—CQ as a Mediator—

CHAPTER 8

Antecedents and Consequences of Cultural Intelligence Among Short-Term Business Travelers

CHERYL TAY, MINA WESTMAN, AND AUDREY CHIA

This chapter examines factors that can potentially influence the development of cultural intelligence (CQ) among short-term business travelers and the effects of travelers' CQ on travel outcomes, specifically, perceived travel flexibility or autonomy and burnout. To set the context for the study, we first provide the conceptual background on short-term business travelers and present the multidimensional concept of CQ: "an individual's capability to function and manage effectively in culturally diverse settings" (Ang et al., 2007). We then propose that within the context of short-term business travelers, individual factor (need for control) and job-related factor (multicultural experiences [MCEs]) are potential antecedents to travelers' CQ. Additionally, we investigate whether a person-by-situation interaction, i.e., need for control and MCEs, explains variance in travelers' CQ beyond what could be attributed to either factor alone. Finally, we propose that business travelers' CQ alleviates burnout and promotes perception of control over their travel schedule.

CONCEPTUAL BACKGROUND ON SHORT-TERM BUSINESS TRAVELERS

Despite technological advances and rapid growth in electronic communications, global managers recognize the significance of face-to-face interactions to close deals, solve problems, negotiate contracts, and develop mutual trust and respect (Govindarajan & Gupta, 2001; Ivancevich, Konopaske, & DeFrank, 2003). Consequently, with increasing globaliza-

ness trips are generally regarded as a source of stress to the travelers and their families (e.g., DeFrank, Konopaske, & Ivancevich, 2000; Dimberg et al., 2002). Dimberg et al. (2002) found that the physical and psychological impact on the traveler is especially substantial when traveling is frequent, as this prevents easy adaptation and opportunities to settle in to new routines. However, more recent studies have recognized that short business trips can bring about positive impact, e.g., insight into new business practices and productive ideas, individual growth, and respite from routine work demands (Welch & Worm, 2006). In this study, we focus on the positive impact of short business trips, i.e., the MCEs gained from the business trips on travelers' CQ. We present briefly the multidimensional concepts of CQ followed by our proposal on antecedents to travelers' CQ.

THE MULTIDIMENSIONAL CONCEPT OF CQ

CQ is a theoretical extension of contemporary approaches to understanding intelligences, defined as "a person's capability for successful adaptation to new cultural settings" (Earley & Ang, 2003, p. 59). CQ is conceptualized as a complex, multifactor individual attribute that is composed of four factors: cognitive, metacognitive, motivational, and behavioral components.

The cognitive factor of CQ refers to an individual's level of cultural knowledge or knowledge of the cultural environment. Metacognitive CQ refers to individuals' mental processes used to acquire and understand cultural knowledge and encompasses an individual's cultural consciousness and awareness during cross-cultural interactions. Motivational CQ refers to an individual's interest and drive to learn and adapt to new cultural surroundings. Finally, behavioral CQ refers to the extent to which individuals act appropriately (both verbally and nonverbally), are flexible, and adjust their behaviors to the specifics of each cultural interaction (Ang, Van Dyne, Koh, Ng, Templer, Tay, & Chandrasekar, 2007; Earley & Ang, 2003).

ANTECEDENTS TO BUSINESS TRAVELERS' CQ

Multicultural Experiences

We define MCEs as the amount of cultural exposure short-term business travelers experience on business trips. In this context, MCEs can be reflected by frequency and length of trips, number of different destinations, and intensity of exposure to different cultures. MCEs provide opportunities for business travelers to increase their knowledge of specific cultural environments (i.e., their cognitive CQ). For example, a greater number of trips abroad to different destinations expands knowledge about different business and social cultural norms. Travelers with more MCEs should have more opportunities to acquire and cultivate metacognitive strategies and interaction models, such as greater cultural

specific business objectives may prevent travelers from processing and adapting cultural experiences at a deeper level, which would promote metacognitive CQ.

Greater cross-cultural experiences should build travelers' confidence in their ability to function in different cultures. That is, we expect MCEs to be a source of efficacious beliefs on a traveler's capability to interact and work with business partners from different cultures. Thus, we expect MCEs to enhance travelers' motivational CQ. A greater number of trips abroad should also expose travelers to wider repertoires and deeper understanding of behavioral norms. However, knowledge or understanding of acceptable behaviors need not necessarily translate into actual enacted behaviors on the part of the traveler. Particularly when the trips are short term in nature as in this context, MCEs may not provide travelers adequate opportunities to practice and develop verbal and nonverbal repertoires of acceptable behaviors at their business destinations.

Therefore, we do not propose any associations between MCEs and metacognitive CQ or behavioral CQ. We will however test the relationships in our analyses. In sum, we hypothesize the following:

H1: Business travelers' MCEs will be positively associated with their (a) cognitive CQ and (b) motivational CQ.

Need for Control

Need for control is conceptualized as an individual disposition, defined as an individual's desire and intent to exert influence over the situations in which the person operates (see Burger, 1995). Need for control is basic and universal. The strength of this need varies from person to person (Gebhardt & Brosschot, 2002). DeCharms (1968) suggested that people need to feel a sense of mastery and personal competence in their environments. Indeed, Sutton and Kahn (1986) noted that the importance of control in organizational settings is "a persistent theme in the behavioral sciences" (p. 276). Thus, the greater the individual's desire to control, the greater is the desire to take action to understand the cultural environment. We suggest that this desire translates to greater development of CQ.

Compared to travelers who have little desire to control their environment, those with high need for control are likely to research the destination, engage in serious planning of business trips, and be more motivated to learn about international business partners and their cultures. In other words, we expect travelers with greater need for control to have a larger store of cultural information (cognitive CQ), to be more conscious and mindful of environmental changes including cultures in different travel destinations (metacognitive CQ), and to be more confident in and interested to learn about effective interactions at different destinations (motivational CQ).

Similarly, travelers who have greater need for control may consciously monitor and adjust their verbal and nonverbal behaviors to align them with the cultural expectations of their business partners when they visit their partners' host organization and country. To

develop broad and enhanced behavioral repertoires that match different cultural situations than those with lower need for control. In sum, we hypothesize as follows:

H2: Business travelers' need for control will be positively associated with their (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ.

Moderated Relationships

Within the business traveler context, the individual's need for control is expected to moderate the MCEs-to-CQ relationship. This is because an individual's need for control suggests a desire to minimize uncertainties, plan for contingences, and influence outcomes or situations. Moreover, high need for control tends to increase an individual's responsiveness or attentiveness to available resources, including their prior travel experiences, to their advantage. Thus, when travelers have a high need for control, the effects of MCEs on development of CQ may be heightened. For instance, travelers with high need for control should be more sensitive to and should draw more from MCEs that enhance mental processing of cultural information and insight (cognitive CQ), as well as development of cultural competencies and efficacies (motivational CQ). Conversely, those who have low need for control are less likely to seek direct control of their work situations or consciously draw from their MCEs to develop and build on their cognitive or motivational CQ capabilities. Thus, we hypothesize the following:

H3: Business travelers' need for control will moderate the relationships between MCEs and (a) cognitive CQ and (b) motivational CQ such that the relationships between MCEs and CQ facets will be stronger among travelers' with higher need for control than those with lower need for control.

CONSEQUENCES OF BUSINESS TRAVELERS' CQ

In this section, we discuss the concept of burnout and present our conceptual arguments linking CQ dimensions to burnout. Thereafter, we discuss the concept of travelers' perceived travel schedule autonomy and our proposed link between travelers' CQ to schedule autonomy.

Burnout

Burnout is a unique affective response to stress. Literature on burnout regards it as an affective response to continuous and prolonged exposure to work-related stress. The most influential and widely used model of burnout was initially posed by Maslach (1982, 1993), and consists of three core components. The first component, emotional exhaustion, refers to feeling "drained and used up" due to work demands and interactions with people that

personal accomplishment, the third component, is characterized by an internal sense of failure and inability to perform at work.

"Exhaustion is the central quality of burnout" (Maslach, Schaufeli & Leiter, 2001, p. 402) and best captures the "core meaning" of the burnout phenomenon (Shirom, 1989). This component has received the most attention in empirical studies (see Cordes & Dougherty, 1993). Research also suggests that the effects of emotional exhaustion on work-related outcomes may be stronger than other components of burnout (Lee & Ashforth, 1996). Accordingly, we focus on the emotional exhaustion component of burnout within the context of business travelers.

We propose that short-term business travelers who exhibit greater cognitive, metacognitive, motivational, and behavioral CQ should have lower levels of burnout. This is consistent with Hobfoll's (1989) Conservation of Resource (COR) theory in which personal attributes of CQ would serve as resources, defined as "those objects, personal characteristics, conditions, or energies that are valued by the individual" (Hobfoll 1989, p. 516). In the COR theory, resources are used to prevent resource loss, which is the principal ingredient in the stress burnout process (Hobfoll, 1989). Business travelers who have greater cognitive and metacognitive CQ (i.e., are better informed and more aware of the cultural environment in different travel destinations) should be in a better position to cognitively plan and manage the stress that arises from interacting in the different cultural contexts during business travel.

In the same way, business travelers who feel more efficacious, have greater motivation and drive to interact, and work with others in different cultures (i.e., high motivational CQ) have more psychological resources at their disposal to address emotional demands and the stress of adjusting and making deals with people of different cultures. Motivation serves as an energy resource and is valued for its ability to add to the acquisition of other kinds of resources (Hobfoll, 1998). We suggest that business travelers who are high in motivational CQ would have greater drive and desire to develop personal and work resources to facilitate their intercultural business tasks and interactions that help ease work stress. In contrast, those who are low in motivational CQ may lack the confidence and energy resources to invest in establishing necessary intercultural networks to facilitate work relations in their business travels.

Similarly, we propose that travelers with higher behavioral CQ, i.e., those who can display a wide repertoire of verbal and nonverbal behaviors, possess more personal resources that will prevent threatened loss of other resources needed to address issues that arise due to different cultural interactions. We expect business travelers with higher behavioral CQ to have lower levels of burnout than those who struggle with limited behavioral repertoires. Travelers who need to interact and work with business partners and associates from different cultures feel more stressed if they lack the resources and capabilities that would allow them to display appropriate and expected social behaviors during their trips, in order to avoid offending others and successfully adapt to the norms of other cultures (i.e., behavioral CQ). In sum, we propose the following:

Schedule Autonomy

Schedule autonomy in this study refers to travelers' perceived ability to influence and/or make changes to their business trip schedules. Similar to job autonomy, we suggest that for short-term business travelers, schedule autonomy represents a precondition to an extended array of individual and work-related outcomes (e.g., psychological and physical well-being, family conflicts, job performance and withdrawal behaviors). It is thus of interest to investigate the antecedents to schedule autonomy.

We propose that business travelers' CQ can affect travelers' appraisals of schedule autonomy. Travelers who are high in cognitive CQ have rich, complex, and well-organized knowledge structures, and possess increased repertoire of specific and universal cultural norms, practices, and conventions in different settings. Those with high metacognitive CQ are better able to monitor, analyze, and adjust their behaviors in different cultural settings (Ang et al., 2007; Earley & Ang, 2003). As such, these travelers are more likely to conclude that they are better able to manage and exert influence over their business trip schedule in culturally relevant and acceptable ways than those with low cognitive and/or metacognitive CQ.

Travelers with high motivational CQ enjoy and are motivated to learn and adapt to new and diverse cultural situations. Their confidence in their adaptive capabilities (Earley & Ang, 2003) is likely to influence their assessment of their ability to exert influence over business scheduling in different cultural destinations. Travelers with high behavioral CQ are also expected to favorably assess their ability to control their business schedules. Travelers with high behavioral CQ possess a broad repertoire of adaptive and communicative behaviors, which they can use depending on the cultural sensitivities of those with whom they interact. The ability to communicate effectively and to enact appropriate behaviors should aid these individuals in persuading international business partners to accept their suggested schedule changes and thus provide a basis for greater autonomy perception. Thus, we propose that

H5: Business travelers' (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ will be positively associated with perceived schedule autonomy.

METHOD

Data Collection

Data were collected from business travelers working in large multinational corporations in Singapore, Israel, and Brazil. In Singapore and Israel, respondents filled out questionnaires in English. In Brazil, the English questionnaire was translated into Portuguese and then back into English (Brislin, 1970).

distributed and 98 returned, giving a response rate of 82 percent. In Brazil, 420 questionnaires were distributed and 328 returned, for a response rate of 78 percent. Of the total sample of 496, we dropped three cases where respondents indicated that they had not spent any work time outside their home country in the past year and another two that had missing data. The final sample of 491 short-term business travelers was analyzed, 61.5 percent of these were males and 61.7 percent were married. On average, respondents had been with their current employer for 9.83 years (SD = 7.94) and were well educated, with 75.1 percent holding at least a bachelor's degree. Almost 92 percent of the respondents had made trips that lasted one week or less and had made an average of 9.25 (SD = 9.7) trips in the last year.

Measures

Burnout was measured with five items that tap into the emotional exhaustion component (Maslach, Jackson & Leiter, 1996). A seven-point scale ranging from 0 = never to 6 = every day was used. Coefficient alpha reliability was 0.90.

Schedule autonomy was measured with three items that assessed the extent to which respondents perceived (1) they had control over their travel schedule, (2) that it was not a problem if they were unable to go on a scheduled trip because of personal reasons, and (3) that their travel agendas were flexible. Responses were made on a seven-point scale (1 = strongly agree and 7 = strongly agree). Coefficient alpha reliability was 0.66.

CQ was measured with eight items from the cultural intelligence scale CQS (Ang et al., 2007) on cognitive (two items), metacognitve (one item), motivational (three items), and behavioral (two items) components of CQ. We selected items that were most relevant to business travelers, such as, "I am confident that I can socialize with locals in a culture that is unfamiliar to me" and "I change my nonverbal behavior when a cross-cultural situation requires it." Items were measured on a seven-point scale (1 = strongly disagree and 7 = strongly agree). Coefficient alpha reliability for cognitive CQ was 0.67, motivational CQ was 0.77, and behavioral CQ also 0.77.

MCEs was measured by the average of two items: (1) the proportion of work time spent outside of home country, and (2) the product of the number of business trips and average duration of business trips made in the year. Coefficient alpha reliability was 0.66.

Need for control was measured with five items, which were adapted from Kushnir and Melamed (1991). An example was, "To what extent is it important for you to determine the way your work is done?" Items were measured on a five-point scale (1 = very important and 5 = very unimportant). Coefficient alpha reliability was 0.85.

Control Variables

We controlled for several factors that could potentially affect our outcome variables in the analyses. Specifically, we controlled for gender (female = 1, male = 2), marital status (others = 1, married = 2), educational level (0 = below degree education, 1 = degree and

to burnout and autonomy and are more pronounced among business travelers (Westman, Etzion, & Gortler, 2004). To control for their effects when analyzing CQ on burnout and schedule autonomy, we added Frone, Russell, and Cooper's (1992) work-family conflict items, where two items measured the extent to which work interfered with family (WIF), and two items measured the extent to which family interfered with work (FIW). Items were on a five-point frequency response scale (1 = almost never/never to 5 = almost always/always). Coefficient alpha reliability for WIF was 0.65, and 0.77 for FIW.

Prior to testing our hypotheses, confirmatory factor analysis (CFA) established discriminant and convergent validity of the constructs (including WIF and FIW). All items loaded significantly on the intended factors (loadings exceed 0.51). The overall goodness-of-fit statistics indicated that the data fitted the factor structure reasonably well: χ^2 (280, n = 491) = 698.20, root mean square error of approximation (RMSEA) = 0.054, goodness-of-fit (GFI) = 0.91, comparative fit index (CFI) = 0.95, non-normed fit index (NNFI) = 0.94.

RESULTS

Table 8.1 reports means, standard deviations, intercorrelations, and Cronbach alphas.

We tested hypotheses 1 and 2 with hierarchical regression analyses. We entered control variables (tenure with current company, gender, marital status, educational level, and location) in step 1, followed by the proposed CQ antecedents, MCEs, and need for control in step 2. These steps were conducted for each of the four CQ dimensions.

We predicted in hypothesis 1 that MCEs would positively relate to (a) cognitive CQ and (b) motivational CQ. Results in Table 8.2 show that MCEs were significantly related to cognitive CQ ($\beta = .13$, $p < 0.001$) but not motivational CQ ($\beta = 0.06$, ns) over and above the control variables, supporting hypotheses 1(a) but not 1(b). MCEs were not significantly related to metacognitive ($\beta = 0.04$, ns) or behavioral CQ ($\beta = 0.04$, ns).

In hypothesis 2, we predicted that travelers' need for control would be positively related to all four CQ dimensions. Results support our hypothesis (see Table 8.2). After accounting for the control factors, need for control was significantly related to (a) cognitive CQ ($\beta = 0.16$, $p < 0.001$), (b) metacognitive CQ ($\beta = 0.19$, $p < 0.001$), (c) motivational CQ ($\beta = 0.21$, $p < .001$), and (d) behavioral CQ ($\beta = 0.16$, $p < 0.001$).

We tested hypothesis 3 with moderated hierarchical regressions (Cohen, Cohen, West, & Aiken, 2003) by adding the interaction term between MCEs and need for control to the equation after both these predictors were included. All CQ factors were examined. Predictors were mean centered as recommended by Aiken and West (1991). Results (see Table 8.2, step 3) show a significant MCEs × need-for-control interaction, and incremental variance explained over-and-above controls and the two predictors on cognitive CQ ($\beta = -0.11$, $p < 0.01$), $\Delta R^2 = 0.01$, ΔF (9, 481) = 5.74, $p < 0.05$, and motivational CQ ($\beta = -0.09$, $p < 0.05$), $\Delta R^2 = 0.01$, ΔF (9, 481) = 4.14, $p < 0.05$. However, contrary to our prediction, the positive MCEs–cognitive CQ and MCEs–motivational CQ relationships

.1

, Standard Deviations, Correlations, and Cronbach's Alphas

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
t tional ustion)	2.46	1.41	(.90)																
ıle nomy	4.34	1.51	−.32	(.66)															
ve CQ	4.93	1.36	−.12	.22	(.67)														
gnitive CQ	5.81	1.21	−.11	.19	.48	(−)													
ional CQ	5.78	0.97	−.19	.20	.55	.48	(.77)												
oral CQ	5.42	1.19	−.14	.20	.46	.45	.53	(.77)											
ltural riences [a]	23.82	19.11	−.02	.07	.15	.06	.08	.05	(.66)										
or control	4.51	0.60	−.15	.19	.17	.20	.22	.17	−.02	(.85)									
interfering work	1.99	0.88	.27	−.08	−.04	−.10	−.20	−.09	.03	−.04	(.77)								
nterfering family	2.91	1.02	.37	−.05	−.05	.15	.08	.10	.14	−.04	.22	(.65)							
with ent pany	9.83	7.94	−.09	.05	.07	−.03	.03	.00	.00	.11	−.01	−.02	(−)						
r[b]	1.61	0.49	.09	.02	−.07	.05	.08	.04	−.04	.05	−.07	.19	−.17	(−)					
status[c]	1.62	0.49	−.04	.00	.04	.03	.03	.06	−.01	.03	−.01	.09	.11	−.02	(−)				
ional level[d]	0.75	0.43	.02	−.05	.13	.11	.11	.10	−.01	.11	−.03	.08	.01	−.02	.00	(−)			
ore nmy-coded)	0.14	0.34	−.10	.18	.14	.15	.13	.08	.15	.00	−.13	−.07	−.03	.01	.11	−.14	(−)		
(dummy- ed)	0.20	0.40	−.09	−.16	.03	−.05	.08	−.03	−.02	−.08	−.20	.13	.09	.03	.17	.12	−.20	(−)	
(dummy- ed)	0.67	0.47	.15	.01	−.12	−.07	−.16	−.04	−.10	.07	.26	−.06	−.05	−.04	−.22	.00	−.56	−.70	(−)

te: n = 491 for all variables. Cronbach's alpha (in parentheses). Correlations between .08 and .09 are significant at $p < .05$; between .10 and e significant at $p < .01$, above .13 are significant at $p < .001$, one-tailed

ean of (No. of business trips × length of business trip expressed as proportion) and proportion of work time outside country

= female, 2 = male

= others, 2 = married

= below degree education, 1 = degree and above

8.2

archical Regression Analyses on CQ Dimensions

	Cognitive CQ				Metacognitive CQ				Motivational CQ				Behavioral CQ			
	Step 1	Step 2a	Step 2b	Step 3	Step 1	Step 2a	Step 2b	Step 3	Step 1	Step 2a	Step 2b	Step 3	Step 1	Step 2a	Step 2b	Step 3
re with rrent mpany	.06	.06	.04	.03	−.01	−.01	−.04	−.05	.04	.04	.01	.00	.01	.01	−.01	−.01
ler[a]	−.06	−.06	−.08*	−.08*	.06	.06	.04	.03	.08	.08*	.06	.06	.05	.05	.04	.03
al status[b]	.01	.01	.00	.01	.02	.02	.02	.02	.00	.00	−.01	−.01	.05	.05	.04	.05
ational vel[c]	.15***	.15***	.13***	.14***	.14***	.14***	.11**	.13***	.12	.12***	.09*	.10*	.12**	.12***	.10**	.11**
apore	.17***	.15***	.17***	.15***	.16***	.15***	.16***	.16***	.16***	.15***	.16***	.16***	.09*	.08*	.09*	.09*
l	.04	.06	.06	.06	−.04	−.04	−.02	−.02	.09	.09*	.12**	.12	−.03	−.03	−.02	−.01
cultural xperiences)[d]		.13***		.12***		.04		.04		.06		.06		.04		.03
d for control 3)			.16***	.20***			.19***	.23***			.21***	.24***			.16***	.18***
× B				−.11**				−.12**				−.09*				−.06
=		8.23*	12.41***	5.74*		.78[ns]	17.62***	6.42**		1.96[ns]	23.20***	4.14*		.60[ns]	11.92***	1.78[ns]
R^2		.02	.03	.01		.00	.03	.01		.00	.04	.01		.00	.02	.00
2	.05	.07	.08	.10	.05	.05	.08	.09	.05	.05	.09	.11	.03	.03	.05	.05
djusted R^2	.04	.06	.07	.09	.03	.03	.06	.08	.04	.04	.08	.09	.01	.01	.03	.03
=	(6,484)	(7,483)	(7,483)	(9,481)	(6,484)	(7,483)	(7,483)	(9,481)	(6,484)	(7,483)	(7,483)	(9,481)	(6,484)	(7,483)	(7,483)	(9,481)
	4.47***	5.07***	5.70***	6.18***	3.84***	3.40***	5.92***	5.48***	4.04***	3.75***	6.94***	6.17***	2.12*	1.90*	3.56***	3.05***

Note: n = 491 for all variables.

* $p < .05$; ** $p < .01$; *** $p < .001$, one-tailed

[a]1 = female, 2 = male

[b]1 = others, 2 = married

[c]0 = below degree education, 1 = degree and above

[d]Mean of (No. of business trips × length of business trip expressed as proportion) and proportion of work time outside country

Figure 8.1 **Interaction between Multicultural Experiences and Need for Control in Predicting Cognitive CQ**

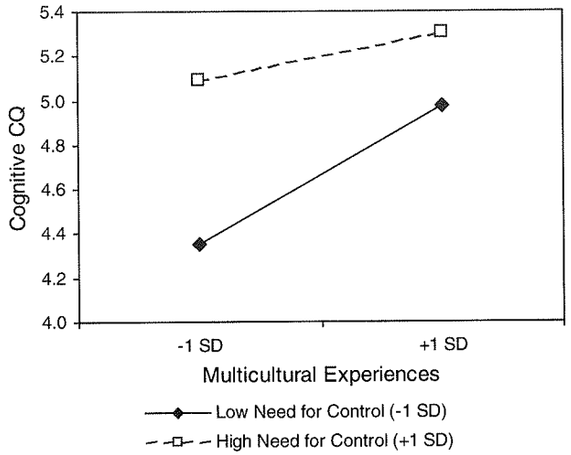
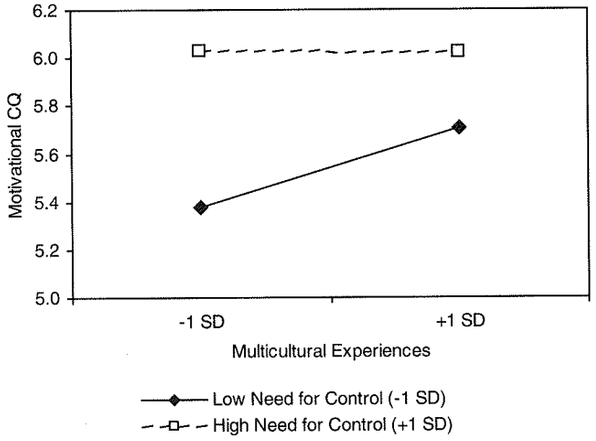


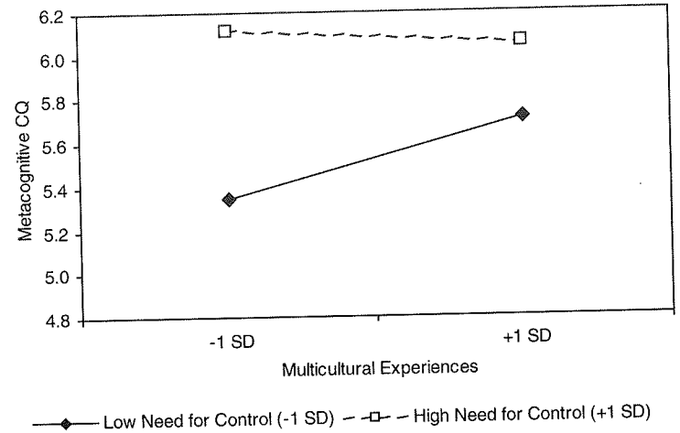
Figure 8.2 **Interaction between Multicultural Experiences and Need for Control in Predicting Motivational CQ**



hypothesized, we found significant MCEs × need-for-control interaction on metacognitive CQ ($\beta = -0.12$, $p < 0.01$), $\Delta R^2 = 0.01$, $\Delta F\ (9, 481) = 6.42$, $p < 0.001$. The significant interaction in Figure 8.3 also shows that travelers with low rather than high need of control experienced higher levels of metacognitive CQ when exposed to more MCEs.

In hypotheses 4 and 5, we proposed that all four CQ factors would negatively relate to

Figure 8.3 **Interaction between Multicultural Experiences and Need for Control in Predicting Metacognitive CQ**



factors, metacognitive ($\beta = -0.13$, $p < 0.001$), motivational ($\beta = -0.16$, $p < 0.001$), and behavioral CQ ($\beta = -0.14$, $p < 0.001$) were significantly and negatively related to burnout. However, contrary to our prediction, cognitive CQ was not related to burnout ($\beta = -0.05$, ns). Thus, hypotheses 4(b)–4(d) are supported, but hypothesis 4(a) is not. Results in Table 8.4 support hypothesis 5. All CQ factors—cognitive ($\beta = 0.18$, $p < 0.001$), metacognitive ($\beta = 0.14$, $p < 0.001$), motivational ($\beta = 0.16$, $p < 0.001$), and behavioral CQ ($\beta = 0.16$, $p < 0.001$)—were significantly and positively related to schedule autonomy.

Post hoc analyses following Baron and Kenny's (1986) procedures suggest that schedule autonomy partially mediates each CQ factor to burnout relationship. In each instance, predictor–mediator, predictor–outcome, and mediator–outcome conditions were satisfied (see Table 8.3). Finally, for the predictor–mediator–outcome condition, results demonstrate that the respective CQ factor to burnout relationship was weakened when schedule autonomy was included in the equation (Table 8.3). Sobel tests support that autonomy is a partial mediator for the metacognitive ($Z = -2.85$, $p < 0.001$), motivational ($Z = -3.09$, $p < 0.001$), and behavioral CQ ($Z = -3.19$, $p < 0.001$) to burnout relationship.

DISCUSSION

The aims of the study were twofold; first, to examine the antecedents of CQ among business travelers, and, second, to investigate the effects of CQ on travel outcomes, i.e., burnout and schedule autonomy. Below we discuss our findings and their implications.

Antecedents of CQ

e 8.3

rarchical Regression Analyses on Burnout

	Step 1	Step 2a	Step 3a	Step 2b	Step 3b	Step 2c	Step 3c	Step 2d	Step 3d
ure with current company	−.05	−.04	−.03	−.05	−.03	−.04	−.03	−.05	−.03
der[a]	.03	.03	.04	.03	.04	.04	.05	.04	.04
tal status[b]	−.03	−.03	−.03	−.03	−.03	−.03	−.03	−.02	−.03
ucational level[c]	.02	.02	.01	.03	.02	.03	.02	.03	.02
apore (dummy-coded)	−.07*	−.06	−.03	−.05	−.02	−.05	−.02	−.06	−.03
l (dummy-coded)	−.13***	−.12**	−.17***	−.13***	−.17***	−.12**	−.16***	−.13***	−.17***
cultural experiences[d]	−.07*	−.06	−.05	−.07	−.05	−.06	−.05	−.06	−.05
for control	−.14***	−.13***	−.08*	−.11*	−.07	−.10*	−.06	−.11*	−.07
y interfering with work	.16***	.16***	.14***	.15***	.13**	.14***	.12*	.15***	.13**
interfering with family	.34***	.34***	.34***	.37***	.36***	.36***	.35***	.36***	.35***
Cognitive CQ		−.05	.00						
Metacognitive CQ				−.13***	−.09*				
Motivational CQ						−.16***	−.11*		
Behavioral CQ									
Schedule autonomy									
ΔF		1.55[ns]	−.30***		−.28***		−.28***	−.14***	−.09*
ΔR^2		.00	52.98***	9.85***	49.59***	13.61***	48.12***	13.61***	−.28***
			.08	.02	.07	.02	.07	.02	48.45***
R_2	.22	.22	.30	.24	.31	.24	.31	.24	.07
Adjusted R2	.20	.20	.28	.22	.29	.22	.29	.22	.31
df	(10,480)	(11,479)	(12,478)	(11,479)	(12,478)	(11,479)	(12,478)	(11,479)	.29
F	13.58***	12.50***	17.11***	13.46***	17.73***	13.90***	18.01***	13.63***	(12,478)
									17.77***

e: n = 491 for all variables.
<.05; * p <.01; *** p <.001, one-tailed
female, 2 = male
others, 2 = married
below degree education, 1 = degree and above
an of (No. of business trips × length of business trip expressed as proportion) and proportion of work time outside country

Table 8.4

Hierarchical Regression Analyses on Schedule Autonomy

	Step 1	Step 2a	Step 2b	Step 2c	Step 2d
Tenure with current company	.05	.05	.06	.05	.06
Gender[a]	.03	.04	.03	.02	.02
Marital status[b]	−.01	−.01	−.01	.00	−.01
Educational level[c]	−.03	−.06	−.05	−.04	−.05
Singapore (dummy-coded)	.13***	.10**	.11**	.11**	.12**
Israel (dummy-coded)	−.14***	−.15***	−.13**	−.15***	−.13**
Multicultural experiences[d]	.05	.03	.05	.05	.05
Need for control	.18***	.15***	.15***	.14***	.15***
Family interfering with work	−.08*	−.08*	−.06	−.05	−.06
Work interfering with family	−.01	.01	−.03	−.02	−.03
Cognitive CQ		.18***			
Metacognitive CQ			.14***		
Motivational CQ				.16***	
Behavioral CQ					.16***
ΔF		16.32***	9.71***	11.89***	12.89***
ΔR^2		.03	.02	.02	.02
R^2	.10	.13	.12	.12	.12
Adjusted R^2	.08	.11	.10	.10	.10
df	(10,480)	(11,479)	(11,479)	(11,479)	(11,479)
F	5.06***	6.23***	5.57***	5.79***	5.89***

Note: n = 491 for all variables.
* p <.05; ** p <.01; *** p <.001, one-tailed
[a]1 = female, 2 = male
[b]1 = others, 2 = married
[c]0 = below degree education, 1 = degree and above
[d]Mean of (No. of business trips × length of business trip expressed as proportion) and proportion of work time outside country

results show that after accounting for tenure, gender, marital status, educational level, and location, MCEs were positively associated with cognitive CQ, i.e., MCEs build and expand travelers' cultural knowledge. However, contrary to our prediction, MCEs were not related to motivational CQ. It could be that the business travels were too short and task-focused to afford travelers the opportunity to interact sufficiently and build confidence and efficacy for intercultural interactions. Results also support our expectation that in the context of short-term trips, travelers do not have adequate time to reflect, adapt, and develop the more complex CQ capabilities, i.e., metacognitive and behavioral CQ.

Results demonstrate that need for control is positively associated with and thus an important antecedent to all four CQ dimensions (cognitive, metacognitive, motivational, and behavioral). This makes sense, as individuals who have a greater need to control their

people in new cultural settings. Thus, the inclusion of need for control in the current study is an important contribution to CQ research.

We further investigated whether a person-by-situation interaction, i.e., need for control and MCEs together, explain variance in travelers' CQ beyond what could be attributed to either factor alone. Results demonstrate a significant interaction of MCEs with need for control on cognitive, metacognitive, and motivational CQ. But, contrary to our prediction, the positive relationships between MCEs and the respective CQ dimensions were stronger when need for control was lower than when it was higher.

The graphical illustrations in Figures 8.1–8.3 show that across different levels of MCEs, travelers with high need for control have higher cognitive, metacognitive, and motivational CQ than those who have a low need for control. However, travelers with low need for control were better able to capitalize on their MCEs to gain and develop their CQ, such that they have a higher rate of CQ when MCEs increase than those with high need for control. We speculate that travelers with different levels of need for control apply different strategies to cope with business travels. Perhaps, those with high need for control are more proactive prior to leaving for their trips and may thus seek and rely more on pre-trip learning, planned searches of the cultural and business destination and less on actual on-site experiences. This is consistent with Westman and Etzion's (2004) finding that managers with high need for control used proactive coping before business travels. On the other hand, those with low need for control should have less pre-trip preparations, not needing to have a strong control over the environment. Without preconceived notions, they may be more responsive to cultural cues during the trips. As such, on-site MCEs may have a greater impact on these travelers' CQ.

Consequences of CQ

Results demonstrate that all but cognitive CQ alleviate burnout. The significant relationships are made more significant when the effects of controls (tenure, gender, marital status, educational level, and location) and FIW and WIF were taken into account. The finding that metacognitive, motivational, and behavioral CQ decreased travelers' burnout is consistent with COR theory, which states that such personal capabilities prevent and/or lower burnout (Hobfoll & Shirom, 2000). Contrary to our expectations, cognitive CQ did not significantly contribute to lower levels of burnout. We suspect that cognitive knowledge alone, without the capability and desire to apply this knowledge during intercultural interactions, may not constitute resources that combat stress.

As expected, all four CQ factors promote perceptions of schedule autonomy over and above controls, FIW, WIF, and CQ antecedents. Travelers' perceptions could be bolstered by high levels of CQ to believe that their cultural knowledge and adaptive capabilities can help them better negotiate, persuade, and elicit agreements with intercultural business partners with regard to their schedules. Our findings indicate that CQ is part of the process of decreasing travel stress and burnout directly through travelers' CQ capabili-

where possession of CQ resources enables travelers to gain another important resource, vis-à-vis schedule autonomy, to combat burnout.

CONTRIBUTIONS AND IMPLICATIONS

This study has several key contributions and strengths. We investigated CQ in a unique situation of short-term business travel. To the best of our knowledge, this is the first study to examine CQ in this area. Recent conceptual and empirical work on multidimensional CQ suggests that CQ dimensions are capabilities that can be developed. Here, we add to the growing body of literature to suggest that MCEs, an environmental factor, and, particularly, need for control, an individual factor, can potentially develop an individual's CQ dimensions. We incorporated COR theory into the CQ phenomenon. CQ dimensions as personal resources have significant effects on perceived schedule autonomy, another personal resource, and burnout, an individual psychological outcome.

Our study also has important implications for practicing managers. As short business trips can be a source of stress for both traveler and traveler's family, developing CQ capabilities and promoting a sense of autonomy can alleviate burnout, which is a major threat to the health of the individual as well as the organization in today's fast-paced world. Interestingly, our findings provide initial evidence that MCEs in the context of frequent, short-term trips develop only the cognitive aspect of CQ. And it is the other aspects of CQ, i.e., metacognitive, motivational, and behavioral, that alleviate travelers' burnout. Cognitive CQ was not related to burnout. One implication of this is that even more experienced travelers, who have more knowledge of other cultures, may still be vulnerable to burnout if their metacognitive, motivational, and behavioral CQ do not rise in tandem with their cognitive CQ. Additionally, results suggest that these CQ dimensions are part of a gain spiral in combating burnout. This has important implications for employees and managers because most cross-cultural training emphasizes primarily the development of the cognitive aspect of CQ (Templer, Tay & Chandrasekar, 2006). Our findings suggest that it is more sensible to develop travelers' metacognitive, motivational, and behavioral CQ rather than focus on cognitive CQ alone. Training may also include other family members so that they can be more knowledgeable of the travel process and be better able to give informational, evaluative, and instrumental support to those who travel on business.

LIMITATIONS AND FUTURE RESEARCH

Our study used cross-sectional data, so the usual cautions about drawing causal relationships from cross-sectional data apply. We also used a single data source, relying on self-reports from travelers. However, as far as possible, we asked for objective data, e.g., number and duration of trips; used different scale endpoints and anchors; and assured respondents of confidentiality so that they would answer the questions as truthfully as possible. We suggest that future research should employ longitudinal design to better capture

better examine the developmental effects of CQ dimensions. The use of interviews and/or other qualitative methodology may also prove fruitful in providing greater depth and understanding of travelers' CQ development before, during, and after each business trip episode. An intensive case study approach with grounded theory is also likely to identify additional factors that facilitate CQ development. This approach also provides deeper insight into the developmental processes of the CQ dimensions and how they differentially affect outcomes for individual travelers and their organizations.

In this study, we used only eight items from the 20-item CQS to safeguard against respondent fatigue. However, this approach does not do justice in capturing the various nuances in the construct, particularly for metacognitive CQ that was measured with only one item. Still, the one measure was strong enough to produce significant results attesting to the efficacy of the construct. We suggest that in future CQ studies, the full 20-item scale be used in order to provide a more comprehensive understanding of the antecedents to and consequences of the four CQ dimensions, as well as allow consolidation of research results across studies that use the same instrument.

The business travelers in our study came from three different countries—Singapore, Israel, and Brazil. Brazil had the highest ratio of respondents in the sample and results may be skewed toward the population in Brazil. We have controlled for location effects and, since we are not primarily interested in country effects, the uneven number of respondents from each country is not deleterious to our study. However, it might be interesting to examine whether the same patterns of results would emerge from a larger Singaporean sample of travelers as well as travelers from different countries. Finally, future research should further investigate the nature of MCEs, e.g., whether it is a neutral variable and under what circumstances MCEs can contribute to travelers' developmental gain or loss.

In conclusion, this study presents intriguing findings that further our understanding of the potential antecedents of the CQ dimensions and their effects on short-term business travel. Our study provides initial evidence of individual and environmental factors and their interacting effects on the development of cognitive CQ, a potentially important resource in facilitating and negotiating business trip schedules and combating burnout. Findings suggest that CQ plays an important role in business travel processes. Travelers' CQ capabilities are strong resources that can prevent the loss of resources, which leads to travel stress. CQ plays an important role in business travel processes. We recommend continued research through alternative and innovative research designs to further explicate the development of CQ dimensions and investigate their effects on a wider set of traveler outcomes.

REFERENCES

Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Ang, S., Van Dyne, L., Koh, C., Ng, K., Templer, K.J., Tay, C., & Chandrasekar, N.A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation, and

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.

Brislin, R.W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*, 185–216.

Burger, J.M. (1995). Need for control and self-esteem: Two routes to a high desire for control. In M.H. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 217–233). New York: Plenum Press.

Cohen, J., Cohen, P., West, S.G., & Aiken, L.S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cordes, C.L., & Dougherty, T.W. (1993). A review and integration of research on job burnout. *Academy of Management Review, 18*, 621–656.

DeCharms, R. (1968). *Personal causation: The internal affective determinants of behavior*. New York: Academic Press.

DeFrank, R.S., Konopaske, R., & Ivancevich, J.M. (2000). Executive travel stress: Perils of the road warrior. *The Academy of Management Executive, 14*, 58–71.

Dimberg, L.A., Striker, J., Nordanlycke-Yoo, C., Nagy, L., Mundt, K.A., & Sulsky, S.I. (2002). Mental health insurance claims among spouses of frequent business travelers. *Occupational and Environmental Medicine, 59*, 175–181.

Earley, P.C., & Ang, S. (2003). *Cultural Intelligence: Individual interactions across cultures*. Palo Alto, CA: Stanford University Press.

Frone, M.R., Russell, M., & Cooper, M.L. (1992). Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface. *Journal of Applied Psychology, 77*, 65–78.

Gebhardt, W.A., & Brosschot, J.F. (2002). Desirability of control: Psychometric properties and relationships with locus of control, personality, coping, and mental and somatic complaints in three Dutch samples. *European Journal of Personality, 16*, 423–438.

Govindarajan, V., & Gupta, A.K. (2001). *The quest for global dominance*. San Francisco, CA: Jossey-Bass.

Hobfoll, S.E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*, 513–524.

Hobfoll, S.E. (1998). *Stress, culture, and community*. New York: Plenum Press.

Hobfoll, S.E., & Shirom, A. (2000). Conservation of resources theory: Applications to stress and management in the workplace. In R.T. Golembiewski (Ed.), *Handbook of organization behavior* (pp. 57–81). New York: Dekker.

Ivancevich, J.M., Konopaske, R., & DeFrank, R.S. (2003). Business travel stress: A model, propositions and managerial implications. *Work & Stress, 17*, 138–157.

Kushnir, T., & Melamed, S. (1991). Work-load, perceived control, and psychological distress in Type A/B industrial workers. *Journal of Organizational Behavior, 12*, 155–168.

Lee, R.T., & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology, 81*, 123–133.

Maslach, C. (1982). *Burnout: The cost of caring*. Englewood Cliffs, NJ: Prentice Hall.

Maslach, C. (1993). Burnout: A multi-dimensional perspective. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 19–32). Washington, DC: Taylor & Francis.

Maslach, C., Jackson, S.E., & Leiter, M.P. (1996). *Maslach burnout inventory manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Schaufeli, W.B., & Leiter, M.P. (2001). Job burnout. *Annual Review of Psychology, 52*, 397–422.

Shirom, A. (1989). Burnout in work organizations. In C.L. Cooper & I. Robertson (Eds.), *International*

Sutton, R.I., & Kahn, R.L. (1986). Prediction, understanding and control as anecdotes to organizational stress. In J. Lorsch (Ed.), *Handbook of organizational behavior* (pp. 272–285). Englewood Cliffs, NJ: Prentice Hall.

Templer, K.J., Tay, C., & Chandrasekar, N.A. (2006). Motivational cultural intelligence, realistic job preview, realistic living conditions preview, and cross-cultural adjustment. *Group and Organization Management*, *31*, 154–173.

Welch, D.E., & Worm, V. (2006). International business travelers: A challenge for IHRM. In G.K. Stahl & I. Björkman (Eds.), *Handbook of research in international human resource management* (pp. 283–301). Northampton, MA: Edward Elgar Publishing.

Westman, M., & Etzion, D. (2004). Characteristics of business trips and their consequences: A summary of recent findings. Working Paper No. 13/2004. The Israel Institute of Business Research, Tel Aviv University.

Westman, M., Etzion, D., & Gortler, E. (2004). The work-family interface and burnout. *International Journal of Stress Management*, *11*, 413–428.

Handbook of Cultural Intelligence

Theory, Measurement, and Applications

Editors Soon Ang and Linn Van Dyne

Foreword by Harry C. Triandis

M.E. Sharpe