

## **DOING BUSINESS IN GLOBAL ARENA: AN EXAMINATION OF THE RELATIONSHIP BETWEEN CULTURAL INTELLIGENCE AND CROSS-CULTURAL ADJUSTMENT**

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### **ABSTRACT**

*The study examines the relationship between cultural intelligence (CQ) and cross-cultural adjustment (CCA) using a field study of 332 expatriates in Malaysia. The findings of this study reveal that CQ is a vital cross-cultural competency that facilitates expatriates CCA in international assignment. Specifically, the result of this study reveals that greater general adjustment is related to greater motivational and meta-cognitive CQ. The more successful 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 CCA. The findings of this study have significant contribution to the body of knowledge in the cross-cultural management field as well as practical implication to expatriating firms especially in the area of selection and hiring of international candidates.*

**Keywords:** cultural intelligence, cross-cultural adjustment, expatriate

### **INTRODUCTION**

In the pace of globalisation, the effectiveness of international assignment is becoming an important source of competitive advantage for many multinational corporations (MNCs) (Dickmann & Harris, 2005; Zhang & Dodgson, 2007). Some of the advantages that companies could gain from sending expatriates on the international assignments, are establishing new international markets, spreading and sustaining corporate culture, facilitating organisational coordination and control, and transferring of technology, knowledge and skills (Brown, 1994; Huang, Chi, & Lawler, 2005). In addition, expatriate assignments are also often utilised as effective managerial development opportunities for promising employees (Takeuchi, Tesluk, Yun, & Lepak, 2005).

Given the strategic importance of these assignments, an unsuccessful expatriate may be detrimental to an organisations future in a host country. An unsuccessful expatriate will incur substantial direct and indirect costs to them (e.g., diminished self-esteem, self-confidence) and to their employer (e.g., damaged corporate reputation, lost business opportunities) (Mendenhall & Oddou, 1985; Fisher & Hartel, 2003). One of the major reasons associated with expatriate's failure or ineffectiveness was that expatriates did not adjust themselves into host country's environment (Caligiuri, 2000; Kraimer, Wayne & Jaworski, 2001; Hechanova, Beehr & Christiansen, 2003; Shaffer & Harrison, 1998; Shay & Baack, 2006; Wang & Takeuchi, 2007).

Prior research on cross-cultural adjustment (CCA) has established that individual-level factors, such as personality trait, ability, skill, gender, marital status, prior international experience, and local language fluency are important predictors of CCA (Caligiuri, 2000; Hechanova et al., 2003; Holopainen & Björkman, 2005; Kim & Slocum, 2008). Despite growing interest in the expatriate management, many gaps remain in understanding the diverse factors affecting the expatriate's CCA. Specifically, the individual differences in the form of skills and ability for successful intercultural interaction in culturally diverse environment in international setting still remain equivocal (Gelfand, Erez & Aycan, 2007). Despite the extensive research and critical reviews, however, much of the research remains poorly organised in the form of lists of skills rather than as an integrated theoretical framework. Such listings fail to provide a comprehensive conceptual classification, and thus, remain detached from theory (Dinges & Baldwin, 1996; Ang, Van Dyne, Koh, Ng, Templer, Tay & Chandrasekar, 2007).

It is believed that cultural intelligence (CQ) represents an essential intercultural capacity that is crucial for expatriates working on international assignments within contemporary organisations (Alon & Higgins, 2005). Defined broadly as an individual's capability to effectively deal with people from different cultural backgrounds (Earley & Ang, 2003; Ang, Van Dyne, Koh & Ng, 2004), CQ holds great promise to explain why some people interact and adapt more effectively in foreign cultures than others, beyond just an ability to understand the language of a culture. However, the awareness of the concept's significance for CCA in diverse cultural environment still remains at an early stage.

Responding to this need, this study aims to advance Earley and Ang's (2003) theoretical discussion of CQ and extend the empirical research on CCA by examining the role of CQ and its dimensions on multiple indicators of CCA (general, interaction, and work adjustment) in a sample of expatriates working and residing in Malaysia. This study also aims to provide practical suggestions to management. A clearer understanding of which individual factors contribute to

CCA would aid decision makers and human resource professionals in the design of appropriate selection mechanism and training programs.

## **THEORETICAL DEVELOPMENT AND HYPOTHESES**

### **Cultural Intelligence**

The concept of CQ represents an individual's capability for successful adaptation to new and unfamiliar cultural settings and ability to function easily and effectively in situations characterised by cultural diversity (Earley & Ang, 2003; Ang et al., 2007). Grounded in the established stream of intelligence research, CQ is a theoretical extension of existing facet models anchored on the theory of multiple intelligences (Gardner, 1993). Cultural intelligence is a multidimensional construct consist of meta-cognitive, cognitive, motivational, and behavioral component (Earley & Ang, 2003).

The meta-cognitive CQ is defined as one's knowledge or control over cognitions that leads to deep information processing relating to culture (Ang et al., 2004). It consists of the cognitive strategies that are used to acquire and generate coping strategies (Ng & Earley, 2006). Ang et al. (2004) further states that meta-cognitive CQ is the individuals' cultural conscious and awareness, and is thus manifest in the ability to question cultural assumptions. Relevant capabilities include planning, monitoring, and revising mental models of cultural norms for countries or groups of people (Ang et al., 2007).

Cognitive CQ reflects knowledge of the norms, practices and conventions in different cultures gained from both experience and formal education, those universal as well as culture-specific (Ang et al., 2004; Ang et al., 2007). This includes knowledge of the economic, legal, and social systems of different cultures and subcultures (Triandis, 1994) and knowledge of basic frameworks of cultural values. Those with high cognitive CQ understand the similarities and differences across cultures (Brislin, Worthley, & MacNab, 2006).

Motivational CQ goes beyond recognising cultural differences, and deals with the motivation behind cognitive processes and cognitive knowledge; it reflects the interest in engaging others and the desire to adapt to the other culture (Ang et al., 2007). This facet of CQ includes three primary motivators: enhancement (wanting to feel good about oneself), growth (wanting to challenge and improve oneself), and continuity (the desire for continuity and predictability in ones' life) (Earley, Ang & Tan, 2006). According to Earley and Ang (2003) and Ng and Earley (2006), this component directs and motivates one's adaptation to a new cultural settings. Kanfer and Heggstad (1997, cited in Ang et al., 2007) argued

that such motivational capacities "provide agentic control of affect, cognition, and behaviour that facilitate goal accomplishment".

Lastly, the behavioural aspect involves the capability to engage in adaptive behaviours in accordance with cognition and motivation based on cultural values of specific settings. This includes of having a wide and flexible *repertoire* of behaviours. According to Earley and Ang (2003), those with high behavioral CQ capable at exhibit situational appropriate behaviours based on their broad range of verbal and nonverbal capabilities, such as displaying culturally appropriate words, tone, gestures, and facial expressions.

Previous empirical studies have demonstrated the ability of CQ to predict various expatriate behavioural outcome such as cultural judgment and decision making (Ang et al., 2007; Ang et al., 2004), cultural adaptation (Ward, Fischer, Lam, & Hall, 2008; Ang et al., 2007; Ang et al., 2004), CCA (Lee & Sukoco, 2007; Templer, Tay, & Chandrasekar, 2006), and job performance (Ang et al., 2004; Ang et al., 2007) in the international arena.

### **Cross-Cultural Adjustment**

Cross-cultural adjustment is conceptualised as the degree of psychological comfort that an expatriate has with the various aspects of a host culture (Black & Stephens, 1989; Gregersen & Black, 1990). Three specific areas of CCA have been distinguished in the literature (Black & Stephens, 1989): (i) adjustment to general environment (degree of comfort with general living conditions, such as climate, health facilities and food); (ii) interaction with host country nationals; and (iii) work (performance standards, job and supervisory responsibilities). Cross-cultural adjustment has been suggested to be key indicator as well as a determinant of expatriate success in their international assignments (Templer et al., 2006).

According to some researchers, CCA is a temporal and primary outcome in an expatriate's assignment that would influence the development of secondary or more distal expatriate adjustment such as strain (Hechanova et al., 2003), job satisfaction (Takeuchi, Yun, & Tesluk, 2002), organisational commitment (Nauman, 1993; Shaffer & Harrison, 1998), performance (Shay & Baack, 2006; Kim & Slocum, 2008), and turnover intent (Black & Stephens, 1989; Hechanova et al., 2003).

Prior research on CCA has established that individual-level factors, such as personality, self-monitoring, self-efficacy, ability, skill, gender, marital status, prior international experience, and local language fluency are important predictors of CCA (Parker & McEvoy, 1993; Ones & Viswesvaran, 1999;

Caligiuri, 2000; Hechanova et al., 2003; Holopainen & Björkman, 2005; Kim & Slocum, 2008).

### **Hypothesis**

We expect CQ to be related to CCA based on stress management theory of psychological stress. First of all, based on the stress management theory of psychological stress, intercultural interactions involves a series of stress-provoking life changes that draw on adjustive resources and require coping responses; CCA, therefore, is conceptualised by successfully coping with change. Based on Ang et al.'s (2007) analysis, certain CQ facets such as motivational and behavioural CQ are expected to negate psychological stress, thus leads to higher level of CCA. Since CQ is a person's capability to adapt new cultural contexts effectively, individuals high in CQ is expected to adjust better in new cultural environment in their international assignment. We expect all the four dimensions of CQ to be related to CCA.

First of these, meta-cognitive CQ should be related to CCA as it facilitates the culture learning process which is important cognitive element in the adjustment process. According to Lysgaard's (1955) U-curve theory of adjustment, individual learn to adjust to new culture through four stages namely, honeymoon, culture shock, adjustment, and mastery. As individuals move from one stage to another, the meta-cognitive CQ which is the higher-order mental capability to think about personal thought processes, anticipate cultural preferences of others, and adjust mental models during intercultural experiences would provide individuals with useful insights into understanding the process of learning cultural knowledge (Johnson, Lenartowicz, & Apud, 2006; Ang et al., 2007). As individuals high on meta-cognitive CQ master the process of acquiring the cultural knowledge, they should be more persistent in thinking strategically about their interactions with those from other cultures and engage in make sense the general cross-cultural situations hence facilitates their adjustment to new culture.

Cognitive CQ should be positively related to CCA as it represents the knowledge component in the adjustment process. It indicates knowledge of cultural universals as well as knowledge of cultural differences (Ang, Van Dyne & Koh, 2006). This knowledge applies to any cultural environment and includes the understanding of geographic, economic, legal, and social systems in other cultures hence provides frameworks for understanding and comparing/contrasting different cultures (Johnson et al., 2006). According to Wiseman, Hammer, and Nishida (1989), cultural knowledge is an important determinant of one's ability to minimise misunderstandings with someone from another culture. As such, individual who is on cognitive CQ is most likely is able to adjust to new cultural

environment as they are more knowledgeable about specific aspects of other cultures.

Motivational CQ is also expected to be positively related to CCA because those with higher motivational CQ have intrinsic interest in other cultures and expected to be successful in culturally diverse situations. According to Bandura's (2002) social cognitive theory, individual who is higher in intrinsic motivation will initiate effort, persist in their efforts and perform better. Self-efficacy, other components of motivational CQ is also among the central motivational elements in CCA (Earley & Ang, 2003). Individuals with strong self-efficacies regulate their emotional states effectively; they are not only persevere 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 have shown that higher efficacy beliefs led to engagement and persistence in difficult situations, as well as better adjustment (Harrison, Chadwick, & Scales, 1996; Epel, Bandura, & Zimbardo 1999; Bhaskar, Harrison, Shaffer, & Luk, 2005; Palthe, 2004).

Behavioural CQ is proposed to be related positively with CCA since individual high on this dimension has the capability to vary their behavior in response to situational cues-in particular, in response to cultural cues. Goffman's (1959) theory of self-presentation discussed that individuals use impression management techniques to make others view them positively. Since 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 actors in the culturally diverse environment (Gudykunst, Ting-Toomey, & Chua, 1988). When individuals are flexible, they are less offensive to others, more likely to fit in and better adjusted. Research has linked behavioural flexibility to various intercultural outcomes. Black (1990) found that behavioural flexibility correlated with general, interaction, and work adjustment in a sample of Japanese expatriates working in the US. Another study found that flexibility predicted both general and work adjustment in expatriate managers working in a variety of countries (Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006). Drawing from the above discussion, we therefore propose the below hypotheses:

H<sub>1</sub>: There is a positive relationship between CQ and cross-cultural adjustment.

Specifically, meta-cognitive CQ (H<sub>1a</sub>); cognitive CQ (H<sub>1b</sub>); motivational CQ (H<sub>1c</sub>) and behavioural CQ (H<sub>1d</sub>) will relate positively to: (i) general, (ii) interaction, and (iii) work adjustment.

## METHODOLOGY

Data were obtained from expatriates using a structured questionnaire through mail and online survey. The participants in the study were expatriates currently working and residing in Malaysia. Only those working and residing in Malaysia for at least one year was included in this study. A total of 500 mail surveys and 500 online surveys were distributed—339 surveys were replied. The initial response rate was 34%, which is consistent with other typical response rates (20%–30%) in most expatriate studies (for example, Harrison & Shaffer, 2005). Out of 339, 7 were unusable responses, resulting in final sample of 332, representing a 33% return rate.

The sample included 252 (75.9%) men and 80 (24.1%) women. We studied 122 (36.7%) participants ranging from 42 to 52 years of age and 103 (31.0%) between 31 to 41 years of age. Participants marital status includes 251 (75.6%) married and 54 (16.3%) unmarried. 208 (62.7%) are accompanied by their spouse and 124 (37.3%) are not. 251 (75.6%) participants have previous international experience and 81 (24.4%) without experience. 238 (71.7%) did not receive any cross-cultural training through their organisation. Participants job status includes 169 (50.9%) in managerial position and 163 (49.1%) in non-managerial position. Participants education status includes 119 (35.8%) with degree and 85 (25.6%) with masters degree. 112 (33.7%) working in service sectors, 109 (32.8%) other sector, and 84 (25.3%) in manufacturing. Participants length of stay in Malaysia ranged from 2 to 24 ( $M = 4.80$ ,  $SD = 3.40$ ). Tenure with present organisation ranged from 2 to 25 ( $M = 7.25$ ,  $SD = 4.45$ ). The participants comes from various countries with majority ( $n = 51$ , 15.4%) are from India, 39 (11.7%) from UK, 32 (9.6%) from Australia, and 200 (63.3%) from other 42 various countries.

## Measures

### *Cultural intelligence*

Cultural intelligence was measured with the 20-item, Four Factor Model of Cultural Intelligence Scale (CQS) was developed and validated by Ang et al. (2007). The inventory includes four items for meta-cognitive CQ ( $\alpha = .76$ ), six for cognitive CQ ( $\alpha = .84$ ), five for motivational CQ ( $\alpha = .76$ ), and five for behavioural CQ ( $\alpha = .83$ ). Sample items include *I am conscious of the cultural knowledge that I apply to cross cultural interaction* for meta-cognitive CQ; *I know the legal and economic systems of other cultures* for cognitive CQ; *I enjoy interacting with people from different cultures* for motivational CQ; and *I change my verbal behavior when a cross-cultural interactions requires it* for behavioural CQ. Respondents are asked to use a seven-point Likert-type scale to

indicate the extent to which each item describes their capabilities. The 7-point Likert-type scale ranges from strongly disagree (1) to strongly agree (7).

#### *Cross-cultural adjustment*

Black and Stephens' (1989) self-reported 14-item Expatriate Adjustment Scale was used to assess three dimensions of expatriate adjustment. Respondents were asked to rate the extent to which they felt they had adjusted to various aspects of life abroad. Seven items assessed *general adjustment* (e.g., housing, food, and shopping); four items assessed *interactions adjustment* (e.g., socialising with people from the host culture); and three items assessed *work adjustment* (e.g., job responsibilities and performance standards/expectations). Respondents were asked to use a 7-point Likert-type scale to indicate the extent to which each item indicates their adjustment to various living and working conditions in the new environment abroad. Response choice alternatives ranged from 1 (very unadjusted) to 7 (completely adjusted). Cronbach's alphas for general adjustment, interactions adjustment, and work adjustment were .91, .82, and .86 respectively (Black & Stephens, 1989).

#### *Control variables*

Prior studies found that gender, previous international experience, time in host country and local language fluency influence expatriates' attitudes and behaviors (Ren, Harrison, Bhaskar, & Shaffer, 2006; Hechanova et al., 2003; Shaffer & Harrison, 1998; Takeuchi et al., 2005). Hence, to control the possible effects of those variables, those were measured.

## **RESULTS**

### **Descriptive Statistics, Reliability Coefficients and Correlations**

The descriptive statistics for all variables are presented in Table 1, along with the correlation matrix. Meta-cognitive CQ was correlated positively with all three dimensions of cultural adjustment (general adjustment  $r = .38$ , interaction adjustment  $r = .44$ , and work adjustment  $r = .20$ , all  $ps = < .05$ ). Meta-cognitive CQ also correlated with length of stay in Malaysia ( $r = .12$ ,  $p < .05$ ) and language proficiency ( $r = .18$ ,  $p < .05$ ). Cognitive CQ also correlated positively with all three dimensions of cultural adjustment (general adjustment  $r = .25$ , interaction adjustment  $r = .35$ , and work adjustment  $r = .11$ , all  $ps = p < .05$ ). Cognitive CQ also correlated with length of stay in Malaysia ( $r = .12$ ,  $p < .05$ ) and language proficiency ( $r = .18$ ,  $p < .05$ ). Behavioural CQ was correlated with all three dimensions of adjustment (general adjustment  $r = .22$ , interaction adjustment



Table 1  
*Descriptive statistics, reliability coefficients, and correlations (N = 332).*

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Meta Cognitive	5.79	.69	.84										
2. Cognitive	5.16	.56	.334**	.78									
3. Motivational	5.90	.71	.530**	.347**	.85								
4. Behavioral	5.42	.81	.415**	.415**	.437**	.86							
5. General adjustment	5.71	.70	.382**	.248**	.517**	.218**	.83						
6. Interaction adjustment	5.66	.76	.439**	.348**	.554**	.330**	.548**	.86					
7. Work adjustment	5.98	.80	.200**	.112*	.225**	.160**	.244**	.286**	.90				
8. Gender	1.24	.43	.052	.076	.031	.125*	.052	-.001	-.151**	—			
9. Prior overseas experience	1.24	.43	.013	-.080	-.092	-.071	-.024	.028	-.080	.123*	—		
10. Length of stay	4.80	3.40	.122*	.124*	.080	.144**	.214**	.284**	.156**	-.025	.025	—	
11. Language proficiency	3.57	.698	.183**	.176**	.298**	.276**	.312**	.321**	.060	.164**	-.205**	.158**	—

Note: Coefficient alphas are presented along the diagonal  
 \* $p < .05$ , \*\* $p < .01$

$r = .33$ , and work adjustment  $r = .16$ , all  $ps < .05$ ). Length of stay in Malaysia also correlated with behavioral CQ ( $r = .14$ ,  $p < .01$ ) and language proficiency ( $r = .28$ ,  $p < .05$ ). Finally, for motivational CQ, all three dimensions of cultural adjustment were correlated more strongly as compared to other dimensions of CQ (general adjustment  $r = .52$ , interaction adjustment  $r = .55$ , and work adjustment  $r = .23$ , all  $ps < .05$ ). Motivation CQ also correlated positively to language proficiency ( $r = .30$ ,  $p < .05$ ).

### Hypothesis Testing

The first hypothesis was: There is a positive relationship between CQ and cross-cultural adjustment. A hierarchical multiple regression analysis was conducted to test the hypothesis. The results of the first step of the regression analysis for this hypothesis are shown in Table 2. When the control variables were entered in the first step, the regression model was statistically significant,  $R^2 = .167$ , Adjusted  $R^2 = .157$ ,  $F(4, 327) = 16.393$ ,  $p < .001$ . Length of stay in Malaysia ( $\beta = .231$ ,  $p = .001$ ) and language proficiency ( $\beta = .310$ ,  $p = .001$ ) were statistically significant, indicating that those who had been in Malaysia for a longer period of time and proficient in language tended to have better CCA.

When CQ was added to the model in Step 2, the full model was statistically significant,  $R^2 = .368$ , Adjusted  $R^2 = .359$ ,  $F(5, 326) = 38.021$ ,  $p = .001$ . Again, length of stay in Malaysia ( $\beta = .176$ ,  $p = .001$ ) and language proficiency ( $\beta = .175$ ,  $p = .001$ ) was positively associated with CCA, indicating that those who had been in Malaysia for a longer period of time and proficient in language tended to have better CCA. Additionally gender was positively related to CCA ( $\beta = .092$ ,  $p = .044$ ). Cultural intelligence was statistically significant ( $\beta = .477$ ,  $p = .001$ ). This indicates that individuals with higher levels of CQ tended to have better CCA. This finding supports the first hypothesis (H1). In addition, the change in  $R^2$  between Step 1 and Step 2 are significant ( $\Delta R^2 = .201$ ,  $p = .001$ )

Table 2  
Results of the hierarchical regression analysis with CQ as a predictor of cross-cultural adjustment ( $N = 332$ )

Variable	Step 1			Step 2		
	$\beta$	$t$	$p$	$\beta$	$t$	$p$
Gender	.063	1.214	.226	.092	2.017	.044
Prior overseas experience	-.038	-.719	.472	-.054	-1.187	.236
Length in Malaysia	.231	4.508	.000	.176	3.910	.000
Language proficiency	.310	5.804	.000	.175	3.618	.000
CQ	-	-	-	.477	10.193	.000

Note: Gender and prior experience are dummy-coded categorical variables.

indicate that CQ explain an additional 20.1% of the variance in CCA, even when the effects of the control variables are statistically controlled for.

Step 1  $R^2 = .167$ , Adjusted  $R^2 = .157$ ,  $F(4, 327) = 16.393$ ,  $p = .000$ ;  
Step 2  $R^2 = .368$ , Adjusted  $R^2 = .359$ ,  $\Delta R^2 = .201$ ,  $p = .000$ ,  $F(5, 326) = 38.021$ ,  
 $p = .000$ .

The sub-hypothesis 1 are: (H<sub>1a</sub>) Meta-cognitive CQ; (H<sub>1b</sub>) cognitive CQ; (H<sub>1c</sub>) motivational CQ and (H<sub>1d</sub>) behavioral CQ will relate positively to (i) general, (ii) interaction, and (iii) work adjustment, respectively. To test these hypotheses, it requires an examination on the relationship between dimensions of CQ and dimensions of CCA. Again a hierarchical regression analysis was conducted.

The full model (Table 3) after controlling for the effects of control variables in Step 2 was statistically significant for all three dimensions of CCA, general ( $R^2 = .340$ , Adjusted  $R^2 = .324$ ,  $F(8, 323) = 20.811$ ,  $p < .001$ ), interaction ( $R^2 = .428$ , Adjusted  $R^2 = .414$ ,  $F(8, 323) = 30.262$ ,  $p < .001$ ), and work adjustment ( $R^2 = .107$ , Adjusted  $R^2 = .085$ ,  $F(8, 323) = 4.846$ ,  $p < .001$ ).

Meta-cognitive CQ was positively related to general ( $\beta = .142$ ,  $p < .05$ ) and interaction adjustment ( $\beta = .143$ ,  $p < .010$ ) indicating that those higher in meta-cognitive CQ tended to have higher level of general and interaction adjustment. Cognitive CQ ( $\beta = .132$ ,  $p < .010$ ) was positively associated with interaction adjustment, indicating those higher in their cognitive CQ tended to have higher level of interaction adjustment. Motivational CQ was positively associated with all three dimensions of CCA, general ( $\beta = .412$ ,  $p < .001$ ), interaction ( $\beta = .385$ ,  $p < .001$ ), and work adjustment ( $\beta = .144$ ,  $p < .05$ ). This indicates that individuals with higher levels of motivational CQ tend to have better general, interaction, and work adjustment. In this model, behavioral CQ ( $\beta = -.111$ ,  $p < .05$ ) was negatively related to general adjustment. The above findings support the hypothesis H<sub>1a</sub> (i), H<sub>1a</sub> (ii), H<sub>1b</sub> (ii), H<sub>1c</sub> (i), H<sub>1c</sub> (ii), and H<sub>1c</sub> (iii).

When comparing the adjusted  $R^2$  value for CCA dimensions, meta-cognitive, cognitive, motivational, and behavioural CQ, we found the account for 41.4% of variance in interaction adjustment. The second largest was for general adjustment, 32.4% of its variance was explained by meta-cognitive, cognitive, motivational, and behavioural CQ. The least variance explained was for work adjustment, whereby only 8.5% of the variance was accounted by meta-cognitive, cognitive, motivational, and behavioural CQ.

In addition, the change in  $R^2$  between Step 1 and Step 2 was significant for all three dimensions of CCA, general ( $\Delta R^2 = .214$ ,  $p < .001$ ), interaction

Table 3  
Results of the hierarchical regression analysis between dimensions of CQ and dimensions of cross-cultural adjustment (N = 332)

Variable	General		Interaction		Work	
	Step 1 β (t)	Step 2 β (t)	Step 1 β (t)	Step 2 β (t)	Step 1 β (t)	Step 2 β (t)
Gender	-.004 (-.084)	-.013 (-.274)	.058 (1.118)	.064 (1.474)	.149 (2.685)**	.155 (2.842)**
Prior experience	-.031 (-.576)	-.037 (-.794)	-.093 (-1.780)	-.107 (-2.441)*	.055 (.981)	.052 (.947)
Length of stay	.167 (3.181)**	.146 (3.138)**	.230 (4.490)***	.190 (4.406)***	.146 (2.663)**	.125 (2.313)*
Language fluency	.291 (5.327)***	.167 (3.323)**	.314 (5.879)***	.162 (3.479)**	.050 (.880)	-.022 (-.385)
Meta-cognitive		.142 (2.543)*		.143 (2.769)**		.096 (1.483)
Cognitive		.058 (1.136)		.132 (2.760)**		.001 (.016)
Motivation		.412 (7.195)***		.385 (7.226)**		.144 (2.165)*
Behavior		-.111 (-2.027)*		-.009 (-.185)		.061 (.951)
R <sup>2</sup>	.126	.340	.169	.428	.053	.107
Adj R <sup>2</sup>	.116	.324	.159	.414	.041	.085
ΔR <sup>2</sup>		.214***		.260***		.055**
F	(4,327) 11.809***	(8,323) 20.811**	(4,327) 16.592**	(8,323) 30.262**	(4,327) 4.531**	(8,323) 4.846***

Note: \*p < .05, \*\*p < .01, \*\*\*p < .001

Gender and prior experience are dummy-coded categorical variables.

( $\Delta R^2 = .260, p < .001$ ), and work adjustment ( $\Delta R^2 = .055, p < .010$ ). This indicates that meta-cognitive, cognitive, motivational, and behavioural CQ together explains an additional 21.4%, 26.0% and 5.50% of the variance in general, interaction, and work adjustment, respectively, even when the effects of the control variables are statistically controlled for.

## **DISCUSSION AND CONCLUSION**

This study explored how CQ is related to the CCA of expatriates in Malaysia. The results indicated that after accounting for gender, prior overseas experience, length of stay in Malaysia and language proficiency, CQ was significantly related to CCA. Specifically it was found that expatriates in Malaysia with greater meta-cognitive CQ, motivational CQ, longer time spent in Malaysia and proficient in language fared better in their general adjustment. Greater interaction adjustment in expatriates was related to being more meta-cognitive CQ, more cognitive CQ, more motivational CQ, with prior experience, longer time spent in Malaysia and proficient in language. Finally, greater work adjustment in expatriates was related to being more motivational CQ, being male and longer time spent in Malaysia. In general, the findings of the present study is consistent with results of previous studied (Ang et al., 2004; Lee & Sukoco, 2007; Templer et al., 2006; Ang et al., 2007; Ward et al., 2008).

The meta-cognitive aspect of CQ was related to CCA in expected direction. Specifically, meta-cognitive dimension of CQ was related positively to general and interaction adjustment. This implies that the greater the meta-cognitive CQ the greater the general and interaction adjustment will be. Similarly, the cognitive aspect of CQ was also positively related to CCA. Specifically, cognitive dimension of CQ was related positively to interaction adjustment. Although not related to all the three dimensions of cross-cultural adjustment, cognitive CQ indeed have some significant effect on CCA in general. This implies that the greater the cognitive CQ the greater the interaction adjustment will be. This pattern of results support Ang et al.'s (2007) contention that cognitive capabilities such as questioning assumptions, adjusting mental models, and rich cultural knowledge schemas are especially important for making accurate judgments and decisions when situations involve cultural diversity. This in turn facilitates the expatriate's adaptation process to new cultural environment.

Similar to the findings in majority of the prior studies, motivational CQ was the only CQ dimension that strongly associated with CCA. Specifically, motivational CQ was related to experiencing greater general, interaction, and work adjustment in the positive direction. This implies that the greater the motivational CQ the greater the general, interaction, and work adjustment will be. The result of this

study is consistent with findings of the previous studies (Templer et al., 2006; Ward et al., 2008). This findings suggests that expatriates who were more interested and motivated to explore and experience diverse cultures, and who were more self-confident in their abilities to adapt to new cultural environments adjusted better to work, life, and social demands in foreign assignments (Ang et al., 2007).

Despite prediction, behavioural CQ was not positively related to CCA. Instead it was found to be negatively related to general adjustment. Negative relationship between behavioural CQ and CCA is likely to occur when the expatriate engage in mimicry rather that of adaptive behaviours that are correct for different intercultural situations. Evidence suggests that high level of mimicry demonstrated by actors in new cultural environment are perceived as insincere or even devious (Thomas & Ravlin, 1995), hence subject to some form of rejection from other actors in the new cultural environment. This in turn may affect the expatriate's psychological well being and adjustment to various aspects of new intercultural environment.

One interesting findings was that time spent in host country (i.e., Malaysia) was related to all three dimensions of CCA, general, interaction, and work adjustment. This is explained by Bandura's (1977) Social Learning Theory and Kolb's (1984) Experiential Learning Theory in which the expatriates over the time learn to adapt to the target culture by learning appropriate behaviors and cultural norms through interaction with host country nationals and other actors in the new cultural environment.

A negative relationship found between prior overseas experience and CCA among expatriates in Malaysia is surprising. Specifically, prior overseas experience in this study found negatively related to interaction adjustment dimension. This findings appears to be inconsistent with results reported in earlier studies (Shaffer et al., 1999; Huang et al., 2005; Ang et al., 2007). One possible explanation for this findings is that expatriates in Malaysia most likely had a prior overseas experience from countries with huge cultural distance from Malaysia, which in turn may inhibit their adjustment. This makes sense since more than 50% of the expatriates in Malaysia came from non-Asian countries. A country-specific previous overseas experience would have produced a positive relationship between prior overseas experience and CCA such as reported in Kim and Slocum (2008). Prior overseas experience mainly in the work rather than non-work related aspects may also hinder expatriates from making appropriate non-work related adjustments such as interaction and general adjustment when assigned to multicultural countries like Malaysia.

### **Theoretical and Practical Implications**

The current study has several key contributions and implications. First, to our knowledge, this is among the first empirical study on CCA that focuses on CQ and its dimensions. It furthers the theoretical developments of Earley and Ang's (2003) CQ concept. In particular, the present study provides empirical support for the validity of all four dimensions of CQ in understanding how individuals adjust to work, life, and interactions in new cultural environment. Secondly, the use of field data collected from expatriates from wide range of backgrounds originating from 45 different countries enhances the generalisability of results. Finally, this study also adds to the body of knowledge in the area of cross-cultural management studies in Malaysia. The findings of this study helps to fill the void in the existing dearth knowledge on expatriate management in this country. Findings of this study can be used to predict and understand expatriates effectiveness in other South East Asian countries since this country has a lot of commonalities in the national cultural value as proposed in Hofstede's (1984, 1988) model of national cultural value dimensions.

The results from this study also contain implications for MNC's in selecting and training expatriates. First of all, when a MNC selects potential candidates for international assignments, individuals high on motivational CQ should be a competency by which people scheduled for expatriate assignments are screened. This should be followed by the meta-cognitive and cognitive component of CQ in the screening process. Although there are arguments that CQ can be trained, candidate with readily high CQ level definitely is more preferable and more likely to produce results than those low in CQ. MNC also should select individuals with prior overseas experience in the country where they will be assigned since the results of the present study highlights that the longer the time spent in host country, the higher the CCA of the expatriates. Secondly, this study has important implications for intercultural training, which has, to date, focused primarily on knowledge or cognitive training (Earley & Peterson, 2004). Since our results highlighted motivational CQ and meta-cognitive CQ as fundamental capabilities with relevance to CCA, training programs could include modules on both.

### **Limitations and Future Research Directions**

This study has certain limitations which provide venues for future research. First, we acknowledge that some concerns might exist in that self-reported measures (i.e., CQ and CCA) have social desirability and common method bias problem (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Therefore, future research should include expatriate CQ and CCA assessment from multiple sources including peers, subordinates, and superiors. Second, this study limits the

examination of international assignment effectiveness to CCA. Future researchers should consider multidimensional performance dimensions (e.g., task, contextual performance) and withdrawal cognition in the assessment of expatriate effectiveness so that it will enhance our understanding about expatriate management. Third, this study is cross-sectional in design. Future researchers should considering longitudinal study since the level of individual CQ and cultural adjustment is varies over time. Therefore, longitudinal study would provide better knowledge on these changes that took place over the time.

## CONCLUSION

In conclusion, the research findings presented here contributes to knowledge of expatriate management theoretically, as well as practically. The results demonstrated the importance of CQ, especially motivational component of CQ and time spent in host country for effective CCA. This suggests that MNC should consider these variables when selecting and training appropriate candidates or international assignments. We hope this research would stimulate more research attention on how CQ could enhance expatriate effectiveness in its broader nomological network by examining various antecedents, moderators, and outcomes of CQ.

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