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# Business Cultural Intelligence Quotient: A Five-Country Study

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*Cultural intelligence (CI) has often been linked to performance at the individual, team, and firm levels as a key factor in international business success. Using a new measure of CI, the business cultural intelligence quotient (BCIQ), our study provides empirical evidence on several key antecedents of CI using data on business professionals across five diverse countries (Austria, Colombia, Greece, Spain, and the United States). The findings suggest that the most important factors leading to cultural intelligence, in order of importance, are the number of countries that business practitioners have lived in for more than six months, their level of education, and the number of languages spoken. We find that cultural intelligence varies across countries, suggesting that some countries have a higher propensity for cross-cultural business interactions. By teasing out the common antecedents of BCIQ among professionals, our findings may help with screening and training professionals for international assignments. Future research may examine the environmental (country-specific) factors associated with a*

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*higher propensity for cultural intelligence (such as immigration, cultural diversity, languages spoken, and international trade) to explain the effect of country of origin on cultural intelligence in the professional community.* © 2016 Wiley Periodicals, Inc.

## Introduction

The ability to interact effectively across cultures, or *intercultural competence*, is of paramount importance for success in today's global business environments (Johnson, Lenartowicz, & Apud, 2006). Assessing the degree of intercultural competence is now a necessity for personnel recruitment, development, and retention, resulting in multiple tools for measurement (Leung, Ang, & Tan, 2014). Some of the most well-known measurement instruments include the global mind-set inventory (GMI) (Javidan & Teagarden, 2011), global leadership online (GLO) (Gundling, Hogan, & Cvitkovich, 2011), the global competencies inventory (GCI) (Stevens, Bird, Mendenhall, & Oddou, 2014), the cultural intelligence scale (CQS) (Early & Ang, 2003), the global executive leadership inventory (GELI) (Kets de Vries, Vrignaud, & Florent-Treacy, 2004), and the intercultural development inventory (IDI) (Hammer, Bennett, & Wiseman 2003). These constructs and their instruments,<sup>12</sup> which seem to be in competition, can, and probably should, be used in a complementary fashion for assessment purposes since they arise from different disciplines such as psychology and management and cover different content domains such as intercultural traits, intercultural attitudes, and worldviews (Leung et al., 2014).

Popularized by Earley and Ang (2003), cultural intelligence (CI), as measured by a cultural quotient (CQ), differs from other intercultural competence constructs since it is a type of intelligence that reflects a person's ability to interact, adapt, and perform in diverse cultural contexts (Thomas et al., 2008). Recently, Alon, Boulanger, Myers, and Taras (2016) created and validated a new cultural intelligence measure, the *business cultural intelligence quotient* (BCIQ). Unlike the previous measures mentioned above, BCIQ was specifically designed for business professionals and includes both attitudinal and knowledge questions.

In this article, we examine the antecedents of cultural intelligence using the BCIQ measurement, and rank the key antecedents that lead to cultural intelligence among business professionals. We find that among the five countries examined, the degree of BCIQ is different, suggesting that country-specific variables may impact the general business community and its ability to interact with the rest of the world.

## The Relevance of Cultural Intelligence

A high CQ is essential for any business professional working in an international or cross-cultural setting, where employees, partners, competitors, and customers may come from different parts of the world. A recent search of "cultural intelligence" in business research databases (ABI Inform, January 2016) revealed more than 1,000 scholarly articles with the term in their title or keywords. Google Scholar showed over 10,600 hits for the construct (Google Scholar, March 1, 2016). Cultural quotient is associated with individual decision making, task performance, global leadership success (Alon & Higgins, 2005; Ang et al., 2007), job performance (Barakat, Lorenz, Ramsey, & Cretoiu, 2015), multicultural team performance (Van Dyne et al., 2012), and firm-level strategic decisions such as offshore outsourcing (Ang & Inkpen, 2008), as examples. CQ is, therefore, a desirable attribute among business professionals affecting the competitiveness of their businesses, industries, and countries.

Multiple types of intelligence are required for effective leadership, including verbal, mathematical, and emotional as well as cultural. They are respectively measured by *intelligence quotient* (IQ), *emotional quotient* (EQ), and *cultural quotient* (CQ) (Alon & Higgins, 2005). While no single type of intelligence is sufficient for business success, CQ has been identified as a key success factor in international business and cross-cultural management.

Crowne (2009) uses the concept of *social intelligence* to encapsulate both EQ and CQ measures and suggests several antecedents to predicting them. Ang and Van Dyne (2008) create a broader nomological network of CQ that illustrates the correlates or moderators of CQ, in addition to its antecedents and consequences. In a related study, Ang, Van Dyne, & Koh (2006) show a relationship between personality and CQ, finding that consciousness is related to the self-awareness aspect of CQ; agreeableness and stability to the behavioral aspect; extraversion to intercultural knowledge; motivational to behavioral aspects; and openness to all aspects of CQ.

In this study, we apply a new measure of business cultural intelligence, the BCIQ, a multidimensional construct (Alon et al., 2016), to examine the importance of specific antecedents of various dimensions of cultural intelligence. We use the BCIQ to test antecedents across professionals in five countries: Austria, Colombia, Greece,

Spain, and the United States. Our approach expands on Crowne's (2008, 2009) and Ang and Van Dyne's (2008) research by identifying the relative importance of various antecedents of cultural intelligence across multiple dimensions. Many previous studies measuring CQ use students from the same country, while this study has the advantage of including multiple countries and working professionals. As a result, the sample and the study should mirror more closely the reality of the work environment of multinational companies.

### Antecedents of Cultural Intelligence

Despite the many papers written in recent years, research on the antecedents of cultural intelligence is still in its infancy, although several predictors have emerged. For example, personality (MacNab & Worthley, 2012) and cross-cultural and experiential training (Lenartowicz, Johnson, & Konopaske, 2014) seem to be correlated with CQ, but evidence on the biographical and demographic profiles of the samples still appears to be relatively incomplete.

Crowne (2008) was among the first researchers to explore in detail cultural exposure, including employment, education, vacations, and other experiences abroad, as antecedents of CQ. While her study is not empirical, it suggests that working, studying, and living abroad can have positive implications for CQ, while simply vacationing abroad may not. Crowne (2013) establishes that both the depth and the breadth of cultural exposure are strong predictors of CQ. In another study, Shannon and Begley (2008) report that international work experiences are positively related to self-awareness and motivational elements of CQ. Wood and Peters (2014) show that short-term study tours affect only three levels of CQ. In this sense, both quantity (length of exposure) and quality (type of exposure: work, education, vacation) of the cultural experience can improve one's CQ. Individuals who have experienced intense and long exposures in other countries learn to develop their cultural intelligence.

Learning a foreign language also involves a certain exposure to the culture where the language has developed (Planken, Van Hooft, & Korzilius, 2004) and is both the result of a cultural context and an influence on cultural behavior (Holden, 2002). Language trainers transfer traditions, literature, cultural values, and assumptions to individuals, who then benefit from enhanced cultural knowledge and intercultural skills. Speaking a foreign language fluently cannot be achieved without adapting to how native speakers think, as the individual learns to adapt to the structure and rationale of the foreign language (Werry, 2005). Shannon and Begley (2008)

empirically study the relationship between language skills and CQ among students in a university in Ireland, finding that learning new languages is positively related to cognitive and behavioral aspects of CQ. Barner-Rasmussen, Ehrnrooth, Kovesnikov, and Mäkelä (2014) show that language skills both complement and increase the effect of cultural skills on the effectiveness of boundary spanners in multinational corporations. Learning a new language is difficult and time consuming because the learner must spend numerous hours learning vocabulary, grammar, and context. He/she is usually committed and motivated to achieve fluency. It is expected, therefore, that individuals who master several foreign languages also develop their CQ.

Higher levels of education may lead to greater open-mindedness and interest in learning about other people and cultures because, through education, individuals encounter different paradigms (Heckman & Kautz, 2012). For example, a student who studies different disciplines (science, literature, math, and art) may also develop a multilayered mental schema. Education increases the ability of people to interact with different cultures not only because it broadens their conceptual horizons, but also because students learning specifically about new cultures have direct exposure to cultural others among peers and educators (Baehr, 2013).

While studies of cultural intelligence have started to map its antecedents, few do so systematically, empirically, or across multiple countries. The present study builds on Crowne (2008), measuring cultural exposure and taking into account the contributions of Shannon and Begley (2008), but in addition measuring other antecedents of CQ such as number of spoken languages and education level, ranking them based on their ability to predict CQ.

### The Data Sample

Following the validation of the new BCIQ instrument (Alon et al., 2016), we launched a new study to assess the differences in measured CI across countries by examining the predictive power of antecedents. To collect the data for this study, the BCIQ instrument was made available to the Academy of International Business (AIB) members, who were asked via e-mail if they were interested in gathering responses from business professionals and participating in the study. This call led to a multinational team, who gathered data samples from five countries: Spain ( $n=443$ ), Colombia ( $n=514$ ), Greece ( $n=244$ ), Austria ( $n=256$ ), and the United States ( $n=120$ ). Data were collected electronically using the BCIQ cultural intelligence survey (38 questions) and several demographics/

antecedents (15 questions). Providing details about employers or employment status was optional and thus resulted in very few responses in these areas.

## Methodology and Results

The BCIQ differs from Ang's in the sense that it offers (1) a refined factor structure; (2) the use of objective cultural knowledge measures; (3) applicability in the business and workplace context, which makes it suitable for assessing CI in business professionals, especially expatriates and global virtual team members; and (4) improved reliability and validity compared to other CQ measures (see Alon et al., 2016). The BCIQ comprises four factors:

BCIQ1: Motivation regarding new experiences and diversity

BCIQ2: Cross-cultural listening, communication, and adaptation

BCIQ3: Cognitive preparation and learning behavior when encountering new cultures

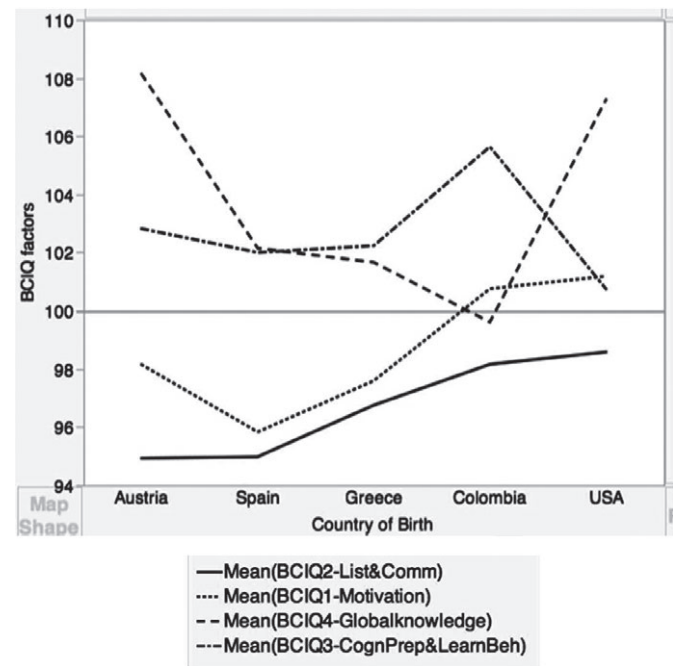
BCIQ4: Global knowledge (see Table 1)

For a detailed description of this instrument, along with the extensive validation process applied, refer to Alon et al. (2016). As with the IQ instrument, each BCIQ factor centers on a mean of 100 and a standard deviation of 10, which makes the interpretation of results, on both an individual and a group level, relatively straightforward.

We used the BCIQ measurement tool on a total of 1,577 professionals born in the five countries to analyze the demographic and work-related antecedents leading to higher CQ across all four factors or dimensions. Figure 1 shows how the five countries in our sample scored.

A test of differences between mean scores of countries of birth is statistically significant, showing variations in our country samples. Since individuals within a country may have different characteristics, we analyze the individual drivers of BCIQ. Table 2 lists descriptive statistics of key variables in our model for Austria, Colombia, Greece,

FIGURE 1 Mean of BCIQ Factors versus Country of Birth



Spain, and the United States for the full sample. The average age of survey respondents ranged from almost 30 years old in Austria to just over 40 in Spain. Respondents were roughly evenly divided between male and female with an average education level between university and postgraduate levels. There appears to be a large variation between countries in the number of languages respondents speak in addition to their native language, ranging from the United States on the low end to Greece at the high end, which reported the most languages spoken in addition to the native language. Our data show significant variation in the cultural intelligence of persons whose current country of residence is not their country of birth, in contrast to those individuals who reside in their country of birth. We refer to the former individuals as *international* persons in our model, as they represent a degree of international cultural experience beyond that of fellow

TABLE 1 The Four Elements of BCIQ

Factor	Name	Definition
BCIQ1	Motivation	An assumed force operating internally that induces an individual to choose one action over another, specifically choices supporting openness to new ideas, interpersonal relationships, cultural identities, and experiences
BCIQ2	Listening, Communication, and Adaptation	The cross-cultural utilization of baseline verbal/nonverbal awareness regarding social practices and how information is exchanged. Also, the ability to accurately modify and adapt actions according to the situation
BCIQ3	Cognitive Preparation	The self-study of appropriate cross-cultural behavior/business practices
BCIQ4	Global Knowledge	The level of general knowledge about other cultures in terms of facts, customs, practices, norms, and values.

**TABLE 2** Means, Standard Deviations, and Observations of Key Variables by Country of Birth

Country of Birth	BCIQ1 Motivation	BCIQ2 ListCommAdapt	BCIQ3 CogPrepLearn	BCIQ4 Knowledge	International	Number of Languages	Number of Countries	Age	Gender	Education
Austria	$\mu$ 98.1	94.9	102.8	108.1	0.03	1.30	0.61	29.75	0.55	4.75
	$\sigma$ 8.3	10.3	7.4	9.6	0.16	0.66	0.79	6.15	0.50	1.01
	N 191	218	216	200	256	255	254	256	256	256
Colombia	$\mu$ 100.8	98.2	105.6	99.6	0.06	1.03	0.82	34.56	0.50	5.57
	$\sigma$ 8.9	9.9	8.0	10.6	0.24	0.80	0.91	7.26	0.50	0.54
	N 394	436	445	410	509	511	513	514	512	512
Greece	$\mu$ 97.6	96.7	102.2	101.7	0.18	1.43	0.56	31.56	0.57	5.59
	$\sigma$ 9.2	10.9	8.4	9.5	0.39	0.67	0.67	7.34	0.50	0.74
	N 208	218	224	217	243	243	244	244	245	244
Spain	$\mu$ 95.8	95.0	102.0	102.1	0.03	1.05	0.57	40.07	0.53	5.31
	$\sigma$ 9.7	10.7	8.4	10.5	0.18	0.81	0.89	7.98	0.50	1.04
	N 355	392	395	376	441	440	442	443	439	441
USA	$\mu$ 101.2	98.6	100.8	107.2	0.12	0.79	0.49	39.50	0.64	5.51
	$\sigma$ 8.6	9.7	9.3	9.3	0.32	0.63	0.85	10.76	0.48	0.56
	N 94	107	110	83	121	19	121	120	121	39
Total	$\mu$ 98.5	96.5	103.2	102.5	0.07	1.14	0.65	35.24	0.54	5.36
	$\sigma$ 9.3	10.4	8.4	10.6	0.25	0.78	0.86	8.56	0.50	0.88
	N 1242	1371	1390	1286	1570	1468	1574	1577	1573	1492

Notes: International indicates whether the participant has an international orientation, which was coded 0 if the participant's country of birth is their country of residence; and 1 otherwise. *Fluent languages* measured the number of languages spoken fluently besides the participant's native language and ranged from 0 ("One") to 3 ("Three or more"). *Foreign Countries* measured the number of countries participants had lived for more than 6 months besides their country of origin. Available responses were coded as 0 ("None"), 1 ("One to two"), 2 ("Three to five"), or 3 ("Over five different countries"). Age was measured in years. Gender was coded as 0 ("Male") or 1 ("Female"). Education measured the highest level of education with responses ranging from 0 ("Primary school") to 5 ("Post-graduate degree").



nationals who do not reside abroad. We note that an international person can be of any nationality.

Many survey respondents reported that they had lived in other countries for periods that exceed six months. The correlation matrix in Table 3 shows the nature of the relationships between these key variables.

Correlations in Table 3 clearly indicate that the significant factors of business CI, in descending order, are number of countries lived in, number of languages spoken, and education levels. These are consistently highly correlated to our four CI measures: BCIQ1—motivation; BCIQ2—listening, communication, and adaptation; BCIQ3—cognitive preparation and learning behavior; and BCIQ4—global knowledge. This robust finding provides empirical validation and support for Crowne (2008), who suggests that the number of countries lived in affects CI, which in fact is the most consistently significant factor explaining our BCIQ model, using data from our five-country sample.

We note that correlations are strong between the demographic variables (age, gender, and education) and

cultural variables (international, additional languages, and number of countries lived in), indicating the need for a parsimonious regression model to minimize potential problems of multicollinearity.

Table 4 shows the results of fitting a multilinear hierarchical linear model (HLM) to our data to evaluate the relative impact that number of countries lived in, country of origin, number of languages spoken fluently, native language, and international orientation have, controlling for demographic variables such as gender, age, and level of education. The hierarchical linear model is used to address the issue that respondents are nested within countries. The analysis fit a model with constant slopes across countries and country-dependent intercepts. With five countries, we considered the intercept of the model as a random variable, allowing an adjustment to the fit of each BCIQ factor for the country where it was measured, but we considered that rate of change due to our control or explanatory variables as a constant across countries.

**TABLE 3** Correlations for BCIQ Measures and Key Demographic Variables

Variables	1	2	3	4	5	6	7	8	9	10
1. BCIQ1—Motivation	—									
2. BCIQ2—ListCommAdapt	0.518* (0.000)	—								
3. BCIQ3—CogPrepLearn	0.392* (0.000)	0.303* (0.000)	—							
4. BCIQ4—Knowledge	0.120* (0.000)	0.048 (0.091)	0.111* (0.000)	—						
5. International	0.043 (0.129)	−0.003 (0.904)	0.061* (0.023)	0.014 (0.622)	—					
6. Multiple languages	0.230* (0.000)	0.051 (0.069)	0.143* (0.000)	0.164* (0.000)	0.106* (0.000)	—				
7. Number of countries	0.261* (0.000)	0.087* (0.001)	0.216* (0.000)	0.144* (0.000)	0.212* (0.000)	0.3663* (0.000)	—			
8. Age	−0.091* (0.001)	0.021 (0.447)	0.017 (0.536)	0.021 (0.448)	−0.100* (0.000)	−0.151* (0.000)	−0.0282 (0.263)	—		
9. Gender	0.062* (0.029)	0.065* (0.017)	−0.129* (0.000)	−0.041 (0.144)	−0.028 (0.273)	0.026 (0.330)	−0.0570* (0.024)	−0.076* (0.003)	—	
10. Education	0.168* (0.000)	0.111* (0.000)	0.182* (0.000)	0.091* (0.001)	0.066* (0.011)	0.108* (0.000)	0.1581* (0.000)	0.124* (0.000)	0.023 (0.367)	—

Notes: \* $p < 0.05$ . The four components of BCIQ are defined as follows: *BCIQ1 Motivation*: an assumed force operating that induces an individual to choose one action over another, specifically choices supporting openness to new ideas, interpersonal relationships, cultural identities, and experiences; *BCIQ2 Listening and Communication Adaptation*: the cross-cultural utilization of baseline verbal/nonverbal awareness regarding social practices and how information is exchanged; *BCIQ3 Cognitive Preparation & Learning Behavior*: the self-study of appropriate cross-cultural behavior/business practices; and *BCIQ4 Global Knowledge*: the level of general cross-cultural knowledge (Elston et al., 2012). International indicates whether the participant has an international orientation, which was coded 0 if the participant's country of birth is their country of residence; and 1 otherwise. *Fluent languages* measured the number of languages spoken fluently besides the participant's native language and ranged from 0 ("One") to 3 ("Three or more").

**TABLE 4** Multilevel Hierarchical Linear Regression Results

	BCIQ1—Motivation			BCIQ2—Listening, Communication, and Adaptation		
Number of countries lived in besides country of origin	2.5350***	—	—	0.9419**	—	—
Number of languages spoken fluently besides native language	—	2.6848***	—	—	0.6655**	—
International orientation	—	—	1.1597***	—	—	−0.2130
Female	0.9820*	0.7519	0.8053	1.1387	1.0700	1.1101
Age	−0.1034***	−0.0851***	−0.1109***	0.0385	0.0525	0.0336
Level of education	1.4007***	1.3371***	1.7896***	0.9291***	1.0083***	1.0899***
N	1173	1151	1170	1285	1265	1282
LR test multilevel vs linear regression <i>p</i> -value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Intraclass correlation coefficient (empty model)		4.23			1.68	
	BCIQ3—Cognitive Preparation			BCIQ4—Global Knowledge		
Number of countries lived in besides country of origin	1.6149***	—	—	1.6694***	—	—
Number of languages spoken fluently besides native language	—	1.6324***	—	—	1.7511***	—
International orientation	—	—	2.2424***	—	—	0.6097
Female	−2.0937***	−2.2071***	−2.1475***	−0.9616*	−1.1182**	−1.1565***
Age	0.0448**	0.0622*	0.0488**	0.0641	0.0990	0.0534
Level of education	1.4040***	1.3586***	1.6558***	1.9371***	1.9392***	2.1899***
N	1304	1283	1301	1224	1203	1222
LR test multilevel vs linear regression <i>p</i> -value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Intraclass correlation coefficient (empty model)		3.41			9.23	

The results shown in Table 4 provide estimates of the parameters of our HLM model for each one of the four BCIQ factors and each of the three antecedent variables (number of countries lived in for more than six months, number of languages spoken fluently, and international status) after controlling for gender, age, and education level. Results from the 12 regression analyses suggest that different antecedents predict different BCIQ dimensions and that gender, age, and country of birth/country of residence do not consistently predict or explain the four cultural intelligence measures across the five countries. As with Table 3, the most important or statistically significant factors in predicting cultural intelligence are, in order of importance: number of countries lived in for more than six months, number of languages spoken, and education level. Age is negatively related to motivation, and females rank lower than males in cognitive preparation and learning behavior in our study.

In general, however, the results show that the more languages spoken, the higher the level of the individual's motivation and openness to new ideas and cultural

diversity. The number of languages spoken also positively relates to greater cross-cultural communication skills, more learning behavior regarding other cultures, and higher levels of general global knowledge. In brief, the more languages one speaks, the higher one's level of cultural intelligence. Higher levels of education also have a similar impact in our model, leading to higher levels for all four dimensions of cultural intelligence. These findings suggest that learning additional languages and obtaining advanced education result in higher cultural intelligence.

Finally, increases in the number of countries lived in clearly leads to higher levels of all four cultural intelligence dimensions, which suggests that living in foreign countries is also a good way to increase cultural intelligence.

The intraclass coefficient of correlation shows the proportion of total variance of each BCIQ factor accounted for solely by the clustering into countries. BCIQ4—global knowledge has the highest percentage of variance accounted for by countries (9.2%).



## Applications for Business Cultural Intelligence

Global talent management is a primary concern for managers worldwide, as many companies determine that their current manpower capabilities are insufficient to cover expected future demands (Strack et al., 2012). Leadership development on a global scale thus becomes essential to reduce the talent shortage. Developing managers with a global mind-set and cultural intelligence who can work or lead in multicultural teams has become a major challenge for international corporations (Caligiuri, 2013; Javidan & Teagarden, 2011).

Companies need tools to identify, recruit, develop and retain professionals with high cultural intelligence and the potential to become global leaders. Our findings suggest the BCIQ questionnaire can be a useful tool to identify the right people and to assess areas that need improvement. In this way, the BCIQ can serve as a guide for training and development efforts in multinationals and business schools.

The study of high-performance work management systems has already established the importance of an internal and external strategic fit of human resource management systems (Baird & Meshoulam, 1988; Huselid, 1995). Management efforts to recruit, develop, and retain culturally intelligent employees should be complementary, helping to create that internal strategic fit, as proposed by Wright and Snell (1998). This theory holds that an organization derives the best outcomes from its human resource management efforts when these directly mirror and support its business strategy (external fit) and when they agree and team up with each other (internal fit). When international expansion is part of the company's strategy, global talent management is essential, and diverse human resource management systems can work synergistically. For these human resource management functions, both BCIQ and its antecedents, as identified in this study, can become very useful tools.

Based on our study results, we reached several conclusions that may be useful to international human resource managers and global leaders in their talent management search of attracting, recruiting, developing and retaining individuals who have the capability to make a significant impact on the performance of the firm (Evans, Pucik, & Björkman, 2011). The main implications for management suggested by our study include (1) those that may assist companies to attract and recruit culturally agile professionals, (2) those that focus on the training and development of culturally intelligent leaders, and (3) those

that may help to retain international strategic talent. Our findings indicate that, in order of importance from high to low, living abroad for more than six months, a high educational level, and speaking multiple languages fluently are significant antecedents of CQ at the individual level. Companies can use this ranking of cultural intelligence antecedents in their human resource strategies, which may be an improvement on the simplistic "how to" or "doing business in" guides for understanding new countries and cultures.

## Recruiting and Selection of Culturally Intelligent Professionals

The first step for organizations seeking to optimize their global talent management is staffing key positions with culturally intelligent individuals. The BCIQ test may prove a valuable part of the employee selection process, and selection reliability may increase if coupled with other tools, such as the global mind-set inventory (Javidan & Teagarden, 2011).

In fact, in every stage of the recruitment and selection process, from job description and recruitment to employee selection criteria, companies need to make conscious attempts to attract staff with BCIQ antecedents. Obviously, some of these, such as educational level, are already a requirement in staffing efforts (Cappelli, 1993). In addition to academic degrees, education depth and length may include successful completion of alternative education opportunities, such as professional certificates and massive open online courses (MOOCs). All three CQ antecedents identified in this study may apply as key criteria in staffing decisions when CI is a priority. This can be implemented by assigning a relatively higher weight in the hiring process to an applicant's experience living abroad and ability to speak multiple languages. Weighting could apply to all stages of the selection process, from initial screening of applications and quantitatively ranking resumes by grading units to structuring interviews.

Internal recruitment may also benefit from using the BCIQ to identify employees with high CQs who may be hidden or dispersed in the organization and could become boundary spanners key to fit the company's goals (Barner-Rasmussen et al., 2014).

## Developing a Culturally Intelligent Workforce

Companies could customize employee development efforts to address specific human resource needs, depending on strategic goals. As a diagnostic tool, the BCIQ could help enterprises to identify potential high-CQ employees to improve their intercultural skills. The BCIQ could also help to assess existing strengths and

weaknesses of individuals in each of the CQ dimensions in order to design the most effective training programs (Earley & Peterson, 2004). For example, an individual may excel in speaking different languages but may not have the skills to adapt to different culture settings. In this case, giving the individual international work experience would be highly beneficial, whereas it might be better to invest in developing languages and communication skills for another high-potential employee.

According to Story, Barbuto, Luthans, and Bovaird (2014), the number of languages a leader speaks is one of the few personal characteristics relevant for the development of a global mind-set, although experience abroad is also marginally correlated with a global mind-set.<sup>3</sup> More specifically, while taking international business trips was marginally correlated, actually living abroad was more likely to increase the individual's global mind-set. This finding suggests that there are differing qualities or intensities of international experiences, which shape the individual's global mind-set. Living in an expatriate community abroad is not likely to be developmentally equivalent to living among the native community abroad and learning the language and culture directly.

Regarding learning methodologies, development practices that attempt to increase cross-cultural intelligence usually employ cross-cultural training programs (Hansen & Williams, 2003; Littrell, Salas, Hess, Paley, & Riedel, 2006), even though their effectiveness has often been criticized (Lenartowicz et al., 2014; Wurtz, 2014). Experiential learning theory (ELT) suggests that intercultural training programs should provide participants with concrete personal experiences, reflective observation opportunities, abstract conceptualization methods, and active experimentation tools (Ng, Van Dyne, & Ang, 2009). Our results confirm that the main drivers to develop CQ are experientially based and therefore training programs to foster cross-cultural skills should give participants opportunities to face cultural challenges (Erez et al., 2013; Kratze & Bertolo, 2013; Taras et al., 2013; Yamazaki & Kayes, 2004). Accordingly, in addition to culturally specific country knowledge (cognitive approach), intercultural training programs should include experiential methods to develop the meta-cognitive, motivational, and behavioral intercultural skills needed to deal with intercultural situations (Earley & Peterson, 2004). A particularly effective way to assure intercultural encounters is by mixing up employees from different countries and business units in both face-to-face working environments and in blended and virtual training programs. Working in diverse teams not only provides participants with tacit cultural learning experiences (Lenartowicz et al., 2014) but

also contributes to building networks and social capital within the company, fostering knowledge transfer across borders.

Training should be tailored to fit the culture in each firm (Kaufmann, Englezou, & García-Gallego, 2014). The context where training and learning take place affects their outcomes (Argote, 2011) and is *itself* shaped by learning and training. Therefore, a dialectic relation exists between employee training and context. Tailoring training to the existing organizational culture is crucial, and content, method, material, and training objectives must be specific. A structured seminar on cross-cultural knowledge, for example, could be useful to a company with high power distance, but probably would not match the needs of a company whose staff has broad experience from experiential learning activities.

Our results suggest that companies should encourage the completion of formal education programs, such as bachelor's and master's degrees as well as foreign language training programs through training leaves, sabbaticals, and career breaks. Companies need to provide training opportunities as part of an employee's lifelong development, as a culture of constant learning is beneficial for increasing CQ.

As discussed in the academic literature, international assignments are an effective way to develop intercultural and global leadership skills (Caligiuri & Di Santo, 2001; Ng et al., 2009). While short-term assignments increase CQ (Wood & St. Peters, 2014), our findings indicate that mid- to long-term cross-cultural working experiences better improve CI.

In fact, international assignments have evolved from an instrument of organizational control and knowledge transfer from the parent company to the subsidiaries (corporate agency role), or a way to fill positions that cannot be staffed locally (problem-solving role) to a competence development role with a learning-driven approach (Evans et al., 2011; Stahl, Chua, Caligiuri, Cerdin, & Taniguchi, 2009) from the periphery to the center. Many multinationals have already introduced international mobility experiences in foreign business units as a requirement for individual career development. International assignments are a great opportunity to improve language communication competences, the third most important CQ antecedent, as long as individuals get involved in the host-country culture. By encouraging employees to learn the different languages spoken in the organization and markets, companies can not only improve their knowledge transfer (especially tacit knowledge) but can also help individuals develop intercultural skills and get the most from their international assignments and intercultural

teamwork (Ishii, 2012). Language competence, even at the intermediate level, increases the absorptive capacity of foreign cultures, especially when living abroad.

On the other hand, as Ng et al. (2009) note, not all international assignees translate their experiences into the learning outcomes critical for global leadership development. Assignees with higher CQs derive better learning outcomes from their international work experience due to their cognitive, motivational, and behavioral skills. This emphasizes the need to recruit the right people to go abroad and to select individuals with higher BCIQ1, BCIQ2, and BCIQ3, who can further develop their CQ skills and become future global business leaders.

### Deployment and Retention of Globally Competent Professionals

In order for human resource investments in training and recruiting to pay off, these efforts should be coupled with a continual and conscious effort to retain and motivate professionals. There is no use in recruiting the best people and developing their full potential if this potential is not deployed in the long term. If future international leaders are either not committed to their employer or lack the motivation to improve, then human resource management has not truly succeeded. Reward and incentive systems should be implemented to increase individuals' three key antecedents of CQ, and culturally competent managers should be promoted and rewarded.

According to the psychological contract theory, both parties to the employment agreement (employer and employee) should believe that they have an agreement on what each should offer to the relationship (Robinson, 1996). The psychological contract goes far beyond the written employment contract. It involves more issues than, say, times of service, vacation, dress codes, and so on, such as organizational commitment and organizational citizenship behavior. Consistent with psychological contract theory, an employee is expected to pursue improving his/her attributes, if and when the employer provides substantial assistance to this end and rewards employees for their improved qualities.

As the psychological contract theory states, employers can subsidize tuition fees for formal and alternative education programs as well as language training programs that employees pursue to improve their own CQ antecedents, thus providing additional motivation to workers. Companies that do not already do so can also incentivize employees for undertaking overseas experiences by paying for moving expenses and providing bonuses and higher direct remuneration for overseas assignments.

Employers can reward employees who improve their own cultural intelligence profile by offering opportunities for upward career mobility to these individuals, for instance, inclusion of CI, as a prerequisite for upward career mobility. This maintains the psychological contract between the two parties (employees who made the effort to improve and the organization that benefits from this investment), while it also engenders a feeling of justice in terms of an overall social exchange (Cropanzano & Mitchell, 2005). Managers need to openly and consistently communicate the company policy of providing development opportunities and rewards for those who improve their CQ in expected ways. The expected reward may indeed act as an incentive for employees to adopt the intended behavior, as proposed by expectancy theory (Ajzen, 1991).

We suggest competency-based rewards. Rewards that are linked with educational achievements, mastering foreign languages, and living-abroad experience, especially for work purposes, are preferred to purely performance-based employee reward systems, which increase short-term efficiency at the expense of long-term development of competencies (Díaz-Fernández, López-Cabrales, & Valle-Cabrera, 2013; Lawler, 1994), including CQ. To put it differently, explicit behaviors or work outcomes of culturally intelligent individuals are difficult to operationalize and assess. Therefore, rewards that incentivize individuals to develop their CI through education, foreign languages, and living-abroad experience (*ex ante*) should complement performance-related pay systems, where pay is related, for example, to successful cross-national project completion (*ex post*). A practical example for a company would be to offer salary raises for increased CI-related competencies (mastering of foreign languages and education grades completed), bonuses or raises in salary during international placements, and bonuses for successful completion of international assignments. Such a system would induce employees to enhance their own CI antecedents, and deploy them in practice when they are most needed (at a well-paid project).

### Conclusions and Suggestions for Future Research

While the academic literature is replete with discussions on the importance of cultural intelligence, this research provides empirical evidence using a broad international dataset on the relative importance of key antecedents for developing cultural intelligence in business professionals. These key antecedents are, in order of importance

from high to low, the number of countries lived in for six months or more, education level, and number of languages spoken. In addition, this article demonstrates the viability of the innovative BCIQ framework for modeling these factors.

This study suggests that organizations seeking to better address the complexities of a more globalized environment need to acquire, develop, and retain individuals with high BCIQs at all levels. Firms need to search for people with extensive experience living abroad (staffing), advanced educational backgrounds, and command of foreign languages. Firms should provide professionals with the opportunities and incentives to further develop and build on those skills (development) in order to enhance retention (sustainability). Rewarding international experiences and the development of cultural intelligence should be built into the organization's DNA. Should this happen in industries where globalization is most pronounced, it is anticipated that employees' individual performance will rise, along with that of their companies.

While we uncovered common personal antecedents for BCIQ across the five countries, we also found possible systematic differences in BCIQ among professionals in different countries, a country-of-origin impact on BCIQ. Professionals from certain countries may have a higher predisposition for international assignments. Through the HLM regressions, we found that the interclass coefficient of correlation shows the proportion of total variance of each BCIQ factor accounted for solely by the clustering into countries. For example, BCIQ4-global knowledge has the highest percentage of variance accounted for by countries (9.2%). While the international knowledge questions attempted to balance questions from each region of the world, this finding suggests that international knowledge varies among countries. While IQ may have similar variance across countries, CQ may be influenced by contextual variables.

This surprising finding may require additional research. If cultural intelligence varies by country, what are the country-level determinants of cultural intelligence? Might it be possible, for example, that countries with more cultural diversity, trade, openness, advanced educational levels, and international media may influence their populations' propensity for cultural intelligence and, thus, upward job mobility in multinationals? A study of more countries, with different contexts (e.g., gross domestic product, openness, and cultural diversity) may help explain these systemic differences.

Future research directions might include developing a more comprehensive data set of countries to examine

the sensitivity of our model to different countries and extending the robustness of results by conditioning estimates and explicitly controlling for other important factors not considered in this study. Country-level factors affecting cultural intelligence should also be explored further to see if macro and institutional environments impact collective CI.

Differentiating between different classes of professionals might also provide insight on the importance of BCIQ. Is BCIQ more important for those in charge (leaders) compared to those who follow (professional employees)? Is the impact of BCIQ different depending on whether the professional is an expatriate, a virtual global team member, a domestic employee with international clients, or a worker with colleagues from other countries? If so, which BCIQ dimensions impact their success most? Employment status was shown to be an important variable in the global mind-set study, for example (Javidan & Teagarden, 2011), and we might expect it to also be so for BCIQ.

We hope that more research will be conducted using BCIQ to show not only its antecedents but also its outcomes. How might CQ affect work outcomes, project management, and success in international ventures? How does BCIQ work across different levels of analysis? For example, what is the relationship between employees' cultural intelligence and the competitiveness of their firms? While CQ research already tells us much about international human resource management, how it affects other parts of the organization is still ripe for further examination.

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## Notes

1. All authors have contributed equally to the paper and are listed alphabetically.
2. Refer to Leung et al. (2014) for a more detailed review of the main intercultural competence instruments and their similarities and differences. For a thorough discussion about the conceptualization of global mind-set, refer to Levy, Beechler, Taylor, and Boyacigiller (2007); and for an understanding of the differentiation of cultural intelligence as a type of intelligence, refer to Thomas et al. (2008).
3. Training and development of a global mind-set is becoming recognized as an overlooked and unique characteristic necessary for working effectively in a global environment (Teagarden, 2014). A global mind-set takes into consideration the executives' personal and psychological attributes as they relate to the ability to work within culturally diverse environments.





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