreeableness, conscientiousness, neuroticism, and openness) is the prominent measurement construct of personality for use in cross-cultural adjustment research. Given that personality affects choice of behaviours and experiences, Ang et al. (2006) conducted a quantitative study to examine the relationship between five personality traits and the four-dimensional model of cultural intelligence (Earley & Ang, 2003). They found that only openness to experience was significantly related to all four
dimensions of CQ. The personality trait of openness to experience was defined as being imaginative, cultured, creative, original, broad-minded, intelligent, and artistically sensitive (McCrae & Costa, 1987). Personality traits describe what a person typically does across time and situations (McCrae & Costa, 1987), but CQ focuses on a particular type of individual capability, describing what a person can do to be effective in culturally diverse settings. Thus, they are totally different concepts. Grounding CQ as a form of intelligence allows precision about the nature of CQ from a set of relatively confusing concepts that can be further enhanced and refined over time.

In sum, EQ and SQ describe individuals’ capability to manage emotions and interpersonal situations in a common cultural setting. In other words, EQ and SQ lack a cultural component. Therefore, they are less informative, and hence less predictive of an individual’s cognition, motivation, and behaviour in culturally diverse settings (Earley & Ang, 2003). Since the norms and value systems for social interaction vary from culture to culture, it is unlikely that individuals with high EQ and SQ in one culture will effectively translate these abilities automatically into different cultural settings (Earley & Mosakowski, 2004). CQ conceptually overlaps with EQ and SQ in that they complement intelligence, and all are important for an individual to effectively function successfully at work and in various social settings and in personal relationships. CQ complements IQ by describing individual variability in coping with diversity and functioning in new cultural settings. CQ shares some attributes with personality and other intelligence concepts, yet is distinct in the nature of abilities from these other forms of intelligence, because CQ deals specifically with cognition, motivation and
behaviour in cross-cultural settings, and is a general set of capabilities with relevance to situations characterized by cultural diversity (Ang & Inkpen, 2008).

### 2.5.2 Conceptualization of Four-Dimensional CQ

Essentially, CQ is grounded in the theory of multiple intelligences (Sternberg & Detterman, 1986), and is conceptualized as a multi-dimensional model (Earley & Ang, 2003). Earley (2002) illustrates that CQ resides in three dimensions: the body, the heart, and the head. Similarly, Thomas and Inkson (2004) also view CQ as having three components: knowledge, mindfulness, and a behavioural component. Earley and Ang (2003) further advanced four dimensions that constitute cultural intelligence (as shown in figure 2.3): (i) meta-cognitive, (ii) cognitive, (iii) motivational, and (iv) behavioural CQ. These four dimensions of CQ reflect the existing observation of intelligence (Sternberg & Detterman, 1986) as a complex, multi-facet individual attribute and will now be described in detail.

**Figure 2. 3 Demonstration of Dimensions of Cultural Intelligence**

- **Metacognitive CQ (MC):** awareness and consciousness during cross-cultural interaction.
- **Motivational CQ (MOT):** capability to direct energy toward functioning in intercultural situations.
- **Cognitive CQ (COG):** competence based on general knowledge and knowledge structures about culture.
- **Behavioral CQ (BEH):** capability to exhibit appropriate verbal and non-verbal actions in culturally diverse interactions.

*Source: adapted from Earley and Ang (2003), Earley and Mosakowski (2004) and Ang et al. (2007)*
2.5.2.1 Meta-cognitive CQ

Meta-cognition is a higher level ability that concerns individuals’ knowledge and strategy monitoring, controlling and using the cognitive knowledge that one possesses (Butterfield, 1994). The concept stemmed from cognitive psychology studies, has been referred to as the “thinking about thinking” (Flavell, 1979), or “cognition about cognition” (Butterfield, 1994). According to Flavell (1979), meta-cognition has two broad elements, including (i) meta-cognitive knowledge, i.e. what and how to deal with knowledge gained under a variety of circumstances; and (ii) meta-cognitive experience, i.e. what and how to incorporate relevant experiences as a general guide for future interactions.

The important implication of meta-cognition towards cross-cultural adjustment lies in that, it provides persistence and attention to detail of unfamiliar verbal and nonverbal cues (Davidson, Deuser, & Sternberg, 1995), and encompasses strategizing before cross-cultural interaction, checking presumptions during an encounter and adjusting mental maps when experiences diverge from expectations (Van Dyne & Ang, 2004). Individuals with greater meta-cognitive CQ should be better able to understand, interpret, and act according to these cues, thus meta-cognition is a critical aspect of CQ (Earley & Peterson, 2004).

There are three key aspects of meta-cognitive CQ: planning, self-monitoring and the use of cognitive strategies (Earley & Peterson, 2004). In order to develop planning, individuals must establish a goal and develop a plan to
accomplish it. This process entails grabbing power over cognitive actions and monitoring one’s thinking (Butterfield, 1994).

Self-monitoring requires analyzing one’s own state of capability and being aware of that state, determining the need for future practice to master a skill or manage a situation (Earley & Peterson, 2004). The self-monitoring aspect is important to achieve high levels of CQ because it helps with developing competence and avoiding the appearance of incompetence (Earley, 2002).

Finally, the use of cognitive strategies in meta-cognition involves the knowledge of self in relation to approaches that the expatriate could use to accomplish possible strategies, the knowledge of general strategies to make interaction decisions, the knowledge of when and how to use certain strategies in certain situations, and the knowledge of how these various strategies will be effective (Earley, 2002; Earley & Peterson, 2004).

Planning, self-monitoring, and using cognitive strategies in the initial stage of the cross-cultural encounter intertwine into the meta-cognitive aspect of CQ model, through which expatriates assess self and the situation in an unfamiliar situation and prepare behaviours and strategies that can be understood and managed.

2.5.2.2 Cognitive CQ

The cognitive facet refers to the knowledge of a new culture that individuals may obtain and the understanding that they build up through a range of cues
Earley and Ang (2003, p. 109) explain that cognition involves “knowing ‘about’ things”, “knowing ‘how to do’ things”, “knowing the ‘why and when’ of things”; and it concerns the information-processing aspects of intelligence based on Self-concept Theory (Markus & Wurf, 1987).

According to Markus and Wurf (1987), the self is a person’s mental representation of her own personality, social identity, and social roles. Importantly, Earley and Ang (2003) assert that knowing oneself is not sufficient for high CQ as awareness does not guarantee flexibility; instead, managing self-concept flexibly and strong reasoning skills are important for high level CQ, because understanding new cultures may require abandoning pre-existing conceptualizations of oneself and pre-existing comprehensions of how and why others function as they do (Earley, 2002).

Cognitive abilities of CQ are shown in ways of integrating new messages and information, and using self-concept to comprehend new cultural encounters (Earley, 2002). A culturally intelligent person could generate an accurate mapping of the social situation to function effectively, because she or he knows “what culture is, how cultures vary, and how culture affects behaviour” (Thomas & Inkson, 2004, p. 15). This entails a general but wide-ranging foundation of knowledge about cultures and societies including political, economic, religious systems, and social relationships.
2.5.2.3 Motivational CQ

The third aspect of CQ, motivation, refers to individuals’ willingness to face and engage the new culture and their inward desire to persevere when faced with difficult situations (Earley & Peterson, 2004). Motivation has been considered as a vital aspect of cross-cultural adjustment, as Earley (2002) asserts that if the motivational facet of cultural intelligence is weak, adjustment will not occur. The close relationship between motivation and culture has been noted in various studies (e.g. Adler, 2002; Smith & Bond, 1999). Merely cognitive understanding of the new culture and possessing requisite skills do not qualify for effective cross-cultural adjustment, and enough motivation is needed to engage successful cross-cultural interaction (Earley, 2002).

Based on Social Learning Theory (Bandura, 1977), Goal-Setting Theory (Locke & Latham, 1990) and Cultural Self-Representation Theory (Erez & Earley, 1993), Earley and Ang (2003) describe three critical components of the motivational aspect of CQ: (i) persistence or maintenance of norms and values, (ii) self-efficacy, and (iii) goal-setting. According to Social Learning Theory (Bandura, 1977), motivation is generated when cognitive representations of expected outcomes build a mental picture of a desired result. As home and host culture vary, presumably, individuals with strong desires to maintain familiarity will not be motivated to change behaviour (Williams, 2008). Therefore, high-level inclination to maintain home country norms and values would result in lower level persistence in the face of difficulties, uncertainty, and challenges in the host cultural environment.
 Individuals who lack persistence in new cultures would easily retreat after experiencing early adjustment difficulties (Earley, 2002; Thomas, 2006).

Second, Self-representation Theory (Erez & Earley, 1993) suggests that individuals gain self-enhancement, self-efficacy and a feeling of importance from social contacts and interactions. The concept of self-efficacy refers to “a judgment of one’s capability to accomplish a certain level of performance” (Bandura, 1986, p. 391). This judgment is a key determinant of motivation as individuals are inclined to evade tasks and situations they believe go beyond their capabilities and are likely to accept or choose tasks and situations they believe are under control (Erez & Earley, 1993). Self-efficacy plays an important role in CQ because successful intercultural interaction is based on a person’s sense of efficacy for social discourse in a novel setting. Individuals who doubt their own abilities to understand and interact in new cultures are liable to “disengage after experiencing early failures” (Earley, 2002). Therefore, cultural intelligence reflects self-concept; and it directs and motivates adjustment to new cultural surroundings.

Third, goal-setting provides purpose, direction, a sense of achievement, and feedback concerning successful accomplishment of tasks and interaction (Locke & Latham, 1990; Bandura, 2002). Goal-setting is a critical component of the motivational facet of CQ because the immediate benefit of setting goals is to guide adaptation strategies in productive directions, to solidify personal commitment to adjusting, and to persist in the face of
failure or confusion (Earley & Ang, 2003). Individuals without goals would lack a basis for self-evaluation of task completion, because it is the goals and objectives that offer the obligation and criteria for proper completion (Bandura, 2002). The motivational theories suggest that individuals’ behaviours and actions are merely out of motivation, which makes it a particularly noteworthy aspect.

2.5.2.4 Behavioural CQ

The overall concept of CQ is more than thinking about thinking (meta-cognitive), knowing what and how to do (cognitive), and having the willingness to engage and persevere (motivational). It also requires individuals to have “a well developed repertoire of behaviours” (Thomas & Inkson, 2004, p. 15), and to be able to choose appropriate behaviours from this repertoire and exert culturally appropriate behaviours in new cultural circumstances at ease (Earley, 2002). Thus, the behavioural component of CQ is defined as the ability “to generate the behaviours needed to reflect cognition and motivation” (Earley & Ang, 2003, p. 10).

Behavioural CQ is the only observable aspect of CQ to the interlocutor (Earley & Ang, 2003). The most salient aspect of CQ is behavioural CQ since meta-cognition, cognition, and motivation do not necessarily translate into culturally proper behaviours such as self-presentation, linguistic performance and nonverbal behaviours. It focuses on individual capabilities at the action level and reflects individual capability to exhibit appropriate verbal and nonverbal actions in culturally diverse interactions (Thomas &
In other words, possessing proper meta-cognitive, cognitive and motivational elements does not necessarily ensure behavioural CQ, and behaviours that people enact in a new cultural environment do not always reflect meta-cognition, cognition and motivation that are not perceivable. Self-presentation and Impression Management Theory (Goffman, 1959) contribute to the explanations of the behavioural CQ framework. According to Goffman (1959), making a good first impression in an interaction requires an individual to attend, not only to verbal and nonverbal communications, but also to kinesics, facial expressions, proxemics, and social clues, which vary by culture. Earley and Peterson (2004) cited instances in which a person may know and wish to enact a culturally appropriate behaviour but cannot do so because of some deep-set reservations. Components of behavioural CQ encompass elements of self-presentation, i.e. conscious or unconscious attempts to control self-images; language production, i.e. foreign language ability; and nonverbal messages, i.e. communication through body language (Earley & Ang, 2003). That is, people with high-level behavioural CQ are likely to be capable of exerting situational appropriate behaviours based on their broad range of verbal and non-verbal capabilities, such as presenting culturally appropriate words, tone, gestures, facial expressions and body language.

Importantly, Earley (2002) explained the potential effect of mimicry to high-level behavioural CQ. Research (Chartrand & Bargh, 1999) suggests that actual mimicking of interlocutor’s behaviour, even if done unconsciously or mechanically, leads to greater satisfaction with the interaction. According to Earley (2002), a person high in behavioural CQ is
a talented mimic who can integrate and imitate the cues and behaviours they
learned through observing others. If mimicry is adopted with intent then it
constitutes a type of cognitive strategy (Earley, 2002; Thomas, 2006). That
is, mimicry, though subtle and unconscious, brings a number of positive
benefits in a social encounter and can be used as a strategy for facilitating
interaction. A high CQ person is a gifted imitator even if such mimicry is
carried out unconsciously.

To sum, the overall conceptualization of the four-dimensional CQ model
(Earley & Ang, 2003) has received very few criticisms. The most common
objections have been summarized in Hampden-Turner and Trompenaars
critiques against cultural intelligence mainly claim that (i) cultures are said
to be entirely relative in their values, so holding one culture to be more
intelligent than another is discriminatory; (ii) cultural studies are said to be a
form of postmodernism, whereas to have one central definition of culture is
modernist - an imposition of our own dominant beliefs; and (iii) attempts to
categorize cultures are said to be crude stereotypes. In their argument,
Hampden-Turner and Trompenaars (2006) addressed each one of these
criticisms and defended the legitimacy of the CQ concept in management
research. It is important to note that all of those objections come from
researchers who examine cultural intelligence as a cultural factor at the
macro level rather than at the micro individual level. The most influential
work in the development of CQ conceptualization and its applications are
summarized in table 2.4.
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<td>Thomas and</td>
<td>Conceptualized as abilities involving understanding the fundamentals of intercultural</td>
<td>• Knowledge</td>
<td>• Cross-cultural decision</td>
</tr>
<tr>
<td>Inkson, 2003</td>
<td>interaction, developing a mindful approach to intercultural interactions, and building</td>
<td>• Mindfulness</td>
<td>making</td>
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<td></td>
<td>adaptive skills and a repertoire of behaviour so that one is effective in different</td>
<td>• Behaviour Skills</td>
<td>Cross cultural</td>
</tr>
<tr>
<td></td>
<td>intercultural situations.</td>
<td></td>
<td>communication</td>
</tr>
<tr>
<td>Earley and</td>
<td>Conceptualized as a seemingly natural ability to interpret someone’s unfamiliar and</td>
<td>• Cognitive</td>
<td>• Appropriate behaviours in new cultures</td>
</tr>
<tr>
<td>Mosakowski, 2004</td>
<td>ambiguous gestures in just the way that person’s compatriots and colleagues would, even</td>
<td>• Physical</td>
<td></td>
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<tr>
<td></td>
<td>to mirror them.</td>
<td>• Emotional/Motivational</td>
<td></td>
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<tr>
<td></td>
<td>Conceptualized as a person’s capability to gather, interpret, and act upon these</td>
<td>• Meta-cognitive</td>
<td>• Intercultural training</td>
</tr>
<tr>
<td>Earley and</td>
<td>radically different cues to function effectively across cultural settings or in a</td>
<td>• Cognitive</td>
<td>• Multinational teams</td>
</tr>
<tr>
<td>Peterson, 2004</td>
<td>multicultural situation.</td>
<td>• Motivation</td>
<td></td>
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<td></td>
<td>Conceptualized as a person’s capability for successful adaptation to new cultural</td>
<td>• Behaviour</td>
<td></td>
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<tr>
<td>Earley, Ang and Tan,</td>
<td>settings, unfamiliar settings attributable to cultural context.</td>
<td></td>
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<tr>
<td>2006</td>
<td></td>
<td>• Cultural strategic thinking</td>
<td>• Diversity assignments</td>
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<tr>
<td></td>
<td></td>
<td>• Motivation</td>
<td>• Global work assignments</td>
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<td></td>
<td></td>
<td>• Behaviour</td>
<td>• Global teams</td>
</tr>
<tr>
<td>Thomas, 2006</td>
<td>Conceptualized as the ability to interact effectively with people who are culturally</td>
<td>• Knowledge</td>
<td>• Development</td>
</tr>
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<td></td>
<td>different.</td>
<td>• Mindfulness</td>
<td>• Assessment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Behaviour</td>
<td></td>
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<tr>
<td>Ang et al., 2007</td>
<td>Conceptualized as an individual’s capability to function and manage effectively in</td>
<td>• Meta-cognition</td>
<td>• Cultural judgment and decision making</td>
</tr>
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<td></td>
<td>culturally diverse settings.</td>
<td>• Cognition</td>
<td>• Cultural adaptation</td>
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<td></td>
<td></td>
<td>• Motivation</td>
<td>• Task performance</td>
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<td>• Behaviour</td>
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2.5.3 Empirical Studies on CQ

As CQ is construct developed in the last decade, there have been so far a limited number of empirical studies; indications, however, point to an increasing predictive validity. Empirical studies on CQ mainly concentrate on its relationships with five personality traits (eg. Ang, Van Dyne, & Koh, 2006), cultural judgment, decision-making and task performance (eg. Ang, et al., 2007), cultural adjustment (e.g. Templer, et al., 2006; Ang, et al., 2007), cross-cultural experiences and need for control (eg. Tay, Westman, & Chia, 2008), multi-cultural teams in cross-border business (eg. Shokef & Erez, 2008), and international non-work experiences and preferred organizational culture (eg. Balogh, Gall, & Szabo, 2011).

To better understand how the four CQ factors affect individuals in new cultural environments, previous empirical studies on CQ, with a brief description of issues addressed and not addressed are summarized in table 2.5. The findings from these representative studies confirm that CQ, as an individual level construct, is associated with a wide range of personal, professional and outcome variables. The predictive validity of CQ has been demonstrated to exist in many samples, including undergraduates, expatriates, foreign professionals, international executives; using many criteria, for example, cultural judgment tasks, quality of business proposals developed through collaborative intercultural interaction, adjustment in foreign assignments; and over and beyond other constructs, such as demographics, intelligence, and international experience.
<table>
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<tr>
<th>Study</th>
<th>Context</th>
<th>Data Analysis Technique</th>
<th>Description of work</th>
<th>Issues not covered</th>
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</table>
| Ang et al. (2006)     | 338 business undergraduates                                              | Hierarchical regression analysis | - Examined the relationships between CQ and five personality traits.  
- Significant relationships were found between  
  (i) conscientiousness and meta-cognitive CQ;  
  (ii) agreeableness and emotional stability with behavioural CQ;  
  (iii) extraversion with cognitive, motivational, and behavioural CQ;  
  (iv) openness with all four factors of CQ.  | The study is the first to examine personality and CQ, and the model is incomplete. Moderators of the relationships to further specify boundary conditions for the findings are absent. |
- Positive relationships were found between motivational CQ and socio-cultural adjustment (i.e. work adjustment, general living condition adjustment, and host country international adjustment).  | - Other three dimensions of CQ not covered.  
- Psycho-Cultural adjustment outcome not covered.  
- More host countries in broader contexts are needed to for further validate the findings. |
| Ang et al. (2007)     | Study 1: 593 undergraduates from the U.S. and Singapore;  
Study 2: 98 international managers temporarily in Singapore;  
Study 3: 103 foreign professionals in Singapore. | Hierarchical regression analysis | - Examined the relationship between the four dimensions of CQ and three intercultural effectiveness outcomes (i.e., cultural judgment and decision making, task performance, and cultural adaptation).  
- Meta-cognitive CQ and cognitive CQ were found to be predictors of cultural judgment and decision-making.  
- Motivational CQ and behavioural CQ predicted cultural adaptation.  
- Meta-cognitive CQ and behavioural CQ predicted task performance.  
- Cross-validated CQS.  | - Individual level predictors not covered.  
- Consistency of design was sacrificed for breadth of findings  
- Ignored other antecedent variables for other aspects of cultural adaptation. |
| Tarique and Takeuchi (2008) | 221 undergraduates in an American university                           | Hierarchical regression analysis | - Examined the relationships between CQ and international non-work experience.  
- Higher numbers of non-work experience were associated with higher levels of CQ.  | More different cultural contexts should enhance the generalizability of findings. |
<table>
<thead>
<tr>
<th>Study</th>
<th>Context</th>
<th>Data Analysis Technique</th>
<th>Description of work</th>
<th>Issues not covered</th>
</tr>
</thead>
</table>
| Tay et al.’s (2008)   | 491 business travellers in Brazil, Singapore, and Israel               | Hierarchical regression analysis | - Examined the relationships between CQ and multicultural experiences and need for control.  
- Multicultural experiences were positively related to cognitive CQ.  
- Need for control was positively related to all four factors of CQ.                                                                                       | Influence of multicultural experiences and need for control have been examined rather than overall cross-cultural adjustment.                                |
| Shokef and Erez’s (2008) | 191 MBA students in Israel, Hong Kong, Spain, South Korea, and the U.S. | Hierarchical regression analysis | - Examined the affects of working in multicultural teams on CQ and global identity.  
- Working in multicultural teams enhanced the development of meta-cognitive, behavioural, and motivational CQ, and global identity.           | As the scope of study was large, there is no narrow focus on multicultural teams.                                                                      |
| Balogh et al. (2011)  | 1242 students in Hungary                                               | Hierarchical regression analysis | - Examined the relationships between CQ levels and desired organizational culture.  
- Students with higher levels of CQ preferred to work in an organization with a culture of adhocracy rather than hierarchical culture.  
- Students with low cultural intelligence prefer hierarchical organizations that value stability, predictability and control. | The study treats CQ as a fixed personal characteristic, and neglects the development of CQ and change of CQ levels throughout lifetime experience. |
| Ramalu et al. (2011)  | 332 expatriates in Malaysia                                            | Hierarchical regression analysis | - Greater general adjustment is related to greater motivational and meta-cognitive CQ.  
- Interaction adjustment is associated with greater motivational, meta-cognitive and cognitive CQ.  
- Greater work adjustment is related to greater motivational CQ.  
- Motivational component of CQ is the only dimensions of CQ that is significantly related to all three dimensions of adjustment. | The study limits the examination of cross-cultural adjustment to socio-cultural adjustment alone. Psycho-cultural adjustment issues are not covered. |
2.5.4 Summary of Cultural Intelligence

CQ is one domain of intelligence that involves a general set of capabilities with relevance to situations characterized by cultural diversity. It shares some attributes with EQ, SQ and personality, yet is distinct in the nature of abilities from, personality and other forms of intelligence in that CQ is innately culture-free. The four dimensions that conceptualize CQ are meta-cognition, cognition, motivation and behaviour. The four-dimensional CQ model has been shown to perform well in research studies. Specifically, meta-cognitive CQ reflects the higher level mental capability to acquire and understand cultural knowledge. The second cognitive facet of CQ reflects the learned or procedural cultural knowledge and knowledge structures about culture. The third motivational element acknowledges that most cognition is motivated and reflects individual capability to direct energy towards learning about and functioning in intercultural situations. Finally, behavioural CQ is the capability to exhibit appropriate verbal and nonverbal behaviours during cross-cultural interaction.

Prior empirical studies have indicated that the CQ construct adequately predicts expatriate cultural judgment, decision-making and task performance (Ang et al., 2007), cultural adaptation (Templer, 2006; Ang et al., 2007; Williams, 2008; Ramalu, 2011), cross-cultural experiences and need for control (Tay, Westman, & Chia, 2008), multi-cultural teams in cross-border business (Shokef & Erez, 2008), and international non-work experiences and workplace culture (Balogh et al., 2011). The understanding of the significance of the CQ conceptualization for CCA in diverse cultural environments still remains at an early stage (Ramalu, 2011); therefore there
is considerable room for researchers to explore the relationship between the different dimensions of CQ and CCA.

2.6 Development of Theory and Hypotheses

2.6.1 Cultural Intelligence and Cross-Cultural Adjustment

Based on stress management theory (Cox, 1993) and cultural safety theory (Wood & Schwass, 1993), CQ is expected to be related to CCA, as cross-cultural interactions involve a series of stress provoking life changes that resort to resources and necessitate coping responses to maintain a culturally safe zone for oneself.

Anchored in stress management theory (Cox, 1993), successful CCA should require effective coping strategies to manage stress generated in various professional discipline assignments through administering a threatened cultural identity in relationships and practice in a changing environment. Given that CQ is an individual’s ability to function well in new cultural contexts (Earley, 2002), culturally intelligent expatriates are expected to be mindful of the stress caused by the changing environment (i.e. mind), to possess higher motivation after early experiences of cross-cultural stress or failures (i.e. heart), and to have greater range of culturally appropriate behaviours in cross-cultural interaction (i.e. body) (Earley & Ang, 2003). Empirically, Ang et al.’s (2007) study showed that certain CQ facets such as motivation and behaviour could counteract psychological stress, and thus result in higher levels of CCA, including both socio-cultural and psychocultural adjustment.
At the same time, the notion of cultural safety (Wood & Schwass, 1993) draws attention to the links between individuals’ CQ and psycho-cultural wellbeing within processes of historical and social change that have subordinated their home culture. The promoters of possessing higher levels of CQ require less desire to maintain familiarity with one’s home culture, critical reflection on one’s own personal and cultural history, wider contextualization of one’s values and beliefs, and the acquisition of the knowledge base of different cultures that would enable culturally appropriate behaviours (Earley & Ang, 2003). According to cultural safety theory (Wood & Schwass, 1933), individuals who have high cultural identities are those who have a strong desire and tendency to maintain home country norms and values rather than an uncritical imposition of one’s own understandings and beliefs. Those individuals are very sensitive about any threat to their cultural safety and will not be motivated to change their behaviour according to the new cultural environment and counterparts. The motive to cling to home-based norms and values is presumed to be hindering CCA. Thus, individuals with high levels of CQ should be more flexible with cultural identity; be able to conduct critical reflection about oneself and the new environment; be mindful of their own socio-cultural, economic, and historical location; and thus are more likely to avoid culturally unsafe practices in building the bicultural relationship and multicultural relationship in CCA.

Hence, it is expected that all the four dimensions of CQ will be related to CCA. Specifically, the relationships between each dimension of CQ and
CCA (i.e. socio-cultural adjustment and psycho-cultural adjustment) are examined as follows.

2.6.1.1 Meta-cognitive Cultural Intelligence and Socio-Cultural Adjustment

Ang et al. (2004) defined meta-cognitive CQ as individuals’ knowledge or control over cognitions that bring about massive information processing applicable to culture. It was termed as the “thinking about thinking” by Flavell (1987) or “cognition about cognition” by Butterfield (1994). Meta-cognition consists of planning, self-monitoring and the use of cognitive strategies that are exploited to acquire and generate coping strategies. It is higher order cognition that is relevant to cultural consciousness and awareness, and is thus potentially central to the ability to question cultural assumptions (Ang, et al., 2007; Ng & Earley, 2006).

Socio-cultural adjustment refers to the capability to function well in a new culture in the areas of i) work; ii) host country national interaction; and iii) general living conditions (Black et al., 1991). On the basis of Black et al.’s (1991) three-dimensional adjustment model, Caligiuri and Lazarova (2002) further noted that expatriates’ work and non-work adjustment experience relies greatly on the professional and social support they could get from the parent company, local facilities, family, host-country nationals, or peer expatriates, which would facilitate their cultural consciousness and awareness.
Meta-cognitive CQ should be related to socio-cultural adjustment as it facilitates the culture learning process, which is an important cognitive element in the adjustment process. Cultural consciousness and awareness is likely to equip individuals with constructive insights into the comprehension process of learning cultural knowledge (Ang, et al., 2007; Johnson, Lenartowicz, & Apud, 2006). Individuals with a higher level of meta-cognitive CQ are more culturally conscious and better aware of the existence of any social support available in a new cultural environment. As such people with a higher level of personal thought processes are more likely to be better adjusted to both work and non-work environments in the host country. Drawn from Black and Mendenhall’s (1991) U-curve adjustment theory, individuals become skilled at adjusting to new cultures in the course of four stages namely, honeymoon stage, cultural shock stage, recovery stage and adjustment stage. At the same time, as individuals pass through one U-curve adjustment stage to another, the meta-cognitive CQ, as a higher-order mental capability, could help individuals anticipate the cultural preferences of others, and thus, adjust mental models during intercultural experiences and interactions (Ang et al., 2007). As Caldwell and O’Reilly (1982) suggest, individuals who are capable of monitoring situations (being meta-cognitively intelligent) should be effective in cross-cultural interactions. In other words, individuals with higher levels of meta-cognitive CQ are more likely to be capable of managing the acquiring process of cultural knowledge as well as being more constant in organizing thoughts strategically about their interactions in general cross-cultural situations, all of which would assist their adjustment to a new culture. A recent empirical study conducted by Ramalu et al. (2011) reported a positive
relationship between meta-cognitive CQ and general adjustment, interaction adjustment and job performance using a sample of 332 expatriates in Malaysia. Thus, it is postulated that:

\[ H1: \text{Meta-cognitive CQ is positively related to socio-cultural adjustment.} \]

2.6.1.2 Cognitive Cultural Intelligence and Socio-Cultural Adjustment

Cognition involves, “knowing ‘about’ things,” “knowing ‘how to do’ things”, and “knowing the ‘why and when’ of things”; thus cognitive CQ encompasses knowledge that “captures the relative utility of particular strategies across various contexts” (Earley & Ang, 2003, p.109). In this sense, Ang, Van Dyne & Koh (2006) explained that cognitive CQ refers to knowledge of cultural universals and knowledge of cultural differences. That is, cognitive CQ reflects knowledge of the norms, values and conventions in different cultures obtained from experience and training, including universal and culture-specific knowledge and covering knowledge structures. This knowledge applies to any cultural environment and includes the understanding of geographic, economic, legal and social systems in other cultures, and provides a framework for understanding and contrasting different cultures (Johnson, et al., 2006).

Again, socio-cultural adjustment is defined as the capability to function effectively in unfamiliar cultural environments in terms of work, general living conditions and host-country national interactions (Black et al., 1991). There is a body of literature that has investigated the effects of cognitive
factors on cross-cultural adjustment. For example, Black and Porter (1991) found that expatriate managers should adapt on a cognitive level in order to perform well in new cultural environments; and Bruschke, Hammer, Rasmussen, and Wiseman (1998) found that cultural knowledge helped ease anxiety and smoothed adaptation. Therefore, cultural cognitive skills are important to good adjustment.

According to Bandura’s (1986, 2002) social cognitive theory, individuals who have stronger intrinsic motivation will initiate cognitive effort, persist in their efforts and perform better. Expatriates with high cognitive CQ will have a better knowledge base linked to the legal, economic, and social systems of various cultures and subcultures, as well as knowledge of basic frameworks of cultural values (Brislin, Worthley, & MacNab, 2006; Triandis, 1994). Utilization of this type of knowledge is more likely to bring about better work and non-work adjustment. Black and Porter’s (1991) study shows that individuals with better cultural knowledge experience higher levels of socio-cultural adjustment. This is further supported by Pusch’s (2004) study, confirming that expatriates will need to adjust their pre-existing management skills and behaviours to acknowledge new cultural rules and values in order to perform well in a new cultural environment, thereby making their cultural knowledge important. In other words, individuals with higher levels of cognitive CQ are more knowledgeable about specific aspects of other cultures, thus are more likely to be capable of adjusting to new cultural environments.

Therefore, higher levels of cognitive cultural intelligence are expected to be
positively associated with socio-cultural adjustment, as it represents the knowledge component in the adjustment process which is an important determinant of individuals’ capability to decrease misapprehension in cross-cultural interactions (Bruschke, et al., 1998). Therefore,

\[ H2: \text{Cognitive CQ is positively related to socio-cultural adjustment.} \]

2.6.1.3 Motivational Cultural Intelligence and Socio-Cultural Adjustment

Research has linked motivational cultural intelligence to various intercultural outcomes. Motivational cultural intelligence refers to an individual’s willingness to encounter and engage the new culture and their inward desire to persevere when faced with difficult situations (Earley & Petersen, 2004).

As previously mentioned, Earley and Ang (2003) discuss three critical components of the motivational aspect of cultural intelligence: self-efficacy, persistence and goal-setting. Each of the three aspects of motivation has been considered an essential determinant of cross-cultural adjustment. First, Bandura (1986, p. 391) explains that self-efficacy is “a judgment of one’s capability to accomplish a certain level of performance”. Having a strong sense of self-efficacy contributes positively to problem-solving and the strategic approach when facing obstacles, and this is important in cross-cultural adjustment because immediate and clear resolutions to problems are most likely to be unavailable (Earley, et al., 2005; Wood & Bandura, 1989). Second, expatriates must have the directed effort to persist in the face of
perplexity, uncertainty, challenge, hidden misunderstanding or evident signals. Individuals who lack motivation would be skeptical about their own abilities to understand and interact in new cultures, and are thus liable to withdraw after experiencing early assignment difficulties, mystification, or adjustment failure (Earley, 2002; Thomas, 2006). Third, clear goal-setting provides guidance towards adjustment strategies, and therefore is likely to help individuals be more committed to adjustment into new cultures, and learn from failed experiences. Expatriates are more likely to benefit from having a strong sense of direction in the adjustment process, as “human activities by their very nature are goal directed and purposeful” (Earley & Petersen, 2004, p.107). Thus, motivated purposeful individuals with strong orientation or predisposition to work within and across new cultural settings should potentially be successful in cross-cultural adjustment.

Previous studies have demonstrated a positive relationship between motivational CQ and socio-cultural adjustment. For instance, Templer et al.’s (2006) study on expatriates in Singapore found that motivational CQ is positively associated with socio-cultural adjustment. Ang et al.’s (2007) study in the USA and Singapore also reported that individuals with higher levels of motivational CQ adjust better to work, life, and social demands in cross-border assignments. The results of more recent studies (Ward, Fischer, Lam, & Hall, 2009; Williams, 2008) are also consistent with previous findings, indicating that the greater the level of motivational CQ, the greater socio-cultural adjustment is likely to be. If the motivational facet of cultural intelligence is weak, cross-cultural adjustment will not come about (Earley, 2002). Based on the foregoing discussion, it is expected that:
2.6.1.4 Behavioural Cultural Intelligence and Socio-Cultural Adjustment

Behavioural CQ is hypothesized to be positively associated with socio-cultural adjustment, because individuals with high levels behavioural CQ have the capability to adapt their behaviour in response to different cross-cultural situational cues. According to Earley and Ang (2003, p.10), behavioural CQ is the ability to “generate the behaviours needed to reflect cognition and motivation”. Correspondingly, Thomas and Inkson (2004, p.15) define it as “a well-developed repertoire of behaviours”, and the scope to choose appropriate behaviours from this repertoire and to exert culturally appropriate behaviours in new cultural circumstances with ease and comfort.

The effect of the behavioural aspect of CQ on socio-cultural adjustment has remained somewhat indistinct within recent empirical studies, with Ang et al. (2007) finding that behavioural CQ contributes to adjustment for samples of overseas students in America and Singapore, but Ramalu et al.’s (2011) reported that they are negatively related for samples of Indian expatriates in Malaysia. This study hypothesizes a positive relationship, because socio-cultural adjustment represents an individual’s sense of “fitting in” to work and non-work situations. Those who are sufficiently flexible to acclimatize their verbal and their nonverbal behaviours to new cultural circumstances are more likely to have better self-presentation.
Based on Goffman’s (1959) self-presentation theory, individuals use impression management techniques so as to make others view them positively. Better self-presentation is likely to lead to positive impressions, less intercultural misunderstandings, better intercultural relationships in host environments, and thereby direct behaviour to better socio-cultural adjustment (Goffman, 1959). As cultures differ in their social norms for appropriate behaviours, the ability to display a flexible range of behaviours or adaptive behaviours is critical to create positive impressions and develop effective intercultural relationships with other factors in culturally diverse environments (Molinsky, 2007).

Research has shown that behavioural flexibility is conducive to socio-cultural adjustment. For example, Ang et al.’s (2007) study demonstrates that flexible individuals are less offensive to others and thus more likely to fit into work and non-work situations. Black (1990) also found that behavioural flexibility correlated with general, interaction, and work adjustment in a sample of Japanese expatriates working in America. Similarly, Shaffer et al.’s (2006) study found that flexibility predicted both general and work adjustment in expatriate managers working in a variety of countries. To conclude, when individuals are flexible, they are less offensive to others, more likely to be better self-presented and thus better adjusted. It is therefore proposed that:

**H4: Behavioural cultural intelligence is positively related to socio-cultural adjustment.**
2.6.1.5 Meta-cognitive Cultural Intelligence and Psycho-Cultural Adjustment

Psycho-cultural adjustment refers to an individual’s behaviour and mental adjustment processes, including both their variability and their invariance, under diverse cultural conditions (Ward & Kennedy, 1996). This notion concentrates on attitudinal factors of the adjustment process and connects with “subjective wellbeing” (also termed as “personal wellbeing”) such as an individual’s emotional state, their cognitive perceptions and their personal characteristic variables (Ward & Kennedy, 1996, 2001; Wang, 2003). Cross-border assignments present substantial personal challenges for expatriates, because expatriates may encounter various cultural and instrumental barriers in different work and life environments which may accumulate episodes of psychological stress, leading to an unstable psychological state resulting in maladjustment, which may in turn cause cognitive fatigue and diminish the energy and effort required for effective performance (Sullivan & Bhagat, 1992).

Individuals with a higher level of meta-cognitive capabilities have sound overall understanding of themselves (i.e., self-monitoring) and sound awareness of various cross-cultural situations either consciously or unconsciously (Earley, 2002). Such people are likely to be better able to adopt cognitive strategies to adjust mental models and to generate coping strategies against psychological stress and an unstable psychological state. In other words, higher levels of meta-cognitive capabilities should assist in reducing mental stress and thereby contribute to quick and smooth psycho-cultural adjustment processes. Therefore, it is expected that:
**H5:** Meta-cognitive CQ is positively related to psycho-cultural adjustment.

### 2.6.1.6 Cognitive Cultural Intelligence and Psycho-Cultural Adjustment

Cognitive CQ is concerned with the cognitive aspects that involve gathering data about new cultures, comprehending the similarities and differences between home and host cultures, and functioning effectively in a new culture. Psycho-cultural adjustment focuses on affective factors that are problem-related and environmentally induced, and it is often taken as a reduction of the natural stress that an expatriate feels upon entering a new culture (Berry, et al., 1999; Wang, 2009).

Bruschke et al’s (1998) research suggests that greater knowledge of the host culture could reduce the level of anxiety and uncertainty towards the new environment. Likewise, Ward and Searle (1991) demonstrated that the cognitive aspect of the cross-cultural experience, i.e., cultural knowledge, is positively associated with psycho-cultural adjustment. A completely unknown environment is likely to increase the psycho-cultural stress of expatriates, whereas a sound cross-cultural knowledge base is likely to help in reducing expatriate stress and strain. Hence, cognitive abilities are likely to contribute to a reduction in stress and enhance psychological adjustment to a new culture. Thus, it is expected that:

**H6:** Cognitive CQ is positively related to psycho-cultural adjustment.
2.6.1.7 Motivational Cultural Intelligence and Psycho-Cultural Adjustment

Motivational cultural intelligence reflects the intrinsic interest to involve others, the inward desire to adjust to new cultures; there are three critical components of the motivational cultural intelligence: self-efficacy, persistence and goal-setting (Earley & Ang, 2003). Self-efficacy to function successfully in culturally heterogeneous environments is a central aspect of motivational CQ (Ang et al., 2007; Earley & Ang, 2003). Bandura (1986, p. 391) defines self-efficacy as “a judgment of one’s capability to accomplish a certain level of performance”. Highly self-efficacious individuals regulate their emotional states effectively, and they are not only persevering but also set goals and expectations such that they will proactively search for new and useful strategies for approaching the objectives of intercultural encounters (Bandura, 1986; Earley & Ang, 2003). Studies (eg. Bhaskar-Shrinivas, et al., 2005; Epel, Bandura, & Zimbardo, 1999; Harrison, Chadwick, & Scales, 1996) have shown that high-efficacy beliefs lead to engagement and persistence in difficult situations and better adaptation.

Motivational CQ is proposed to be positively associated with psychocultural adjustment, because strong motivational CQ individuals potentially are highly efficacious and do not need constant rewards to persist in their actions (Earley & Petersen, 2004), and should achieve mental satisfaction more easily than those who do not have intrinsic interest in host cultures and therefore likely to draw back in culturally diverse situations. Low self-efficacy individuals may be more likely to experience an unstable
psychological state or even depression, ready to escape from the cross-cultural situation (Bandura, 1986). That is, self-efficacy contributes to personal well-being. Willingness and courage that derives from efficacy judgment to face obstacles should lead to positive emotional states and general psychological well-being.

Moreover, Bandura (1977) suggests that appropriate goals are a requirement for positive self-evaluation. Motivation provides for attention to purpose, direction, and a sense of achievement in terms of the expatriates role, which is a requirement for generating positive emotions and affirmative self-evaluation in psycho-cultural adjustment. Expatriates with high levels of life satisfaction are most likely to persevere when assignment problems and uncertainty arise in new and unfamiliar cross-border business and social environments. In addition, the close relationship between motivational CQ and personal wellbeing is also consistently supported in two studies by Ang et al. (2004) and Ang et al. (2007). Hence, it is postulated that:

*H7: Motivational CQ is positively related to psycho-cultural adjustment.*

2.6.1.8 Behavioural Cultural Intelligence and Psycho-Cultural Adjustment

Behavioural CQ reflects the capacity and capability of individuals to acquire behavioural repertoires appropriate to new cultures and to exhibit appropriate verbal and nonverbal actions in culturally diverse situations (Earley & Preston, 2004). Those with high levels of Behavioural CQ are likely to be more flexible in their verbal and nonverbal behaviours, and thus would seem more likely to match with role expectations from other cultures
to a larger extent. Flexibility plays an important role in coping with actual experience in culturally diverse environments (Earley, 2002).

Behavioural CQ is likely to be positively associated with psycho-cultural adjustment, because the adaptive nature and flexibility of expatriates with higher levels of behavioural CQ possibly will assist the “fitting in” process and reduce psychological stress. Individuals who fail to exert appropriate verbal and nonverbal actions in culturally diverse situations and who constantly experience communication barriers and misunderstandings are likely come across day-to-day accumulation of uncertainty, confusion, insecurity and anxiety, thus are liable to experience psycho-cultural maladjustment. Selmer (1999) found that the managers who are able to change their management styles in a new environment have the best adjustment. The two studies by Ang et al. (2004) and Ang et al. (2007) reported positive relationships between behavioural CQ and personal wellbeing. Therefore, it is hypothesized that:

\[ H_8: \text{Behavioural cultural intelligence is positively related to psycho-cultural adjustment.} \]

2.6.2 Moderating Effects of Cultural Distance Asymmetry

Drawn from Cultural Tightness-Looseness Theory (Gelfand, Nishii, & Raver, 2006; Triandis, 1989) and Trait Activation Theory (Tett & Burnett, 2003; Tett & Guterman, 2000), the current research hypothesizes that the relationships between CQ and CCA are moderated by the asymmetric effects of cultural distance between home and host countries.
Cultural tightness refers to the extent to which social norms are clear and pervasive in a society; and deviations from these norms are not tolerated and may be punished, while culturally loose societies are those in which norms are less clear and a range of behaviours deviating from norms may be tolerated (Triandis, 1989). Certain individual differences, such as the extent to which individuals feel responsible for their actions or the degree to which they share similar attitudes, can be understood more clearly on the basis of cultural tightness-looseness (Gelfand, et al., 2006). As the direction of cultural flows of the international assignment change, individual differences in meta-cognitive awareness, cultural knowledge, motivation, and culturally appropriate behaviours may emerge as the most important individual difference within the context of cultural distances (Kim, Kirkman, & Chen, 2006; Tett & Burnett, 2003). That is, individual characteristics, for example, CQ, have a stronger effect on individual decision (attitude and behaviour) when the cultural context is loose rather than tight and when the cultural context activates cues related with the characteristics. This theory suggests CQ would have a stronger or weaker effect on the expatriates’ adjustment depending on the direction of cultural flows.

Moreover, trait activation theory (Tett & Burnett, 2003) suggests that individuals should prefer working with and perform better in an environment offering cues for their trait expression. For instance, Ng, Ang, and Chan (2008) suggest that three facets of leader traits (e.g., neuroticism, extraversion and conscientiousness) have a significant effect on leader effectiveness through leadership self-efficacy when job demand is low rather than high. Applying this rationale to the current study suggests CQ
has a significant effect on expatriate adjustment through the expatriate’s efficacy beliefs when the direction of cultural flow is from a less authoritarian cultural context to a more authoritarian cultural environment.

Additionally, the terms mediation and moderation should be differentiated and clarified before particular emphasis is given to the role of moderational analysis in the research (Shaver, 2005). A mediator variable is usually conceptualized as the mechanism through which one variable (i.e., the predictor) influences another variable (i.e., the outcome) (see figure 2.4). For example, suppose that individual openness mediates the relationship between CQ and adjustment (higher levels of CQ → more individual openness → better CCA). That is, higher levels of CQ impacts positively on the level of individual openness, which in turn contributes to adjustment (see Shaver (2005) and Rose et al. (2004) for similar examples).

**Figure 2.4 Clarification of Moderated Relationships Among Variables**

![Diagram](image)

Mediated relationship among variables (A = predictor; B = mediator; C = outcome)  
Moderated relationship among variables (A = predictor; B = moderator; C = outcome)

*Source:* adapted from Rose, Holmbeck, Coakley, & Franks (2004) and Shaver (2005)

Unlike a mediator, a moderator is a variable that influences the strength or the direction of a relationship between a predictor variable and a criterion.
variable (Rose, Holmbeck, Coaskley, & Franks, 2004; Shaver, 2005). Suppose a researcher finds that expatriates’ CQ levels (e.g., in the context of cultural flows from authoritarian to less authoritarian cultures) are less significantly associated with individual adjustment. It may be that the effect becomes more or less robust in the presence of other contextual variables. For example, the strength or the direction of the relationship between CQ and adjustment may depend on the direction of cultural flows of the international assignment. That is, a significant association may emerge only when an expatriate assigned from a less authoritarian to a more authoritarian cultural context. By testing CDA as a moderator of the relationship between the predictor (CQ) and the outcome (adjustment), the researcher can specify certain conditions under which CDA predicts adjustment. This would not only allow for more precise conclusions, but would likely have implications for future interventions.

Therefore, there should be a significant difference in the behaviour of business expatriates on reciprocal transfers in terms of the extent of their CCA (including both socio-cultural and psycho-cultural adjustment). It is postulated that CDA moderates the relationship between CQ and CCA, such that the relationship between CQ and adjustment is stronger when the direction of cultural flow is from a less authoritarian cultural context to a more authoritarian cultural environment; conversely, the relationship between CQ and adjustment is weaker when the direction of cultural flow is from a more authoritarian cultural context to a less authoritarian cultural environment. Therefore, the moderating effect is hypothesized as:
H9. The relationship between individual CQ and cross-cultural adjustment strengthens or weakens as the direction of cultural flow changes.

Further, the current study proposes that the moderation effects of cultural distance asymmetry not only exist at the individual level in the relationships between CQ and CCA, but also function at the organizational level in the relationships between position status and CCA. The impact should also be a moderating effect rather than mediating effect, because the strength of the relationship between position levels and adjustment may depend on the direction of cultural flows of the international assignment. That is, the significant association is hypothesized to emerge only when an expatriate assigned from a less authoritarian to a more authoritarian cultural context.

The position status of an individual may underpin the perception of power bases (Carson, Carson, & Roe, 1993), and the subordinates’ perceptions of their superiors’ status and power bases may influence the subordinates’ attitudes and behaviours at work (Caligiuri & Cascio, 1998). High-status people are more likely to adopt “strategies involving the control of resources (power bases)” (Stahelski & Payton, 1995, p. 55). According to the analysis of qualitative data in Brewster, Lundmark and Holden (1993, p. 49), some expatriate managers become “authoritarian in their style overnight and they seem perfectly comfortable with the adjustment”. This underscores Hofstede’s (2001) observation that managers in all settings almost certainly learn to behave as autocratically as their subordinates allow them. Possible explanations may be that, expatriates at higher position levels are likely to
have more freedom and added authority, therefore, have better control over and greater access to various resources. For example, expatriates in managerial positions are more likely to have additional budgets and superior autonomy to access coping strategies when needed, whereas non-managerial expatriates may not have as many possible coping options with limited resources and little position power (Caligiuri & Cascio, 1998). Therefore, position level represents a critical organizational factor in the cross-cultural adjustment process.

However, in examining relevant literature, studies on the relationships between expatriates’ position level in the organization and CCA are scarce. Most previous research focuses on relationships between adjustment and other organisational factors such as expatriate recruitment (e.g. Templer, 2006), selection mechanisms (e.g. Black et al., 1991; Tung, 1981, 1982), role clarity (e.g. Andreason, 2003; Bhaskar-Shrinivas et al, 2005), cross-cultural training (e.g. Tung, 1981; Black and Mendenhall, 1990), logistical and social support (e.g. Black et al., 1991; Brewster and Scullion, 1997), and mentoring (e.g. Caligiuri and Lazarova, 2002).

The only literature that examines position levels and CCA is Caligiuri & Cascio’s (1998) conceptual paper, which proposed that female expatriates with higher status within an organization may potentially be better adjusted cross-culturally. Caligiuri, Joshi, & Lazarova (1999) then empirically examined factors affecting the performance and CCA of female expatriates on global assignments using a sample of 38 females from the U.S.-based companies. They found that female expatriates in higher positions were
more adjusted to a new cultural environment than are those employed in lower position levels in the organization (Caligiuri, Joshi, & Lazarova, 1999).

Based on Power Distance Theory (Hofstede, 2001; Schwartz, 2006) and Managerial Discretion Theory (Hambrick & Abrahamson, 1995; Hambrick & Finkelstein, 1987), the current research attempts to take Caligiuri & Cascio’s (1998) proposition one step further by hypothesizing that, the relationships between position level and CCA should be moderated by the direction of cultural flows of the international assignment (i.e. cultural distance asymmetry).

As mentioned previously, Hofstede’s (2001) cultural study noted power distance (PD) to be a significant indicator of national cultural distance. Power distance refers to the disparities in wealth and authority within a country, and the extent to which these inequalities are institutionalized and accepted among the people (Hofstede, 2001). People in countries dominated by a high power distance cultural dimension are accustomed to accepting centralized power and depend heavily on superiors for instruction and direction. Greater centralization of power and authority in high power distance (HPD) countries than in low power distance (LPD) countries is expected. There is a clear line between superiors and subordinates, and authoritative decision-making and leadership style is the common practice in high power distance countries, such as China (Adler, 1997, 2002). This suggests that, in high power distance countries, there would be larger
disparities between managerial expatriates (ME) and non-managerial expatriates (NME), deeper lines separating social classes which limit interaction between classes and movement from one socio-economic class to another.

On the other hand, in low power distance countries, people generally do not tolerate highly centralized power, they expect to be consulted in decision-making, and social structures are more loosely weaved (Hofstede, 2001). These countries tend to place a high value on the freedom and worth of the individual, and a participative or consultative decision-making and leadership style may work best because such circumstances are expected in these cultures, such as Australia (Adler, 1997, 2002). Status differences in these countries are not as prominent as in high power distance countries. For example, Renwick and Witham (1997) found that subordinates in Malaysia, a high power distance country, did not receive delegated authority easily; while in Denmark, a lower power distance culture, individuals often have more autonomy, independence and self-governance in making organizational decisions (Adler, 1997). Renwick and Witham (1997) suggest low power distance cultures tend to place more value on the freedom and individual worth of subordinates, which is likely to result in the enhancement of self-efficacy of non-managerial expatriate workers.

Accordingly, when an expatriate manager, from a low power distance country, who has traditionally been exposed to and practices participative decision-making and leadership is assigned to a high power distance environment, the manager will expect to receive the necessary or more than
necessary delegated power, discretion and authority to undertake the new role. This is because the authoritative leadership style is deeply embedded in high power distance cultures, and managerial expatriates would thus face remarkably less adjustment obstacles than the ones from the other way round. Managerial Discretion Theory (Hambrick & Finkelstein, 1987) also sheds light on the potential moderating mechanisms. Managerial Discretion Theory suggests that when managers have greater discretion, they have a wider range of alternatives from which they may choose and this should lead to better cross-cultural adjustment. It is possible that managers would experience potential changes from employing their traditional style in their home cultures to more attuned leadership styles in new environments. However, necessary power, status and authority, which are more easily delegated to managerial level individuals, will facilitate cross-cultural adjustment in this direction of cultural flow.

Conversely, when an managerial expatriate who is accustomed to authoritative decision-making and leadership style in high power distance culture is sent to a low power distance environment that does not tolerate highly centralized power, the manager’s authority, discretion and status may be easily challenged in the less authoritarian, more liberal and more egalitarian low power distance setting. The clear line between superiors and subordinates that the managerial expatriate has been used to in high power distance cultures might become vague and even unacceptable. Therefore, the high power distance home environment is presumed to cause comparatively more adjustment difficulties to a managerial expatriate
attempting to adjust to a less authoritarian environment than the other way round.

Similarly, non-managerial expatriates from low power distance countries being sent to work in a more authoritative, sometimes highly centralized power environment are likely to face larger disparities between superiors and subordinates. For example, in large power distance cultures, such as China, individuals are not supposed to make organizational decisions without the manager’s input (Adler, 1997). Higher levels of adjustment capabilities are needed to tolerate highly centralized power and to face the challenge of at least expecting to be consulted in decision-making and leadership style. In contrast, because low power distance cultures put more value on individual worth and freedom, when non-managerial expatriates from high power distance countries are sent to work in a more liberal environment (low power distance countries), their self-efficacy level may be enhanced considerably through easier interaction between superiors and subordinates. They would face potentially fewer disparities, less centralization of power and more egalitarianism between managers and technical workers. Therefore, it is proposed that non-managerial expatriates native to low power distance cultures when adjusting to high power distance cultures are likely to face less obstacles than the other way round.

To conclude, the relationship between position status and CCA should be moderated by the direction of cultural flow of the international assignments (i.e. cultural distance asymmetry). Therefore, the following hypothesis is developed:
H10. The relationship between organizational position level and cross-cultural adjustment strengthens or weakens as the direction of cultural flow changes.

2.7 Chapter Summary and Conceptual Model

The purpose of this study is to explore expatriate adjustment through a system perspective, unfolding across three levels of analysis, i.e. individual differences represented by CQ at the micro level, organizational position status at the meso level, and cultural distance asymmetry construct at the macro level. This will be the first study to correlate these three components in CCA research, and this chapter has presented a review of the broad body of literature on the nature of and interaction between the three components relevant to understanding the expatriate adjustment process. Hypotheses were developed, which constitute a comprehensive model to analyze expatriate adjustment as a dependent variable. An examination of the research hypotheses may help to further explain whether individual CQ and position status matter in CCA and whether CDA effects impact on expatriate adjustment.

To sum, the research objectives will be achieved through, (i) examining the relationship between the four dimensions of CQ and socio-cultural adjustment; (ii) examining the relationship between the four dimensions of CQ and psycho-cultural adjustment; and (iii) assessing how CDA moderates the relationships between CQ, position status and expatriate adjustment. Please see table 2.6 for a summary of hypotheses offered in this chapter.
The chapter concluded with the development of a comprehensive model – one in which individual CQ, organizational position status, and CDA work together to predict effective CCA. Figure 2.5 presents this integrated conceptual model with all the facets of the major constructs discussed in sections 2.3 through 2.6 in this chapter.

The examination of the model expects to explore whether individuals with higher CQ levels possess higher levels of socio-cultural and psycho-cultural adjustment; and whether CDA has a profound effect on the relationships between CQ, position level and CCA. This framework provides the
conceptual basis for research methodologies that will be discussed in the following chapter.

Figure 2.5 Theoretical Research Model

[Diagram showing a theoretical research model with nodes labeled Cultural Intelligence and Cross-Cultural Adjustment, connected by arrows indicating hypotheses (H1 to H10).]
CHAPTER THREE: METHODOLOGY

3.1 Chapter Overview
This chapter outlines the applied methodology. Specifically, it describes the methodology plan (Section 3.2), the target population and sampling frame (Section 3.3), research sites and procedures (Section 3.4), sample selection and sample characteristics (Section 3.5), research instruments, scaling techniques, questionnaire development, measures of variables, and operationalization of the measures employed for data collection (Section 3.6), and data analysis plan (Section 3.7). The target study participants are Australian business expatriates on international assignments in the People’s Republic of China and Chinese expatriates on overseas assignments in Australia. The quantitative methods used to test the hypotheses include descriptive statistics, factor analysis, multiple regression analysis, and SEM.

3.2 Methodology Plan
Following the development of the theoretical framework in the previous chapter, a positivist survey-based quantitative research method is adopted. In order to select the right methods for this research, it is necessary to go back to the epistemological background. The choice between quantitative and qualitative research paradigms depends on the underlying philosophical paradigm that governs the epistemology. According to Burns (2000), qualitative purists (i.e. constructivists) believe that the knowable world is that of the meaning attributed by individuals and it is impossible to differentiate fully causes and effects. The constructivist position virtually
excludes the existence of an objective world and each individual produces his own reality.

In contrast, quantitative purists have assumptions that social science inquiry should be objective, and the researcher contends that the observer is separate from the entities that are subject to observation. A Positivist approach to research is based on knowledge gained from verification of observable experience rather than intuition (Burns, 2000). The positivist position is taken in this research, as the researcher believes i) that there are general patterns of cause-and-effect that can be used as a basis for predicting and controlling natural phenomena, the goal is to discover these patterns; ii) that we can rely on our measurements of the world to provide accurate data; and iii) research will be free of subjective bias and objectivity will be achieved. The research objectives in the context of the current study necessitate the use of a quantitative research design.

Positivist approaches adopted in this research involves hypothesis generation and testing. Following Burns (2000), the research is evaluated using three criteria: i) validity (i.e. the extent to which a measurement approach gives the correct answer); ii) reliability (the extent to which a measurement approach gives the same answer whenever it is carried out; and iii) generalizability (the extent to which the findings can be applied more broadly outside of the study context).

In addition, as the conceptual model contains various paths linking
variables, the structural equation modelling approach is best suited to analyze the hypotheses proposed in the study.

A cross-sectional survey methodology is employed to investigate the nature of individual cultural intelligence, organizational position status, the direction of cultural flows, and expatriates’ cross-cultural adjustment, consisting of psycho-cultural adjustment and socio-cultural adjustment. Survey research is defined, by Johnson and Christensen (2008, p. 222), as a “non-experimental research method based on questionnaires or interviews”, and a survey design is appropriate when a study intends to get “quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population” (Creswell, 2009, p. 145). Johnson and Christensen (2008) outline two types of survey designs: (i) cross-sectional survey, in which data are collected at a single point of time; and (ii) longitudinal survey, in which data are collected at multiple points and compared across time with a fixed set of respondents. A cross-sectional design was chosen in this study, because cross-sectional designs have certain advantages over longitudinal approaches such as higher feasibility (Anderson, 1995), better representative samples, lesser mortality, reduced response biases, and are time and resource efficient (Fatima, 2011; Malhotra, 2004). However, there are undeniable benefits with a longitudinal study to trace cross-cultural adjustment over time and this can be part of future research.

To appropriately examine the posited hypotheses employing SEM, a sample of 200 participants is required (Tabachnick & Fidell, 2007). Various
researchers (eg. Hair, Anderson, Tatham, Black, & Babin, 2010; Lattin, Carroll, & Green, 2003; Loehlin, 2004) have recommended having about 5-10 observations per variable with the intention of using multiple regression, structural equation modelling, or other multivariate data analysis. Given that there are approximately 20 variables of interest for this study, the aim was to achieve a usable and adequate sample size of more than 200 expatriates. This recommended sample size also assures an acceptable level of reliability (Aaker, Kumar, & Day, 2001) and validity for the testing (Hoelter, 1983).

3.3 Target Population and Sampling Frame

The study plans to investigate the overall impact of the relational constructs in a two-way flow cross-cultural context. Such a task requires research design control facilitated by two distinctive research contexts and respondents on assignment transfers between these two environments. The selection of Australian and Chinese expatriates confirms the distinctiveness of the research contexts. As previously mentioned, national cultural dissimilarity plays an important role in comparing the two-way flow transfers of expatriates. Culturally distant countries can serve as better comparative sites in comparative cross-cultural studies. Australia and China, as two geographically and culturally distant countries, exhibit large discrepancies in terms of cultural characteristics. For example, as mentioned in previous chapter, Hofstede’s (2001) typology of the cultural dimensions suggests that Australia scores low for power distance and long-term orientation but high for individualism. In contrast, China scores high for power distance and long-term orientation but low for individualism. These
distinctive characteristics and the comparison of a western versus eastern culture, make these countries a particularly useful vehicle through which the hypotheses can be investigated. By targeting participants on transfers between the two countries, a much clearer and likely more complete picture should emerge of the interaction of the relational constructs in cross-cultural environments. Of necessity, an appropriate two-way flow sampling frame of Australian expatriates in China (AusChn) and Chinese expatriates in Australia (ChnAus) was thus chosen.

The research data available on expatriation is expanding fast in America, but less so for Australian and Chinese expatriates. Therefore, several sources were used to collect the desired data: (i) the member directories of the Australian Chamber of Commerce (AusCham) in China and Australian Chinese Chamber of Commerce (ACCC) were the primary sources used to obtain data; (ii) directories of Australian firms in China and Chinese companies in Australia were used to identify Business Groups on reciprocal transfers between Australia and China, and data were obtained by asking expatriates in specific corporations to complete the survey and distribute survey links to their expatriate friends who satisfied the criteria for the research study; and (iii) with the help of professional networking internet sites (e.g., LinkedIn, InterNations), friends, and colleagues, potential participants were identified and located for this project through personal solicitation in China’s two cities of Suzhou and Shenzhen where high numbers of Australian businesspeople are known to gather, and two metropolises in Australia, Sydney and Melbourne, where strong Chinese expatriate community support are known. All data collected were
anonymous due to privacy concerns.

Individuals in the sampling frame were contacted by methods of: (i) a pencil-and-paper survey instrument and information letter together with self-addressed envelopes mailed through both Chinese and Australian postal systems; and (ii) a web-based survey administration strategy was also applied, whereby email letters were sent with an information letter and an invitation to visit an internet website. The web survey was assembled at Kwiksurveys.com to collect data for this project. Kwiksurveys.com is an Internet survey tool that allows the user to create and post questionnaires on-line, and the professional account granted unlimited use to freely customise surveys of any length. The survey instrument for this research was thus created and posted on-line at http://kwiksurveys.com?u=EXPAT. A copy of the questionnaire can be found in Appendices A1- A8.

3.4 Research Sites and Procedures

Both AusCham in Shanghai and ACCC in Queensland publish their membership list with contact details, which are available through government agencies. These databases provide the most reliable and comprehensive list of Australian and Chinese businesspeople available to private citizens. The listings of ACCC and Auscham each provide 50 MNCs, MNEs and MNOs with around 850 expatriate listings in each of the databases. Directories, friends, colleagues and professional networking internet sites were supplementary means used to locate potential business groups on reciprocal transfers between Australia and China. These
additional sources for collecting desired data were based on the need to increase the representation in the business and cross-border trade sectors. In total, a sampling frame of 2000 expatriates was employed.

A four-wave contact mail-out approach (Smith, Oczkowski, & Smith, 2011) was adopted for the administration of the survey and is discussed below (see table 3.1).

<table>
<thead>
<tr>
<th>Waves of Mail-out</th>
<th>Surveys posted</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2000</td>
<td>131</td>
</tr>
<tr>
<td>2</td>
<td>2000</td>
<td>111</td>
</tr>
<tr>
<td>3</td>
<td>150</td>
<td>25</td>
</tr>
</tbody>
</table>

(i) Initial contact: prior to sending out the survey to potential respondents, several phone conversations or face-to-face conversations were held with the key cross-border managers who are expatriates’ community organizers, HR managers, or company supervisors. A pre-approach letter describing the purposes of the study, incentives for respondents, and confidentiality issues were sent to potential respondents (see Appendices A1 - A2). Additionally, participation in this study is voluntary and anonymous, but respondents may leave their contact means in the final Additional Comments Section whereby they could register for a drawing for one of four A$50 thank-you incentive gifts.

(ii) First wave survey: an email and post mail enclosed with a cover letter, a reply-paid envelope, and the complete questionnaire providing a link to the on-line survey (see Appendices A1 - A4) were sent to all potential respondents asking them to forward this information to the expatriates or
provide expatriates’ contact details by return email or mail. Formal informed consent and authorization from the management were granted, and a briefing was delivered to employees who had overseas assignment experience before carrying out the survey in some companies.

(iii) Second wave survey: approximately two weeks after the first wave of survey, a follow up mail/email (see Appendices A5 - A8) was sent to all potential respondents kindly asking for confirmation. In some cases, the researcher visited the offices to thank them for their assistance and collected the completed questionnaire directly from the respondents.

(iv) Follow-ups: in order to expedite and increase the response rate, reminders containing the information letter and invitation to web survey link were sent to the expatriates who did not respond after around four weeks’ time on an on-going basis. Some confirmation was received after each round of email exchanges and the response rate was further increased between the points of contact.

Eventually, altogether 267 responses came back from official expatriate listings, directories and networking, resulting in a total response rate of 13.3%. Among the returns, 28 cases contained more than 25% missing values and were discarded for this study. As a consequence, 239 usable returns indicated that the respondents belonged to the target group, 130 of which originated from Chinese expatriates working in Australia and 109 came from Australian expatriates in China.
3.5 Sample Adequacy and Sample Characteristics

Non-response bias occurs when the sample is not representative because non-respondents may behave differently to respondents. Two checks were performed to gauge the degree of sample adequacy and possible non-response bias. The first check examines any possible non-response bias through independent sample t-tests for differences in the means between waves of responses (Smith, et al., 2011). A series of mean t-tests on differences between early and late respondents were conducted for the key variables, only 3 out of 71 (4.2 % of all questions) were statistically significant at the 5% level when comparing early and late respondents. The majority 68 out of 71 (95.8 %) indicated no significant differences between early and late respondents, which may indicate the absence of significant non-response bias.

The second check examines whether the sample characteristics significantly differed from the database for the two classification types: main industry type and employee size (table 3.2). Chi-square goodness-of-fit chi-square tests for the concordance between the sampling frame and sample for industry type (test statistic = 3.92 (df = 3) < 7.82 critical value) and organizational employee size (test statistic = 2.45 (df = 2) < 5.99 critical value) showed no significant differences (at the 5% level) between the sampling frame and sample. This indicates the absence of any serious non-response bias in this study and confirms the compatibility between the sample and database characteristics.
Table 3. 2 Sample and Database Concordance

<table>
<thead>
<tr>
<th>Industry Type</th>
<th>Respondents No.</th>
<th>Expected database No.</th>
<th>Residual</th>
<th>Sample %</th>
<th>Database %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>173</td>
<td>162</td>
<td>11</td>
<td>72.4</td>
<td>67.9</td>
</tr>
<tr>
<td>Education</td>
<td>22</td>
<td>20</td>
<td>2</td>
<td>9.2</td>
<td>8.3</td>
</tr>
<tr>
<td>Engineering/Construction</td>
<td>26</td>
<td>34</td>
<td>-8</td>
<td>10.9</td>
<td>14.2</td>
</tr>
<tr>
<td>Government</td>
<td>18</td>
<td>23</td>
<td>-5</td>
<td>7.5</td>
<td>9.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employee Size</th>
<th>Respondents No.</th>
<th>Expected database No.</th>
<th>Residual</th>
<th>Sample %</th>
<th>Database %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (&lt;50)</td>
<td>46</td>
<td>43</td>
<td>3</td>
<td>19.2</td>
<td>17.8</td>
</tr>
<tr>
<td>Medium (51-500)</td>
<td>134</td>
<td>126</td>
<td>-8</td>
<td>56.1</td>
<td>52.9</td>
</tr>
<tr>
<td>Large (&gt;500)</td>
<td>59</td>
<td>70</td>
<td>-11</td>
<td>24.7</td>
<td>29.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>239</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the overall sample, most of the expatriates are males and married. Males comprised 83.7% of the total sample, and 76.6% of the expatriates were married. The gender, age and marital distribution did not vary notably across data sources, and their percentages are consistent with previous studies (eg. Caligiuri, 2000; Selmer, 2001; Shaffer, Harrison, & Gilley, 1999), which have regularly noted the higher proportion of male versus female expatriates and higher proportion of married samples versus unmarried.

Most of the participants in this research were between ages 30 and 39. The majority of the expatriates had earned a university degree (49.8%), worked 1-3 prior overseas assignments (59.4%), and had 1-5 years previous time spent in the host country (46.4%) (see Section 4.3 and Appendix B for more detailed descriptive statistics).
3.6 Research Instrument

3.6.1 Questionnaire Design

The questionnaire used to collect the data for this study was divided into four sections (a copy of the questionnaire can be found in Appendices A1 - A8). The first section (i.e., Section A) seeks demographic background information concerning the expatriates. In Section B, expatriates were asked about their cultural intelligence. In this section, expatriates were asked to assess the extent to which their familiarity towards cultural norms and values, and their interaction and engagement in certain cultural activities. Section C asked expatriates to indicate the levels of their socio-cultural and psycho-cultural adjustment. The final section gave respondents the opportunity to provide open-ended qualitative comments related to their adjustment of their international assignment. Finally, an additional “My Expatriate Friends” section was designed to identify more expatriate contacts.

Using the methods of forward translation (Hambleton, 1993) followed by back translation (Brislin, Lonner, & Thorndike, 1973), all the questions that were sourced from English language publications were translated into Chinese in order to ensure that the contents were fully understood by expatriates from China. Some Chinese expatriates had a certain degree of command of, or even enough familiarity with, the English language, but it seemed prudent to use the bilingual version of questionnaire for the sample group from China where their mother tongue language, i.e. Chinese, was included. This could increase participation response rates and avoid possible misunderstanding, misinterpretation, or incomprehension of the questions.
A draft questionnaire was initially developed in English and was forward translated into Chinese by the author and Lee Yan, a professor in the field of Chinese language literacy from Yunnan University. This was followed by back translation by two bilingual academic scholars, Professor Lin Orton and Ms Lisa Tung, who are native English speakers in Australian institutions. The back translation method is important in cross-cultural studies to ascertain the equivalence of meanings of different languages. This improves the reliability and validity of research conducted in different languages (Hui & Triandis, 1985), and it allows the development of the research instrument to be devoid of any linguistic bias (Brislin, et al., 1973).

The original and back-translated versions were then compared, redrafted and edited. Cronbach’s alpha coefficients for each of the measures (see table 4.2 in Chapter Four) were comparable between the English version and the Chinese version of the scales. For example, Cronbach’s alpha for the psycho-cultural adjustment scale for the English version was .813 and for the Chinese version, .795.

3.6.2 Demographic Information

Demographic information was requested in the first section of questionnaire. Demographic questions are questions edited, rephrased or modified to be made more suitable for this research, including age, gender, length of assignment, spouse support, prior years of experience in the host country, position status, education, home country, previous offshore work assignments, and perceived levels of local language proficiency in the host country. These variables were chosen because prior research on cross-
cultural adjustment (e.g. Black et al., 1991; Caligiuri, 2000; Church, 2000; Hechanova et al., 2003; Hutchings, 2003; Selmer, 2007; Trompenaars & Hampden-Turner, 1997) have reported a number of them to be important predictors of behavior and are likely to have a strong impact on expatriate adjustment. Dummy variables are assigned corresponding to the responses on the instrument. The variable of position level is characterized as either Manager/Board of Director or Non-manager. Manager is someone who has more responsibilities and supervises a non-managerial employee. A non-manager is someone who answers to all higher authorities and has no subordinates. A summary of coding for all variables can be found in Appendix C.

The Local Language Ability Inventory in the demographic section for testing expatriates’ local language ability in the host country was adapted from the Host Language Ability Scale (Cronbach’s alpha= .92) developed by Jan Selmer (2006c) as an instrument to measure the Language ability for use with Western expatriates in China. The original scale (Selmer, 2006b) consists of five items: (i) understanding and speaking of host language, (ii) non-verbal communication, (iii) speaking of dialect, (iv) conversation, and (v) writing. In adapting the scale to the current research, two modifications were made to the scale: (i) Reading ability, as one of the four basic ESL (English as a second language) skills (Mitchell & Myles, 2004; Russell, 2009: Four ESL Skills - Listening, Speaking, Reading, and Writing), was deemed to be relevant for many of the participants and therefore, was added in the scale. (ii) According to Second Language Acquisition researchers (e.g. Everson, 2009; Stoyoff, 2009; Wall & Horak, 2009), comprehension skills
should be distinct from speaking skills, but the items in Selmer’s (2006c) scale combined comprehension ability and speaking ability as a single element. Attempting to present items that are largely decontaminated in terms of their content, the adapted scale differentiates comprehension skills from speaking skills.

The adapted scale (Cronbach’s alpha = .91) therefore contains eight dimensions: (i) understanding of host language, (ii) speaking of host language, (iii) non-verbal communication, (iv) speaking of local dialect, (v) understanding of local dialect, (vi) conversation, (vii) reading, and (viii) writing.

3.6.3 Measurement of Variables

This section details the measures employed for the variables of interest in this research, including endogenous dependent variables, exogenous independent variables, and control variables. The endogenous dependent variable in this study is cross-cultural adjustment, represented by socio-cultural adjustment (SCA) and psycho-cultural adjustment (PCA). The moderator is cultural distance asymmetry, represented by the direction of cultural flows. The exogenous independent variables are organizational position status, represented by position levels of managerial and non-managerial roles, and individual differences, represented by meta-cognitive, cognitive, motivational, and behavioural facets of cultural intelligence. To measure the variables, separate scales were applied.
3.6.3.1 Endogenous Dependent Variable: Socio-Cultural Adjustment

Socio-cultural adjustment is a multi-dimensional construct that involves expatriates’ willingness and capability to effectively interact and interrelate with the host country nationals and fit in the host culture. To assess socio-cultural adjustment, the respondents completed the Black and Stephens’s (1989) 14-item scale. This instrument has been used extensively to capture expatriates’ socio-cultural adjustment to new cultures (Parker & McEvoy, 1993; Selmer, 1999; Williams, 2008). The measure has been found to be structurally equivalent with a good fit when applied on culturally dissimilar samples providing evidence of its construct validity (Robie & Ryan, 1996). It is designed to measure three dimensions of socio-cultural adjustment: work adjustment (WA) (sample item: “Supervisory responsibilities”), general living condition (GL) (sample item: “Cost of Living”), and Host Country Nationals interaction adjustment (HCN) (sample item: “Socializing with host nationals”) on an ascending, seven-point Likert-type scale. A major strength of this measure is its flexibility, as the authors constructed the scale to assess a variety of domains.

Respondents were asked to indicate how well adjusted they were to their respective host locations on a scale ranging from 1 = “very unadjusted” to 7 = “completely adjusted”. The reliability scores in prior studies were adequate: three items on work adjustment with a reported Cronbach $\alpha$ of .74 (Parker & McEvoy, 1993); seven items on general adjustment with a reported Cronbach $\alpha$ of .74 (Parker & McEvoy, 1993); and four items on HCNs interaction adjustment with a reported Cronbach $\alpha$ of .86 (Parker & McEvoy, 1993).
The measurement items used for socio-cultural adjustment can be found in table 3.3. For part of the later analysis, all items were totalled and averaged to yield an individual score for socio-cultural adjustment. Scores can range from 1 to 7, with higher scores reflecting better adjustment and lower scores indicating poorer adjustment.

Table 3.3 Measuring Socio-Cultural Adjustment

<table>
<thead>
<tr>
<th>Item codes in Measurement Model</th>
<th>Dimension</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA1</td>
<td>Work Adjustment</td>
<td>Specific job responsibilities</td>
</tr>
<tr>
<td>WA 2</td>
<td></td>
<td>Performance standards and expectations</td>
</tr>
<tr>
<td>WA 3</td>
<td></td>
<td>Supervisory responsibilities</td>
</tr>
<tr>
<td>GL1</td>
<td>General Living Adjustment</td>
<td>Living conditions in general</td>
</tr>
<tr>
<td>GL2</td>
<td></td>
<td>Housing conditions</td>
</tr>
<tr>
<td>GL3</td>
<td></td>
<td>Food</td>
</tr>
<tr>
<td>GL4</td>
<td></td>
<td>Shopping</td>
</tr>
<tr>
<td>GL5</td>
<td></td>
<td>Cost of living</td>
</tr>
<tr>
<td>GL6</td>
<td></td>
<td>Entertainment /recreation facilities and opportunities</td>
</tr>
<tr>
<td>GL7</td>
<td></td>
<td>Health care facilities</td>
</tr>
<tr>
<td>HCN1</td>
<td>Host Country National Interaction Adjustment</td>
<td>Socializing with host nationals</td>
</tr>
<tr>
<td>HCN2</td>
<td></td>
<td>Interacting with host nationals on a day-to-day basis</td>
</tr>
<tr>
<td>HCN3</td>
<td></td>
<td>Interacting with host nationals outside of work</td>
</tr>
<tr>
<td>HCN4</td>
<td></td>
<td>Speaking with host nationals</td>
</tr>
</tbody>
</table>

Source: adapted from Black and Stephens (1989)

3.6.3.2 Endogenous Dependent Variable: Psycho-Cultural Adjustment

The psycho-cultural adjustment construct is associated with individuals’ psychological state, potential health, and subjective wellbeing such as emotional state, cognitive perceptions and personal characteristic variables in the new cultural environment. It concentrates on attitudinal factors of the
mental adjusting process, and can be measured by assessing self-reported psychological symptoms and perceived distress (Ward & Kennedy, 1996).

Respondents’ psycho-cultural adjustment was measured using the 12-item General Health Questionnaire developed by Goldberg (1972). This scale is traditionally used to assess minor psychiatric symptoms, psychological distress and personal well-being. In the last few decades, the scale has been applied to monitor levels of well-being in organizational contexts (Forster, 2000), and extensively employed in expatriation studies as measures of expatriates’ subjective well-being and psychological adaptation in overseas assignments (eg. Anderzen & Arnetz, 1999; Selmer, 1999, 2007; Williams, 2008), with Cronbach’s alphas ranging between .79 and .94 in various studies. The instrument examines expatriates’ psycho-cultural wellbeing on overseas assignments with 12 items. Respondents were asked to think about how they have been feeling over the past few weeks, covering sleeping difficulties, feelings of unhappiness, and respondents’ ability to enjoy everyday experiences.

All items measuring psycho-cultural adjustment can be found in table 3.4. The scores range from 1 to 4, with higher scores showing greater adjustment. Reliability was satisfactory (Cronbach $\alpha = .91$) in prior studies. The scores for items 1, 3, 6, 7, 11, and 12 have been reversed, and the 12 items were totalled and averaged to yield a single score for psycho-cultural adjustment for part of the later analysis.
### Table 3.4 Measuring Psycho-Cultural Adjustment

<table>
<thead>
<tr>
<th>Item codes in Measurement Model</th>
<th>Dimension</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCA 1</td>
<td>Psycho-Cultural Adjustment</td>
<td>Have you recently felt you couldn't overcome your difficulties?</td>
</tr>
<tr>
<td>PCA 2</td>
<td></td>
<td>Have you recently felt capable of making decisions about things?</td>
</tr>
<tr>
<td>PCA 3</td>
<td></td>
<td>Have you recently been feeling unhappy and repressed?</td>
</tr>
<tr>
<td>PCA 4</td>
<td></td>
<td>Have you recently felt that you are playing a useful part in things?</td>
</tr>
<tr>
<td>PCA 5</td>
<td></td>
<td>Have you recently been able to concentrate on what you are doing?</td>
</tr>
<tr>
<td>PCA 6</td>
<td></td>
<td>Have you recently lost much sleep over worry?</td>
</tr>
<tr>
<td>PCA 7</td>
<td></td>
<td>Have you recently been thinking of yourself as a worthless person?</td>
</tr>
<tr>
<td>PCA 8</td>
<td></td>
<td>Have you recently been reasonably happy, all things considered?</td>
</tr>
<tr>
<td>PCA 9</td>
<td></td>
<td>Have you recently been able to enjoy your normal day-to-day activities?</td>
</tr>
<tr>
<td>PCA 10</td>
<td></td>
<td>Have you recently been able to face up to your problems?</td>
</tr>
<tr>
<td>PCA 11</td>
<td></td>
<td>Have you recently felt constantly under strain?</td>
</tr>
<tr>
<td>PCA 12</td>
<td></td>
<td>Have you recently been losing confidence in yourself?</td>
</tr>
</tbody>
</table>

**Source:** adapted from Goldberg (1972)

#### 3.6.3.3 Exogenous Independent Variable: Cultural Intelligence

Cultural intelligence involves capabilities to function well in a new cultural context, including meta-cognitive, cognitive, motivational, and behavioural aspects of individual capabilities.

Data on the individual CQ were collected using the 20-item CQ Scale instrument developed by Ang et al. (2004). It has been used widely in recent research projects published in peer-reviewed journals in cross-cultural management studies (e.g. Ang & Inkpen, 2008; Ang & Van Dyne, 2008; Ramalu et al., 2011; Templer et al., 2006; Williams, 2008). The 20 items examine an individual’s level in each of the four facets of CQ, namely, the
meta-cognitive (four items), cognitive (six items), motivational (five items), and behavioural (five items) dimensions.

**Table 3.5 Measuring Cultural Intelligence**

<table>
<thead>
<tr>
<th>Item codes in Measurement Model</th>
<th>Dimension</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC1</td>
<td>Meta-cognitive CQ</td>
<td>I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.</td>
</tr>
<tr>
<td>MC2</td>
<td>Meta-cognitive CQ</td>
<td>I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.</td>
</tr>
<tr>
<td>MC3</td>
<td>Meta-cognitive CQ</td>
<td>I am conscious of the cultural knowledge I apply to cross-cultural interactions.</td>
</tr>
<tr>
<td>MC4</td>
<td>Meta-cognitive CQ</td>
<td>I check the accuracy of my cultural knowledge as I interact with people from different cultures.</td>
</tr>
<tr>
<td>COG 1</td>
<td>Cognitive CQ</td>
<td>I know the legal and economic systems of other cultures.</td>
</tr>
<tr>
<td>COG 2</td>
<td>Cognitive CQ</td>
<td>I know the rules (e.g., vocabulary, grammar) of other languages.</td>
</tr>
<tr>
<td>COG 3</td>
<td>Cognitive CQ</td>
<td>I know the cultural values and religious beliefs of other cultures.</td>
</tr>
<tr>
<td>COG 4</td>
<td>Cognitive CQ</td>
<td>I know the marriage systems of other cultures.</td>
</tr>
<tr>
<td>COG 5</td>
<td>Cognitive CQ</td>
<td>I know the arts and crafts of other cultures.</td>
</tr>
<tr>
<td>COG 6</td>
<td>Cognitive CQ</td>
<td>I know the rules for expressing non-verbal behaviors in other cultures.</td>
</tr>
<tr>
<td>MOT1</td>
<td>Motivational CQ</td>
<td>I enjoy interacting with people from different cultures.</td>
</tr>
<tr>
<td>MOT2</td>
<td>Motivational CQ</td>
<td>I am confident that I can socialize with locals in a culture that is unfamiliar to me.</td>
</tr>
<tr>
<td>MOT3</td>
<td>Motivational CQ</td>
<td>I am sure I can deal with the stresses of adjusting to a culture that is new to me.</td>
</tr>
<tr>
<td>MOT4</td>
<td>Motivational CQ</td>
<td>I enjoy living in cultures that are unfamiliar to me.</td>
</tr>
<tr>
<td>MOT5</td>
<td>Motivational CQ</td>
<td>I am confident that I can get accustomed to the shopping conditions in a different culture.</td>
</tr>
<tr>
<td>BEH1</td>
<td>Behavioral CQ</td>
<td>I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.</td>
</tr>
<tr>
<td>BEH2</td>
<td>Behavioral CQ</td>
<td>I use pause and silence differently to suit different cross-cultural situations.</td>
</tr>
<tr>
<td>BEH3</td>
<td>Behavioral CQ</td>
<td>I vary the rate of my speaking when a cross-cultural situation requires it.</td>
</tr>
<tr>
<td>BEH4</td>
<td>Behavioral CQ</td>
<td>I change my non-verbal behavior when a cross-cultural situation requires it.</td>
</tr>
<tr>
<td>BEH5</td>
<td>Behavioral CQ</td>
<td>I alter my facial expressions when a cross-cultural interaction requires it.</td>
</tr>
</tbody>
</table>

**Source:** adapted from Ang et al. (2004, 2007) and Cultural Intelligence Center (2005)

All items measuring cultural intelligence can be found in table 3.5. Each statement was described in a seven-point Likert-type scale (1 = strongly
disagree to 7 = strongly agree), with the higher scores corresponding to higher levels of meta-cognitive, cognitive, motivational, and behavioural facets of CQ respectively. Ang et al. (2007) cross-validated the CQ Scale with samples from Singapore and America respectively and found it to be highly reliable. They reported Cronbach’s alpha values on the two sample groups from Singapore and America for the meta-cognitive items ($\alpha = .76; \alpha = .78$), cognitive items ($\alpha = .84; \alpha = .81$), motivational items ($\alpha = .87; \alpha = .80$), and behavioural items ($\alpha = .84; \alpha = .81$) respectively.

3.6.3.4 Control Variables

This research employs control variables in view of the fact that certain participants’ conditions are beyond the control for the investigator and may influence the statistical results of dependent variables (Hechanova et al., 2003). Gender, age, spouse support, prior years of experience in the host country, education, previous offshore work assignments, and perceived levels of local language proficiency in the host country are employed as control variables. As indicated previously, prior studies have found these variables to have a potential impact on expatriates’ attitudes and behaviours (Hechanova, et al., 2003; Ren, Harrison, Bhaskar-Shrinivas, & Shaffer, 2006; Takeuchi, Tesluk., Yun, & Lepak, 2005) and on expatriates’ cross-cultural adjustment (Black et al., 1991; Caligiuri, 2000; Church, 2000; Hechanova et al., 2003; Hutchings, 2003). Hence, these were measured to control the possible effects of these variables. The information on control variables was obtained from the demographic section of the survey. In order to ensure the internal consistency of the instruments, all the measurement
items used in the present study are adapted from scales used in existing studies with Cronbach’s alpha coefficients ranging from .74 to .91, which is above the recommended minimum value of .70 (Hair et al., 2010).

A summary of all variables and their reported Cronbach’s alpha from original studies can be found in table 3.6.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measures</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Adjustment</td>
<td>Socio-Cultural Adjustment Questionnaire (Black and Stephens, 1989)</td>
<td>.75</td>
</tr>
<tr>
<td>General Living Condition Adjustment</td>
<td>Socio-Cultural Adjustment Questionnaire (Black and Stephens, 1989)</td>
<td>.74</td>
</tr>
<tr>
<td>Host Country National Interaction Adjustment</td>
<td>Socio-Cultural Adjustment Questionnaire (Black and Stephens, 1989)</td>
<td>.86</td>
</tr>
<tr>
<td>Psycho-Cultural Adjustment</td>
<td>General Health Questionnaire (Goldberg, 1972)</td>
<td>.91</td>
</tr>
<tr>
<td>Meta-cognitive Cultural Intelligence</td>
<td>Four Factor Cultural Intelligence Scale (Ang, Van Dyke, and Koh, 2004)</td>
<td>.76</td>
</tr>
<tr>
<td>Cognitive Cultural Intelligence</td>
<td>Four Factor Cultural Intelligence Scale (Ang, Van Dyke, and Koh, 2004)</td>
<td>.84</td>
</tr>
<tr>
<td>Motivational Cultural Intelligence</td>
<td>Four Factor Cultural Intelligence Scale (Ang, Van Dyke, and Koh, 2004)</td>
<td>.87</td>
</tr>
<tr>
<td>Behavioural Cultural Intelligence</td>
<td>Four Factor Cultural Intelligence Scale (Ang, Van Dyke, and Koh, 2004)</td>
<td>.84</td>
</tr>
<tr>
<td>Position status</td>
<td>Demography-related Construct</td>
<td>N/A</td>
</tr>
<tr>
<td>Gender</td>
<td>Control- Demographic Information</td>
<td>N/A</td>
</tr>
<tr>
<td>Age</td>
<td>Control- Demographic Information</td>
<td>N/A</td>
</tr>
<tr>
<td>Marital status</td>
<td>Control -Demographic Information</td>
<td>N/A</td>
</tr>
<tr>
<td>Spouse support</td>
<td>Control -Demographic Information</td>
<td>N/A</td>
</tr>
<tr>
<td>Home country</td>
<td>Control -Demographic Information</td>
<td>N/A</td>
</tr>
<tr>
<td>Education</td>
<td>Control- Demographic Information</td>
<td>N/A</td>
</tr>
<tr>
<td>Local Language Ability in Host Country</td>
<td>Control- Demographic Information</td>
<td>N/A</td>
</tr>
<tr>
<td>Previous Time in Host</td>
<td>Control -Demographic Information</td>
<td>N/A</td>
</tr>
<tr>
<td>Prior Overseas Assignment</td>
<td>Control -Demographic Information</td>
<td>N/A</td>
</tr>
</tbody>
</table>
3.6.4 Reliability and Validity Issues

3.6.4.1 Reliability

Reliability refers to the overall consistency of a measure (Hair et al., 2010). Reliability is achieved when scales generate stable and consistent results repeatedly over time and across situations (Malhotra, 2004). The commonly used measure of the reliability of scales is Cronbach’s alpha (McDonald & Ho, 2002). A substantially low value of Cronbach’s alpha indicates an unreliable scale, and a cut-off point of .70 is the recommended minimum value that ensures internal reliability of the scale items and the construct (Hair et al., 2010; Kline, 2005). As suggested by George and Mallery (2003), a Cronbach’s alpha of .70 or above can be considered acceptable in terms of reliability, .80 or above good, .90 or above excellent. Cronbach alpha for all constructs are measured by using SPSS 20.0.

3.6.4.2 Validity

Validity is defined as the degree to which the instrument measures what it purports to measure, and it reflects the accurateness or truthfulness of the measurement scale (Byrne, 2010). Content validity pertains to whether an instrument has sufficient coverage of a topic or not. Face validity is a component of content validity and is achieved when an individual reviewing the instrument concludes that it measures the characteristic or trait of interest (Byrne, 2010; Lattin, et al., 2003). Following the examples of Hardesty and Bearden (2004) and Fatima (2011), to ensure content validity and face validity of the scales used in this study, all scale items have been
taken from existing research, where Cronbach’s alpha values were acceptable.

Construct validity is the extent to which an instrument measures the theoretical construct that it is intended to measure (George & Mallery, 2003). It concentrates on the theoretical background for an instrument and the alignment between a theoretical concept and a specific measuring device (Hair et al., 2006). Goodness-of-fit measures of the measurement model in the SEM analysis and Average Variance Extracted (AVE) have been used to verify construct validity (George & Mallery, 2003).

Convergent validity and discriminant validity are subsets of construct validity. Convergent validity examines whether constructs that should be related are related; while discriminant validity tests whether believed unrelated constructs are unrelated (Hair et al., 2010). Convergent validity and discriminant validity together demonstrate construct validity. Convergent validity is confirmed by high correlations between the scale item scores (George & Mallery, 2003). A critical value that is greater than ±1.96 evidences convergent validity (Fatima, 2011). The convergent validity of the scales in use for the current study was confirmed by checking factor loadings, AVE values and squared multiple correlations from the output of confirmatory factor analysis.

The AVEs are calculated to measure convergent validity of the scales. AVE values indicate the amount each item contributes to explaining the specified construct. AVE values greater than .50 are considered to have good
convergent validity (Fornell & Larcker, 1981). AVE is computed using AMOS 20.0 output in conducting the CFA.

Discriminant validity ensures the non-overlapping factors do not overlap (George & Mallery, 2003), and is assessed by investigating the difference between the squared root of AVE and the correlations for all pairs of constructs (Fornell & Larcker 1981). To demonstrate discriminant validity, the variance shared between a construct and any other construct in the model (the squared correlation between the two constructs) should be less than the variance that the construct shares with its measures (AVE). Additionally, in examining the discriminant validity of the CQ construct, as recommended by recent CQ researchers (eg. Bucker, Furrer, & Lin, 2011; Perrinjaquet, Furrer, Usunier, Cestre, & Valette-Florence, 2007), four-factor models of CQ should be tested, rather than testing the four dimensions of CQ separately, which allows the discriminant validity of the four CQ dimensions to be examined.

3.7 Data Analysis Plan

3.7.1 Statistical Modelling Approach

Conceptually, in order to test the proposed causal model and the impact of cultural flow direction (i.e. CDA) on the latent variables of psycho-cultural adjustment and socio-cultural adjustment, a structural equation modelling (SEM) approach has been adopted using AMOS 20.0.

SEM is a powerful statistical modelling technique that combines factor
analysis and regression to investigate the latent relationships among constructs and to test a model, and it is also an excellent path analysis method that allows testings of multiple regression equations simultaneously (Hair, et al., 2010; Tabachnick & Fidell, 2007). SEM has a number of advantages over other alternative approaches (for example, multiple regression and general linear analysis) because it is effective in expressing definite measurement errors and constructing latent and observed variables while checking internal consistency of data (Byrne, 2010; Fatima, 2011). It focuses more on abstract psychological variables (i.e. latent constructs) such as “intelligence” or “attitudes”, rather than on the manifest variables used to measure the constructs (Ullman, 1996), which makes it ideal for analyzing data for this study. AMOS 20.0 software was applied to evaluate the model fit using the raw data as input and the Maximum Likelihood (ML) estimation procedure.

In applying the SEM approach, independent variables are called exogenous variables (Pearl, 2000). Exogenous variables in SEM are factors in a model whose values are independent from the states of other variables in the system and determined by variables outside the causal model. Contrasted with exogenous variables, endogenous variables are factors in a causal model whose values are determined by the states of other variables in the system (Byrne, 2010). The exogenous variables in this research are thus identified to be independent variables, as represented by the meta-cognition, cognition, motivational, and behavioural facets of cultural intelligence and organizational position levels. Psycho-cultural adjustment and socio-cultural adjustment (including three dimensions of WA, GL and HCN) served as
endogenous dependent variables in this study. Observed variables
(represented by the rectangles in figure 3.1) are the variables that are
measured, and the latent or unobserved variables (represented by ovals in
figure 3.1) are those that are not measured directly but inferred from
relations among measured variables. Single headed arrows depict
hypothesized causal relations. Categorical multi-group analysis is employed
to determine the potential moderating effect of direction of cultural flows on
the hypothesized structural model. Following Joreskog’s (1993) model
generating approach, this research expects to reject the priori theoretically
derived model supported by literature, and through tracing the source of
misfit, re-estimating and modifying it, to generate a better-suited model that
not only represent the data, but that is also meaningful and interpretable
(Byrne, 2010; Hair, et al., 2010; Loehlin, 2003). In tracing the source of
misfit, re-estimating and modifying the model, a model trimming approach
(Kline, 2005) was used and the fit of the model was evaluated employing
various tests and fit indices. Model trimming was conducted by deleting
each non-significant regression weight and covariance, one at a time on the
basis of the largest associated $p$ value. The purpose of this method was to
get a parsimonious model that still fits the data well. Overall model fit
statistics were examined to determine the adequacy of the fit of the model.
This study represents the first attempt to examine the proposed causal
relationships and the CDA moderation effect on expatriate adjustment using
an SEM approach.
Figure 3.1 Hypothesized Theoretical Model


3.7.2 Model Fit Analysis and Statistical Indices

The analysis began by specifying the hypothesized theoretical model (figure 3.1). The research model included (i) five exogenous variables (i.e., Meta-cognitive CQ scale, Cognitive CQ scale, Motivational CQ scale, Behavioural CQ scale, and organizational position level), (ii) one moderating variable (the cultural distance asymmetry variable); and (iii) two endogenous variables (psycho-cultural adjustment and socio-cultural adjustment).
The early stage of the analytical strategy involves assessing the reliability using Cronbach’s alpha and factor loadings. Following Nunnally and Bernstein (1994), alphas greater than or equal to .70 suggest acceptable reliability, along with factor loadings that exceed .60. Subsequent to the internal reliability tests to ascertain the items to retain, confirmatory factor analysis (CFA) was conducted to test the proposed model in AMOS 20.0. As the data did not strongly breach multivariate normality assumptions, ML estimation procedures were employed (McDonald & Ho, 2002).

Researchers (Hatcher, 1994; Kline, 2005) recommend looking across multiple indicators, rather than concentrating on the value of any specific fit indicator, for the purpose of getting a better evaluation of the overall fit of structural models. Therefore, a variety of indicators were reported to assess model fit in this study: normed chi-square statistic ($\chi^2$/d.f.), root mean square error of approximation (RMSEA), comparative fit index (CFI), incremental fit index (IFI), and Tucker Lewis index (TLI). Briefly, RMSEA measures discrepancy per degree of freedom. CFI, IFI, and TLI are model fit indices calculated based on comparisons between a hypothesized model and a null model, which assumes no relationship among the variables (Bentler & Bonett, 1980). Table 3.7 summarizes the estimation and goodness-of-fit indices used for all measurement and structural equation models.
### Table 3.7 Summary of Model Fit Indices

<table>
<thead>
<tr>
<th>Model Fit Indices</th>
<th>Abbreviations</th>
<th>Standard Thresholds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor Loading Regression Weight</td>
<td>λᵢ</td>
<td>Factor loadings should be greater than .60 (Kline, 2005) to .70 (e.g. Nunnally &amp; Bernstein, 1994).</td>
</tr>
<tr>
<td>Standard error of the estimate</td>
<td>SE</td>
<td>No unanimous agreement for excessive “small” or “large” standard (Byrne, 2010, p. 75)</td>
</tr>
<tr>
<td>Critical Ratio</td>
<td>CR</td>
<td>It is obtained by dividing the parameter estimates by the standard error. Based on α = .05, CR &gt; ±1.96 to be significant.</td>
</tr>
<tr>
<td>Squared Multiple Correlation</td>
<td>SMC</td>
<td>It is the square of factor score and similar to R² in regression analysis. SMC = 1 - (error variance / total variance) and vary from 0 to 1.</td>
</tr>
<tr>
<td>Composite Reliability</td>
<td>CR</td>
<td>It is the internal consistency of the measures and the accepted minimum level is .70 (Hair et al., 2010) (e.g. Nunnally &amp; Bernstein, 1994).</td>
</tr>
<tr>
<td>Average Variance Extracted</td>
<td>AVE</td>
<td>It compares the amount of variance captured by the construct with the variance for measurement error. The recommended minimum accepted level is .50 (Hair et al., 2010).</td>
</tr>
<tr>
<td>Chi-square</td>
<td>CMIN (χ²)</td>
<td>The value of χ² varies largely with the sample size and tends to be more inaccurate with large sample size (Byrne, 2010, p. 75).</td>
</tr>
<tr>
<td>Degree of freedom</td>
<td>df</td>
<td>df = (p+1)/2 – t, p = observed variables, t = parameters (Byrne, 2010, p. 79).</td>
</tr>
<tr>
<td>Probability level of chi-square significance</td>
<td>p-value for testing model fitness</td>
<td>It is generally accepted that p-value should be greater than .05 which indicates that a model fits with the data well (Hair et al., 2010, p. 746).</td>
</tr>
<tr>
<td></td>
<td>p-value for testing hypotheses</td>
<td>To support a hypothesis p value should be less than .05. (Hair et al., 2010, p. 746).</td>
</tr>
<tr>
<td>Normed Chi-square</td>
<td>CMIN/df</td>
<td>CMIN/df should be in between of 1 and 3 and preferably less than 2 to indicate good model fit (Kline, 2005).</td>
</tr>
<tr>
<td>Goodness-of-fit Index</td>
<td>GFI</td>
<td>GFI expresses the combined effect of relative variance and covariance of a model where, &gt; .90 is minimum and &gt; .95 indicates a very good fit (Byrne, 2010, p. 82).</td>
</tr>
<tr>
<td>Comparative Fit Index</td>
<td>CFI</td>
<td>CFI should be equal to or greater than .90 to accept the model, and values of .95 or greater are interpreted as evidence of excellent model fit (e.g. Bentler &amp; Bonett, 1980).</td>
</tr>
<tr>
<td>Incremental Fit Index</td>
<td>IFI</td>
<td>IFI should be equal to or greater than .90 to accept the model (e.g. Bentler &amp; Bonett, 1980).</td>
</tr>
<tr>
<td>Tucker Lewis Index</td>
<td>TLI</td>
<td>TLI is an incremental fit measure, of which the recommended acceptance level is also &gt; .90 (Hair et al., 2010, p. 622) (e.g. Bentler &amp; Bonett, 1980).</td>
</tr>
<tr>
<td>Root Mean-square Error of Approximation</td>
<td>RMSEA</td>
<td>RMSEA values greater than .10 indicate poor fit, values of .08 suggests good fit, and values of .05 or less indicate excellent fit (e.g. Bentler &amp; Bonett, 1980).</td>
</tr>
<tr>
<td>Modified Index</td>
<td>MI</td>
<td>The reduced amount of χ² value resulted from freeing one single path (Hair et al., 2010). This study considers 1.00 per change of MI value as cut off.</td>
</tr>
</tbody>
</table>

**Source:** adapted from Byrne (2010, pp. 75-82), Hair et al., (2010, p. 746) and Fatima (2011, p. 123)
3.8 Chapter Summary

This chapter discussed the methodological issues involved in the study. AusChn and ChnAus were surveyed with an instrument that extracts background variables and measures individual differences as identified by CQ, and CCA as identified by SCA and PCA.

It is intended to employ the AMOS based SEM approach to examine the theorized model and causal relationships. Multi-group analysis is proposed to test the potential moderating effect of CDA on the hypothesized structural model. The statistical analysis plan includes utilizing a set of goodness-of-fit indices and CFA estimates to evaluate the data fit with the hypothesized model (Byrne, 2010). The inspection of residuals and modification indices (MIs) would be done to identify the presence of significant points of ill-fit in the initial hypothesized SEM model. CFA would be used to compare alternative measurement models. Multiple group analysis would be carried out to test the categorical moderating effect. Details of the variables and the relationships without control variables are depicted in figure 3.1. More details of the procedures employed and a discussion of the results of the data analysis can be found in the following chapter.
CHAPTER FOUR: DATA ANALYSIS AND RESULTS

4.1 Chapter Overview

This chapter presents the results and interpretation of the data analysis performed to address the research questions of this study. The purposes of the data analysis are: (i) to test the adequacy of the proposed model; and (ii) in case that the proposed model is inadequate, to refine the model and identify a more appropriate structure.

Initially, a set of preliminary analysis is conducted involving a description of data entry, handling of missing values, treatment of outliers, assessment of normality and linearity, and a discussion of measurement reliability and validity issues (Section 4.2). This is followed by the presentation of basic demographics and descriptive statistics for key variables (Section 4.3). Then, bivariate inter-correlations among main variables are checked (Section 4.4). The tests of the measurement model, hypothesized model and alternative models are discussed, the inferential analysis is described next and the assessment of the fit of a refined new model is summarized (Sections 4.5 and 4.6). The research results are interpreted along with the data analysis, involving findings of hypotheses tests and comparative analyses of the relative groups of antecedents used in the research model. Discussion of the research results (Section 4.7), and chapter summary (Section 4.8) are provided at the end of the chapter.
4.2 Preliminary Analysis

4.2.1 Data Integrity

Before conducting the main analysis, all variables of interest were thoroughly checked for accuracy of data entry, missing values, multivariate outliers, the normality of distributions, and linearity.

4.2.1.1 Data Entry and Missing Values

The research data were entered into the SPSS 20.0 data file. To ensure the accuracy of data entry, adequate care was given at the time of data entry and the researcher has carried out a thorough and careful check.

In most quantitative research studies, missing values are a common problem. In treating missing values, a researcher can choose to ignore, delete, or adopt a procedure to estimate missing values according to the level, extent and randomness of the missing values (Hair et al., 2010). The traditional methods of handling missing data include different ad hoc solutions that aim to complete the dataset before analysis, such as the removal of cases with missing data (i.e., list wise or pair wise deletion) or the substitution of missing values with the variable mean. However, these ad hoc traditional methods can seriously bias sample statistics and are criticized in the methodological literature (Little & Rubin, 2002; Peugh & Enders, 2004). Modern missing-data techniques, such as maximum likelihood estimation (ML) or multiple imputation (MI), have been supported by many empirical research studies with strong theoretical frameworks and are the recommended procedures in the current
methodological literature (Little & Rubin, 2002; Peugh & Enders, 2004). ML estimation can be used to estimate models with or without missing, and could be used in conjunction with traditional missing-data techniques (Peugh & Enders, 2004). Data were thus examined to decide if missing data were missing completely at random (MCAR), missing at random (MAR), or non-ignorable. Subsequent to the examination, 28 cases that containing more than 25% missing values were discarded, resulting in a usable dataset of 239 out of total 267 data cases.

Given non-systematic sources of missing data, a full information maximum likelihood (FIML) approach to missing data in AMOS 20.0 was adopted to accommodate missing data. FIML approach is superior to traditional methods, and it is model-specific. AMOS does not impute missing values; instead, it recognizes missing data and uses all observed data values to estimate models with a FIML approach. FIML estimation is ideally suited for missing data problems in this study because the missing data handling is built into the estimation process. Data cases were then checked for outliers, normality and linearity.

4.2.1.2 Outliers

As a result of random effects, data can be non-normal because of outliers. Outliers are cases significantly different from other observations with an extreme value on one variable (i.e. a univariate outlier) or a combination of scores on two or more variables (i.e. multivariate outliers) that distort statistics (Hair, et al., 2010; Winter, Dedou, & Wieringa, 2009). Raw data needs to be screened for outliers and random effects on estimation need to
be treated based on the extent of their sensitivity (Hair et al., 2010; Fatima, 2011). By defining outliers as leverage scores which deviate three or more times greater than the standard deviation from the mean, the data of this study were subjected to evaluation in both model-based outlier approach using Mahalanobis distance measure and the non-model-based approach using leverage indices for each individual to examine the minimum, maximum values, and standard deviations. There were 52 cases detected with p values less than .05 in AMOS. Through running a set of analysis with and without the identified outliers from the farthest from the centroid, one case (observation number 145) was determined to be influential for the analysis and was thus deleted. Other outliers were retained, as a check of deleting them failed to improve the fit indices and did not alter parameter estimates to any significant effect. Better values of fit indices ($\Delta \chi^2_{\text{diff}} = .09$) were yielded after taking out case 145, resulting in a sample of 238 (chi-square $\chi^2=2595.5$, df =975; chi-square/df = 2.65; RMSEA = .084; CFI = .884), compared to the model fit with a dataset of 239 cases retaining case 145 (chi-square $\chi^2= 2674.7$; df = 975; chi-square/df = 2.74; RMSEA = .086; CFI = .877).

4.2.1.3 Normality

After the treatment of outliers, normality was examined to check if the data confirm to the symmetrical bell shaped normal distribution (Hair et al., 2010). Skewness and Kurtosis values are the usual indicators of normality, with high Skewness or high Kurtosis implying non-normality and random effects of data (Hair et al., 2010; Winter, Dedou, & Wieringa, 2009).
Skewness assesses the distribution symmetry, while Kurtosis measures the comparative peak or flatness of the distribution (Fatima, 2011). Kurtosis is not considered to be significantly influential to the results of most statistical analysis (Morgan, Leech, Gloeckner, & Barrett, 2004). Following Tabachnick and Fidell (2007), data is considered to achieve normality if the Skewness and Kurtosis values are within the range between +3 and – 3.

As Skewness and Kurtosis values less than 1.00 (in absolute value) were found for all main variables, data normality is secured. Table 4.1 shows the descriptive statistics for each of the main variables used in the analysis.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC_CQ</td>
<td>4.97</td>
<td>1.544</td>
<td>-.585</td>
<td>-.607</td>
</tr>
<tr>
<td>COG_CQ</td>
<td>4.53</td>
<td>1.423</td>
<td>-.109</td>
<td>-.814</td>
</tr>
<tr>
<td>MOT_CQ</td>
<td>4.94</td>
<td>1.503</td>
<td>-.332</td>
<td>-.892</td>
</tr>
<tr>
<td>BEH_CQ</td>
<td>4.95</td>
<td>1.470</td>
<td>-.443</td>
<td>-.749</td>
</tr>
<tr>
<td>WA_SCA</td>
<td>5.21</td>
<td>1.535</td>
<td>-.871</td>
<td>-.121</td>
</tr>
<tr>
<td>GL_SCA</td>
<td>4.87</td>
<td>1.459</td>
<td>-.535</td>
<td>-.768</td>
</tr>
<tr>
<td>HCN_SCA</td>
<td>4.95</td>
<td>1.556</td>
<td>-.481</td>
<td>-.720</td>
</tr>
<tr>
<td>PCA</td>
<td>3.04</td>
<td>.680</td>
<td>-.744</td>
<td>.015</td>
</tr>
</tbody>
</table>


4.2.1.4 Linearity

Linearity assessment is another basic procedure for multivariate analysis. It signifies measures of association such as factor analysis, regression analysis and structural equation modelling can only be accurately estimated if the relationship between independent and dependent variables are linear (Fatima, 2011; Hair et al., 2010; Winter, Dedou, & Wieringa, 2009).
examined for linearity using bivariate scatter plots, as shown through figures 4.1 to 4.4.

Figure 4. 1 Scatter Plots for CQ Measures with Work Adjustment Graph

Figure 4. 2 Scatter Plots for CQ Measures with General Living Condition Adjustement Graph

Figure 4. 3 Scatter Plots for CQ Measures with HCN Interaction Adjustment Graph
Figure 4. 4 Scatter Plots for CQ Measures with Psycho-Cultural Adjustment
Graph

Scatter plots were generated from the revised dataset to observe the general
trend of the data on the subject of the relationships among the independent
and dependent variables for linearity.

As revealed in the graphs, the relationships among the main variables
presented linear relationships; with the CQ measures showing a stronger
linear relationship to socio-cultural adjustment (i.e. work adjustment,
general living condition adjustment, and host country national interaction
adjustment) than the psycho-cultural adjustment measure, and no non-linear
relationships have been apparent.

Subsequent to the assurance of data entry accuracy, proper treatment of
missing values and multivariate outliers, the verification of normality and
linearity, reliability tests were then performed.
4.2.2 Reliability Tests

Cronbach’s alpha tests were conducted using the SPSS 20.0 program for internal consistency of the scales in use in the current study, including the reliability tests for the measures in other language (Chinese translation).

The test results (table 4.2) demonstrated that the measures had a Cronbach’s Alpha that exceeds the standard cut-off point of .70; therefore all the scales achieved strong reliability, indicating good internal consistency.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cronbach’s alpha for English Version</th>
<th>Cronbach’s alpha for Chinese Version</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Language</td>
<td>.912</td>
<td>.898</td>
<td>8</td>
</tr>
<tr>
<td>MC_CQ</td>
<td>.925</td>
<td>.911</td>
<td>4</td>
</tr>
<tr>
<td>COG_CQ</td>
<td>.927</td>
<td>.931</td>
<td>6</td>
</tr>
<tr>
<td>MOT_CQ</td>
<td>.893</td>
<td>.876</td>
<td>5</td>
</tr>
<tr>
<td>BEH_CQ</td>
<td>.951</td>
<td>.916</td>
<td>5</td>
</tr>
<tr>
<td>WA_SCA</td>
<td>.935</td>
<td>.947</td>
<td>3</td>
</tr>
<tr>
<td>GL_SCA</td>
<td>.946</td>
<td>.927</td>
<td>7</td>
</tr>
<tr>
<td>HCN_SCA</td>
<td>.965</td>
<td>.939</td>
<td>4</td>
</tr>
<tr>
<td>PCA</td>
<td>.813</td>
<td>.795</td>
<td>12</td>
</tr>
</tbody>
</table>

4.3 Descriptive Analysis

4.3.1 Descriptive Statistics for the Sample Groups

Subsequent to preliminary analysis and scale reliability issues, descriptive statistics were examined for demographic variables.

Table 4.3 and 4.4 summarize the comparative demographic characteristics for each of the sample groups (Group 1 = AusChn; Group 2 = ChnAus).

<table>
<thead>
<tr>
<th>Direction of Cultural Flows</th>
<th>Australians in China (Group 1 AusChn)</th>
<th>Chinese in Australia (Group 2 ChnAus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic Variables</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Age</td>
<td>2.90</td>
<td>1.045</td>
</tr>
<tr>
<td>Spouse Support</td>
<td>2.18</td>
<td>.791</td>
</tr>
<tr>
<td>Education</td>
<td>2.15</td>
<td>.768</td>
</tr>
<tr>
<td>Prior Assignment</td>
<td>2.06</td>
<td>.597</td>
</tr>
<tr>
<td>Time in Host Country</td>
<td>1.74</td>
<td>.843</td>
</tr>
<tr>
<td>Local Language</td>
<td>2.58</td>
<td>1.221</td>
</tr>
</tbody>
</table>

Note. N=238. Responses were coded as: Gender [1 = male, 2 = female]; Age [1 = < 30, 2 = 30-39, 3 = 40-49, 4 = 50-59, 5 = > 60]; Marital Status [1 = Single, 2 = Divorced, 3 = De Facto, 4 = Married]; Spouse Support [1 = Not at all, 2 = A fair amount, 3 = A great deal]; Education [1 = Below Degree; 2 = Bachelor; 3 = Postgraduate]; Position Level [1 = Managerial/BOD, 2 = Non-managerial]; Prior Assignment [1 = 0, 2 = 1-3, 3 = > 4]; Previous Time in Host Country [1 = < 1 year, 2 = 1-5 years, 3 = 6-10 years, 4 = > 11 years]; Local Language Ability [1 = Inadequate, 2 = Adequate, 3 = Good, 4 = Very Good, 5 = Excellent].
Table 4. 4 Comparative Demographic Variables of Sample Groups: Frequency Table

<table>
<thead>
<tr>
<th>Background Variables</th>
<th>Australians in China (n = 109)</th>
<th>Chinese in Australia (n = 129)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>91</td>
<td>83.5</td>
</tr>
<tr>
<td>Female</td>
<td>18</td>
<td>16.5</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30</td>
<td>8</td>
<td>7.3</td>
</tr>
<tr>
<td>30-39</td>
<td>37</td>
<td>33.9</td>
</tr>
<tr>
<td>40-49</td>
<td>26</td>
<td>23.9</td>
</tr>
<tr>
<td>50-59</td>
<td>34</td>
<td>31.2</td>
</tr>
<tr>
<td>&gt;60</td>
<td>4</td>
<td>3.7</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>11</td>
<td>10.1</td>
</tr>
<tr>
<td>Divorced</td>
<td>9</td>
<td>8.2</td>
</tr>
<tr>
<td>De facto</td>
<td>8</td>
<td>7.3</td>
</tr>
<tr>
<td>Married</td>
<td>81</td>
<td>74.3</td>
</tr>
<tr>
<td>Spouse Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all</td>
<td>21</td>
<td>19.3</td>
</tr>
<tr>
<td>A fair amount</td>
<td>31</td>
<td>28.4</td>
</tr>
<tr>
<td>A great deal</td>
<td>37</td>
<td>33.9</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below Degree</td>
<td>25</td>
<td>22.9</td>
</tr>
<tr>
<td>Bachelor</td>
<td>43</td>
<td>39.4</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>41</td>
<td>37.6</td>
</tr>
<tr>
<td>Position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managerial/BOD</td>
<td>66</td>
<td>60.6</td>
</tr>
<tr>
<td>Non-managerial</td>
<td>43</td>
<td>39.4</td>
</tr>
<tr>
<td>Prior Assignment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>16</td>
<td>14.7</td>
</tr>
<tr>
<td>1-3</td>
<td>70</td>
<td>64.2</td>
</tr>
<tr>
<td>&gt;4</td>
<td>23</td>
<td>21.1</td>
</tr>
<tr>
<td>Previous Time in Host Country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1yr</td>
<td>50</td>
<td>45.9</td>
</tr>
<tr>
<td>1-5 yrs</td>
<td>43</td>
<td>39.4</td>
</tr>
<tr>
<td>6-10 yrs</td>
<td>10</td>
<td>9.2</td>
</tr>
<tr>
<td>&gt;11 yrs</td>
<td>6</td>
<td>5.5</td>
</tr>
<tr>
<td>Local Language Ability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inadequate</td>
<td>50</td>
<td>45.9</td>
</tr>
<tr>
<td>Adequate</td>
<td>43</td>
<td>39.4</td>
</tr>
<tr>
<td>Good</td>
<td>10</td>
<td>9.2</td>
</tr>
<tr>
<td>Very Good</td>
<td>6</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Note. N=238. Responses were coded as: Gender [1 = male, 2 = female]; Age [1 = < 30, 2 = 30-39, 3 = 40-49, 4 = 50-59, 5 = > 60]; Marital Status [1 = Single, 2 = Divorced, 3 = De Facto, 4 = Married]; Spouse Support [1 = Not at all, 2 = A fair amount, 3 = A great deal]; Education [1 = Below Degree; 2 = Bachelor; 3 = Postgraduate]; Position Level [1 = Managerial/BOD, 2 = Non-managerial]; Prior Assignment [1 = 0, 2 = 1-3, 3 = > 4]; Previous Time in Host Country [1 = < 1 year, 2 = 1-5 years, 3 = 6-10 years, 4 = > 11 years]; Local Language Ability [1 = Inadequate, 2 = Adequate, 3 = Good, 4 = Very Good, 5 = Excellent].
There were both differences and similarities between the two expatriate sample groups. Differences are shown for demographic variables of age, education level, spouse support, position level, time in host country, and local language ability. As displayed in table 4.3, ChnAus was on the average younger (ChnAus Mean 2.16; SD .712, as compared to AusChn Mean 2.90; SD 1.045), and had a greater amount of spouse support (ChnAus Mean 2.49; SD .557, as compared to AusChn Mean 2.18; SD .791) with greater local language proficiency (ChnAus Mean 3.23; SD 1.068 as compared to AusChn Mean 2.58; SD 1.221). In contrast, as displayed in table 4.4, more AusChn had earned a postgraduate degree (37.6% AusChn as compare to 16.2 % ChnAus), with a higher position level percentage (60.6% Managerial/BOD AusChn as compared to 39.5% ChnAus in Managerial / BOD role). The distribution of organizational position status was divergent between the sample groups in that the overwhelming majority of the Australian expatriates in China were managers or board of directors, while most of the Chinese expatriates in Australia were in non-managerial roles.

Meanwhile, there were similarities between the two-way flow samples of expatriates for the demographic variables of gender, marriage status, and prior overseas assignment experience. Both expatriate sample groups had a similar gender distribution (83.5% male AusChn as compared to 83.7% male ChnAus), similar marital status (74.3% married AusChn as compared to 79.1% married ChnAus) and similar prior overseas assignment frequency (AusChn Mean 2.06; SD .597 as compared to ChnAus Mean 2.02; SD .667).
### 4.3.2 Descriptive Statistics for Independent and Dependent Variables

Table 4.5 displays the descriptive statistics for the independent and dependent variables of the overall sample and each of the sample groups respectively.

In the overall sample, among the continuous 7 point-Likert Scale measures for the independent variables, cognitive CQ had the greatest range compared to other individual facet measures for CQ with a minimum of 1.17 and a maximum of 7.00. For the dependent variables (measured from 1 to 7), work adjustment had the greatest range with a minimum of 1.00 and a maximum of 7.00. The psycho-cultural 4 point-Likert Scale measure showed a range from 1.17 to 4.00, with a mean central tendency of 3.05 and a standard deviation of .680. The mean scores for all of the three dependent variables of expatriate socio-cultural adjustment (i.e. work adjustment, general living adjustment, and host country national interaction adjustment) have significantly higher mean scores than the midpoint of the scale, 4.00. The mean score for the variable of psycho-cultural adjustment is also higher than the midpoint of the scale, 2.50.

These results suggest that the sample expatriates felt relatively well adapted to the host country environments both socio-culturally and psycho-culturally. The same tendency applies to each of the subsample groups.
### Table 4.5 Descriptive Statistics for Independent and Dependent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Overall Sample (N=238)</th>
<th>AusChn (n=109)</th>
<th>ChnAus (n=129)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
<td>Mean</td>
</tr>
<tr>
<td>MC_CQ</td>
<td>1.25</td>
<td>7.00</td>
<td>4.99</td>
</tr>
<tr>
<td>COG_CQ</td>
<td>1.17</td>
<td>7.00</td>
<td>4.53</td>
</tr>
<tr>
<td>MOT_CQ</td>
<td>1.60</td>
<td>7.00</td>
<td>4.94</td>
</tr>
<tr>
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*Likert Scale ranges from 1 to 4; all other scales range from 1 to 7. MC_CQ = Meta-cognitive Cultural Intelligence. COG_CQ = Cognitive Cultural Intelligence. MOT_CQ = Motivational Cultural Intelligence. BEH_CQ = Behavioural Cultural Intelligence. WA_SCA = Work Adjustment. GL_SCA = General Living Adjustment. HCN_SCA = Host Country National Interaction Adjustment. PCA = Psycho-Cultural Adjustment.
4.4 Bivariate Analysis

Two sets of bivariate analysis were performed to observe the simple bivariate relationships among the relevant variables in this research.

First, the correlations among dependent variables and independent variables were computed. Then, the relationships between these continuous measures and the remaining control variables were examined via a set of independent sample t-tests comparing various groups on the continuous measures.

Pearson’s Product-Moment Correlational Coefficient and Point Biserial analysis of the relationships among the dependent and independent variables are presented in table 4.6, and full results of correlations among all relevant variables are shown in table 4.7.

### Table 4.6 Pearson Correlational Coefficient Analysis for Independent and Dependent Variables

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<th>Variables</th>
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*Note.* **P < .01. MC_CQ = Meta-cognitive Cultural Intelligence. COG_CQ = Cognitive Cultural Intelligence. MOT_CQ = Motivational Cultural Intelligence. BEH_CQ = Behavioural Cultural Intelligence. WA_SCA = Work Adjustment. GL_SCA = General Living Adjustment. HCN_SCA = Host Country National Interaction Adjustment. PCA = Psycho-Cultural Adjustment.
### Table 4. Pearson Correlational Coefficient and Point Biserial Analysis for All Relevant Variables

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</table>

Note. *P < .05; **P < .01. N = 238; Responses were coded as: Gender [1 = male, 2 = female]; Age [1 = < 30, 2 = 30-39, 3 = 40-49, 4 = 50-59, 5 = > 60]; Marital Status [1 = single, 2 = married]; Spouse Support [1 = Not at all, 2 = A fair amount, 3 = A great deal]; Education [1 = Below Degree; 2 = Bachelor; 3 = Postgraduate]; Position Level [1 = Managerial/BOD, 2 = Non-managerial]; Prior Assignment [1 = 0, 2 = 1-3, 3 = 4-7]; Previous Time in Host Country [1 = < 1 year, 2 = 1-5 years, 3 = 6-10 years, 4 = > 11 years]; Local Language Ability [1 = Inadequate, 2 = Adequate, 3 = Good, 4 = Very Good, 5 = Excellent]; MC_CQ = Meta-cognitive Cultural Intelligence. COG_CQ = Cognitive Cultural Intelligence. MOT_CQ = Motivational Cultural Intelligence. BEH_CQ = Behavioural Cultural Intelligence. WA_SCA = Work Adjustment. GL_SCA = General Living Adjustment. HCN_SCA = Host Country National Interaction Adjustment. PCA = Psycho-Cultural Adjustment.
As the results of analysis demonstrated in table 4.6, each of the individual CQ facets (MC_CQ, COG_CQ, MOT_CQ and BEH_CQ) carries a statistically significant positive relationship with each other and this is consistent with the general CQ scale reliability tests conducted by earlier research (e.g. Ang et al., 2004; Ang et al., 2007; Earley & Ang, 2003; Van Dyne & Ang, 2004).

The independent variables and dependent variables also demonstrated statistically significant positive relationships within their variable groups. MOT_CQ held the highest positive correlation coefficient among the individual CQ facets to adjustment with WA_SCA (r = .743, P < .01), GL_SCA (r = .755, P < .01), HCN_SCA (r = .755, P < .01), and to PCA (r = .494, P < .01). This provides possible preliminary support for hypothesis 3 and 7 developed in the previous chapter. BEH_CQ also positively correlated with statistical significance to WA_SCA (r = .762, P < .01), GL_SCA (r = .732, P < .01), HCN_SCA (r = .754, P < .01), and PCA (r = .447, P < .01).

Finally, the three dependent variables of SCA were statistically significantly related to PCA respectively with WA_SCA (r = .515, P < .01), GL_SCA (r = .542, P < .01), and HCN_SCA (r = .521, P < .01). This means that all of the correlations were statistically significant (P < .01) and positive among the dependent variables, potentially indicating that expatriates who had a tendency to good adjustment in one domain also had a propensity for good adjustment in other domains.
Table 4.7 shows the correlations among all of the variables to be included in the main hypothesis analysis. For the correlation between nominal variables and interval or ratio variables, the calculation of Point Biserial has been performed. Gender was not significantly correlated to any other variables. Age was positively correlated with marital status \((r = .202, p < .01)\), spouse support \((r = .161, p < .05)\), education \((r = .278, p < .01)\), prior overseas assignments \((r = .138, p < .05)\), previous time in host country \((r = .219, p < .01)\), and psychological adjustment \((r = .135, p < .05)\). This implies that older expatriates had more family commitments, received more spouse support, obtained higher level education, had more prior overseas work assignments, spent more time in the host country, and had better psychological adjustment. Age was negatively correlated with home country \((r = -.390, p < .01)\) and position level \((r = -.194, p < .01)\), indicating that the males in the sample tended to be older than the females, and respondents in managerial positions were older than those in non-managerial positions.

Spouse support was positively correlated with marital status \((r = .636, p < .01)\), home country \((r = .141, p < .05)\), previous time in host country \((r = .223, p < .01)\), and all dependent variables (with correlation coefficients range from \(r = .163, p < .05\) to \(r = .386, P < .01\)). This indicates that respondents who had received more spouse support tended to have better socio-cultural and psycho-cultural adjustment in the host country, and that the longer time living in the host country, the more spouse support were needed.
Home country was positively associated with position level ($r = .209$, $p < .01$), demonstrating that majority of expatriates sent from Australia were managers or board of directors, while most of the expatriates from China were in non-managerial roles. Home country was negatively correlated with education ($r = -.174$, $p < .01$), implying that most Australians assigned to China had received higher levels of education.

Education was positively correlated with host country national interaction adjustment ($r = .163$, $p < .05$), and psycho-cultural adjustment ($r = .161$, $p < .05$), indicating that respondents who had received higher levels of education tended to have better socio-cultural interaction adjustment and psycho-cultural adjustment in the host country. Education was negatively correlated with position level ($r = -.161$, $p < .05$), showing that sample expatriates who were in managerial roles had received higher levels of education.

Previous time in the host country was positively associated with work adjustment ($r = .22$, $p < .001$), general living condition adjustment ($r = .25$, $p < .001$), host-country national interaction adjustment ($r = .34$, $p < .001$), and cognitive cultural intelligence ($r = .30$, $p < .001$). This shows that respondents who had been in the host country for a longer period of time had experienced better work adjustment, better general living condition adjustment, better host-country national interaction adjustment, and higher cognitive cultural intelligence. The number of prior overseas assignments was not correlated with any other variables (other than age as noted above).
Importantly, it is noted that these interpretations of pair-wise correlation statistics should be carefully considered, as the results from inferential analysis of bivariate correlation might not hold when a multivariate analysis is undertaken.

4.5 Evaluation of Measurement Model and Confirmatory Factor Analysis

This study intended to employ SEM as the primary analytical tool to analyze data and to test the hypothesized model. This research would need to estimate a number of different models involving multiple theoretical causal relationships, various latent variables and a categorical moderating variable. SEM is appropriate and useful for this research, as it allows simultaneous examination of models that posit a number of causal relationships, and it quantifies data combining regression and factor analysis (Hatcher, 1994; Kline, 2005).

SEM has a two-step procedure: (i) measurement verification and (ii) structural model testing (Anderson & Gerbing, 1988; Byrne, 2010). The verification of the measurement model in this section further addresses the validity and reliability issues of the scale items through confirmatory factor analysis (CFA), and the testing of structural models and causal relationships is discussed in the next section.
4.5.1 Model Modification

Prior to testing the casual relationships and hypothesized paths of the structural model, the measurement model was assessed following Anderson and Gerbing’s (1988) and Byrne’s (2001) approach to SEM.

A series of CFA were conducted through SEM using AMOS 20.0 with maximum likelihood estimation approach to assess the relationships between the latent variables in the measurement model. This study employed maximum likelihood estimation during CFA as the method of parameter estimation, because it chooses the parameters most likely to have generated the data, and it is the most commonly employed technique when the sample size is greater than 100 (Ding, Velicer, & Harlow, 1995).

All factors were allowed to co-vary in the measurement model, and items were allowed to load onto their corresponding latent factors. Goodness-of-fit measures and validity and reliability thresholds (summarized in chapter three table 3.5) have been used to check the measurement models.

Initially, five first-order latent variables, and one second-order latent variable with a total of 46 indicators were used to conduct CFA. The resulting model fit statistics (chi-square $\chi^2 = 2595.5$, df = 975; RMSEA = .084, IFI = .884, TLI = .877, CFI = .884) indicated that the measurement model did not fit the data quite well.
The model fit indices can be revised by investigating factor loadings, modification indices (MI), and the normalized residuals (Byrne, 2010; Hair et al., 2010). Specifically, it is suggested that, first, low standardized factor loadings, high modification indices, and high-standardized residuals should be examined to develop an acceptable model (Hair, et al., 2010). Large values of normalized residuals greater than +/- 1.96 signify problematic covariances (Joreskog & Sorbom, 1993). Standardized item factor loadings of observed variables should be between .63 or preferably .70, and 1.0 to indicate that constructs could explain 40% of the variance of the corresponding items (Hair et al., 2010; Tabachnick & Fidell, 2007). Second, modification indices between pairs of correlated error terms that exceed 20 need attention (Ang, et al., 2006).

The examination of residuals, loadings and modification indices suggested the removal of seven indicators: PCA1 (“overcome difficulties”); PCA3 (“feeling unhappy and repressed”); PCA6 (“lost sleep over worry”); PCA7 (“thinking of oneself as a worthless person”); PCA11 (“constantly under strain”); PCA12 (“losing confidence in oneself”); and MOT2 (“I enjoy living in cultures that are unfamiliar to me”).

These indicators were dropped in sequence one by one and re-runs were performed, resulting in a comparatively better fit indices in each run, and finally an acceptable model fit was achieved (chi-square = 1420.6; df = 681; p = .000; chi-square/df = 2.08; NFI = .941; IFI = .936; CFI = .941; RMSEA = .068).
Parameter estimates of the final model were inspected, and neither large standardized residual covariances nor problematic modification indices were identified. Further checks of possible removing or combining alternatives did not yield better model fit indices. Therefore, further modification was considered unnecessary.

4.5.2 Construct Reliability and Validity Testing

CFA permits the assessment of construct reliability, convergent validity and discriminant validity of each latent construct and helps determine the extent to which the proposed covariance matches the observed covariance (Byrne, 2010).

Table 4.8 reports the loadings of each indicator, i.e. their reliability measure of their corresponding factors. Coefficients from latent variables to their corresponding indicators were from .654 to .979 (P < .05) within the range of .63 to 1.00 (Hair et al., 2010; Tabachnick & Fidell, 2007), indicating there should be no convergent validity issues. Each item has a loading greater than .70 onto its specified factor, except for COG 5 loaded .654 and GL7, .694. Although some researchers (e.g. Baker & Sinkula, 2005) suggest the value of the factor loadings should be greater than .70, trials of dropping these items failed to improve the overall model fit, and it was preferable to use as many of the scale items. Thus, these two items were retained as they were still above the .63 threshold (Hair et al., 2010; Kline, 2005; Tabachnick & Fidell, 2007).
Table 4.8 also reports the internal consistency (Cronbach’s alpha) calculated in SPSS 20.0 for the latent variables in the final modified CFA model. As seven indicators were eliminated, Cronbach’s alpha of each subscale was calculated again. The resulting values ranged between .856 and .965, well above the threshold level of .70 for the reliability criterion in the field of social science. Some may argue that Cronbach’s alpha higher than .95 is problematic, as high degree of internal consistency suggests the survey must be uni-dimensional rather than multi-dimensional. In fact, this argument is unjustified. Consistency and dimensionality should be measured separately, because internal consistency is a form of reliability whereas dimensionality is related with construct validity (Yu, 2012). That is, reliability is a necessary, but not a sufficient condition, for validity. A uni-dimensional test will display internal consistency, but an internally consistent test does not necessarily entail one construct (Gardner, 1996). Cronbach’s alpha measures common variance shared by scale items, and it could be high when each scale item shares variance with at least some other items, but it does not have to share variance with all other items (Gardner, 1996).

Therefore, a high Cronbach’s alpha does not necessarily indicate one dimension, and internal consistency should not be a problem for the scales in use. In addition, AVE values (.731-.887) are all above .50 threshold, confirming good convergent reliability (Fornell & Larcker, 1981).
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<td>BEH5</td>
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<td></td>
<td>WA1</td>
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<td>WA3</td>
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<td>.914</td>
<td>.835</td>
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<td>Socio-cultural General Living Adjustment (GL_SCA)</td>
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<td></td>
<td>GL1</td>
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<td>GL7</td>
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<td>Socio-cultural Host Country National Interaction Adjustment (HCN_SCA)</td>
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<td></td>
<td>HCN1</td>
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<td></td>
<td>HCN4</td>
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<td>.910</td>
<td>.828</td>
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<tr>
<td>Psycho-Cultural Adjustment (PCA)</td>
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</tr>
<tr>
<td></td>
<td>PCA2</td>
<td></td>
<td>.764</td>
<td>.584</td>
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<td>PCA4</td>
<td></td>
<td>.846</td>
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<td>PCA5</td>
<td></td>
<td>.813</td>
<td>.661</td>
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<td>PCA8</td>
<td></td>
<td>.929</td>
<td>.863</td>
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<td></td>
<td>PCA9</td>
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<td>.912</td>
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<tr>
<td></td>
<td>PCA10</td>
<td></td>
<td>.924</td>
<td>.854</td>
</tr>
</tbody>
</table>

Note. * Squared Multiple Correlations. ** Average Variance Extracted. MC = Meta-cognitive Cultural Intelligence. COG = Cognitive Cultural Intelligence. MOT = Motivational Cultural Intelligence. BEH = Behavioural Cultural Intelligence. WA = Work Adjustment. GL = General Living Adjustment. HCN = Host Country National Interaction Adjustment. PCA = Psycho-Cultural Adjustment
This study utilizes two testing methods to assess discriminant validity: (i) investigating the difference between the squared root of average variance extracted (AVE) and the correlations for all pairs of constructs (Fornell & Larcker 1981); and (ii) in examining the discriminant validity of the CQ construct, as recommended by recent CQ researchers (e.g. Bucker, et al., 2011; Perrinjaquet, et al., 2007). Models of CQ should be examined using chi-square difference tests (Anderson & Gerbing, 1988; Hair et al., 2010), rather than testing the four dimensions of CQ separately, which allows the discriminant validity of the four CQ dimensions to be examined. First, comparison has been made between the square root of AVE and the correlations for all pairs of constructs (Fornell & Larcker 1981). Figures in table 4.9 show that the square root of the AVE value of each construct exceeds the intercorrelations with its other constructs in the model, confirming discriminant validity (Fornell & Larcker, 1981).

Table 4.9: Correlation Matrix for Latent Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>MC_CQ</th>
<th>COG_CQ</th>
<th>MOT_CQ</th>
<th>BEH_CQ</th>
<th>SCA</th>
<th>PCA</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC_CQ</td>
<td>.905</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.98</td>
<td>1.54</td>
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<tr>
<td>COG_CQ</td>
<td>.715**</td>
<td>.855</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.53</td>
<td>1.42</td>
</tr>
<tr>
<td>MOT_CQ</td>
<td>.863**</td>
<td>.792**</td>
<td>.919</td>
<td></td>
<td></td>
<td></td>
<td>5.00</td>
<td>1.50</td>
</tr>
<tr>
<td>BEH_CQ</td>
<td>.870**</td>
<td>.721**</td>
<td>.900**</td>
<td>.911</td>
<td></td>
<td></td>
<td>4.96</td>
<td>1.47</td>
</tr>
<tr>
<td>SCA</td>
<td>.767**</td>
<td>.676**</td>
<td>.831**</td>
<td>.822**</td>
<td>.915</td>
<td></td>
<td>5.01</td>
<td>1.52</td>
</tr>
<tr>
<td>PCA</td>
<td>.419**</td>
<td>.424**</td>
<td>.476**</td>
<td>.414**</td>
<td>.500**</td>
<td>.875</td>
<td>2.87</td>
<td>.92</td>
</tr>
</tbody>
</table>

*Note: **p < .01. Square root of AVE on the diagonal. MC_CQ = Meta-cognitive Cultural Intelligence. COG_CQ = Cognitive Cultural Intelligence. MOT_CQ = Motivational Cultural Intelligence. BEH_CQ = Behavioural Cultural Intelligence. SCA = Socio-cultural Adjustment. PCA = Psycho-Cultural Adjustment.*

The results demonstrate discriminant validity between the four CQ factors: the square root of AVEs (.855-.919) exceeded the corresponding correlations among CQ factors (.715-.900). The results also support discriminant validity between CQ and other constructs: the square root of
AVEs for each CQ factor (.855-.919) exceeded the correlations of the CQ factors with socio-cultural adjustment (.676-.831) and psycho-cultural adjustment (.414-.500). This provides evidence of discriminant validity of the four CQ factors as well as discriminant validity of CQ compared with other socio-cultural and psycho-cultural adjustment constructs.

Second, testing alternative CQ models rather than testing the four CQ dimensions separately allows the discriminant validity of the four dimensions to be examined during CFA. Therefore, the chi-square difference tests are further conducted to test the construct validity, in which the fit of the hypothesized six-factor model was compared with several alternative models (table 4.10).

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\chi^2/df$</th>
<th>$\Delta \chi^2_\text{diff}$</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>1420.6***</td>
<td>681</td>
<td>2.08</td>
<td>0</td>
<td>.942</td>
<td>.068</td>
</tr>
<tr>
<td>Six-Factor Model (MC, COG, MOT, BEH, SCA, PCA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td>2249.0***</td>
<td>686</td>
<td>3.27</td>
<td>1.19</td>
<td>.877</td>
<td>.098</td>
</tr>
<tr>
<td>Five-Factor Model (MC, COG, MOT, BEH, SCA+PCA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td>2376.5***</td>
<td>692</td>
<td>3.43</td>
<td>1.35</td>
<td>.868</td>
<td>.101</td>
</tr>
<tr>
<td>Four-Factor Model (MC+MOT+BEH, COG, SCA, PCA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 4</td>
<td>2166.3***</td>
<td>690</td>
<td>3.14</td>
<td>1.06</td>
<td>.884</td>
<td>.095</td>
</tr>
<tr>
<td>Four-Factor Model (MC+COG, MOT+BEH, SCA, PCA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 5</td>
<td>2337.6***</td>
<td>692</td>
<td>3.37</td>
<td>1.29</td>
<td>.871</td>
<td>.100</td>
</tr>
<tr>
<td>Three-Factor Model (MC+COG+MOT+BEH, SCA, PCA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 6</td>
<td>3156.8***</td>
<td>694</td>
<td>4.54</td>
<td>2.46</td>
<td>.806</td>
<td>.122</td>
</tr>
<tr>
<td>Two-Factor Model (MC+COG+MOT+BEH, SCA+PCA)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 7</td>
<td>3661.8***</td>
<td>694</td>
<td>5.27</td>
<td>3.19</td>
<td>.767</td>
<td>.134</td>
</tr>
</tbody>
</table>

As demonstrated in table 4.10, the results showed the six-factor model (model 1) presented a better fit compared to:

(i) a five factor model (model 2) that combined CCA factors (i.e. SCA and PCA) ($\Delta\chi^2 (686-681=5, N=238)=828.4$, $P < .001$; RMSEA = .098; CFI = .877);

(ii) a four-factor model (model 3) that combined meta-cognitive CQ, motivational CQ, and behavioural CQ ($\Delta\chi^2 (692-681=11, N=238)=955.9$, $P < .001$; RMSEA = .101; CFI = .868);

(iii) a four factor model (model 4) combining meta-cognitive CQ with cognitive CQ, and combining motivational CQ with behavioural CQ (cf. Bucker et al.’s (2011) two-factor CQ model) ($\Delta\chi^2 (690-681=9, N=238)=745.7$, $P < .001$; RMSEA = .095; CFI = .884);

(iv) a three factor model (model 5) combining meta-cognitive CQ, cognitive CQ, motivational CQ with behavioural CQ, and combining SCA with PCA ($\Delta\chi^2 (692-681=11, N=238)=917.0$, $P < .001$; RMSEA = .100; CFI = .871);

(v) a two factor model (model 6) combining all CQ factors (i.e. meta-cognitive CQ, cognitive CQ, motivational CQ, and behavioural CQ), and combining all CCA factors (i.e. SCA and PCA) ($\Delta\chi^2 (694-681=13, N=238)=1736.2$, $P < .001$; RMSEA = .122; CFI = .806); and finally

(vi) a one factor model (model 7) where all items were loaded on a single factor ($\Delta\chi^2 (694-681=13, N=238)=2241.2$, $P < .001$; RMSEA = .134; CFI = .767). The alternative models (models 2, 3, 4, 5, 6, 7) returned a significantly higher $\Delta\chi^2$/df than the proposed six-factor model in each case respectively.
The results confirm the four-dimensional CQ model advanced by Earley and Ang (2003), and reject the two-dimensional CQ model proposition in Bucker et al. (2011). Overall, the latent variables in the proposed model were significantly different with a confidence interval of 99%. The fit indices of the nested models showed that meta-cognitive CQ, cognitive CQ, motivational CQ, behavioural CQ, SCA and PCA were distinct constructs. This means the hypothesized correlation between the variables on the corresponding factor possessed discriminant validity. In addition, correlations higher than .85 are accepted if the constructs have been theoretically supported to be distinct from each other (Hair, Anderson, Tatham & Black, 1998). The finalized measurement model demonstrated construct reliability and validity with six first-order variables, two second-order variables, and a total of 39 indicators (seven indicators were dropped).

4.6 Tests of Hypothesized Structural Models and Interpretation of Results

As the appropriate dataset and model have been identified through preliminary analysis and measurement verification, attention is now given to the overall goodness-of-fit statistics, hypotheses testing and path analysis.

4.6.1 Overall Goodness-of-Fit for the General Model

The hypothesized structural model (figure 3.1) was assessed next utilizing the refined constructs and variables. The goodness-of-fit statistics showed that the structural model fit the data reasonably well (chi-square $\chi^2=1431.0$, df =682; chi-square/df = 2.09; RMSEA = .068,IFI = .941, TLI = .936, CFI = .941), and all of the items loaded significantly onto their proposed factors in
the first run. Therefore, the second run of the hypothesized model proceeded with the evaluation of the overall fit of the full structural model. All the control variables and the demographic-related construct of position levels were added such that they were allowed to correlate with the exogenous independent variables, and to predict the endogenous variables of socio-cultural and psycho-cultural adjustment. The model yielded satisfactory fit indices with improved chi-square/df \( (\Delta \chi^2_{64} \text{diff} = 383.8) \) and improved RMSEA value (chi-square \( \chi^2 = 1814.8 \), df = 946; chi-square/df = 1.92; RMSEA = .062, IFI = .935, TLI = .924, CFI = .934). A summary of the overall goodness-of-fit statistics for the revised measurement model and structural models is presented in Table 4.11.

Table 4.11 Summary of Goodness-of-Fit Statistics for the Measurement Model and Structural Models

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>( \chi^2/df )</th>
<th>CFI</th>
<th>RMSEA</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Measurement Model</td>
<td>1420.6***</td>
<td>681</td>
<td>2.08</td>
<td>.941</td>
<td>.068</td>
<td>-</td>
</tr>
<tr>
<td>Hypothesized Model 1</td>
<td>1431.0***</td>
<td>682</td>
<td>2.09</td>
<td>.941</td>
<td>.068</td>
<td>-</td>
</tr>
<tr>
<td>Hypothesized Model 2</td>
<td>1814.8***</td>
<td>946</td>
<td>1.92</td>
<td>.934</td>
<td>.062</td>
<td>( \Delta \chi^2_{64} \text{diff} = 383.8 )</td>
</tr>
</tbody>
</table>


Table 4.12 presents the regression weights for each variable in hypothesized structural model 1 (before adding in control variables) and hypothesized structural model 2 (after adding in control variables). The categorical moderating variable was added and further tested in later moderation analysis.
Table 4. 12 Comparison of Regression Weights in Hypothesized Structural Models 1 and 2

<table>
<thead>
<tr>
<th>Paths</th>
<th>Regression Weights Before Accounting for Control Variables (Hypothesized Structural Model 1)</th>
<th>Regression Weights After Accounting for All Control Variables (Hypothesized Structural Model 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path</td>
<td>Estimate</td>
<td>S.E.</td>
</tr>
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<tr>
<td>SCA &lt;-- COG</td>
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<td>.068</td>
</tr>
<tr>
<td>SCA &lt;-- MOT</td>
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<td>.123</td>
</tr>
<tr>
<td>SCA &lt;-- BEH</td>
<td>.341**</td>
<td>.118</td>
</tr>
<tr>
<td>SCA &lt;-- Age</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SCA &lt;-- Gender</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SCA &lt;-- Spouse Support</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SCA &lt;-- Education</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SCA &lt;-- Position Level</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SCA &lt;-- Prior Assignment</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SCA &lt;-- Time Host</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SCA &lt;-- Local Language</td>
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</tr>
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<td>PCA &lt;-- MC</td>
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<td>PCA &lt;-- COG</td>
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<td>.068</td>
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<tr>
<td>PCA &lt;-- MOT</td>
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<td>.123</td>
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<tr>
<td>PCA &lt;-- BEH</td>
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<td>.118</td>
</tr>
<tr>
<td>PCA &lt;-- Age</td>
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<td>PCA &lt;-- Gender</td>
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<td>PCA &lt;-- Spouse Support</td>
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</tr>
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<td>PCA &lt;-- Education</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>PCA &lt;-- Position Level</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>PCA &lt;-- Prior Assignment</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>PCA &lt;-- Time Host</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>PCA &lt;-- Local Language</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. *P < .05. **P < .01. ***P < .001. MC = Meta-cognitive Cultural Intelligence. COG = Cognitive Cultural Intelligence. MOT = Motivational Cultural Intelligence. BEH=Behavioural Cultural Intelligence. SCA = Socio-Cultural Adjustment. PCA = Psycho-Cultural Adjustment. Gender [1= male, 2 = female], Age [1 = < 30, 2 = 30-39, 3 = 40-49, 4 = 50-59, 5 = > 60], Marital Status [1 = Single, 2 = Divorced, 3 = De Facto, 4 = Married], Spouse Support [1 = Not at all, 2 = A fair amount, 3 = A great deal], Education [1= Below Degree; 2 = Bachelor; 3 = Postgraduate], Position Level [1 = Managerial/BOD, 2 = Non-managerial], Prior Assignment [1 = 0, 2 = 1-3, 3 = > 4], Time Host = Previous Time in Host Country [1 = < 1 year, 2 = 1-5 years, 3 = 6-10 years, 4 = > 11 years], Local Language Ability [1 = Inadequate, 2 = Adequate, 3 = Good, 4 = Very Good, 5 = Excellent].
4.6.2 Causal Relationship Testing and Interpretation of Results

In testing for significance of the estimated path coefficients (\(\beta\)), the critical ratio (CR) (equivalent to t-value) and p-value were used as the basis of assessment criterion. Some researchers (Known & Suh, 2004) use p-value < .10 as an acceptable cut-off point. Following Byrne (2010) and Hair et al. (2010), to accept a hypothesis in this study, the standard threshold limits of CR and p-value were set at \(\geq 1.967\) significant at \(p < .05\) level, \(\geq 2.567\) significant at \(p < .01\) level, and \(\geq 3.758\) significant at \(p < .001\) level, respectively. It is noted that the use of a stricter and smaller p-value threshold for accepting individual hypothesis represents more robustness of the test result, and is thus preferred for supporting hypotheses.

Ten research hypotheses were proposed and tested for the causal relationships and moderation effect. The first eight hypotheses deal with the causal relationships between CQ and CCA constructs, and the last two hypotheses deal with the CDA moderation effect on CCA. Test results, along with relevant path coefficients and fit indices, are reported and discussed below.

4.6.2.1 Hypothesis 1: Meta-cognitive Cultural Intelligence and Socio-Cultural Adjustment

The first hypothesis of this study is: Meta-cognitive CQ is positively related to socio-cultural adjustment.

It was expected that individuals with higher levels of meta-cognitive CQ would be more culturally conscious and better aware of the existence of any
social support available in a new cultural environment, and such people could better adjust to both work and non-work environments in the host country. Table 4.13 shows the results of the analysis performed to test this hypothesis. The SEM analysis showed the relationship was not statistically significant. The regression weights were not statistically significant both before and after accounting for control variables. After accounting for control variables in the finalized model, the insignificant standardized path coefficient ($\beta = -.015$, $p = .853 > .05$, and $t = -.185 < 1.967$) indicated that meta-cognitive cultural intelligence was not statistically significant as a predictor of socio-cultural adjustment. Therefore, the first hypothesis of this study was not supported.

This result appears to imply that while greater meta-cognitive abilities may facilitate expatriates’ adjustment processes to new cultural environments, it is not a crucial prerequisite for socio-cultural adjustment outcomes. Particularly, explanations for the insignificant test result can be found in the theoretical observation noted by Earley and Peterson (2004, p. 106) such that “awareness does not guarantee flexibility”, as well as comment made by Ang et al. (2007, p. 342) such that “cognitive capabilities do not necessarily translate into actions and behaviours”. This means good planning, self-monitoring, recognizing cognitive strategies and knowing how to behave are insufficient for good socio-cultural adjustment outcomes in culturally diverse environments.

Further, according to Earley (2002), to exert culturally appropriate
behaviours, it is also necessary to incorporate expatriates’ motivation or their willingness to reformulate their self-concept and give up pre-determined conceptualizations of how and why they function as they do. This means that lowly motivated expatriates with high-level meta-cognitive abilities may still fail the adjustment process.

To sum, the result seems to present empirical support for Earley and Peterson’s (2004) observation, showing that meta-cognitive CQ is not a significant predictor of socio-cultural adjustment. This further confirms Ang et al.’s (2007) comment that higher-order cognitive capabilities (e.g. questioning assumptions, adjusting mental models, and rich cultural knowledge schemas) do not necessarily ensure that proper actions and behaviours can be or indeed will be carried out under new cultural circumstances.

**4.6.2.2 Hypothesis 2: Cognitive Cultural Intelligence and Socio-Cultural Adjustment**

The second hypothesis is: *Cognitive CQ is positively related to socio-cultural adjustment.*

The model analysis did not support the hypothesized positive relationship between cognitive CQ and socio-cultural adjustment ($\beta = .049, p = .391 > .05, \text{ and } t = .857 < 1.967$). The result contradicts with Ramalu et al. (2011) in showing that cognitive CQ is not a significant predictor of socio-cultural adjustment. The findings of the present study suggest that an individual with higher levels of cognitive CQ does not necessarily experience better socio-
cultural adjustment.

The most prevailing explanation for this result would be that cognitive capabilities do not necessarily result in effective work and non-work adjustment actions and behaviours (Ang et al., 2007). Knowledge itself does not guarantee proper behavioural outcomes in a new cultural environment. Being knowledgeable about cultures may assist, yet cannot automatically ensure the application of the cultural knowledge, as “awareness does not guarantee flexibility” (Earley & Peterson, 2004, p. 106). Hall’s (1993) study on overseas expatriates also shows that cognitive training failed to significantly improve cultural adjustment.

In addition, successful socio-cultural adjustment may not contribute to the knowledge base and improve cognitive CQ levels as much as stumbled or failed socio-cultural adjustment would do. Early failures and previous failed experiences in the adjustment process make significant contributions to expatriates’ knowledge pool towards target cultures (Ang et al., 2007) and thereby expatriates’ cognitive CQ is likely to be enhanced through learning from failed cross-cultural adjustment. As a result, cognitive cultural intelligence and socio-cultural adjustment may not have a significant positive relationship.
4.6.2.3 Hypothesis 3: Motivational Cultural Intelligence and Socio-Cultural Adjustment

The third hypothesis is: Motivational CQ is positively related to socio-cultural adjustment.

As expected, the test result reveals a strong positive influence of motivational CQ for developing socio-cultural adjustment ($\beta = .286$, $p = 0.011 < .05$, and $t = 2.556 > 1.967$ significant at $p < .05$ level). The strong relationship between motivational CQ and socio-cultural adjustment in hypothesis 3 is validated and is in line with the results in the majority of earlier studies (e.g. Ang et al., 2007; Templer et al., 2006; Ward et al., 2009; Williams, 2008).

The result implies that the greater the motivational CQ the better socio-cultural adjustment (including general living, work adjustment, and host country national interaction adjustment) will be. It is demonstrated that expatriates who are more motivated to discover and experience diverse cultures will be flexible individuals who are less offensive to others and thus more likely to fit in and better adjust to work and non-work situations.

Higher levels of motivational CQ also represent greater self-confidence and self-efficacy, better maintenance of norms and values, and clearer goal-setting (Ang et al., 2007; Earley, 2002). Such qualities of expatriates will bring about better and quicker adjustment into new or unfamiliar work, life, and social demands in foreign assignments, and will survive better after experiencing early failures.
4.6.2.4 Hypothesis 4: Behavioural Cultural Intelligence and Socio-Cultural Adjustment

The fourth hypothesis is: \textit{Behavioural cultural intelligence is positively related with socio-cultural adjustment.}

The effect of behavioural CQ on socio-cultural adjustment was also statistically significant ($\beta = .300$, $p = .003 < .01$, and $t = 2.986 > 2.567$ significant at .01 level). This result is consistent with the findings of Ang et al. (2007), but contradicts with Ramalu et al.’s (2011) study. Ramalu et al. (2011) found a negative relationship between behavioural cultural intelligence and socio-cultural adjustment on samples of global expatriates working in Malaysia. The result of current study confirms Ang et al.’s (2007) study and indicates that individuals who had higher levels of behavioural cultural intelligence tended to have better socio-cultural adjustment, supporting the fourth hypothesis.

According to Thomas and Inkson (2004, p. 15) individuals need to ensure “a well-developed repertoire of behaviours” so that they may have the scope to choose appropriate behaviours from this repertoire (i.e. high behavioural CQ) and to exert culturally appropriate behaviours in new cultural circumstances with ease and comfort (i.e. better socio-cultural adjustment outcomes). Because socio-cultural adjustment represents an individual’s sense of “fitting in” to work and non-work situations, those who are sufficiently flexible to adapt their verbal and nonverbal behaviours to new cultural circumstances, are more likely to have better self-presentation.
Better self-presentation then, is likely to lead to positive impressions, less intercultural misunderstandings, and better intercultural relationships in the host environment (Goffman, 1959; Gudykunst, Ting-Toomey, & Chua, 1988), and thereby direct behaviour to better socio-cultural adjustment.

4.6.2.5 Hypothesis 5: Meta-cognitive Cultural Intelligence and Psycho-Cultural Adjustment

The fifth hypothesis is: *Meta-cognitive CQ is positively related to psycho-cultural adjustment.*

Hypothesis 5 predicted that expatriate meta-cognitive CQ would be positively related to their psycho-cultural adjustment in the host cultural environment. The model analysis did not support this positive relationship ($\beta = .034, p = .816 > .05$, and $t = -.232 < 1.967$).

The non-significance of the relationship indicates that having conscious or unconscious awareness of various cross-cultural situations does not ensure a good emotional state. The result provides empirical support and furthers Ang et al.’s (2007) proposition in that cognitive capability does not necessarily translate into actions, neither does it automatically produce positive psychological outcome.

Expatriates who have higher levels of meta-cognitive CQ may still encounter great psychological stress. Their psycho-cultural comfort when adapting to new cultural environment may possibly not be greatly affected by the higher-order cognitive processes.
4.6.2.6 Hypothesis 6: Cognitive Cultural Intelligence and Psycho-Cultural Adjustment

The sixth hypothesis is: Cognitive CQ is positively related to psycho-cultural adjustment.

The result lacks statistically significant evidence to accept the prediction. The effects of cognitive cultural intelligence on psycho-cultural adjustment ($\beta = .103, p = .330 > .05$, and $t = .973 < 1.967$) did not reach the .05 level of statistical significance. Therefore, the sixth hypothesis of this study was not supported.

Cognitive abilities does not relate to psycho-cultural adjustment to a new culture. This means knowledge capabilities towards the target cultures is not sufficient condition for developing psychological wellbeing.

4.6.2.7 Hypothesis 7: Motivational Cultural Intelligence and Psycho-Cultural Adjustment

The seventh hypothesis is: Motivational CQ is positively related to psycho-cultural adjustment.

The link between motivational CQ and psycho-cultural adjustment has been found to be in the expected positive direction ($\beta = .447, p = .030 < .05$, and $t = 2.168 > 1.967$ significant at .05 level), leading to support of Hypothesis 7.

This result is consistent with the findings of prior empirical studies reported
in Ang et al. (2007) and Williams (2008). Notably, motivational CQ is the only dimension of cultural intelligence that was found to be significantly related to both socio-cultural and psycho-cultural adjustment in the current study. This implies the importance of motivational CQ in affecting expatriates’ psycho-cultural adjustment while interacting with people in host country environment.

Therefore, it is confirmed in the current study that expatriates who are highly efficacious in their cross-cultural interactions, and who have clear aims and possess higher levels of motivation to explore new cultures will result in experiencing better emotional state, and thus greater psycho-cultural adjustment.

4.6.2.8 Hypothesis 8: Behavioural Cultural Intelligence and Psycho-Cultural Adjustment

The eighth hypothesis is: Behavioural cultural intelligence is positively related to psycho-cultural adjustment.

Despite of the prediction that behavioural CQ predicts overall wellbeing of expatriates, the results showed that the relationship between behavioural CQ and psycho-cultural adjustment was non-significant ($\beta = .002, p = .991 > .05$, and $t = .012 < 1.967$), prompting rejection of Hypothesis 8. The results showed that behavioural CQ was positively related to socio-cultural adjustment, but not psycho-cultural adjustment in this study. Whereas the findings in Ang et al. (2007) reported positive relationship between
behavioural CQ and wellbeing, the current study found behavioural CQ has no bearing on psycho-cultural adjustment.

While the reason for the insignificant result is unclear and elusive, it is beneficial to take notice of the following observations drawn from the literature. First, the positive relationship between behavioural CQ and psycho-cultural adjustment may not exist when expatriates employ mimicry excessively rather than exerting true adaptive behaviours. Earley and Peterson (2004, p. 109) explained the important potential effect of mimicry on high-level behavioural CQ: “Mimicry is subtle and often subconscious, but it results in generally positive effects in a social encounter. A high CQ person is a talented mimic who uses mimicry in moderate doses”.

Nevertheless, mimicry is potentially subtle and often subconscious, and is thus hard to consciously control its “doses” (Chartrand & Bargh, 1999). This implies that working on mimicry can suggest effective mimicking of someone else’s behaviour, but this may not always lead to rising satisfaction with the interaction if the “doses” are not right. That is, the capability to present a flexible range of behaviours, such as modelling the mannerisms and posturing proper behaviours in a new culture does not necessarily represent individuals’ psycho-cultural comfort. In other words, behaviours can be exerted out of high mimicry techniques of doing so without psychological comfort of doing so based on the theory of rationalization.
In addition, indications have been made by Thomas and Ravlin (1995) that high levels of mimicry presented by actors in new cultural environments are often regarded as artificial, insincere or even devious. When expatriates engage in mimicry rather than truly adaptive behaviours based on proper understanding and respect for different cultures, they may be subject to psychological unease and discomfort in simply “acting out” mimicry behaviours. Mimicry may result in a certain level of denial or rejection from the interlocutors (Chartrand & Bargh, 1999). There are situations when mere mimicry fails to function as cross-cultural communication cues, or behaviours adopted through mimicry are misinterpreted and misleading, and thus generates unstable emotional reactions. The rejection in cross-cultural relationships in turn may generate negative emotions that affect expatriates’ psycho-cultural adjustment to various aspects of new intercultural environments.

To sum, there are certain observations in the literature that indicate behavioural CQ does not automatically predict psycho-cultural adjustment, and results demonstrate that behavioural CQ only plays a minor role, if any, on psycho-cultural adjustment.

The SEM testing of the causal relationships for the first eight hypotheses is summarized in table 4.13.
Table 4. 13 Structural Equation Modelling: H1 to H8 Hypotheses Testing

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Paths</th>
<th>Estimates</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$\beta$</td>
<td>C.R.(t)</td>
</tr>
<tr>
<td><strong>H1</strong>: Meta-cognitive CQ is positively related to socio-cultural adjustment.</td>
<td>MC -&gt; SCA</td>
<td>-.015</td>
<td>-.185</td>
</tr>
<tr>
<td><strong>H2</strong>: Cognitive CQ is positively related to socio-cultural adjustment.</td>
<td>COG -&gt; SCA</td>
<td>.049</td>
<td>.857</td>
</tr>
<tr>
<td><strong>H3</strong>: Motivational CQ is positively related to socio-cultural adjustment.</td>
<td>MOT -&gt; SCA</td>
<td>.286*</td>
<td>2.556</td>
</tr>
<tr>
<td><strong>H4</strong>: Behavioural CQ is positively related to socio-cultural adjustment.</td>
<td>BEH -&gt; SCA</td>
<td>.300**</td>
<td>2.986</td>
</tr>
<tr>
<td><strong>H5</strong>: Meta-cognitive CQ is positively related to psycho-cultural adjustment.</td>
<td>MC -&gt; PCA</td>
<td>-.034</td>
<td>-.232</td>
</tr>
<tr>
<td><strong>H6</strong>: Cognitive CQ is positively related to psycho-cultural adjustment.</td>
<td>COG -&gt; PCA</td>
<td>.103</td>
<td>.973</td>
</tr>
<tr>
<td><strong>H7</strong>: Motivational CQ is positively related to psycho-cultural adjustment.</td>
<td>MOT -&gt; PCA</td>
<td>.447*</td>
<td>2.168</td>
</tr>
<tr>
<td><strong>H8</strong>: Behavioural CQ is positively related to psycho-cultural adjustment.</td>
<td>BEH -&gt; PCA</td>
<td>.002</td>
<td>.012</td>
</tr>
</tbody>
</table>

** Results supported at the significance level of P < .01. * Results supported at the significance level of P < .05.
4.6.3 Tests of CDA Moderation Effect and Interpretation of Results

The moderator variable of cultural distance asymmetry and two relevant hypotheses are addressed in this section.

The ninth hypothesis is: *The relationship between CQ and cross-cultural adjustment strengthens or weakens as the direction of cultural flow changes;* and

The tenth hypothesis is: *The relationship between position level and cross-cultural adjustment strengthens or weakens as the direction of cultural flow changes.*

The moderating effects of CDA on two sets of relationships were assessed to determine whether significant differences exist across groups, including the relationships between CQ and cross-cultural adjustment, and the relationships between organizational position status and cross-cultural adjustment. A specific discussion of the testing is provided below.

As a final step, a categorical moderating variable was added in the analysis for the purpose of testing the moderation effects of cultural distance asymmetry. The moderating variable proposed in this study is cultural distance asymmetry, represented by the direction of cultural flows for each of the two cultural groups. The moderating cultural group variable is thus employed to split the sample into cultural groups and facilitate multiple group analysis.
The demography-related position level variable was constructed to be used within the multiple group analysis: (i) the manager subgroup (those who have more responsibilities and supervises the normal non-manager employee, including board of directors and individuals in managerial roles, with a total number of 117); and (ii) the non-manager subgroup (those who answer to all higher authorities and have no subordinates, with a total number of 121). The position level variable was not used to split the sample, but was employed within the multiple group analysis for further testing the cultural group effects on construct of position status and cross-cultural adjustment.

Following Byrne (2010), a series of multiple group analysis in AMOS was conducted accordingly to assess the moderator variable effects on the structural model by comparing the sample groups.

In this study, the procedure of testing moderating effect was performed using a three-step approach suggested by Hsieh (2010). Alternative increasingly nested structural models were estimated that progress from totally unconstrained estimates to totally constrained estimates for the cultural groups (see table 4.14).

The first model is an unconstrained model in which path coefficients were allowed to vary across sample groups, and the last model is a fully constrained model. Other models in between are partially constrained.
## Table 4.14 Testing for Multi-group Invariance: Model Fit Comparison

<table>
<thead>
<tr>
<th>Model</th>
<th>NPAR</th>
<th>CMIN</th>
<th>DF</th>
<th>P</th>
<th>CMIN/DF</th>
<th>IFI</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>Constrained Estimates</th>
<th>Δχ² Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unconstrained</td>
<td>458</td>
<td>3352.653</td>
<td>1892</td>
<td>.000</td>
<td>1.772</td>
<td>.900</td>
<td>.883</td>
<td>.898</td>
<td>.057</td>
<td>-</td>
<td>Acceptable fit</td>
</tr>
<tr>
<td>Model 1</td>
<td>429</td>
<td>3377.092</td>
<td>1921</td>
<td>.000</td>
<td>1.758</td>
<td>.900</td>
<td>.885</td>
<td>.898</td>
<td>.057</td>
<td>MW</td>
<td>$Δχ² = 24.439$, insignificant**</td>
</tr>
<tr>
<td>Model 2</td>
<td>407</td>
<td>3452.031</td>
<td>1947</td>
<td>.000</td>
<td>1.773</td>
<td>.896</td>
<td>.883</td>
<td>.895</td>
<td>.057</td>
<td>MW, MI</td>
<td>$Δχ² = 99.378$, significant*</td>
</tr>
<tr>
<td>Model 3</td>
<td>390</td>
<td>3489.278</td>
<td>1960</td>
<td>.000</td>
<td>1.780</td>
<td>.894</td>
<td>.882</td>
<td>.893</td>
<td>.057</td>
<td>MW, MI, SI</td>
<td>$Δχ² = 136.625$, significant*</td>
</tr>
<tr>
<td>Model 4</td>
<td>386</td>
<td>3521.452</td>
<td>1964</td>
<td>.000</td>
<td>1.793</td>
<td>.892</td>
<td>.880</td>
<td>.891</td>
<td>.057</td>
<td>MW, MI, SI, SM</td>
<td>$Δχ² = 168.799$, significant*</td>
</tr>
<tr>
<td>Model 5</td>
<td>382</td>
<td>3557.003</td>
<td>1968</td>
<td>.000</td>
<td>1.807</td>
<td>.890</td>
<td>.878</td>
<td>.889</td>
<td>.058</td>
<td>MW, MI, SI, SM, SC</td>
<td>$Δχ² = 204.35$, significant*</td>
</tr>
<tr>
<td>Model 6</td>
<td>304</td>
<td>3728.900</td>
<td>2046</td>
<td>.000</td>
<td>1.823</td>
<td>.883</td>
<td>.876</td>
<td>.882</td>
<td>.059</td>
<td>MW, MI, SI, SM, SC, SR</td>
<td>$Δχ² = 370.247$, significant*</td>
</tr>
<tr>
<td>Model 7</td>
<td>299</td>
<td>3807.825</td>
<td>2051</td>
<td>.000</td>
<td>1.857</td>
<td>.878</td>
<td>.870</td>
<td>.877</td>
<td>.060</td>
<td>MW, MI, SI, SM, SC, SR, MR</td>
<td>$Δχ² = 455.172$, significant*</td>
</tr>
<tr>
<td>Model 8</td>
<td>255</td>
<td>4188.847</td>
<td>2095</td>
<td>.000</td>
<td>1.999</td>
<td>.854</td>
<td>.849</td>
<td>.853</td>
<td>.065</td>
<td>Fully constrained</td>
<td>$Δχ² = 836.194$, significant*</td>
</tr>
</tbody>
</table>

**Note.** N=238; Groups were defined by AusChn = Australians in China (n = 109) and ChnAus = Chinese in Australia (n = 129). RMSEA = root mean square error of approximation; CFI = comparative fit; *significant (p < .05); **insignificant (p > .05). MW = Measurement Weights, MI = Measurement Intercepts, SI = Structural Intercepts, SM = Structural Means, SC = Structural Covariances, SR= Structural Residuals, MR = Measurement Residuals.

The second step was to examine the difference between these nested models. In comparing the goodness-of-fit statistics across these alternative models, a chi-square difference (Δχ²) test was conducted (Bollen, 1989).

As shown in table 4.14, evidence of chi-square difference test and fit indices supports alternative model 1, which yielded comparatively better fit indices in comparing the nested models in the multi-group analysis (chi-square χ² = 3377.092, df = 1921; chi-square/df = 1.758; RMSEA = .057, IFI = .900, TLI = .885, CFI = .898). Though the values for TLI and CFI were slightly lower than the recommended value of .90, as previously indicated, TLI and CFI
are a function of model complexity meaning these values are lower when many factors and items are included in the model (Cheung & Rensvold, 2002).

The third step was to compare the path coefficients between the two groups. Following Byrne (2010), the independent t-value was employed to compare two path coefficients in AMOS program.

The AMOS output for the main paths and critical ratios for differences between pair wise parameters based on model 1 in table 4.14 are reported in table 4.15, with full results of all paths reported in table 4.16.

The critical ratio t-value was not statistically significant for any of the four dimensions of CQ on both socio-cultural adjustment and psycho-cultural adjustment as shown in table 4.16, indicating hypothesis 9 was not supported.

The result demonstrates that the relationship between expatriates’ CQ and cross-cultural adjustment in the host country is not moderated by cultural distance asymmetry (i.e., the direction of cultural flows).
Table 4.15 Structural Equation Modelling: H9 and H10 Hypotheses Testing

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Paths</th>
<th>AMOS output</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>β1 (AusChn)</td>
<td>β2 (ChnAus)</td>
</tr>
<tr>
<td>H9: The relationship between CQ and cross-cultural adjustment strengthens or weakens as the direction of cultural flow changes.</td>
<td>MC --&gt; SCA</td>
<td>-.094</td>
<td>.069</td>
</tr>
<tr>
<td></td>
<td>COG --&gt; SCA</td>
<td>.095</td>
<td>.103</td>
</tr>
<tr>
<td></td>
<td>MOT --&gt; SCA</td>
<td>.271</td>
<td>.259</td>
</tr>
<tr>
<td></td>
<td>BEH --&gt; SCA</td>
<td>.334</td>
<td>.223</td>
</tr>
<tr>
<td></td>
<td>MC --&gt; PCA</td>
<td>-.179</td>
<td>.053</td>
</tr>
<tr>
<td></td>
<td>COG --&gt; PCA</td>
<td>.091</td>
<td>.200</td>
</tr>
<tr>
<td></td>
<td>MOT --&gt; PCA</td>
<td>.353</td>
<td>.443</td>
</tr>
<tr>
<td></td>
<td>BEH --&gt; PCA</td>
<td>.226</td>
<td>-.192</td>
</tr>
<tr>
<td>H10: The relationship between position level and cross-cultural adjustment strengthens or weakens as the direction of cultural flow changes.</td>
<td>Position Level --&gt; SCA</td>
<td>-.104</td>
<td>.208</td>
</tr>
<tr>
<td></td>
<td>Position Level --&gt; PCA</td>
<td>-.181</td>
<td>.250</td>
</tr>
</tbody>
</table>

Note. *** p < .001, ** p < .01, * p < .05. C.R. (t) = Critical Ratio T-values. AusChn = Australians in China (n = 109); ChnAus = Chinese in Australia (n = 129). Position Level [1 = Managerial/BOD, 2 = Non-manager].
Table 4.16 Multi-group Invariance Analysis for Moderating Effects and Tests for Differences between Path Coefficients

<table>
<thead>
<tr>
<th>Paths</th>
<th>Australians in China (Group 1: n=109)</th>
<th>Chinese in Australia (Group 2: n=129)</th>
<th>T-statistic for Group Difference (C.R. value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td>Standardized</td>
<td>Unstandardized</td>
</tr>
<tr>
<td></td>
<td>Estimate</td>
<td>S.E.</td>
<td>C.R.</td>
</tr>
<tr>
<td>SCA &lt;--- MC</td>
<td>-.088</td>
<td>.104</td>
<td>-.843</td>
</tr>
<tr>
<td>SCA &lt;--- COG</td>
<td>.101</td>
<td>.089</td>
<td>1.136</td>
</tr>
<tr>
<td>SCA &lt;--- MOT</td>
<td>.259*</td>
<td>.136</td>
<td>2.058</td>
</tr>
<tr>
<td>SCA &lt;--- BEH</td>
<td>.345*</td>
<td>.139</td>
<td>2.487</td>
</tr>
<tr>
<td>SCA &lt;--- Age</td>
<td>-.042</td>
<td>.057</td>
<td>-.739</td>
</tr>
<tr>
<td>SCA &lt;--- Gender</td>
<td>.045</td>
<td>.161</td>
<td>.278</td>
</tr>
<tr>
<td>SCA &lt;--- Spouse Support</td>
<td>.457***</td>
<td>.078</td>
<td>5.835</td>
</tr>
<tr>
<td>SCA &lt;--- Education</td>
<td>.147</td>
<td>.078</td>
<td>1.890</td>
</tr>
<tr>
<td>SCA &lt;--- Local Language</td>
<td>.129*</td>
<td>.053</td>
<td>2.450</td>
</tr>
<tr>
<td>SCA &lt;--- Time Host</td>
<td>.441***</td>
<td>.081</td>
<td>5.424</td>
</tr>
<tr>
<td>SCA &lt;--- Prior Assignment</td>
<td>-.054</td>
<td>.097</td>
<td>-.561</td>
</tr>
<tr>
<td>SCA &lt;--- Position Level</td>
<td>-.306*</td>
<td>.123</td>
<td>-.250</td>
</tr>
</tbody>
</table>

Note. N=238, ***P < .001, t ≥ 3.76; **P < .01, t ≥ 2.58; * P < .05, t ≥ 1.96. Time Host = Previous Time in the Host Country. MC = Meta-cognitive Cultural Intelligence. COG = Cognitive Cultural Intelligence. MOT = Motivational Cultural Intelligence. BEH = Behavioural Cultural Intelligence. WA = Work Adjustment. GL = General Living Adjustment. HCN = Host Country National Interaction Adjustment. PCA = Psycho-Cultural Adjustment. Responses were coded as: Gender [1= male, 2 = female]; Age [1 = <30, 2 = 30-39, 3 = 40-49, 4 = 50-59, 5 = >60]; Spouse Support[1= Not at all, 2= A fair amount, 3= A great deal]; Education [1= Below Degree; 2 = Bachelor; 3 = Postgraduate]; Position Level [1 = Managerial/BOD, 2 = Non-managerial]; Prior Assignment [1 = 0, 2 = 1-3, 3 = >4]; Previous Time in Host Country[1= < 1 year, 2= 1-5 years, 3 = 6-10 years, 4 = >11 years]. Local Language Ability [1 = Inadequate, 2 = Adequate, 3 = Good, 4 = Very Good, 5 = Excellent].
<table>
<thead>
<tr>
<th>Paths</th>
<th>Unstandardized Estimates</th>
<th>Standardized Regression Weights (β1)</th>
<th>Standardized Regression Weights (β2)</th>
<th>β1 - β2</th>
<th>T-statistic for Group Difference (C.R. value)</th>
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<tbody>
<tr>
<td>PCA &lt;--- MC</td>
<td>-.116</td>
<td>-.179</td>
<td>.053</td>
<td>-.232</td>
<td>-.755</td>
</tr>
<tr>
<td>PCA &lt;--- COG</td>
<td>.067</td>
<td>.091</td>
<td>.111</td>
<td>.200</td>
<td>-.109</td>
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<tr>
<td>PCA &lt;--- MOT</td>
<td>.234*</td>
<td>.353</td>
<td>.443</td>
<td>.443</td>
<td>-.090</td>
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<tr>
<td>PCA &lt;--- BEH</td>
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<td>.226</td>
<td>-.192</td>
<td>.418</td>
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<tr>
<td>PCA &lt;--- Age</td>
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<td>-.053</td>
<td>.117</td>
<td>-.170</td>
<td>-1.456</td>
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<tr>
<td>PCA &lt;--- Gender</td>
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<td>.122</td>
<td>.099</td>
<td>.043</td>
<td>.479</td>
</tr>
<tr>
<td>PCA &lt;--- Spouse Support</td>
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<td>.226</td>
<td>.029</td>
<td>.197</td>
<td>.223</td>
</tr>
<tr>
<td>PCA &lt;--- Education</td>
<td>.002</td>
<td>-.061</td>
<td>-.596</td>
<td>-.045</td>
<td>-.047</td>
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<tr>
<td>PCA &lt;--- Local Language</td>
<td>.085</td>
<td>-.016</td>
<td>-.794</td>
<td>-.020</td>
<td>.123</td>
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<tr>
<td>PCA &lt;--- Time Host</td>
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<td>-.086</td>
<td>.062</td>
<td>-.062</td>
<td>-.172</td>
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<tr>
<td>PCA &lt;--- Prior Assignment</td>
<td>.095</td>
<td>.057</td>
<td>.148</td>
<td>-.091</td>
<td>-1.516</td>
</tr>
<tr>
<td>PCA &lt;--- Position Level</td>
<td>-.369</td>
<td>-.181</td>
<td>.440**</td>
<td>-.043</td>
<td>-3.300**</td>
</tr>
</tbody>
</table>

**Note.** N=238. ***P < .001, t ≥ 3.76; ** p < .01, t ≥ 2.58; * p < .05, t ≥ 1.96. Time Host = Previous Time in the Host Country. MC = Meta-cognitive Cultural Intelligence. COG = Cognitive Cultural Intelligence. MOT = Motivational Cultural Intelligence. BEH = Behavioural Cultural Intelligence. WA = Work Adjustment. GL = General Living Adjustment. HCN = Host Country National Interaction Adjustment. PCA = Psycho-Cultural Adjustment. Responses were coded as: Gender [1 = male, 2 = female]; Age [1 = <30, 2 = 30-39, 3 = 40-49, 4 = 50-59, 5 = >60]; Spouse Support [1= Not at all, 2= A fair amount, 3= A great deal]; Education [1= Below Degree; 2 = Bachelor; 3 = Postgraduate]; Position Level [1 = Managerial/BOD, 2 = Non-managerial]; Prior Assignment [1 = 0, 2 = 1-3, 3 = >4]; Previous Time in Host Country [1 = < 1 year, 2 = 1-5 years, 3 = 6-10 years, 4 = >11 years], Local Language Ability [1 = Inadequate, 2 = Adequate, 3 = Good, 4 = Very Good, 5 = Excellent].
Noticeably, the position level is significant for both SCA ($P < .001; \ t = -4.793$) and PCA ($P < .01; \ t = -3.300$) across sample groups of AusChn and ChnAus. It is particularly interesting to observe that a negative value for position level on both SCA ($\beta = -.104$) and PCA ($\beta = -.181$) is estimated for AusChn, whereas significant positive values of the regression weights of position level are estimated for both SCA ($\beta = .208$) and PCA ($\beta = .250$) for ChnAus.

The result firmly supports hypothesis 10, and further implies that, for the sample group of AusChn, managerial expatriates have had better cross-cultural adjustment than the expatriates in non-managerial roles as manifested by the negative path coefficients; in contrast, the positive path coefficients signify that, for the sample group of ChnAus, expatriate non-managers had better cross-cultural adjustment experiences than managerial expatriates (see detailed discussion in this regard presented in Section 4.7.2).

4.7 Discussion

The purpose of this study was to investigate how individual differences affect expatriates’ socio-cultural and psycho-cultural adjustment, with critical consideration given to the moderation effect of cultural distance asymmetry. To address this purpose, this section includes a thorough discussion of the data analysis results in the context of the previous research on expatriate adjustment, individual differences and cultural distance asymmetry.
4.7.1 Individual Differences and Cross-Cultural Adjustment

This research project is partly based on previous studies on the impact of individual differences on cross-cultural adjustment. Ever since the advancement of the relatively new concept of cultural intelligence (Earley & Ang, 2003), studies and theories on the issue of how individual differences represented by CQ affect individuals’ cross-cultural adjustment have continually developed. In using certain dimensions of CQ to represent individual differences, previous research has adopted a similar framework and helped develop a better understanding of the concept of CQ and its effect on either socio-cultural or psycho-cultural adjustment. The current study went beyond the previous research by employing additional measures for examining the relationships between individual differences and both socio-cultural and psycho-cultural adjustment in investigating expatriates’ cross-cultural adjustment. This is also the first study to employ structural equation modelling techniques to rigorously assess the causal relationships and moderation effects among cultural intelligence, cultural distance asymmetry, and cross-cultural adjustment constructs.

The results of this study confirmed findings or propositions of several previous studies in the body of expatriate adjustment literature. First, prior studies and the current study similarly found that motivational CQ was positively related to socio-cultural adjustment (e.g. Ang et al., 2007; Ramalu et al., 2011; Templar et al., 2006; Williams, 2008), as well as psycho-cultural adjustment (e.g. Ang et al., 2007; Williams, 2008). The present study endorsed the credibility of these test results, and underscores the importance of strong relationships between expatriates’ motivational CQ
and cross-cultural adjustment. An important implication of this repeatedly same result across diverse samples, across different methods, and across various studies is that, high motivational CQ will direct successful socio-cultural adjustment and psycho-cultural adjustment.

Second, the results of current study verified the positioning taken by Ang, et al. (2007), showing that higher order meta-cognitive and cognitive CQ do not automatically predict either socio-cultural adjustment or psycho-cultural adjustment. The SEM analysis did not demonstrate significant path coefficients between the relevant variables, indicating that cognitive capabilities do not necessarily translate into effective work and non-work adjustment actions and behaviours.

The result also echoes Hall’s (1993) study on overseas expatriates in which cognitive training failed to significantly improve cultural adjustment, implying that knowledge itself does not guarantee appropriate behavioural outcomes in new cultural environments. Being knowledgeable about cultures may assist, yet cannot automatically ensure the application of cultural knowledge, as “awareness does not guarantee flexibility” (Earley & Peterson, 2004, p. 106). Although this result contradicts the findings of Ramalu et al. (2011) where significant relationships were found between cognitive CQ and adjustment, it should be noted that Ramalu et al. (2011) focused on a particular group of expatriates that worked in one specific country, Malaysia. Country-specific knowledge may become more relevant in adjustment processes when the sample is confined to one particular
On the other hand, some of the findings of the current study differ, to some extent, from those of Ang et al. (2007). Ang et al. found that behavioural CQ was positively related to socio-cultural adjustment as well as psychocultural adjustment. While the results of the present study agree with the findings of the previous study in that behavioural CQ predicted socio-cultural adjustment (in Hypothesis 4), the present study generated contradictory results that behavioural CQ was not related to socio-cultural adjustment (Hypothesis 7).

Although the full explanation of why these studies find differing results is uncertain, several notions should be considered. First, the concept of psycho-cultural adjustment is measured differently in the two studies. The present study assessed the psycho-cultural adjustment construct with 12 items to measure a broader range of psycho-cultural outcomes (especially relating to subject wellbeing in cross-cultural adjustment), while Ang et al. used fewer items, four items from Goldberg and Williams (1988), and only measured concentration, contribution, decision-making and responsibilities in one of the three sub-studies contained in the larger study (N = 1, 360) across two national contexts, America and Singapore.

Second, the sample in the two studies varied greatly. While the present study sampled expatriate managers and professionals in Australia and China, Ang et al.’s (2007) study sampled undergraduate students and short-term expatriates from several different countries.
Finally, the studies had various focuses. The present study was principally designed to investigate the effect of individual differences on cross-cultural adjustment, while the main purpose of Ang et al.’s (2007) study was to cross-validate the cultural intelligence scale (CQS).

Table 4.17 summarizes and compares the empirical findings of the current study and that of existing influential studies that partially reported their research results on the relationships between CQ and socio-cultural or psycho-cultural adjustment.

The results of the current study have important implications for expatriate screening, training and development strategy. Findings of the investigation indicate that motivational and behavioural CQ should be preferred over meta-cognitive and cognitive dimensions in CQ training. In selecting expatriate candidates for international assignments, individuals with high motivational CQ may catch up on other aspects of cross-cultural capabilities more easily and quickly, therefore deserve more attention. In pre-departure preparation, motivational and behavioural CQ training should be prioritised and optimised in the human resource development programs in MNCs, MNEs, and MNOs. This may stimulate many multinationals that do not offer any pre-departure training for their expatriates to contemplate that such preparation is needed for successful adjustment, and training to build up motivational CQ for expatriates to adjust their existing cognition and actions is crucial.
Table 4.17 Comparison of Empirical Findings Regarding Hypotheses H1 to H8

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context</strong></td>
<td>Worldwide</td>
<td>America and Singapore</td>
<td>China</td>
<td>Malaysia</td>
<td>Australia and China</td>
</tr>
<tr>
<td><strong>Sample</strong></td>
<td>Global professionals with majority European nationals</td>
<td>Overseas undergraduates</td>
<td>Expatriates from US</td>
<td>Expatriates with majority from India</td>
<td>Expatriates from Australia and China</td>
</tr>
<tr>
<td>MC --&gt; SCA</td>
<td>N/T</td>
<td>N/T</td>
<td>N/T</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>COG --&gt; SCA</td>
<td>N/T</td>
<td>N/T</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>MOT --&gt; SCA</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>BEH --&gt; SCA</td>
<td>N/T</td>
<td>+</td>
<td>N/T</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>MC --&gt; PCA</td>
<td>N/T</td>
<td>N/T</td>
<td>N/T</td>
<td>N/T</td>
<td>0</td>
</tr>
<tr>
<td>COG --&gt; PCA</td>
<td>N/T</td>
<td>N/T</td>
<td>0</td>
<td>N/T</td>
<td>0</td>
</tr>
<tr>
<td>MOT --&gt; PCA</td>
<td>N/T</td>
<td>+</td>
<td>+</td>
<td>N/T</td>
<td>+</td>
</tr>
<tr>
<td>BEH --&gt; PCA</td>
<td>N/T</td>
<td>+</td>
<td>N/T</td>
<td>N/T</td>
<td>0</td>
</tr>
</tbody>
</table>

**Note.** N/T = not tested; 0 = no significant relationships were found between variables; + variables were found to be positively related; - variables were found to be negatively related.
4.7.2 Cultural Distance Asymmetry Moderating Effect

To test the proposed moderating effect of cultural distance asymmetry (i.e. the direction of cultural flows) on cross-cultural adjustment, a series of multi-group analysis were conducted. Contrary to what was expected for Hypothesis 9, no between-group difference was found to be statistically significant for CCA after accounting for the control variables. The finding that the relationships between CQ and CCA are not moderated by CDA is surprising.

The asymmetry property of cultural distance in the hypothesis does not hold as it applies to either the CQ and socio-cultural adjustment relationships or the CQ and psycho-cultural adjustment relationships for the two-flow samples of Australian expatriates in China and Chinese expatriates in Australia. This result seems to suggest that, for Chinese expatriates who live and work in Australia, Australian culture (less authoritarian cultures) could be as difficult to adjust to as Chinese culture (more authoritarian cultures) for Australian expatriates in China. Chinese expatriates in Australia face as much the same hurdles as Australian expatriates in China. More generally, business expatriates from country A assigned to country B should have as much CQ to bridge the cultural distance as those transferred form country B to country A. That is, the impact of cultural distance is not contingent on the direction of the international assignment. To conclude, the direction of cultural flow of the international assignment is irrelevant for the relationships between CQ and CCA; therefore, higher levels of CQ are needed when adjusting to new cultures irrespective of cultural
characteristics of and cultural distance between home and host environments.

To note, the rejection of the asymmetric hypothesis for the moderation effect calls into question previous hypotheses attesting to the moderation effects of cultural distance on the CQ and adjustment relationships, and challenges the geographic scope limitations of the cultural distance asymmetry model in testing its cross-cultural equivalence. However, the interpretation of this result should be treated with caution as it is based on the investigation of 238 two-way flow business expatriates in Australia and China only, and more research is needed to test the validity of these findings for this little studied group of expatriates. Until more research is conducted, the findings should be revisited and qualified in terms of the direction of the cultural flows of international assignment.

The current findings, however, hold important lessons for the moderation effect of cultural flows on the relationships between organizational position level and cross-cultural adjustment. Prominently, the position level was significant for cross-cultural adjustment for both groups, and there was a major moderation effect of cultural distance asymmetry on the relationships between the position level and cross-cultural adjustment (including both socio-cultural adjustment and psycho-cultural adjustment). The position level for both socio-cultural adjustment and psycho-cultural adjustment estimate negative impacts for the sample group of AusChn, while the regression weights of position level on both socio-cultural adjustment and psycho-cultural adjustment were positive for the sample group of ChnAus.
The test results show that AusChn managerial expatriates have better cross-cultural adjustment than the expatriates in non-managerial roles; in contrast, ChnAus expatriate non-managers have better cross-cultural adjustment experiences than managerial expatriates both psycho-culturally and socio-culturally.

No cross-cultural research to date has explored and reported the possible interaction of cultural flows on organizational position level and cross-cultural adjustment. The structural equation modelling analysis of the current study demonstrated significant interactions of cultural flows between position level and cross-cultural adjustment. More generally, the results imply that higher position individuals, when sent from less authoritarian countries to more authoritarian countries, are more ready for the adjustment process (compared to lower position expatriates); and that the cross-cultural adjustment processes for higher position individuals, when sent from authoritarian countries to less authoritarian countries, are more difficult (compared to lower position expatriates).

This provoking result is explained and supported by Power Distance Theory (Hofstede, 2001) and Managerial Discretion Theory (Hambrick & Finkelstein, 1987). According to the Power Distance Theory, people in cultures dominated by high power distance cultural characteristics tend to accept centralized power and depend heavily on superiors for structure and direction. Meanwhile, in low power distance countries, people generally do not tolerate highly centralized power, and they expect to be consulted in
organizational decision-making, and social structures are more loosely weaved in low power distance countries (Hofstede, 2001).

Australia shows significantly different cultural characteristics compared with China in Hofstede’s five-dimensional cultural model. For example, Australia scores 36 (below average) on power distance whereas China has a considerably larger power distance index, 80 (high above average). There are larger disparities between expatriate managers and technical expatriates, deeper lines separating social classes which limit interaction between classes and movement from one socio-economic class to another, and greater centralization of power and authority in the high power distance countries, China (Hofstede, 2001). There is a clear line between superiors and subordinates, and authoritative decision-making and leadership style is expected in China (Rodrigues, 1998; Adler, 1997). In contrast, as noted by Hutchings’ (2005) research, Australia shows apparent characteristics as a low power distance country, whose society demonstrates fewer disparities, less centralization of power and authority, and more equalitarianism between managers and non-managerial workers.

Further, according to the Managerial Discretion Theory, managerial discretion refers to the latitude of managerial action available to managers in the organization, and it reflects the coverage managers are able to influence the actions and outcomes of their companies or organizations (Hambrick & Finkelstein, 1987). A manager with high discretion has a broader range of strategic choices and more options for implementation of these strategic actions, whereas a manager with low discretion has a much narrower and
constricted range of strategic options and implementation approaches. Andreason (2003, p. 48) concisely commented on managerial discretion and hierarchical level that: “…the increasingly important influence of role discretion emerged as expatriates held higher level positions in the firm. Thus, adjustment to the international assignment was better to the extent that job demands were matched by role discretion or control”. Drawn from the Managerial Discretion Theory, managerial positions in high power distance countries are more likely to be given greater discretion, which allows influential managerial procedures and consent in the face of executive actions. Hence, in such cultures it is less likely to question decision makers or the basis upon which actions are taken. In contrast, in low power distance countries, leaders are less patronizing and less as empowered decision makers. Radical strategic actions are more liable to come under scrutiny in low power distance cultures (Crossland & Hambrick, 2011). Using the basis of power distance theory and managerial discretion theory, the interaction between position levels and cultural flows is further detailed below.

(i) Managers: Low to High

When a manager (from a low power distance country, e.g. Australia) who has traditionally been exposed to and practices participative decision-making leadership is assigned to a high power distance environment (e.g. China), the manager will expect to receive the delegated power and authority necessary to undertake the new role more easily, due to the deeply embedded authoritative leadership style in high power distance cultures.
That is, greater latitude of managerial discretion is easily available to managers from low to high power distance cultures, which greatly assist their cultural adjustment, especially work adjustment in managerial roles. Necessary power, status and authority are more easily delegated to managerial level individuals, and greater levels of managerial discretion available in high power distance countries greatly benefit management practice and status recognition (Brewster et al., 1993; Hambrick & Finkelstein, 1987), and thus facilitate cross-cultural adjustment of this direction. Greater decision-making authority available to managers allows the environment setting and work roles to adapt to expatriate managers rather than adapting themselves to the work situation and it certainly contributes to adjustment.

(ii) Managers: High to Low

Conversely, when a manager (from a high power distance country, e.g. China) who has been long accustomed to authoritative decision-making and leadership style is sent to a low power distance environment (e.g. Australia) that does not tolerate highly centralized power, the manager’s authority and status may be easily challenged in the less authoritarian and more egalitarian low power distance setting. The clear line between superiors and subordinates that the manager has been used to in high power distance cultures might become vague and even unacceptable. Therefore, expatriate managers assigned from high to low power distance countries face additional adjustment difficulties associated with less availability of managerial discretion because the latitude of managerial action is restricted to managers in low power distance cultures, as compared to the reverse
(iii) Non-managers: Low to High

Power distance theory (Hofstede, 1980) also provides insights into the regulation effects of cultural distance asymmetry on non-managerial expatriates’ adjustment. Non-managers from low power distance countries (e.g. Australia) being sent to work in a more authoritative, sometimes highly centralized power environment (e.g. China), indeed, come across larger disparities between superiors and subordinates in the high power distance environment. For example, in some high power distance countries, authoritative leadership style does not allow individuals to make any organizational decisions without the manager’s input (Adler, 1997). Therefore, more preparation programs are needed to help non-managerial expatriates from low to high power distance cultures tolerate highly centralized power and to face the challenges of at least expecting to be consulted in decision-making.

(iv) Non-managers: High to Low

In contrast, when non-managers from a high power distance country (e.g. China) are sent to work in a more liberal environment (e.g. Australia), their self-efficacy level is more likely to be enhanced through easier interaction between superiors and subordinates. This is because low power distance cultures put more value on egalitarianism, where individual worth and freedom counts more (Hofstede, 2001; Trompenaars & Hampden-Turner, 1997; Adler, 2002). Non-managerial expatriates, when carrying out day-to-
day technical, functional or operative jobs, face considerably fewer disparities and less centralization of power, between managers and non-managerial workers. Therefore, non-managers from high to low power distance cultures encounter less adjustment obstacles than the other way round.

Again, greater individual worth and freedom available to non-managers and fewer disparities allows the environment setting and work roles to adapt to non-managerial expatriates rather than adapting themselves to the work situation and this certainly contributes to the adjustment process.

<table>
<thead>
<tr>
<th>Degree of Adjustment</th>
<th>Position Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ME</td>
</tr>
<tr>
<td><strong>Direction of Cultural Flows</strong></td>
<td></td>
</tr>
<tr>
<td>LPD→HPD</td>
<td>(i) Easy -</td>
</tr>
<tr>
<td>HPD→LPD</td>
<td>(ii) Difficult +</td>
</tr>
</tbody>
</table>

*Note. ME= Managerial Expatriates; NME = Non-managerial Expatriates; HPD / LPD = High / Low Power Distance culture; -/+ = Less / More adjustment difficulties caused by host cultural environment.*

Therefore, the findings on the impact of position level on adjustment in current study can be summarized (see table 4.18) such that, managers usually enjoy higher power in a high power distance cultural context than in a low power context, thus, they face greater power loss moving from high to low power distance cultures than moving from low to high power distance cultures. For that reason, the former situation results in worse adjustment than the latter situation. Non-managers usually enjoy more autonomy in a low power distance cultural context than in a high power context; hence, they come upon greater autonomy loss moving from low to high power
distance countries than moving from high to low power distance countries. As a consequence, the former situation results in worse adjustment than the latter situation.

Although more rigorous replications of these results in various contexts are needed, these findings have important implications for both academia and practices of expatriate staffing and training decisions. The findings of the current study start to question the assumption that many models of cross-cultural adjustment apply equally well to all expatriates in all circumstances, ignorant of factors that expatriates carry with them to their overseas assignments that moderate some of the proposed relationships. Indeed, the expatriates’ cross-cultural adjustment process and the type and level of stress that expatriates would encounter, vary with factors such as changing cultural flows, cultural distance, hierarchical rankings, position status, and differences in the nature of work.

The individual differences, cultural settings, and assignment directions intertwine in this regard and need to be identified and considered comprehensively in HR practices. It is thereby argued that, management awareness and HRD programs are needed for different expatriate groups, different cultural environments and different assignment directions.

For sub-classifications of different expatriate groups, it may be concluded that, expatriates who are likely to be subject to experience higher levels of cross-cultural adjustment difficulties caused by the destination environment,
the direction of cultural flows of the international assignment, and organizational positional level may therefore, require more extensive pre-departure training and in-country support to provide the foundation for more informed adjustment and performance levels.

4.7.3 Control Variables

The control variables comprehensively reflected other personal characteristics and personal status, which have potential implications for the prediction of cross-cultural adjustment. This section will present additional testing results of relationships between control variables and cross-cultural adjustment, and the pertinent interpretation and implications of the results are discussed below.

This study utilized seven control variables of age, gender, spouse support, education, local language ability, previous time in the host country, and prior international assignments, because these variables have been shown to have a potential effect on adjustment in other studies (Black et al., 1991; Hechanova et al., 2003). In the current study, the control variables of age, education and prior international assignments were not statistically significant in any of the SEM models while gender, spouse support, local language ability and previous time in the host country were significant in different models respectively (see tables 4.12 and 4.16). The following general discussion on control variables will be non-group specific and based on the results reported in table 4.12 where the expatriate sample (N = 238) was tested as a whole before splitting into groups.
Gender. Gender is identified as a significant (P < .05) factor for psycho-cultural adjustment in the current study, indicating that female expatriates had experienced better psycho-cultural adjustment than males in international assignments. This is consistent with previous studies in this field as “mounting recent evidence confirms that women adapt better than men in cross-cultural business situations” (Altman & Shortland, 2008). For example, Cole and McNulty (2011) found female expatriates generally had better cultural adjustment than males and could manage to overcome the negative effect of expatriate local differences in self-transcendence on their work adjustment. The reason why this does not hold significantly true for socio-cultural adjustment in the current study is not clear, but it is noted that emotions are important in the psycho-cultural adjustment process, and there is a prima-facie neurological case for sex differences in psychological adjustment (Haslberger, 2007), who submits that women are on average more empathic, more nurturing, more likely to express emotions and engage in self-disclosure, and are ahead especially in areas such as building and maintaining relationships. Although proof of some of these neurological relationships is still pending, there is evidence of structural and functional differences between female and male brains.

Spouse support. In line with previous studies (eg. Black, et al., 1991; Black & Stephens, 1989; Hutchings, 2003; Tung, 1982), spouse support was found to have significant positive relationships with both socio-cultural adjustment (P < .001) and psycho-cultural adjustment (P < .05). Black and Stephens’s (1989) study found that the adjustment of the spouse is highly correlated
with the adjustment of the expatriate manager. Similarly, Tung’s (1982) study found that the inability of the spouse to adjust or to provide support was the most recurrently cited reason for expatriate premature returns among American and European firms. Therefore, spouse support is a critical factor for predicting successful expatriates’ adjustment. The management and HR professionals of cross-border companies and organizations need to fully understand the effect the lack of family support has on the overall experience of the expatriate’s assignment, and to deal with potential problems.

*Local language ability.* The local language ability of expatriates was found to be positively related to socio-cultural adjustment (P < .01). This would be expected since studies have found that fluency in the language of the host country equips individuals with more effective communications and perceptual skills, and thus facilitates expatriate adjustment (Nicholson & Imaizumi, 1993). Poor local language skills has long been recognized as a major obstacle to successful cross-cultural communication (Victor, 1992); however, many international businesses and multinational organizations de-prioritize language fluency to be fairly low on their lists of desired qualities for personnel selection and screening (Waterhouse, 1998). The more intensive the interaction a person has with host country nationals and the longer the overseas assignment, the more in-depth should be the language training (Andreason, 2003). It is also interesting to note Shaffer et al. (1999) found language skills may be much more important in some expatriate positions than in others; for example, language ability is more important for the interaction adjustment of technical expatriates than for managerial
expatriates. The reason why local language ability is not significant on psycho-cultural adjustment is not clear and deserves further investigation.

*Previous time in the host country.* Consistent with previous studies (e.g. Adler, 2002; Black et al., 1991; Hutchings, 2003; Tung, 1982), the control variable of previous time in the host country was found to have significant positive relationships with socio-cultural adjustment ($P < .001$) and psycho-cultural adjustment ($P < .05$) in the current study. This indicates that individuals who had lived longer in the host country experienced better socio-cultural adjustment and psycho-cultural adjustment. This significant finding is explained by Bandura’s (1977) Social Learning Theory (SLT) and Kolb’s (1984) Experiential Learning Theory, in which individuals, over the time, learn to adjust to the cultural environment in the host country through accumulated repertoires of appropriate behaviours and cultural norms by daily interaction with host country nationals and other interlocutors. Bond and Smith (1996) have also found that cross-cultural adjustment takes place over time. Therefore, previous time in the host country is a critical factor for predicting successful socio-cultural and psycho-cultural adjustment in the new cultural environment.

4.8 Chapter Summary

This chapter provided a detailed analysis of data addressing the research issues identified in Chapter Two. Research findings on a range of variables were examined and reflections about findings offered. Themes and patterns within each of these issues were discussed together with linkages between
them. Each notion has contributed to our understanding of the cross-cultural adjustment process in a more meaningful way. The study’s contribution to scholarship and management practice is worthy of particular attention.

Preliminary analysis indicated that all of the composite scales used in this study were reliable, with internal consistency reliability coefficients above standard thresholds. Bivariate correlations among the study variables indicated that (a) all of the cultural intelligence subscales were positively correlated with each other, (b) the four adjustment variables were all positively correlated with each other, and (c) most of the correlations between the independent (cultural intelligence) and dependent (adjustment) variables were statistically significant, with the lowest correlations relating to psychological adjustment and the highest to host-country national interaction adjustment.

During the structural equation modelling analysis, the measurement model was tested by confirmatory factor analysis and then the fit of the full model was assessed using AMOS and a two-step SEM approach. In the process of model modification and confirmatory factor analysis, covariance between errors on the same factor, low loading items, indicators that were related to problematic standardized residuals or high modification indices have been identified and items eliminated one by one, confirming relevant reliability and validity properties of the constructs. In the structural model analysis performed in this study, a number of different models were fitted, each accounting for control variables and moderating variables in different ways. Ultimately, three of the eight hypotheses on the relationships between four
dimensions of cultural intelligence and cross-cultural adjustment were
supported. The results of this study found statistically significant positive
relationships between motivational cultural intelligence and socio-cultural
adjustment, between behavioural cultural intelligence and socio-cultural
adjustment, and between motivational intelligence and psycho-cultural
adjustment. Meta-cognitive cultural intelligence and cognitive intelligence
were not related to either socio-cultural adjustment or psycho-cultural
adjustment. Behavioural cultural intelligence was not related to psycho-
cultural adjustment.

In the multi-group invariance analysis conducted in this study, it is
surprising to see the proposed moderating effect of cultural distance
asymmetry (i.e. the direction of cultural flows) on CQ and cross-cultural
adjustment relationships failed to manifest. Contrary to expectations, no
between-group difference was found and the critical ratio t-value was
statistically non-significant for both socio-cultural and psycho-cultural
adjustment, either before or after accounting for the control variables. This
indicates that the relationship between expatriate cultural intelligence and
cross-cultural adjustment in the host country is not moderated by cultural
distance asymmetry.

A significant moderation effect of cultural distance asymmetry was found
for the impact of expatriates’ position level in their organizations on cross-
cultural adjustment such that, both psycho-culturally and socio-culturally,
Australian managers more easily adjust to Chinese culture than Australian
non-managers; and that Chinese non-managerial expatriates more easily adjust to Australian culture than Chinese managers.

In examining the test results for control variables, of all the control variables, the impact of gender, spouse support, local language ability, and previous time spent in the host country on socio-cultural adjustment is significant irrespective of the direction of cultural flows of the international assignment. HR practitioners and organizational management should be aware of the importance of the issues associated with these individual differences that could occur for the entire overseas assignment. By recognizing the importance of and impact of these factors on cross-cultural adjustment, management HRD professionals can reduce stressors, ease anxiety and improve the transition through training and counselling programs offered to expatriates to clarify new dynamics in the international assignment, to talk about the changes that would occur during the assignment, and to help develop coping mechanisms while overseas.

In sum, the differences of cross-cultural adjustment process between Australian and Chinese managers and non-managers on two-way transfers, albeit they may be limited, demonstrate the dual impact of the macro level cultural distance and micro level individual differences on adjustment process. The cross-level study findings provide us with a more comprehensive and deeper insight into the subject matter. The conclusions and further implications of these findings and a number of research propositions with recommendations are reserved for the next chapter, Chapter Five.
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Chapter Overview

This chapter concludes the thesis by discussing the conclusions, implications and recommendations and by identifying the thesis’ contributions to scholarship, public and private sector policy, and management practice. Proposals for future research are made where and when appropriate.

A summary of the overall research findings obtained from data analysis and hypotheses testing is presented at first (Section 5.2). This is followed by reviewing the study’s contribution to existing literature in a section on the theoretical and empirical contributions of these findings for academics and researchers (Section 5.3). The implications for human resource practitioners and expatriate management are then discussed (Section 5.4), and the limitations of the study and possible future research directions are offered (Section 5.5). A final section provides concluding remarks drawn from this study (Section 5.6).
5.2 Summary of the Research Findings

The current research investigated the relationships between individual differences and cross-cultural adjustment, with a close examination of the moderation effect of cultural distance asymmetry. It advances the relatively new cultural intelligence studies on expatriates’ cross-cultural adjustment (e.g. Ang et al., 2007; Earley & Ang, 2003; Ramalu et al., 2011; Templer et al., 2006; Williams, 2008). It also attests to the significant impact of cultural distance asymmetry on the relationships between individual differences and cross-cultural adjustment, and thus reinforces cultural distance theory advanced by Selmer et al. (2007).

The research was conducted in the context of a developing country, China, and a developed country, Australia, between which strong business links have been established with fast growing numbers of expatriate population and expatriation assignments.

Notably, motivational CQ, which is an important variable for predicting socio-cultural adjustment, has been found to be equally important for generating psycho-cultural adjustment in the context of host country environment. Motivational CQ is also the only dimension of CQ that was found to be significantly related to both socio-cultural and psycho-cultural adjustment in the current study. The result furthers the Motivation-Adjustment Model anchored by Templer et al. (2006). This implies that the hypothesized positive relationship between motivational CQ and adjustment, which has been established in different parts of the world (e.g.
Ang et al., 2007;Templer et al., 2006; Ward et al., 2008; Williams, 2008),
also exists similarly in the context of Australia and China. The findings
suggest that expatriates who are more motivated to experience diverse
cultures will benefit from greater cultural flexibility which help individuals
to be less offensive to others and more likely to fit in and be better adjusted
both socio-culturally and psycho-culturally.

It was also interesting to note that behavioural CQ was a significant
predictor of socio-cultural adjustment, but not the influential type of
intelligence for psycho-cultural adjustment, indicating that behavioural CQ
is more closely aligned to socio-cultural adjustment rather than psycho-
cultural adjustment in the sample. This indicates the capability to present a
flexible range of behaviours does not necessarily represent individuals’
psycho-cultural comfort.

Other dimensions of CQ (i.e. meta-cognitive and cognitive CQ) were not
found to be related to both socio-cultural and psycho-cultural adjustment.
This implies that cognitive facets of CQ are soft dimensions of the
construct. While meta-cognitive and cognitive CQ are conducive to the
adjustment process, they are not significant antecedents for cross-cultural
adjustment. The lack of statistically significant evidence also means that
cognitive capabilities do not necessarily result in effective work and non-
work adjustment actions and behaviours, as knowledge itself does not
guarantee proper behavioural outcomes in new cultural environment. The
non-significance of the relationship also indicates knowledge capabilities
towards the target cultures is not a sufficient condition for developing
psychological wellbeing. Having conscious or unconscious awareness of various cross-cultural situations does not ensure a good emotional state. The result provides confirmation that cognitive capabilities do not necessarily translate into actions and behaviours as well as psychological outcome.

The multi-group path analysis conducted to identify potential differences in path estimates of the alternative model across the groups failed to show statistically significant results between CQ and CCA relationships, but was notably significant for the relationships between position level and CCA. The result suggests that the relationship between CQ and cross-cultural adjustment is not moderated by cultural distance asymmetry. In other words, the direction of cultural flow of the international assignment is irrelevant for the relationships between CQ and cross-cultural adjustment. However, a trend of strong moderation effects can be observed in the integrated results of data analysis on the organizational factor, position level. This means the impact of cultural distance is contingent on the direction of the international assignment.

The position level estimates indicate that managerial expatriates have had better cross-cultural adjustment than the expatriates in non-managerial roles for the sample group of Australian expatriates in China, as manifested by negative path coefficients. In contrast, expatriate non-managers had better cross-cultural adjustment experiences than managerial expatriates for the sample group of Chinese expatriates in Australia, as manifested by positive path coefficients. These results are fully explained by Hofstede’s (2001)
Power Distance Theory and Hambrick and Finkelstein’s (1987) Managerial Discretion Theory. The power distance situated in the environment of the assignment destination is presumed to cause comparatively more or less adjustment difficulties to expatriates from different cultural flows when attempting to adjust to the new cultures. When an expatriate manager (from China) who had been long accustomed to greater managerial discretion in authoritative leadership style is sent to a destination (Australia) that does not tolerate highly centralized power, she or he would face very different adjustment obstacles than the other way round. In contrast, an expatriate manager assigned from low to high power distance cultures is expected to receive delegated authority easily from the assignment location where greater management discretion is available in the decision-making system.

Meanwhile, when a technical expatriate whose home culture is participative or consultative is dispatched to an authoritative culture, she or he will experience more from the cultural differences than expatriates from the other way round. This is because individuals as subordinates may benefit more in their adjustment process from the more liberal environment. Further research is necessary to determine if this result holds true for expatriates from different cultures (other than Australia and China) on two-way flow transfers.

Control variables of gender, age, education, local language ability, spouse support, previous time in the host country and prior overseas work assignments were used in the current study. These variables were measured and controlled in this study to avoid the findings from being spuriously
attributed to various background characteristics. Test results of current study on the whole sample showed that, age, education and prior overseas assignments were not statistically significant for cross-cultural adjustment in any of the regression models. Gender was significant for psycho-cultural adjustment, suggesting that females had better psycho-cultural adjustment than male expatriates in the sample. Local language ability was significant in the analysis for socio-cultural adjustment, suggesting that local language proficiency contributes to better socio-cultural adjustment, including work adjustment, general living conditions adjustment and better host-country national interaction adjustment. Spouse support was significant in the analysis for both socio-cultural and psycho-cultural adjustment, suggesting that individuals who had received more family support had better socio-cultural and psycho-cultural adjustment. Previous time spent in the host country was also significant for both socio-cultural and psycho-cultural adjustment in the analysis, suggesting that expatriates who had lived longer in the host country had better socio-cultural and psycho-cultural adjustment. This result is explained by Bandura’s (1977) Social Learning Theory, Bond and Smith’s (1996) study, and Kolb’s (1984) Experiential Learning Theory, as expatriates’ cross-cultural adjustment to the target culture take place over time through accumulation of a repertoire of appropriate behaviours and cultural norms in day-to-day interaction with host country nationals. In the multi-group analysis, the control variables of spouse support, local language ability and previous time in the host country are statistically significant for socio-cultural adjustment for both AusChn and ChnAus group indicating that, irrespective of the direction of cultural flows, respondents who had
received more spouse support, had better local language ability, and had been in the host country for a longer period of time have had better socio-cultural adjustment experience in the host country.

To sum, the research results clearly reveal that motivational CQ is vital for the cross-cultural adjustment process, and behavioural CQ plays an essential role in the socio-cultural adjustment involving host country cultural norms and values. The strong impact of cultural distance asymmetry on organizational position roles and adjustment relationships further enhances our understanding of the effects of both macro and micro level factors on expatriate adjustment. These findings justify the importance of identifying the individual differences in cultural intelligence, and understanding them is important to build up successful socio-cultural and psycho-cultural adjustment of expatriates for the purpose of effective functioning in the host country environment, and thereby validate the main objective of this study.

5.3 Theoretical and Empirical Contributions

By examining the impacts of cultural distance asymmetry and each dimension of CQ on socio-cultural adjustment and psycho-cultural adjustment, the present study has a number of academic and management implications.

Globalization has brought about rapid increases in workforce mobility in the last decade and is unlikely to abate in the foreseeable future. Successful preparation for the adjustment of expatriates on overseas assignments continues to be an increasingly important HR issue for cross-border
business in international companies and multinational organizations (Harzing, 2009). Cross-cultural adjustment is a difficult and costly exercise if not carried out successfully. To aid in this task, more focused research needs to be conducted to improve and encourage expatriate development and expatriate effectiveness. By narrowing the gaps in our understanding of how cultural environments and personal differences relate to CCA, the expatriate development process may benefit (Zhang, 2013). To that end, this research is important for both theoretical and practical considerations.

First of all, this study, being conducted in the context of Australia and China using two-way flow expatriate samples, has made important theoretical contributions to the area of cross-cultural research. Cross-cultural adjustment has been suggested to be a crucial determinant of expatriate success in their international assignments (Templer et al., 2006). Filling important gaps in our understanding of cross-cultural adjustment, this study helps further explain the ways in which individual differences are factors in cross-cultural adjustment process. It advances previous models of socio-cultural adjustment (Black et al., 1991) and psycho-cultural adjustment (Ward & Kennedy, 1996) by including participants from Australia (an individualistic culture) and a mirror study of participants from China (a collectivistic culture), so that commonalities and differences in terms of business and personal state of Australian expatriates working in China and Chinese expatriates working in Australia were examined on both socio-cultural factors and psycho-cultural factors.
Another important theoretical contribution from the current study is the additional information concerning expatriation. In search of the relevant literature, most studies centre mainly on the cross-cultural adjustment of expatriate managers (e.g. Adler, 2002; Black et al., 1991; Black & Mendenhall, 1991; Church, 2000; Molinsky, 2007; Osland & Mendenhall, 2006; Selmer et al., 2007; Trompenaars & Hampden-Turner, 1997; Ward & Searle, 1991). Research on the non-managerial expatriates’ adjustment is sparse and almost non-existent to date, especially in English language domains. Little attention has been given in the relevant literature to analyzing the cross-cultural adjustment of non-managerial expatriates, which is an indispensable composition in the expatriate group.

The current study examines the full vision of expatriate adjustment through addressing non-managerial expatriate issues. Recommendations have been made that, for technical expatriates sent from egalitarian cultures to authoritarian cultures, preparation programs should aim to help them tolerate highly centralized power and authoritative leadership style in the higher power distance environments. A much clearer and likely more complete picture should emerge of the cultural adjustment of different expatriate groups on the basis of the test results of the current study.

Equally important, probing the cross-cultural adjustment process among Australian expatriate communities as well as Chinese expatriate communities enriches the literature on expatriation. Most existing literature on adjustment has been written from the perspectives of the Western business community, and many of the theories and models attributing for
adjustment can at best only be applied to managers from the West (e.g. Adler, 2002; Andreason, 2003; Black & Gregersen, 1999; Hutchings, 2003; Selmer, 2006, 2007; Tung, 1982). In contrast, research on eastern business communities is thin and unsystematic, possibly because expatriate operations traditionally tended to move from the better-off and more advanced countries to the impoverished and developing nations. However, in recent decades, the flow of expatriates has become global and multifaceted. Eastern expatriates working in the west are calling for more attention. The current study, responding to this need, expands the scope of research geographically and socially by looking into the relatively underresearched group of Chinese expatriates working in Australia. This could offer a broader research base and thereby further enhance our understanding of the cross-cultural adjustment process for successful international assignment worldwide.

Essentially, the current study advanced the four-dimensional CQ theory (Earley & Ang, 2003) by methodologically investigating the specific relationships between each facet of CQ and socio-psycho adjustment. To the best of the researcher’s knowledge, this is the first attempt to explore the relationships between CQ and cross-cultural adjustment thoroughly from a systematic perspective using structural equation modelling techniques. The study reveals how and to what extent CQ contributes to socio-cultural adjustment and psycho-cultural adjustment in the host countries involving different directions of cultural flows. Cultural intelligence, as a subject, has
been understudied and is worthy of further investigation (Ang et al., 2006; Earley & Ang, 2003; Templer et al., 2006).

This study carried out different statistical analyses that have not been employed in previous studies (e.g. Ang et al., 2007; Ramalu et al., 2011; Templer et al., 2006; Williams, 2008), and broadened the studies on CQ in the following aspects. First, the current study used all four-construct dimensions of CQ to provide additional insight into how individual differences affect cross-cultural adjustment. Second, the present study employed psycho-cultural adjustment, in addition to socio-cultural adjustment, in measuring cross-cultural adjustment, providing a more comprehensive analysis and entire view of expatriates’ CQ influence on adjustment process. Third, structural equation modelling techniques were employed to test the CQ and adjustment relationships.

This study makes an important contribution to examining the cause-and-effect relationships among the variables, and contributes to the literature in finding that meta-cognitive and cognitive CQ are not related to either socio-cultural or psycho-cultural adjustment, while motivational CQ is related to both socio-cultural and psycho-cultural adjustment under current testing models. Behavioural CQ is related to socio-cultural adjustment, but not psycho-cultural adjustment. It is evident that motivational CQ holds the strongest influence over the other three facets of cultural intelligence.

The theoretical contributions are also embedded in the distinct findings of the alternative models for cultural intelligence. The two-factor CQ model
does not hold, and four-factor CQ model being consolidated. In addition, earlier research (e.g. Ascalon et al., 2008; Ward et al., 2009), by using samples of students, in considering the efficacy of CQ, essentially assumes that international students go through the same levels and the same stages of hardship, adjustment and development to that experienced by business expatriates. The sampling approach employed by this research should provide a more informed validation of CQ, and thus extend the results of self-report questionnaires (CQS) which have been widely used (e.g. Alon & Higgins, 2005; Ang et al. 2004, 2006, 2007; Elenkov & McMahan, 2005; Messarra et al., 2008; Templer et al., 2006) in measuring CQ. As previously mentioned, earlier research in CCA seems to focus primarily on personality factors, such as the Big Five personality traits, rather than investigating other factors such as motivation and actual behaviours in the target culture. The increasingly evident need is that a comprehensive, holistic, or multi-dimensional approach is crucial if we are to fully comprehend expatriate adjustment in the IHRM literature. Responding to this need, the present study overcomes this limitation and incorporates the use of CQ (Earley & Ang, 2003), which covers all four dimensions of meta-cognitive, cognitive, motivational, and behavioural capabilities, to investigate personal characteristics, thus providing a more comprehensive picture beyond personality traits.

To note, the current study extends the scope of the cultural distance asymmetry model advanced by Selmer et al. (2007) through examining the comparative influence of different directions of cultural flows on the
relationships between individual differences and cross-cultural adjustment. The interactions between power distances on adjustment are particularly interesting. The result calls into question previous hypotheses attesting to the moderation effects of cultural distance asymmetry on the CQ and adjustment relationships. A provoking finding was that position level was significant for cross-cultural adjustment for both Australians and Chinese, and there was a salient moderating effect of cultural distance asymmetry on the relationships between position level and cross-cultural adjustment (including both socio-cultural adjustment and psycho-cultural adjustment).

In particular, analyzing Australian and Chinese expatriates on two-way flow transfers in this study may be especially noteworthy in the IHRM and cross-cultural literature due to the significant cultural distance between the two countries, because culturally distant countries can serve as better comparative sites. National cultural dissimilarity plays an important role in comparing the two-way flow reciprocal transfers of expatriates (Ward et al., 2009). This thesis uses the cultural distance asymmetry concept on two geographically and culturally distant countries that are showing big gaps in terms of cultural characteristics. By doing so, a much clearer and likely more complete picture should emerge for the cultural distance effects on the interaction of CCA.

The focus on comparing expatriates on reciprocal transfers adapting to the target cultures also provides new perspectives for IHRM research. Existing IHRM and cross-cultural research implicitly assumes a symmetric impact of cultural distance on expatriate adjustment and rests on a presumption of
symmetry in cultural distance (Selmer et al., 2007). This research proposes that such impact is asymmetric. In other words, the impact of cultural distance on expatriates’ socio-cultural and psycho-cultural adjustment is contingent on the direction of the assignment, i.e. the cultural distance experienced by an Australian expatriate in China would not be the same as that of a Chinese expatriate working in Australia. This is because the home and host environments are variably situated in the cultural space. Hence, individuals need to adjust to their environment rather than the other way round (Selmer et al., 2007). The theoretical propositions developed in this research thus extend the CQ model (Earley & Ang, 2003) and CCA model (Templer et al., 2006) by examining important cultural distance asymmetry effects on the CQ and adjustment relationships under new circumstances and looking into the additional psycho-cultural adjustment construct.

A final research implication of the study relates to the development of a comprehensive cross-level examination on the conceptual representation of cultural distance asymmetry effects. This study provides a systemic approach to understanding expatriate adjustment, covering macro-, meso-, and micro-level factors, thus setting the stage for considering how national cultural distance (macro), organizational position status (meso), and individual cultural intelligence (micro) interact to affect expatriate adjustment. The cross-level analysis developed in this study questions the assumptions underlying many earlier expatriate adjustment studies (e.g., Adler, 2002; Church, 2000; Hutchings, 2003; Mendenhall & Oddou, 1985; Osland & Mendenhall, 2006), that many models of CCA apply equally well.
to all expatriates in all circumstances, ignorant of factors that expatriates carry with them to their overseas assignments. In this regard, it is argued that expatriates’ CCA process and the type and level of stress that expatriates would encounter vary with factors such as changing cultural flows, cultural distance, and their individual differences in CQ. This general inquiry makes important contributions to the expatriate and adjustment literatures, and IHRM research should be advanced by integrated cross-level exploration.

5.4 Practical Contributions

This research seeks to address how expatriates’ cultural intelligence, organizational position status and the cultural distance differences between the native and host countries affect the socio-cultural and psycho-cultural adjustments of the expatriates. The topic is important and timely as many companies and organizations are operating across national and cultural boundaries; consequently, the number of expatriates is rapidly increasing and successful adjustment of expatriates on overseas assignments is an increasingly important issue for cross-border business, international companies and multinational organizations (Hazing, 2009).

The results of the study will benefit managers, human resource practitioners, employers and employees, faced with international assignments. To illustrate, it is apparent from the propositions developed in this study that HR practitioners and management of MNEs, MNOs and MNCs should (i) pay more attention to their expatriates’ individual differences, (ii) make an effort in understanding the cultural distance between home and host
countries, and (iii) instil in their potential expatriates a strong motivation for carrying out the international assignment through improved cultural intelligence as human resource development strategies. The improved awareness of HR managers in this regard should contribute to their personnel pool building for international assignments.

The research findings can also be used as constructive inputs into developing future selection, screening and promotional strategies. For example, management can put more emphasis on motivational appeal in their promotional messages to potential expatriate candidates by focusing on causes rather than highlighting the cognitive knowledge benefits alone. This would also act as a HRM strategy and contribute to their personnel pool building for international assignments. Again, the positive impact of adjustment’s dependency on all facets of cultural intelligence implies that HR managers should make an effort in developing strategies to increase expatriates motivational and behavioural CQ so as to reduce the huge costs associated with expatriate failure, premature return, or ineffective performance caused by maladjustment.

Another significant dimension of expatriate development derived from this study would be to focus on the involvement of cultural distance asymmetry (i.e. direction of cultural flows in expatriation) that has strong influence on the relationships between expatriate’s position levels and their socio-cultural adjustment and psycho-cultural adjustment. This should motivate HR management to explore ways and means to differentiate criteria set for
expatriate candidates of different managerial or technical roles overseas. Additional attention should be given to the pre-departure training for expatriate managers assigned from high to low power distance countries, as they face added adjustment difficulties due to less availability or restriction of managerial discretion in low power distance cultures. The same applies to non-managers, assigned from low power distance countries to work in a more authoritative, sometimes highly centralized power environment, who are likely to face larger disparities between superiors and subordinates in the high power distance setting. More preparation programs, for example, training programs aiming for enhancing awareness of the social structures in the target cultures, more extensive local language skill training, and continuous in-country support for the expatriate family, are needed to help non-managerial expatriates assigned from this direction to tolerate highly centralized power and to face the challenge of at least expecting to be consulted in decision-making and authoritative leadership style. There is empirical evidence that expatriate preparation is correlated with the success of the overseas assignment (see Black & Mendenhall, 1990).

More importantly, insights from the propositions developed in this research could also be incorporated into expatriate training decisions and existing expatriate development programs. Higher levels of CQ of individuals indicate better socio-cultural and psycho-cultural adjustment; hence, recognizing the importance of CQ for their business expatriates to overcome cultural distance on two-way flow transfers should stimulate many MNCs, MNEs, and MNOs that do not offer any CQ training for their expatriates at the moment, to contemplate that such training and preparation are crucial for
successful expatriates’ adjustment.

It is suggested that, first, CQ should be accounted over emotional and social intelligence as one of the crucial pre-departure preparation elements. Second, individuals high on motivational CQ may catch up on other aspects of cross-cultural capabilities more easily and quickly and, therefore, deserve more attention when it comes to prioritizing and optimizing the preparation and training programs. Third, training programs should focus primarily on building up CQ (especially on motivational, and behavioural capabilities) for individuals to adjust their existing cognition, motivation, and actions according to different cultural distances. Fourth, for expatriates who are likely to experience higher levels of CCA difficulties caused by the destination environment, the direction of cultural flows of the international assignment should require more extensive pre-departure training in CQ and in-country support to provide the foundation for more informed adjustment and performance levels. Fifth, individual differences, cultural settings, and assignment directions intertwine in this regard and need to be identified and considered comprehensively in the design of training that would seek to enhance expatriate development capacity in overseas assignments. Last but not least, management awareness and HRD programs should take into account differences between various expatriate groups, cultural environments, and assignment directions.

The practical contributions of this research are also extended to the career development of expatriates themselves. Individuals can benefit by having a
greater understanding of themselves, including their own cultural intelligence, the effects of cultural distance, and direction of international assignments, and thus work to compensate for personal differences while on a variety of overseas assignments in new cultural environments. This will help expatriates to be prepared to take greater ownership of their careers. An international assignment is an opportunity for expatriates to build career capital, which depends considerably on the expatriate’s cross-cultural adjustment, because international assignments lead to a restructuring of career capital with overall net gains in knowing-whom, knowing-how, and knowing-why for the well-adjusted expatriate (Haslberger & Brewster, 2009). Therefore, there is a broad connection between expatriate adjustment and their career development. Successful adjustment offers career advantages.

Reduced costs on expatriation to organizations and to individuals is a further incremental contribution of the current research. As stated earlier, the financial loss to multinational companies due to premature return of expatriates on foreign work assignments was estimated as up to $2.5 billion dollars annually (Hill, 2001; Lissy, 1993) with additional costs enumerated as market share loss, reduction in productivity, damage to relationships with foreign companies, damage to relationships with foreign governments (Storti, 2001; Andreason, 2003). It is estimated that the average cost to the multinationals may be as high as $200,000 per employee failure, in direct costs (Black & Mendenhall, 1990; Mendenhall & Oddou, 1985; Porter & Tansky, 1999; Tung, 1987). Further, the potential damage and loss caused by the marginal performances from poorly adjusted expatriates who do not
return early are even greater, in the long run, than the direct costs associated with a premature return (Black & Gregersen, 1999; Dowling et al. 2008; Guimaraes-costa & Cunha, 2009). Satisfactory and effective selection of employees in the initial stage of expatriation preparation before departure, and sufficient training after screening procedures will greatly help reduce these costs associated with expatriate failures. In addition, better screening and enhanced training could also help the employees with reduced personal costs that could be incurred in premature repatriation.

5.5 Limitations of the Research and Recommendations for Future Study

Despite of the implications discussed above, certain limitations should be taken into consideration when interpreting the findings of the study as is the case with any study, and these limitations specified below provide avenues for future research.

First, as a survey based research investigation, it may suffer from the usual limitations associated with self-reported measures (i.e., CQ, socio-cultural and psycho-cultural adjustment), such as respondents’ honesty, memory, ability to respond, social desirability, inflationary bias, and other common method bias problems (Crampton & Wagner, 1994; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The self-reports of abilities, and social desirability bias may interfere with the interpretation of average tendencies as well as individual differences.
Future research may consider a longitudinal quantitative study, because cultural intelligence, as a dynamic competency, has a nature of malleable capability (Ang, Van Dyne, & Koh, 2006); therefore the criterion of their effects on cross-cultural adjustment and effectiveness of expatriates varies over time. As suggested by Crawford-Mathis (2009), conducting a qualitative study using interviews or observations using a longitudinal study design may offer different perspectives and knowledge on these changes that took place over the time and provide a broader understanding of cultural intelligence and its effect on various adjustment outcomes. A longitudinal study, where data are collected from expatriates upon entry into the host country and at various lengths of time while on assignment in the host country, could be undertaken to validate and extend the results of this study. Hence, future research should include qualitative methods with a longitudinal study design on expatriates if time and resources allow.

Second, the main focus of the current study is on the overall cross-cultural adjustment of expatriates, and therefore does not include any performance, or concrete work behaviours of expatriates as outcomes in the conceptual model. Although cross-cultural adjustment is crucial for expatriate success and worth great research effort, each of the other types of expatriation outcomes appeals to particular categories of international human resource management as well. Future studies could make a contribution by theorizing beyond adjustment to concrete behaviours, such as expatriate task performance, OCB, helping, counterproductive behaviours, turnover, and the impact on business development, careers, or HR policies as outcomes with a broader criterion domain. Future study may consider more proximate
intercultural individual work behaviours such as intercultural network
behaviours advice or help seeking, feedback seeking, or expatriate
leadership behaviours.

In addition to concrete work behaviours, future studies may also consider
psychological constructs of trust-affective, cognitive trust, interpersonal
trust, interpersonal liking, or exchange quality between peers (e.g., peer-
member exchange) or expatriate leaders (leader-member exchange). These
are all constructs that have not been explored in the expatriate and cultural
intelligence literature. By going beyond adjustment, future study would
render the subject matter more interesting and appealing. To explore how
cultural intelligence and cultural distance moderate these existing systems of
relationships associated with above mentioned socio-cultural and psycho-
cultural outcomes will also increase the contribution to knowledge and
management practice. Meanwhile, future research can also consider
exploring a great variety of different domains by focusing on relevant areas
of: (i) the different personal aspects of expatriate adjustment, (ii) the
organizational support in the adjustment process, (iii) the role of spouse and
family support and input in cultural adjustment, and (iv) cultural adjustment
of the expatriates’ children.

Third, future studies may focus on the inter-relationships of the four
dimensions of cultural intelligence. Cultural Intelligence is a complex
construct because it is not a uni- but multi-dimensional construct. Because
of its multifaceted nature, cultural intelligence can be best studied at its
dimensional level. Hence, future study may consider the inter-relationships of the four-factor model. For example, how meta-cognitive CQ moderates with motivational CQ to effect socio-cultural or psycho-cultural outcomes. The value of multi-dimensional constructs lies also in its differential predictive validity of each of its sub-dimensions (see Edwards, 2011). Future studies may thus theorize how dimensions of cultural intelligence differentially, rather than similarly, affect a wider domain of criteria. Moreover, CQ can also be studied at team-, organizational-, regional-, or national-levels to suit different purposes of studies.

Fourth, the current study introduced cultural distance as a macro-level factor. To mitigate the concerns of the national conceptualization of cultural distance and tone down stereotypes, future studies may introduce a parallel micro-level concept of psychological distance, which may focus on the differences of subjective experiences of cultural distance that expatriates face in their interactions with host country nationals. Cultural distance and psychological distance can be compared and contrasted for innovative conceptual ideas. Most work organizations and most countries in the world are increasingly diverse and include people with a wide range of individual cultural value orientations. By focusing on the individual level cultural distance in future conceptualization, studies would reduce homogeneity and stereotypes that do not apply to all citizens in the country. In addition, as concepts of cultural distance or psychological distance are multifaceted, many other value orientations associated with cultural distance, for example, national identity, can be relevant to the subject area, and can be further examined.
Fifth, another limitation relates to the sample size issues. A larger sample size may identify more significant asymmetry results if time and resources allow. The findings of the current study suggested important implications of power distance theory as a strong theoretical explanation for the test results, and cultural distance is asymmetric, depending on the direction of cultural flow and the position status of the expatriate (i.e. manager or non-manager expatriates). This interesting interaction between cultural distance asymmetry, position levels and adjustment can be followed up with empirical studies to test the relationships in widely differing cultural contexts with larger sample sizes. This compels further study with a greater focus on measuring power distance and examining its effect on cultural intelligence and cross-cultural adjustment in broader contexts. The sample groups and the host countries could be expanded beyond Australia and China. By including participants from many countries adjusting to many new cultures, the test results can be revisited and a fuller picture would emerge of the interaction of individual differences and cross-cultural adjustment. The findings will be interesting and there is value in pursuing them.

Sixth, national cultural distance examined in this study has important implications for the CQ and adjustment relationships, future studies could go beyond this scope and focus on differences in specific cultural values of individual expatriates and compare that to the average cultural value
orientations in the new organization. This may provide a more focused and stronger approach to the idea of cultural distance.

Seventh, findings of the current study also suggested that relationships between cultural intelligence and adjustment might differ for managers and non-managers. Future studies may focus on specific behaviours that occur at work that might be influenced by cultural intelligence and cultural distance, and behaviours that would have contrasting importance for managers and non-managers. This would allow retainment of the focus on the two different types of jobs, and drawing on this difference in management versus non-management jobs would strengthen the arguments for expecting different relationships.

As a final point, I acknowledge concerns might exist in that there are other relevant micro-, meso- and macro-level factors that are important in addressing the original research question, for example, firm-level cultural intelligence is also an important set of meso-level factors affecting expatriate adjustment (eg. Chen, Kirkman, Kim, & Farh, 2010), but are not discussed in this research as this may increase the complexity of the research. Future research can include them, or provide this as an illustration of the importance of scoping the model upfront with justifications that could complete the whole picture.

5.6 Concluding Remarks

To summarize, this study proposes a research framework that intends to cover contextual gaps and weaknesses identified in the literature. The
general research question driving the research was to investigate whether individual differences are related to cross-cultural adjustment and how does cultural heterogeneity come into play in the relationship between individual differences and expatriate adjustment. The results show that there is a profound effect of individuals’ personal characteristics on the cross-cultural adjustment process. The focus of individual socio-cultural and psychocultural adjustment factors, rather than issues that are merely materialistic, profit or performance-oriented, attach important contribution to the cross-cultural studies. These findings are more reflective of the collectivist, non-materialistic nature of expatriates.

In its uniqueness, this study reveals how and to what extent cultural distance asymmetry moderates the relationships between individual differences and cross-cultural adjustment in the host countries involving different directions of cultural flows. While a large number of prior studies positioned that larger cultural distance will increase adjustment difficulties (e.g. Adler, 2002; Black et al., 1991; Church, 2000; Osland & Mendenhall, 2006; Trompenaars & Hampton-Turner, 1997), this study takes the initiative to investigate the cultural distance impact on individual differences and adjustment relationships empirically in a comparative context involving Australia, a developed country, and China, a developing country.

Since this is the first attempt to integrate the central relational constructs of the macro-level cultural distance, meso-level organizational position status, and micro-level individual cultural intelligence on the cross-cultural
adjustment in one comprehensive model, it is expected that this research would serve as a valuable primary reference source for similar types of future research. The alternative models tested will also offer insights about alternative relations among constructs in the context of world expatriation, and help justify the significance of expatriates’ cross-cultural adjustment presented in the main conceptual model.

This work is not only of value to Australian expatriates and Chinese expatriates working in China and Australia, but also for all expatriate managers and non-managers who wish to gain insights into the expatriation process on reciprocal transfers in high or low power distance countries all over the world. The results are also of interest to academics, researchers, overseas students in Australian and Chinese institutions, business management and human resource practitioners for preparing and selecting expatriates.

This study offers insights into the relationship between individual differences and cross-cultural adjustment, with critical consideration given to cultural distance asymmetry, using a sample of expatriates on reverse cultural flows. The research findings contribute to knowledge of expatriate management theoretically, as well as practically. The results demonstrated the importance of cultural intelligence, especially motivational and behavioural component of cultural intelligence on various expatriate adjustment criteria into new cultures while on international assignments. Therefore, motivational CQ and behavioural CQ should be accounted over cognitive dimensions in CQ (i.e. meta-cognitive and cognitive cultural
intelligence. Individuals high on motivational CQ may catch up on other aspects of cross-cultural capabilities more easily and quickly. This means that multinationals should consider these variables in due course when selecting and training appropriate candidates for international assignments. The result may stimulate more future research attention on how CQ could improve expatriate effectiveness in its broader nomological network through investigating a variety of antecedents, moderators, and outcomes of cultural intelligence. Practically, a clearer understanding of these individual factors is beneficial to taking on international assignments and would assist decision makers and human resource practitioners in the design and proposal of appropriate selection mechanisms and training programs.

Moreover, the rejection of the symmetric moderation hypothesis challenged the geographic scope limitations of previous cultural distance models in testing their cross-cultural equivalence. Finding a significant moderation effect of cultural distance asymmetry on the relationships between individual differences and cross-cultural adjustment is a potentially fundamental contribution to the literature and HR practice. These findings contribute to the body of knowledge in the cross-cultural management and international human resource management fields and provide practical implications to international organizations especially in selection, hiring, promotion and training of expatriate candidates for international assignments, though more rigorous replications of this study are much desired.
Successful expatriation is crucial particularly for countries like Australia and China that rely heavily on overseas trade. An often ignored part of this process is the need for differentiating the selection, development and preparation programs for both the expatriate managers and non-managers on different assignment directions of cultural flows in the working environment of the host country. This study sheds light on that process by comparing the cultural intelligence and adjustment difficulties of different expatriate groups in Australia and China in coping with another culture.
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APPENDICES A - C

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APPENDIX A - 1:  
The Australian Introductory Letter (for Native English Speakers)

THIS IS NOT A JUNK MAIL

Dear

This is an invitation to participate in a PhD research study at Charles Sturt University. I am writing to seek your assistance by completing an anonymous questionnaire in research I am doing at this university. Your position as expatriates with overseas working experiences is of great interest and value to this research.

The topic of the research is

"Towards Better cross-cultural Adjustment: From Distance to Intelligence"

The project aims to identify the relationship between Cultural Intelligence (CQ) and expatriate cross-cultural adjustment, so as to provide insights into the research question of why some individuals adjust more quickly and easily than others cross-culturally. This is a new and critical topic in the current globalized business environment, and your participation will help improve our understanding of the adjustment process among business expatriates.

There are no known or anticipated risks to you as a participant in this study. Participation in this study is voluntary and anonymous. You may leave your email address in the final Additional Comments section whereby participants could register for a drawing for one of four $50 “Thank-you” gifts. It would take approximately 15 minutes to complete. You may post it back using the self-addressed envelope attached. The survey is also on the Web at:

http://kwiksveys.com?u=EXPAT

Please click on to this address to participate and to find out more.

Charles Sturt University’s School of Business Minimal Risk Ethics in Human Research Committee has approved this project (Protocol # 209201005). Any issues you raise will be treated in confidence and investigated fully and you will be informed of the outcome. If you have any complaints or reservations about the ethical conduct of the project, you may contact Committee through the Executive Officer, Ethics in Human Research Committee, Academic Secretariat Charles Sturt University
Private Mail Bag 29, Bathurst NSW 2795, Australia
Phone: (02) 6338 4628 Fax: (02) 6338 4194 Email: ethics@csu.edu.au

I hope that the results of my study will be of benefit to those individuals and organizations directly involved in the study, as well as to the broader research community. I really do value your contribution and this institution equally values it. Discussion is most welcome. Thank you very much ahead of time for your participation!

Sincerely yours,

Ying Zhang
PhD Student Faculty of Business, Charles Sturt University
Wagga Wagga NSW 2678 AUSTRALIA
Phone: 61 02 6933 2534 Email: yizhang@csu.edu.au

THIS IS A BOARD OF STUDIES APPROVED SURVEY
WE WILL RESPECT YOUR PRIVACY AND NOT DISCLOSE YOUR EMAIL DETAILS
主题：中澳外派人员跨文化适应与文化智商
的调查问卷

尊敬的外派者，您好！

诚挚的邀请您参与关于外派人员跨文化适应课题的调研项目，本研究是我在澳大利亚查尔斯特大学攻读博士学位需要进行的一项调查。调研的主题是：“获得更好的跨文化适应：从文化距离到文化智商”

如果可以占用您一点时间，完成一份约15分钟的调研问卷，我将不胜感激。本次调研将对您及其他外派人员的职业生涯大有助益，因为它将帮助您深入了解影响自身文化适应过程的因素。外派经理人在跨文化的接触中面临着适应不同生活方式、思维模式等方面的挑战。该研究旨在研究外派人员的文化适应与文化智商，以提升从母国到东道国的文化适应和外派绩效表现。此外，您的协助参与还有具有宝贵的学术价值，有助于完善有关这一问题的知识结构。中国驻澳大利亚外交机构和中澳商会对此都表示支持。您身处异国或从异国归故里的外派经验，对本调研项目，及机构跨文化适应能力的研究都具有宝贵的價值。

本问卷调查属于完全匿名调研。您的姓名无需填写，关于您的任何隐私资料都将严格保密，但如果您愿意在问卷最后留下联系方式，将能参与50澳元/人次的调研抽奖活动。您的资料将不会出现在任何本研究得出的报告中。您可使用随函所附的已付费信封寄回完成的问卷。您的经验和对问卷的认真作答，为协助理解，也可点击或输入这个网址，完成中英文对照的网络版问卷：http://kwiksurveys.com?u=EXPAT

完成后请您点击SUBMIT键进行提交。并请帮助转发给您所认识的具备海外工作经历的人員。

本问卷已通过查尔斯特大学商学院伦理问题研究伦理风险评估（许可证#209201005）。如果您对本研究项目所涉及的相关伦理风险问题有任何投诉或保留意见，请联系以下机构地址：您提出的意见将予以严格保密，经调查后将告知您调查的结果。

The Committee through the Executive Officer
Ethics in Human Research Committee
Academic Secretariat Charles Sturt University
Private Mail Bag 29, Bathurst NSW 2795, Australia
Phone: (02) 6338 4628 Fax: (02) 6338 4194 Email: ethics@csu.edu.au

如果你想获悉更多讯息及这项研究的结果，请按以下方式致电或电邮联系。歡迎任何形式的討論和建議！非常感谢您的参与协助和对科研工作的支持！

您真诚的，

张颖
在读博士 商学院 管理系
澳大利亚查尔斯特大学
沃加沃加 新州 2678 澳大利亚
电话: 61 02 6933 2534 电邮: yizhang@csu.edu.au

澳大利亚查尔斯特大学商学院人类问题研究伦理风险评估批准匿名调研
关于您的电邮及任何隐私资料都将严格保密
APPENDIX A- 3
The Australian Survey Questionnaire (for Native English Speakers)

Survey Questionnaire
Towards Better Cross-cultural Adjustment: From Distance to Intelligence

Section I About Yourself and Your Organization

Please provide some general background information about yourself and your organization. Please tick ☑ the appropriate box or fill in the blank.

1. Sex:
   □ Male
   □ Female

2. Age:
   □ under 30 □ 50-59
   □ 30-39 □ Over 60
   □ 40-49

3. Current marital status:
   □ Single □ De facto
   □ Divorced □ Married

4. To what extent does your family support you on offshore assignments?
   □ Not at all
   □ A fair amount
   □ A great deal

5. Please indicate your home country.
   □ Australia
   □ China
   □ Other________

6. Please indicate the host country of your current international assignment.
   □ Australia
   □ China
   □ Other________

7. Please indicate your highest level of education completed.
   □ Below Degree □ Post-graduate
   □ Bachelor
8. Please select the response that BEST describes your Local Language Ability if any in the host country overseas:

<table>
<thead>
<tr>
<th>Language Ability</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I understand very little of the local language.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 I speak very little of the local language.</td>
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</tr>
<tr>
<td>3 I understand very little of the local dialect where I live in the host location.</td>
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</tr>
<tr>
<td>4 I speak very little of the local dialect where I live in the host location.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 I cannot manage a conversation in the local language.</td>
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</tr>
<tr>
<td>6 I do not understand non-verbal communication where I live in the host location.</td>
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</tr>
<tr>
<td>7 I cannot read the local language.</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8 I cannot write the local language.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. What line of business/industry are you in?
   - □ Education
   - □ Business
   - □ Engineering /construction
   - □ Entrepreneur
   - □ Government

10. Is your position
   - □ Board of Directors / Managerial
   - □ Non-Managerial

11. What is your approximate annual income (including all allowances) in AUD dollars?
   (To convert RMB to AUD, please divide by 6.5) (Please proceed to question 12 if you feel uncomfortable with this question)
   - □ <$50,000
   - □ $50,001 to $100,000
   - □ $100,001 to $200,000
   - □ >$200,001
12. What is the nature of your company’s business?
   - Private
   - Public
   - Public-private

13. Number of Employees of the company:
   - <50
   - 51-500
   - 501-5000
   - >5000

14. How many PREVIOUS offshore work assignments have you had (before your current assignment)?
   - 0
   - 1-3
   - >3

15. Approximately how much total time have you lived in the current host country?
   - <1 year
   - 1-5 years
   - 6-10 years
   - >10 years

16. Have you attended any intercultural communication training/orientation programs before your offshore assignments?
   - Yes
   - No

17. How long is your current offshore assignment (if any) supposed to be?
   - <1 year
   - 1-5 years
   - 6-10 years
   - >10 years
## Section II About your Cultural Intelligence

Read each statement and select the answer that BEST describes you AS YOU REALLY ARE (1=strongly disagree; 7=strongly agree)

<table>
<thead>
<tr>
<th>CQ Items</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.</td>
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<tr>
<td>2</td>
<td>I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.</td>
<td></td>
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<tr>
<td>3</td>
<td>I am conscious of the cultural knowledge I apply to cross-cultural interactions.</td>
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<tr>
<td>4</td>
<td>I check the accuracy of my cultural knowledge as I interact with people from different cultures.</td>
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<tr>
<td><strong>Knowledge</strong></td>
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<tr>
<td>5</td>
<td>I know the legal and economic systems of other cultures.</td>
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<td>6</td>
<td>I know the rules (e.g., vocabulary, grammar) of other languages.</td>
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<tr>
<td>7</td>
<td>I know the cultural values and religious beliefs of other cultures.</td>
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<tr>
<td>8</td>
<td>I know the marriage systems of other cultures.</td>
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<tr>
<td>9</td>
<td>I know the arts and crafts of other cultures.</td>
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<tr>
<td>10</td>
<td>I know the rules for expressing non-verbal behaviors in other cultures.</td>
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<tr>
<td><strong>Motivation</strong></td>
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<tr>
<td>11</td>
<td>I enjoy interacting with people from different cultures.</td>
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<tr>
<td>12</td>
<td>I am confident that I can socialize with locals in a culture that is unfamiliar to me.</td>
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<td>13</td>
<td>I am sure I can deal with the stresses of adjusting to a culture that is new to me.</td>
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<tr>
<td>14</td>
<td>I enjoy living in cultures that are unfamiliar to me.</td>
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<tr>
<td>15</td>
<td>I am confident that I can get accustomed to the shopping conditions in a different culture.</td>
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<tr>
<td><strong>Behaviour</strong></td>
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<tr>
<td>16</td>
<td>I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.</td>
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<td>17</td>
<td>I use pause and silence differently to suit different cross-cultural situations.</td>
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<tr>
<td>18</td>
<td>I vary the rate of my speaking when a cross-cultural situation requires it.</td>
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<tr>
<td>19</td>
<td>I change my non-verbal behavior when a cross-cultural situation requires it.</td>
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<td>20</td>
<td>I alter my facial expressions when a cross-cultural interaction requires it.</td>
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</tbody>
</table>

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Section III About your Socio-Cultural Adjustment

1=Not adjusted at all;  
2=Not very adjusted;  
3=Slightly not adjusted;  
4=Neutral;  
5=Slightly adjusted;  
6=Very adjusted;  
7= Completely adjusted

Please mark the appropriate box to indicate…

<table>
<thead>
<tr>
<th>how well you feel adjusted to…</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Specific job responsibilities</td>
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<tr>
<td>2 Performance standards and expectations</td>
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<tr>
<td>3 Supervisory responsibilities</td>
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<tr>
<td>4 Living conditions in general</td>
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<tr>
<td>5 Housing conditions</td>
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<tr>
<td>6 Food</td>
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<td>7 Shopping</td>
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<td>8 Cost of living</td>
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<td>9 Entertainment/recreation facilities and opportunities</td>
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<td>10 Health care facilities</td>
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<td>11 Socializing with host nationals</td>
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<td>12 Interacting with host nationals on a day-to-day basis</td>
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<td>13 Interacting with host nationals outside of work</td>
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<td>14 Speaking with host nationals</td>
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### Section IV  About your Psycho-Cultural Adjustment

<table>
<thead>
<tr>
<th></th>
<th>Please think about how you have been feeling over the past few weeks. Have you recently...</th>
<th>Not at all</th>
<th>No more than usual</th>
<th>Rather more than usual</th>
<th>Much more than usual</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>…felt you couldn't overcome your difficulties?</td>
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<tr>
<td>2</td>
<td>…felt capable of making decisions about things?</td>
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<td>3</td>
<td>…been feeling unhappy and repressed?</td>
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<td>4</td>
<td>…felt that you are playing a useful part in things?</td>
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<td>5</td>
<td>…been able to concentrate on what you are doing?</td>
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<td>6</td>
<td>…lost much sleep over worry?</td>
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<td>7</td>
<td>…been thinking of yourself as a worthless person?</td>
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<td>8</td>
<td>…been reasonably happy, all things considered?</td>
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<td>9</td>
<td>…been able to enjoy your normal day-to-day activities?</td>
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<td>10</td>
<td>…been able to face up to your problems?</td>
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<td>11</td>
<td>…felt constantly under strain?</td>
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<td>12</td>
<td>…been losing confidence in yourself?</td>
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</tbody>
</table>
My Expatriate Friends

Do you know other expatriates in China/Australia who might be interested in participating in the study?

Please fill in their names and address below, or send their contacts to yizhang@csu.edu.au. Thank you!

<table>
<thead>
<tr>
<th>1. Name:</th>
<th>2. Name:</th>
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</thead>
<tbody>
<tr>
<td>Address</td>
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<td>Email</td>
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Your Additional Comments

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Survey Questionnaire
Towards Better Cross-cultural Adjustment: From Distance to Intelligence
澳大利亚查尔斯特大学匿名问卷调查
“获得更好的跨文化适应：从文化距离到文化智商”

Section I   About Yourself and Your Organization
第一部分个人及组织信息 (仅用于数据比较)

Please provide some general background information about yourself and your organization. Please tick ☑ the appropriate box or fill in the blank. 请提供关于您人及公司组织的概况信息。请勾选相应的方框。

1. Sex 性别:  ☐ Male 男 ☐ Female 女
2. Age 年龄:
   ☐ under 30 ☐ 30-39
   ☐ 40-49 ☐ 50-59
   ☐ Over 60
3. Current marital status 婚姻状况:
   ☐ Single 单身 ☐ De facto 同居或事实婚
   ☐ Divorced 离异 ☐ Married 已婚
4. To what extent does your family support you on offshore assignments?您家人在多大程度上支持您的外派任务?
   ☐ Not at all 从不支持
   ☐ A fair amount 支持
   ☐ A great deal 非常支持
5. Please indicate your home country. 您的母国籍是
   ☐ Australia 澳大利亚
   ☐ China 中国
   ☐ Other 其它 ______
6. Please indicate the host country of your current international assignment. 您所派驻的东道国是
   ☐ Australia 澳大利亚
   ☐ China 中国
   ☐ Other 其它 ______
7. Please indicate your highest level of education completed. 您已完成的最高学历

273
8. Please select the response that BEST describes your Local Language Ability if any in the host country overseas:
请描述您在所派驻的东道国当地的语言能力

<table>
<thead>
<tr>
<th>Language Ability</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>I understand very little of the local language.</td>
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<tr>
<td>I speak very little of the local language.</td>
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<tr>
<td>I understand very little of the local dialect where I live in the host location.</td>
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<tr>
<td>I speak very little of the local dialect where I live in the host location.</td>
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<tr>
<td>I cannot manage a conversation in the local language.</td>
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<tr>
<td>I do not understand non-verbal communication where I live in the host location.</td>
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<tr>
<td>I cannot read the local language.</td>
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<tr>
<td>I cannot write the local language.</td>
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</tbody>
</table>

9. What line of business/industry are you in? 您所从事的行业
- Education 教育业
- Business 商业
- Engineering 工程
- Entrepreneur 企业
- Government 政府

10. Is your position 您在组织内部的岗位是否属于

11. What is your approximate annual income (including all allowances) in AUD dollars? (To convert RMB to AUD, please divide by 6.5) (Please proceed to question 12 if you feel uncomfortable with this question)
您大体年收入约合多少澳币？（如不愿回答此题请跳过）（人民币换算成澳币，请除以6.5）
- $<50,000
- $50,001 to $100,000
- $100,001 to $200,000
- $>200,001

12. What is the nature of your company’s business?
贵公司的性质
- Private 私有
- Public 公有
- Public-private 公私合营

13. Number of Employees of the company: 贵公司的员工数
- <50
- 51-500
- >500

14. How many PREVIOUS offshore work assignments have you had (before your current assignment)? 您过去曾有过几次外派任务?
- 0
- 1-3
- >3

15. Approximately how much total time have you lived in the current host country? 您在目前派驻的东道国共计生活过多少年？
- <1 year
- 1-5 years
- >10 years

16. Have you attended any intercultural communication training/orientation programs before your offshore assignments? 在外派之前您有否参加过任何跨文化沟通培训项目或课程？
- Yes 有参加过
- No 没有参加过

17. How long is your current offshore assignment (if any) supposed to be? 您目前的外派工作预计需要在东道国多少年？
- <1 year
- 1-5 years
- >10 years
### Section II  About your Cultural Intelligence  
第二部分 关于您的文化智商

Read each statement and select the answer that BEST describes you AS YOU REALLY ARE (1=strongly disagree; 7=strongly agree)

阅读每个陈述，选择最能描述你的能力的回答。反馈的价值取决于您回答问题时的诚实度。这不是测试，答案没有对错好坏之分。请选择最能恰当真实地描述你的回答（1=非常不同意；7=非常支持）

<table>
<thead>
<tr>
<th>CQ Items</th>
<th>文化智能量表-1</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td><strong>Strategy</strong> 战略</td>
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<tr>
<td>1</td>
<td>I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds. 我能意识到自己与不同文化背景的人交往时所应用的文化常识。</td>
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<tr>
<td>2</td>
<td>I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me. 当与陌生文化中的人们交往时，我调整自己的文化常识。</td>
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<td>3</td>
<td>I am conscious of the cultural knowledge I apply to cross-cultural interactions. 我能意识到自己在跨文化交往时所运用的文化常识。</td>
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<td>4</td>
<td>I check the accuracy of my cultural knowledge as I interact with people from different cultures. 当与来自不同文化的人们交往时，我检查自己文化常识的准确性。</td>
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<td><strong>Knowledge</strong> 知识</td>
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<td>5</td>
<td>I know the legal and economic systems of other cultures. 我了解其他文化的法律和经济体系。</td>
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<td>6</td>
<td>I know the rules (e.g., vocabulary, grammar) of other languages. 我了解其他语言的规则（如：词汇、语法）。</td>
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<td>7</td>
<td>I know the cultural values and religious beliefs of other cultures. 我了解其他文化的价值观和宗教信仰。</td>
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<td>8</td>
<td>I know the marriage systems of other cultures. 我了解其他文化的婚姻体系。</td>
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<td>9</td>
<td>I know the arts and crafts of other cultures. 我了解其他文化的艺术和手工艺品。</td>
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<td>10</td>
<td>I know the rules for expressing non-verbal behaviors in other cultures. 我了解其他文化中表达非语言行为的规则。</td>
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<tr>
<td><strong>Motivation</strong> 动因</td>
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<tr>
<td>11 I enjoy interacting with people from different cultures. 我喜欢与来自不同文化的人交往。</td>
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<tr>
<td>12 I am confident that I can socialize with locals in a culture that is unfamiliar to me. 我相信自己能够与陌生文化中的当地人进行交往。</td>
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<td>13 I am sure I can deal with the stresses of adjusting to a culture that is new to me. 我确信自己可以处理适应新文化所带来的压力。</td>
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<tr>
<td>14 I enjoy living in cultures that are unfamiliar to me. 我喜欢生活在自己不熟悉的文化中。</td>
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<tr>
<td>15 I am confident that I can get accustomed to the shopping conditions in a different culture. 我相信自己可以适应一个不同文化中的购物情境。</td>
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<td><strong>Behaviour</strong> 行为</td>
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<tr>
<td>16 I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it. 我根据跨文化交往的需要而改变自己的语言方式(如口音、语调)。</td>
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<td>17 I use pause and silence differently to suit different cross-cultural situations. 我有选择地使用停顿和沉默以适应不同的跨文化交往情境。</td>
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<td>18 I vary the rate of my speaking when a cross-cultural situation requires it. 我根据跨文化交往的情境需要而改变自己的语速。</td>
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<td>19 I change my non-verbal behavior when a cross-cultural situation requires it. 我根据跨文化交往的情境需要而改变自己的非语言行为(如: 手势, 头部动作, 站位的远近)。</td>
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<td>20 I alter my facial expressions when a cross-cultural interaction requires it. 我根据跨文化交往的情境需要而改变自己的面部表情。</td>
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</tbody>
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### Section III  
**About your Socio-Cultural Adjustment**  
**第三部分**  
**关于您的社会文化适应**

Please mark the appropriate box to indicate…  
对于以下14项您在东道国的适应程度是…
1=Not adjusted at all;  
2=Not very adjusted;  
3=Slightly not adjusted;  
4=Neutral;  
5=Slightly adjusted;  
6=Very adjusted;  
7= Completely adjusted

<table>
<thead>
<tr>
<th>how well you feel adjusted to …</th>
<th>1</th>
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<tbody>
<tr>
<td>1 Specific job responsibilities</td>
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<td>2 Performance standards and expectations</td>
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<td>3 Supervisory responsibilities</td>
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<td>4 Living conditions in general</td>
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<td>5 Housing conditions</td>
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<td>6 Food</td>
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Section IV About your Psycho-Cultural Adjustment
第四部分 关于您的心理文化适应

Please think about how you have been feeling over the past few weeks. Have you recently...
请回想您过去几周内的感觉。您最近是否...

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>No more than usual</th>
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<td>3</td>
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<td>been losing confidence in yourself?</td>
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My Expatriate Friends

我认识的外派经理人

Do you know other expatriates in China/Australia who might be interested in participating in the study?

Please fill in their names and address below, or send their contacts to yizhang@csu.edu.au. Thank you!

您是否认识其他愿意参加本次研究的中国籍或澳籍外派经理人员？

请将您所知道的名字和地址/email地址填写在下方，或发送他们的联系方式至yizhang@csu.edu.au，非常感谢您的帮助！

1. Name: ______________________________________
   Address________________________________________
   ________________________
   ______________________________________
   Email______________________@_______________

2. Name: ______________________________________
   Address________________________________________
   ________________________
   ______________________________________
   Email______________________@_______________

Your Additional Comments

欢迎您的意见和讨论

____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
I NEED YOUR ASSISTANCE: PLEASE

Dear

Some days ago, I sent you a survey seeking your assistance in completing the survey and help with the research I am doing at Charles Sturt University. Due to confidentiality, I do not know who has submitted the survey questionnaire, hence this follow-up. Should you have completed and submitted the document thank you very much. However, if you have not, would you please do so?

There are no known or anticipated risks to you as a participant in this study. You may leave your address / email address in the final Additional Comments section whereby participants could register for a drawing for one of four $50 “Thank-you” gifts. To recap, this Institution and I value your participation; your selection came about because we believe that you, along with a selected group of Chinese and Australian business expatriates, have the knowledge and aptitude to answer the questionnaire. We realise your time is taxed; nevertheless, all we require is about 10-15 minutes. You may post it back using the self-addressed envelope attached. The questionnaire is also on the Web at:

http://kwiksurveys.com?u=EXPAT.

Please click on to this address to participate and to find out more.

Remember, there is something in it for you. Your contribution will not only assist universal management practice and academic scholarship by imparting knowledge and understanding; but for you, I believe the research outcomes will aid you in your cross-cultural skills and your one-on-one business relationships during international assignments. As a bonus, the printed results are complimentary upon your request, the questions are not self-incriminating; nevertheless we guarantee strict confidentiality.

I hope that the results of my study will be of benefit to those individuals and organizations directly involved in the study, as well as to the broader research community. I can assure you that this Institution and I infinitely value and deeply appreciate your contribution. Discussion is most welcome.

Sincerely yours,

Ying Zhang
PhD Student Faculty of Business
Charles Sturt University
Wagga Wagga NSW 2678
AUSTRALIA
Phone: 61 02 6933 2534
Email: yizhang@csu.edu.au

THIS IS A BOARD OF STUDIES APPROVED SURVEY
WE WILL RESPECT YOUR PRIVACY AND NOT DISCLOSE YOUR EMAIL DETAILS
APPENDIX A- 6

The Chinese Follow-up (for Native Chinese Speakers)

主题：如蒙协助，万分感激

尊敬的外派者：您好！

我几周前给您寄送过一份调查问卷，请阁下协助参与该问卷的填写。这是我在查尔斯特大学撰写博士论文需要完成的一项调查。鉴于保密性，我并不知道哪些人提交了问卷，因此特附上此跟踪函。如果您已完成并提交问卷，我将不甚感激。

再次重申，本学术机构和我个人都十分珍视您的参与。我们之所以选择您和其他中澳外派人员来参与本次调研是因为我们相信您具备充足的素质、知识，经验能力和。我清楚知道，阁下的时间非常宝贵，但问卷仅需占用您 10-15 分钟的时间。

要知道您也可以从参与中获益。您奉献知识，给予协助，将提升普遍的管理实战和学术研究水平。我也深信，此项目的研究成果能提高您的跨文化技巧，并帮助您进一步发展和建立中澳商业实战中一对一的商务合作关系。您的姓名无需填写，关于您的任何隐私资料将严格保密，但如果您愿意在问卷最后一栏留下联系方式，将能参与 50 澳元 / 人次的调研抽奖活动。您的资料将不会出现在任何本研究得出的报告中。您可以使用随函所附的已付费信封寄回完成的问卷。您的经验和对问卷的认真作答是对于人力资源学术研究和管理实践的宝贵贡献。为协助理解，也可以点击或输入这个网址，完成中英文对照的网络版问卷：

http://kwisksurveys.com?u=EXPAT

完成后请您点击 SUBMIT 键进行提交。并请帮助转发给您所认识的具备海外工作经历的人士。

作为报酬，本次调查的结果您可免费获取。如果你想获悉更多讯息及这项研究的结果，请按以下方式致电或电邮联系。同时也欢迎任何形式的讨论和建议，本学术机构和调研者本人十分珍视阁下所做的贡献。非常感谢您的参与协助和对科研工作的支持！

您诚挚的，

张颖
在读博士 博学院 管理系
澳大利亚查尔斯特大学
沃加沃加 新州 2678
澳大利亚
电话: 61 02 6933 2534
电邮: yizhang@csu.edu.au

澳大利亚查尔斯特大学商学院人类问题研究伦理风险评估批准匿名调研
关于您的电邮及任何隐私资料都将严格保密
THANKYOU

Your questionnaire has been received.
Thank you very much for your input.
Your position as expatriate is of great interest to this research and your experience will be a valuable contribution. Your answers, when aggregated to other participants’ responses, will aid in providing a better understanding of the cross-cultural adjustment process and relevant moderating factors in two-way flow assignment transfers between Australia and China.

If you would like to know the results of the research or wish to obtain a synopsis of the results, please contact me either by phone or preferably via my email address listed below. Your application will not affect the anonymity of your response. Your comments, in addition, are indeed most welcome. Your application will not affect the anonymity of your response.

Thank you and good business.

Sincerely,

Ying Zhang
PhD Student Faculty of Business
Charles Sturt University
Wagga Wagga NSW 2678
AUSTRALIA
Phone: 61 02 6933 2534
Email: yizhang@csu.edu.au
致谢

您的问卷已提交成功！感谢您的参与。
非常感谢阁下填写问卷的宝贵时间。您的外派经验对于本研究项目是极其重要的贡献。您的回答将与其他参与者的回答一同整合进行数据分析，这将帮助我们深入理解关于中澳双向外派人员的跨文化适应及其影响因素的重要课题。

您如果想要获悉本研究的成果，请按下列的方式致电或者通过电邮联系。该项目的相关成果将邮寄送达您指定的地址。您的申请将不会影响您参与本调研活动的匿名性。欢迎您的任何讨论与建议！

非常感谢并祝事业顺利。

您诚挚的，

张颖
在读博士 商学院 管理系
澳大利亚查尔斯特大学
沃加沃加 新州 2678 澳大利亚
电话: 61 02 6933 2534
电邮: yizhang@csu.edu.au
### Appendix B Descriptive Statistics

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**Appendix C  The Codebook for All Variables**

Responses were coded as (N = 238):

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<td>[1 = &lt;30, 2 = 30-39, 3 = 40-49, 4 = 50-59, 5 = &gt;60]</td>
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<td><strong>BEH_CQ</strong> = Behavioural Cultural Intelligence</td>
<td>[1 = Strongly disagree; 2 = Disagree; 3 = Slightly disagree; 4 = Neither agree or disagree; 5 = Slightly agree; 6 = Agree; 7 = Strongly agree]</td>
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<td><strong>COG_CQ</strong> = Cognitive Cultural Intelligence</td>
<td>[1 = Strongly disagree; 2 = Disagree; 3 = Slightly disagree; 4 = Neither agree or disagree; 5 = Slightly agree; 6 = Agree; 7 = Strongly agree]</td>
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<td><strong>Education</strong></td>
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<td><strong>Gender</strong></td>
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<td><strong>GL_SCA</strong> = General Living Adjustment</td>
<td>[1 = Not adjusted at all; 2 = Not very adjusted; 3 = Slightly not adjusted; 4 = Neutral; 5 = Slightly adjusted; 6 = Very adjusted; 7 = Completely adjusted]</td>
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<td><strong>HCN_SCA</strong> = Host Country National Interaction Adjustment</td>
<td>[1 = Not adjusted at all; 2 = Not very adjusted; 3 = Slightly not adjusted; 4 = Neutral; 5 = Slightly adjusted; 6 = Very adjusted; 7 = Completely adjusted]</td>
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<td><strong>Local Language Ability</strong></td>
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288
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Note: The response scales for each variable are as follows:

- **MC_CQ** and **MOT_CQ**: [1 = Strongly disagree; 2 = Disagree; 3 = Slightly disagree; 4 = Neither agree or disagree; 5 = Slightly agree; 6 = Agree; 7 = Strongly agree]
- **PCA**: [1 = Not at all; 2 = No more than usual; 3 = Rather more than usual; 4 = Much more than usual]
- **Position Level**: [1 = Managerial/Board of Director, 2 = Non-managerial]
- **Previous Time in Host Country**: [1 = < 1 year, 2 = 1-5 years, 3 = 6-10 years, 4 = >11 years]
- **Prior Assignment**: [1 = 0, 2 = 1-3, 3 = >4]
- **Spouse Support**: [1 = Not at all, 2 = A fair amount, 3 = A great deal]
- **WA_SCA**: [1 = Not adjusted at all; 2 = Not very adjusted; 3 = Slightly not adjusted; 4 = Neutral; 5 = Slightly adjusted; 6 = Very adjusted; 7 = Completely adjusted]