Culture as an Antecedent of Emotional Intelligence: An Empirical Study

While a large body of research has examined the outcomes of emotional intelligence, relatively little is known about the antecedents of emotional intelligence. In particular, prior research suggests that emotional intelligence has different effects on management outcomes, such as task performance, and leadership behavior, in different cultural contexts. Our study examines how national culture might influence the four dimension of emotional intelligence, namely self emotional appraisal, others' emotional appraisal, regulation of emotion, and use of emotion. The study is based on a questionnaire survey carried out among university students. Utilizing a sample of 2,067 individuals in nine countries, we explore the influence of cultural dimensions on emotional intelligence. Our ordinary least squares regression analysis results show that especially collectivism, uncertainty avoidance, and long-term orientation have a positive influence on the different dimensions of emotional intelligence. While all three dimensions have a positive effect on regulation of emotion and the use of emotion, self emotional appraisal is positively influenced by collectivism and uncertainty avoidance. Others' emotional appraisal is positively related to uncertainty avoidance and long-term orientation. Masculinity and power distance do not have an influence on any of the emotional intelligence dimensions for the pooled sample. In addition to the effects of culture, we examine gender differences with respect to the dimension of emotional intelligence. We also observe differences among the countries with respect to culture's effect on the dimensions of emotional intelligence. Female scored lower on self emotional appraisal and regulation of emotion than men. However, they scored higher in others' emotional appraisal and use of emotion. Our results provide a more detailed understanding of the development of emotional intelligence. Theoretical and practical implications of these findings are discussed and future research directions are provided.

Culture as an Antecedent of Emotional Intelligence: An Empirical Study

1. Introduction

Our empirical study aims at providing a deeper look into how national culture influences emotional intelligence (hereafter EI). Even though previous literature has shown that EI has an important influence on work outcomes (e.g., Harms & Credé, 2010; O'Boyle et al., 2011), the effect of national culture on EI has not been examined across national cultures. Nevertheless, the topic is of crucial importance as more and more organizations have individuals interacting with global partners. Understanding what determines EI is of interest to the human resource management of the organization in order to increase the job satisfaction of employees and to influence their performance. The purpose of our study is to contribute to this gap in the literature by comparing university students across nine cultures in order to determine how cultural dimensions influence the EI of individuals. The results of our study contribute to the existing management literature by examining culture's influence on the determinants of EI. As far as we know, there are no country comparisons on the topic, even though the topic is of great importance to the human resource management of organizations. Our study helps the human resource management of organizations to understand how to assess candidates for management positions for international assignments, especially when it comes to the pivotal skill to leadership success – EI.

2. Theoretical Background

Contemporary theories on intelligence, such as the one by Gardner (1993), view intelligence as a multifaceted concept. Intelligence is not measured only as a cognitive intelligence, but by considering various dimensions. For example, Gardner (1993) discusses seven types of intelligence: Logical-mathematical intelligence, linguistic intelligence, spatial

intelligence, musical intelligence, bodily-kinesthetic intelligence, interpersonal intelligence, and intrapersonal intelligence. It has been suggested that culture determines the emphasis placed on the various types of intelligence in the society (e.g., Furnham, 2001).

EI, "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1990: 189), is a type of intelligence which corresponds to Gardner's (1993) interpersonal and intrapersonal intelligences (Schutte et al., 1998). According to Salovey and Mayer (1990) and Mayer and Salovey (1997) EI is composed of four dimensions: 1) Appraisal and expression of emotion in the self – self emotional appraisal, 2) appraisal and recognition of emotion in others – others' emotional appraisal, 3) regulation of emotion in the self – regulation of emotion, and 4) use of emotion to facilitate performance – use of emotion.

Wong and Law (2002) recognize the need for a theory, which connects the concept of EI to organizational outcomes. Based on the Gross' model of emotion regulation (Gross, 1998a; 1998b), they model the influence of EI on work outcomes and test this model empirically. Wong and Law's (2002) model proposes that emotionally intelligent employees are able to revise their perceptions about their work environment. The perceptions affect the emotions of the individuals, which can be regulated by the people the employees select to interact with, by the work environment itself, by focusing on specific aspects of the work environment, or by changing the evaluation of the work environment (antecedent-focused emotion regulation). Employees can also change the influence of an emotional stimulus from the work environment by intensifying, diminishing, prolonging, or curtailing certain emotions (response-focused emotion regulation). Employees with high EI can use such regulation of emotions to create positive emotions and promote emotional and intellectual growth and can make use of this emotion regulation. Employees with low EI have slower emotional growth

due to the fact that they are not able to regulate their emotions effectively. There has been significant research, which supports the importance of EI in the workplace with impacts of EI seen in the areas of personal selection, leadership, workgroup cohesion, performance feedback, organizational commitment, organizational citizenship, and job control (Abraham, 2005). Cherniss' (2001) research suggests that EI has a broad influence on organizational effectiveness across a wide range of organizational activities including teamwork, innovation, productivity, sales, quality service, and customer loyalty. This work, along with many others, supports the view of Wong and Law (2002) that for virtually any organization it is of crucial importance to hire employees with high levels of EI in order to realize the many benefits of an emotionally intelligent workforce.

Given this suggested importance of EI it is therefore perhaps surprising that little is known about the antecedents of EI. The existing literature on EI has not been able to identify any antecedents of EI apart from the parents' EI (Vernon, Petrides, Bratko, & Schermer, 2008). So far, there has been theoretical discussion in the literature how EI may develop, nevertheless, there is a clear need for studies examining the antecedents of EI (Barbuto & Bugenhagen, 2009). The topic is not only of interest to theory, but also to the business community, as more and more organizations are having a multi-cultural work force. Understanding what determines EI is of interest to the human resource management of the organization in order to increase the job satisfaction of employees and also influence their performance.

Ang et al. (2007) propose that a person, who is emotionally intelligent in one culture, might not be that in another one. One's norms and values determine the central importance in life, and thereby, influence the manner in which emotions are appraised, recognized, and used. That implies that culture has an influence on EI, and therefore, can be seen as an antecedent of EI. The ways emotions are displayed and dealt with in various countries have been shown to

be influenced by the culture of the countries (see, e.g., Matsumoto, 1989). Previous literature has discussed the influence of three of the five dimensions of Hofstede (individualism, power distance, masculinity, uncertainty avoidance, and long-term orientation) on the display and judgment of emotions (see, e.g., Matsumoto, 1989 and Fernández-Berrocal et al., 2005). So far, the influence of culture on EI has remained widely unexplored. The literature on emotions and culture has been focused only on the two facets of the model of EI, namely the perceiving and expressing emotions (see, e.g., Palmer, Gignac, Ekermans, & Stough, 2008). This, however, leads us to suspect that EI is a concept which is also influenced by culture; a relationship which was suggested in only one study found in the literature, a three country study that examined one cultural dimension (humane orientation) and found a significant positive relationship between it and EI (Engle & Nehrt, 2011). Given the lack of literature in this area, our study will examine how Hofstede's cultural dimensions might have an influence on EI across a broad group of countries.

Dimensions of culture

Culture can be defined as the "collective programming of the mind which distinguishes one group from another" (Hofstede, 1980: 25). It sets the basic values and norms for a society. It is a system to transfer meaning and information to its members (Matsumoto et al., 2008). Hofstede (2001) distinguishes between five dimensions of culture: individualism vs. collectivism, masculinity vs. femininity, power distance, uncertainty avoidance, and short-term vs. long-term orientation. The dimensions of Hofstede have been found to reflect the fundamental dimensions of culture (Taras, Kirkman, & Steel, 2010). These dimensions have also been the basis for the research on culture's influence on emotions (see, e.g., Matsumoto, 1989; 1990; Fernández-Berrocal et al., 2005; and Matsumoto, Nezlek, & Koopmann, 2007) and therefore, serve as an appropriate basis for the analysis on the connection between these dimensions and culture.

Culture and emotional intelligence

Though emotions are biologically programed, controlling the expression of emotions is determined by culture (Matsumoto, 1989). Emotions are shaped and maintained by culture (Kitayama & Markus, 1994). The communication of emotions significantly differs across cultures. Individualistic cultures stress the needs of individuals and therefore emphasize the emotional world of an individual. A balance between positive and negative emotions is searched for. The type of emotion, however, seems to play a great role in the display of emotions. For example, Matsumoto (1990) showed that American individuals (high individualism) found negative emotions in in-groups and happiness to out-groups to be more appropriate emotions to show than did their Japanese counterparts. Nevertheless, Japanese rated anger to out-groups more appropriate than the American participants of the study did. In collective cultures, the cohesion with peers is of high importance and therefore less attention is paid on the emotional world of individuals (Fernández-Berrocal et al., 2005). Hofstede (2001) proposes that countries with high uncertainty avoidance (high anxiety level) have created social systems which allow the expression of emotions and in which the expression of emotion is considered as normal. Cultures scoring high on uncertainty avoidance are more expressive cultures, where emotions are displayed clearly (Palmer, Gignac, Ekermans, & Stough, 2008; Sharma, Deller, Biswal, & Madal, 2009). Countries with high femininity show a greater emotional intensity and expressiveness than masculine countries (Paez & Vergara, 1995). In addition, feminine nations seem to be associated with higher frequency of positive emotions than negative ones (Basabe et al., 2002). Power distance has been shown to influence the fact to whom emotions are shown. Matsumoto (1990) showed that Japanese employees (high power distance) found showing negative emotions towards lower-status others appropriate. They, however, surpass their negative emotions in presence of higher-status others (Ekman, 1972). Hofstede (1991) notes that individualism is associated with low

power distance, whereas collectivism is associated with high power distance. Matsumoto, Nezlek, and Koopmann (2007) demonstrate that long-term orientation is related to lowered emotional expressivity. That is, emotions in general are not shown as openly in long-term oriented cultures. Nevertheless, a purposefully low expressivity of emotions still does not necessarily mean that one would not recognize the emotions. Actually, it may be that emotions are well recognized, but it is not desirable to show them. It is well known that the fact which emotions we display and to whom we display them is influenced by culture. Therefore, we propose the following hypotheses:

Hypothesis 1a (H1a): Collectivism is negatively related to self emotional appraisal.
Hypothesis 1b (H1b): Masculinity is negatively related to self emotional appraisal.
Hypothesis 1c (H1c): Power distance is negatively related to self emotional appraisal.
Hypothesis 1d (H1d): Uncertainty avoidance is positively related to self emotional appraisal.
Hypothesis 1e (H1e): Long-term orientation is positively related to self emotional appraisal.

Cultural variation on the accuracy on emotion recognition has been shown to vary (Elfenbein & Ambady, 2003) and at the same time emotion expression may contain nonverbal accents that can provide indication on the expresser's culture (Marsh, Elfenbein, & Ambady, 2003). That is, the topic of other's emotional appraisal is a complicated issue, as culture already influences the expression of emotions; emotions might be expressed in various ways in different cultures. In his study on the recognition of emotion in facial expression, Matsumoto (1989) examined how different cultures recognize emotions of others and found that individualism was positively correlated with identifying happiness and negatively correlated with identifying sadness. That is, individualistic cultures are not able to identify all kinds of emotions, especially the negative ones. Matsumoto (1989) shows that power distance is negatively correlated to identifying the facial expression of happiness. Low power distance cultures value equality (Hofstede, 2001) and might therefore tolerate as well as observe other's emotions better than individuals from high power distance cultures. Schimmack

(1996) shows that uncertainty avoidance is related to the accuracy in predicting emotions; high uncertainty avoidance was related to lower recognition of the correct emotion. This is supported by Matsumoto's (1989) argument, that high uncertainty avoidance countries have created institutions to deal with emotions, and therefore, they might have difficulties in recognizing the emotions of others. According to Hofstede (2001), femininity is related to good work relationships with others and cooperation at work. Therefore, it may be assumed that feminine cultures observe their counterparts in greater detail and are therefore able to observe and understand their emotions better than individuals from rather masculine cultures. Long-term oriented cultures are focused on building relationships (Hofstede, 2001). Such activity requires thorough observation of the partner. The recognition of the counterpart's feelings is an important aspect of observing and learning to understand the behavior of other's. Therefore, it can be asserted that cultures scoring high in long-term orientation are better able to observe the emotions of others than cultures scoring low in long-term orientation.

The appraisal of others' emotion is a complex topic. Currently the research has mainly focused on the recognition of the facial expression of emotions. The culture of the expresser seems to matter in the way emotions are expressed (accents), but also in recognizing other's emotions. Individuals from certain cultures would thus be more sensitive to others' emotions within their cultures and better at reading others' minds. Therefore, we pose the following hypotheses:

Hypothesis 2a (H2a): Collectivism is positively related to others' emotional appraisal.
Hypothesis 2b (H2b): Masculinity is negatively related to others' emotional appraisal.
Hypothesis 2c (H2c): Power distance is negatively related to others' emotional appraisal.
Hypothesis 2d (H2d): Uncertainty avoidance is negatively related to others' emotional appraisal.
Hypothesis 2e (H2e): Long-term orientation is positively related to others' emotional appraisal.

The regulation of emotions differs in various cultures. For example, conflict inducing behavior is minimized in collectivistic cultures, whereas individualistic cultures are more tolerant for individual deviance (Triandis & Gelfand, 1998). Matsumoto (1989) shows that individualism is closely related to the facial expression of happiness and sadness. That is, in collectivistic cultures emotions, such as sadness, are often not displayed as openly as in individualistic cultures (Matsumoto, 1996). All in all, individualistic cultures do not suppress their emotions as much as collectivistic cultures do (Matsumoto et al., 2008). Uncertainty avoidance seems to have a negative influence on the regulation of emotion. Hofstede (2001) notes that in high uncertainty avoidance cultures it is socially acceptable to express emotions, since anxiety is released by showing of emotions. Cultures scoring high on power distance value emotions less and require a control of emotions at the individual level (Matsumoto et al., 2008). Therefore, power distance can be related to a better control of emotions and thereby suppression of emotions (Matsumoto et al., 2008). As long-term orientation is connected to the practice of saving face (Hofstede, 2001), it is rather related to suppressing emotions (Matsumoto et al., 2008). Considering that the individuals aim for a long-term relationship, it might be seen as desirable to control emotions in order not to hurt the potential long-term relationships. In feminine cultures, men suppress joy and sadness, whereas in masculine cultures, they are displayed openly. All in all, feminine cultures have higher norms for emotional stability than masculine cultures have (Hofstede, 2001). Based on this argumentation, we propose the following hypotheses:

Hypothesis 3a (H3a): Collectivism is positively related to regulation of emotions.
Hypothesis 3b (H3b): Masculinity is negatively related to regulation of emotions.
Hypothesis 3c (H3c): Power distance is positively related to regulation of emotions.
Hypothesis 3d (H3d): Uncertainty avoidance is negatively related to regulation of emotions.
Hypothesis 3e (H3e): Long-term orientation is positively related to regulation of emotions.

The way how managers display their emotions may communicate different messages to their employees in different cultural settings. For example, U.S. American managers might exaggerate their expression of emotion in order to signal pleasure, optimism, frustration, or displeasure to their employees. Japanese leaders are rather modest in their expression of emotions. In summary, when comparing American and Japanese leaders, it seems like the appropriate reactions to certain events, expectations, and performance appraisals are communicated rather in a non-emotional way in Japan, whereas emotions are used to emphasize the message in the U.S. (Bono & Barron, 2008). From this we can conclude that collectivism seems to be negatively related to the use of emotion. The same could be applied to uncertainty avoidance (according to Hofstede, 2001, Japan scores significantly higher on uncertainty avoidance than does the U.S.A.). In masculine cultures, which are characterized by having managers that are assertive and sometimes even aggressive, emotions are not controlled as much as in feminine cultures (Hofstede, 2001). This hints at using emotions, and therefore, it can be assumed that masculinity might be positively related to the use of emotions. Long-term orientation, on the other hand, is more concerned with harmony in a relationship (Hofstede, 2001) and therefore emotions might be used less. The use of emotions in high power distance countries depends on the composition of the interaction. Individuals higher in hierarchy might use negative emotions when interacting with individuals lower in hierarchy. Joy is an emotion which might be revealed when interacting with individuals higher in hierarchy. Nevertheless, power distance is related to controlling emotions (Matsumoto et al., 2008), and therefore emotions might not be used as much in high power distance cultures as in low power distance cultures. The literature presented above demonstrates a relation between the use of emotions and culture. Therefore, we propose the following five hypotheses:

Hypothesis 4a (H4a): Collectivism is negatively related to the use of emotion.
Hypothesis 4b (H4b): Masculinity is negatively related to the use of emotion.

Hypothesis 4c (H4c): Power distance is negatively related to the use of emotion.
Hypothesis 4d (H4d): Uncertainty avoidance is positively related to the use of emotion.
Hypothesis 4e (H4e): Long-term orientation is positively related to the use of emotion.

Figure 1 depicts our conceptual model.

Insert Figure 1 about here

---

3. Method

Sample and data collection procedure

Our sampling strategy included a careful selection of the sample population as well as of the national cultural context. To ensure that the number of countries and the countries selected were appropriate to explore the research questions, we followed the suggestions in the literature (Franke & Richey, 2010) as well as prior research on cultural clusters (countries with similar cultural beliefs, norms, and values) to select countries for sampling (Ronen & Shenkar, 1985). We included China (n = 261), Colombia (n = 202), Germany (n = 255), India (n = 276), Italy (n = 198), Russia (n = 224), Spain (n = 185), Turkey (n = 196), and the U.S. (n = 270) in the current study. The nine countries represent seven of the nine cultural clusters identified by Ronen and Shenkar (1985): Anglo (U.S.), Far Eastern (China), Germanic (Germany), Independent (India), Latin American (Colombia), Latin European (Italy, Spain), and Near East (Turkey). Countries that cover the Arab and the Nordic cluster are not included in this study which represents a shortcoming that is further discussed in the limitation section.

A total of 2,067 business students participated in this study. The respondents were from at least one university (one to three) in each country and only the responses from individuals who were born, raised, educated, and permanently resided in their respective country were used in this study. The average age of respondents was 22 years. More than half

of the respondents (51 percent) were females. Comparisons between countries revealed no difference in age. Gender is distributed about evenly in the majority of countries.

To ensure the equivalence and consistency across samples in terms of survey formats and the data collection procedure (Leung, 2008), in all nine countries, surveys were administered in a classroom setting. Participation in the study was voluntary. All questionnaires were completed anonymously to ensure confidentiality. The data was collected simultaneously for the majority of countries.

Measures

Emotional Intelligence. The four trait-based dimensions suggested by Wong and Law (2002) are used to measure EI. Self-emotional appraisal, others' emotional appraisal, use of emotion, and regulation of emotion were measured with 16 items. The items contributing to the four dimensions on a scale anchored at 1, "strongly disagree," and 5 "strongly agree."

Cultural Dimensions. Hofstede's (2001) five cultural dimensions (individualism/ collectivism, masculinity, power distance, uncertainty avoidance, long-term orientation) are operationalized at the individual level using the 23 items from Yoo, Donthu, and Lenartowicz (2011). The response scales ranged from 1, "strongly disagree," to 5, "strongly agree" for all *items that measured the first four dimensions. Long-term orientation was measured with a* scale that ranged from 1, "very unimportant," to 5, "very important."

Controls. We controlled for two demographic variables that may be related to EI. Age was measured in years. Gender was measured as a dichotomous variable coded as 1 for female and 0 for male.

Common method bias

Following the recommendation in the literature (Chang, Van Witteloostuijn, & Eden, 2010 and Reio, 2010), we empirically tested whether common method bias affects our results. We

used three ex post approaches to assess common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). First, to identify multicollinearity, we examined the correlation coefficients for each country as well as for the pooled sample. We found no highly correlated variables, suggesting that the likelihood of common method bias was low. Second, we used Harman's one factor test and found a very poor fit for the single-factor models for each country sample and the pooled sample, suggesting that the influence of common method bias was minimal. Finally, we used a common method factor and performed confirmatory factor analysis (CFA) for each country and the pooled sample. All item loadings on the common method factor were insignificant for the nine country samples as well as the pooled sample. While these procedures have their limitations, the results still suggest that common method variance is not a significant issue in this study.

4. Results

Measurement model, measurement equivalence, and descriptive statistics

In an effort to identify any country-specific components in the measurement model, we conducted CFA for each country using AMOS 20 and the maximum likelihood estimation procedure (Arbuckle, 2011). According to the literature (e.g., Cheung & Rensvold, 2002), the chi-square (χ^2) statistic is not an adequate test of model fit given large sample sizes ($n > 250$) as well as small sample sizes. Consequently, the results of the χ^2 test were not considered critical for evaluating the model fit such that we complement the χ^2 statistic with other, more appropriate measures of fit. We followed the recommendations in the literature (e.g., Browne & Cudeck, 1993) and used several fit indexes to provide a complete assessment of model fit. We used the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). Following the procedure suggested by Byrne (2010), we used the results of individual country CFA to identify those items that build a baseline model for the multi-group

confirmatory factor analysis (MGCFA). For further analysis, we used a factor structure that was identical for all eight countries and only used those items that showed high factor loadings and high squared multiple correlations for all nine countries as well as for the pooled sample (Byrne, 2010). For the revised measurement model, the values of the CFI were above the .9 threshold and the RMSEAs were below the .8 threshold for the majority of the nine countries and the pooled sample. Overall, the CFA results of the revised measurement model indicate an acceptable fit.

Following the recommendations in the literature, prior to exploring our research questions, we tested the assumptions of cross-cultural measurement invariance using multi-group confirmatory factor analysis (MGCFA). Measurement invariance is a necessary prerequisite for meaningful cross-cultural comparisons of relationships in human resource management and organizational behavior research (Nimon & Reio, 2011; Schmitt & Kuljanin, 2008; Tsui, Nifadkar, & Ou, 2007; Vandenberg, 2002; and Williams, Edwards, & Vandenberg, 2003). Furthermore, prior research suggests that measurement invariance is an important factor in the examination of EI across cultures (Ekermans, 2009). In examining measurement invariance, we constrain factor loadings and variances of the variables to be equal across the nine countries and tested configural invariance, metric invariance, and scalar invariance (Steenkamp & Baumgartner, 1998). We used the difference in CFI between models to statistically compare the measurement models, which may not be higher than .01 (Cheung & Rensvold, 2002). To compare relationships across groups, the measurement of constructs needs to show at least partial metric invariance (e.g., Steenkamp & Baumgartner, 1998). Partial measurement invariance refers to at least two observed indicators of a latent construct showing invariance.

For the EI dimensions the results of the MGCFA for the configural model show a satisfactory fit (χ^2 = 989.24; *df* = 462; CFI = .935; RMSEA = .023). The results of the metric

model also show a satisfactory fit (χ^2 = 1120.87; *df* = 518; CFI = .926; RMSEA = .023). The difference between the configural model and the metric model was not significant (ΔCFI = .009) and therefore, the factor structure can be considered invariant across the nine countries (Byrne, 2010 and Cheung & Rensvold, 2002). The results show an inadequate fit of the scalar model (χ^2 = 1909.73; *df* = 614; CFI = .841; RMSEA = .031). The comparison between the metric model and the scalar model (ΔCFI = .085) shows that the data did not fit the requirement for scalar invariance and, consequently, the data did not meet the requirement for meaningful comparison of the means across countries (Steenkamp & Baumgartner, 1998). For the cultural dimensions, the results of the MGCFA for the configural model show a satisfactory fit (χ^2 = 1061.00; *df* = 720; CFI = .913; RMSEA = .015). The results of the metric model do not show an acceptable fit (χ^2 = 1260.10; *df* = 800; CFI = .890; RMSEA = .017). The difference between the configural model and the metric model was significant (ΔCFI = .023), indicating that the factor structure cannot be considered invariant across the nine countries. The results of the partial metric invariance model indicate that the constructs were measured adequately across the countries (χ^2 = 1154.20; *df* = 752; CFI = .904; RMSEA = .016; ΔCFI = .009). The results show an inadequate fit of the scalar model (χ^2 = 3170.41; *df* = 920; CFI = .462; RMSEA = .034). The comparison between the metric model and the scalar model (ΔCFI = .442) shows that the data did not fit the requirement for scalar invariance and, consequently, the data did not meet the requirement for meaningful comparison of the means across countries. Overall, the MGCFA results support the conclusion that the measurement of the cultural dimensions and the EI dimensions can be interpreted in the same way across the nine countries at the metric level, allowing to compare the results of regression analyses across countries and to combine the country samples in a pooled sample. Based on the results of the CFA and the MGCFA, Table 1 presents means and standard deviations for all variables

(tables of correlation coefficients by country are available from the corresponding author upon request).

Insert Table 1 about here

Test of hypotheses

We used ordinary least squares regression analyses to the cultural dimensions that affect EI. Hypotheses 1a to 1e examine the effect of the respective cultural dimension on self emotional appraisal. Table 2 presents the results for self emotional appraisal. The results suggest that of the control variables gender had a negative effect for the Indian sample and for the pooled sample, suggesting that females score lower than males for self emotional appraisal. Hypothesis 1a predicts that collectivism is negatively related to self emotional appraisal. In contrast to our hypothesis, collectivism had a positive effect on self emotional appraisal for India, the U.S., and the pooled sample. Thus, Hypothesis 1a is not supported. Hypothesis 1b posits that masculinity is negatively related to one's own emotional appraisal. Consistent with Hypothesis 1b masculinity had a negative effect on self emotional appraisal for the Indian sample. In contradiction to the hypothesis, we found a positive masculinity-self-emotional appraisal relationship for the Chinese sample. We found no significant effect for the pooled sample. Thus, the overall pattern of findings provides mixed support for Hypothesis 1b. Hypothesis 1c predicts that power distance is negatively related to self emotional appraisal. Power distance had a negative effect for the Chinese sample, a positive effect for the Russian sample, and no significant effect for the pooled sample. Therefore, the results offer no clear support for Hypothesis 1c. Hypothesis 1d posits that uncertainty avoidance is positively related to self emotional appraisal. Uncertainty avoidance had a positive effect on self emotional appraisal for five of the nine country samples (China, Germany, India, Italy, and Turkey) as well as for the pooled sample. In sum, we conclude that

there is sufficient support for Hypothesis 1d. Hypothesis 1e predicts that long-term orientation is positively related to self emotional appraisal. Long-term orientation had a positive effect on self emotional appraisal for six of the nine countries (China, Germany, India, Russia, Spain, and Turkey) as well as for the pooled sample. Overall, we find strong support for Hypothesis 1e. In addition, the results indicated that cultural dimensions and the control variables together explain between 0 and 15 percent of the variance for self emotional appraisal for the individual country samples and 7 percent for the pooled sample.

Insert Table 2 about here

Hypotheses 2a to 2e assess the influence of the respective cultural dimension on others' emotional appraisal. Table 3 presents the results for others' emotional appraisal. The results suggest that gender had a positive effect for three of the nine countries (Germany, Russia, and Spain) as well as for the pooled sample, suggesting that females score higher than males for others' emotional appraisal. Hypothesis 2a posits that collectivism is positively related to others' emotional appraisal. While collectivism had a positive effect on the emotional appraisal of others for three of the nine countries (Germany, Spain, and the U.S.), it had no significant effect for the pooled sample. This provides modest support for Hypothesis 2a. Hypothesis 2b predicts that masculinity is negatively related others' emotional appraisal. In contrast to our hypothesis, masculinity had a significant positive effect on the emotional appraisal of others for the Chinese sample and, additionally, we found no significant effect for the pooled sample. Thus, Hypothesis 2b is not supported. Hypothesis 2c predicts that power distance is negatively related to others' emotional appraisal. Our results show that power distance had neither a significant effect for the individual countries nor for the pooled sample, providing no support for Hypothesis 2c. Hypothesis 2d states that uncertainty avoidance is negatively related to others' emotional appraisal. Uncertainty avoidance had a positive effect

on others' emotional appraisal for two of the nine country samples (India and Turkey) as well as for the pooled sample. Overall, Hypothesis 2d could not be supported. Hypothesis 2e predicts that long-term orientation is positively related to others' emotional appraisal. Long-term orientation had a positive effect on others' emotional appraisal for six of the nine countries (China, Germany, Russia, Spain, Turkey, and the U.S.) as well as for the pooled sample. Therefore, Hypothesis 2e is supported. Furthermore, the results indicated that cultural dimensions and the control variables together explain between 0 and 20 percent of the variance for others' emotional appraisal for the individual country samples and 12 percent for the pooled sample.

Insert Table 3 about here

Hypothesis 3 examines the effect of the respective cultural dimension on the regulation of emotion. As shown in Table 4, the results suggest that gender had a negative effect for four of the nine countries (Colombia, Germany, India, and the U.S.) as well as for the pooled sample, suggesting that females score lower than males for the regulation of emotion. Hypothesis 3a predicts that collectivism is positively related to regulation of emotions. Collectivism had a positive effect on the regulation of emotion for two of the nine countries (Turkey and the U.S.) as well as for the pooled sample. In sum, our results provide partial support for Hypothesis 3a. Hypothesis 3b states that masculinity is negatively related to regulation of emotions. Masculinity had a significant negative effect for the Indian sample and no significant effect for the pooled sample, providing limited support for Hypothesis 3b. Hypothesis 3c posits that power distance is positively related to regulation of emotions. Power distance had a significant positive effect for two of the nine countries (Russia and Spain), a negative effect for the U.S. sample, and no significant effect for the pooled sample. Thus, the overall pattern of findings provides mixed support for Hypothesis 3c. Hypothesis 3d predicts

that uncertainty avoidance is negatively related to regulation of emotions. Uncertainty avoidance had a positive effect on the regulation of emotion for the Indian sample as well as for the pooled sample, providing modest support for Hypothesis 3d. Hypothesis 3e states that long-term orientation is positively related to regulation of emotions. Long-term orientation had a positive effect on the regulation of emotion for three of the nine countries (China, Russia, and Turkey) as well as for the pooled sample. Overall, these results provide support for Hypothesis 3e. In addition, the results indicated that cultural dimensions and the control variables together explain between 0 and 9 percent of the variance for the regulation of emotion for the individual country samples and 7 percent for the pooled sample.

Insert Table 4 about here

Hypotheses 4a to 4e examine the influence of the respective cultural dimension on the use of emotions. As presented in Table 5, the findings suggest that gender had a positive effect only for the U.S. and for the pooled sample, suggesting that females score higher than males for the use of emotions. Hypothesis 4a predicts that collectivism is negatively related to the use of emotions. In contradiction to our hypothesis, collectivism had a positive effect on use of emotions for two of the nine countries (China and Turkey) as well as for the pooled sample. Therefore, Hypothesis 4a is not supported. Hypothesis 4b states that masculinity is positively related to the use of emotions. Masculinity had a significant positive effect for the Colombian sample and no significant effect for the pooled sample, providing very limited support for Hypothesis 4b. Hypothesis 4c predicts that power distance is negatively associated with the use of emotions. Power distance had neither a significant effect for the individual countries nor for the pooled sample, providing no support for Hypothesis 4c. Hypothesis 4d posits that uncertainty avoidance is positively related to the use of emotions. Uncertainty avoidance had a positive effect on the use of emotion for the Turkish sample as well as for the pooled

sample, providing modest support for Hypothesis 4d. Hypothesis 4e proposes that long-term orientation is positively related to the use of emotions. Long-term orientation had a positive effect on the use of emotion for eight of the nine countries (all countries except Colombia) as well as for the pooled sample. In sum, these results provide strong support for Hypothesis 4e. The results indicated that cultural dimensions and the control variables together explain between 1 and 30 percent of the variance for others' emotional appraisal for the individual country samples and 15 percent for the pooled sample.

Insert Table 5 about here

---

5. Discussion

Meta-analytic studies have identified EI as a main determinant of a wide range of important human resource management outcomes, including general performance, job performance, and team performance (Bell, 2007; Joseph & Newman, 2010; O'Boyle et al., 2011; and Van Rooy & Viswesvaran, 2004) as well as leadership behavior (Harms & Credé, 2010 and Walter, Cole, & Humphrey, 2011). Nevertheless, it is not clear what determines EI. In order to explore the influence of culture on EI, we utilized a sample consisting of nine countries, covering seven cultural clusters. The results show that especially collectivism, uncertainty avoidance, and long-term orientation have a positive effect on the four facets of EI. Our results also provide a more fine-grained empirical understanding of how gender affects EI. While previous research suggests that women score higher on EI (e.g., Day & Carroll, 2004; Mandell & Pherwani, 2003; and Van Rooy, Alonso, & Viswesvaran, 2005), our results show that the influence of gender depends on the dimension of EI. In addition, while prior research investigated the measurement invariance of Wong and Law's (2002) EI scale focusing on countries, regions, or using smaller number of countries (e.g., Libbrecht, De Beuckelaer, Lievens, & Rockstuhl, 2012 and Fukuda, Saklofske, Tamaoka, & Lim 2012), to the authors' knowledge, the present study describes the results of the first large scale effort to test measurement invariance for the

Wong and Law (2002) construct. In the following, we will discuss the theoretical and practical implications of our findings.

Theoretical implications

So far, theoretical considerations and empirical studies have only been interested in the relationship between cultural values and two dimensions of EI, namely self emotional appraisal and others' emotional appraisal. We examine all four EI dimensions suggested by Wong and Law (2002) and all five cultural dimensions suggested by Hofstede (2001), in order to provide a more comprehensive understanding of the influence of culture on EI. Our results show that specific cultural dimensions are antecedents of EI. Individuals from countries scoring high on collectivism seem to be more emotionally intelligent. A collectivistic society expects cohesion with peers and, therefore, individual emotions are controlled; even though own emotions are recognized, they might be suppressed for the benefit of the collective. Since emotions are not shown openly, it is also difficult to observe and recognize emotions of others. Nevertheless, emotions are used as performance facilitators. Uncertainty avoidance is positively related to EI. In cultures where avoiding uncertainties is a central principle, it is important to observe others and interpret their behavior, as well as understand one's own emotions and be able to regulate them. Individuals avoiding uncertainties try to understand others' emotions and also adapt their own behavior, in order to avoid misunderstandings and unpleasant situations. Individuals who have a stronger focus on the future (long-term orientation) are willing to invest in the necessary time and effort to understand others' emotions, their own emotions, and also regulate and use them. To the best of our knowledge, long-term orientation has not been examined in the context of EI or with respect to emotions in general in prior research. In line with the existing meta-analytic evidence (Taras, Kirkman, & Steele, 2010), our results show that individualism-collectivism is not the strongest predictor

of emotions intelligence. Our findings indicate that out of the five cultural dimensions long-term orientation showed the highest effect sizes for the relationships between cultural dimensions and EI. In accordance with previous studies (e.g., Matsumoto, 1989), no relationship between masculinity and emotions could be established in the present study. We could also not find a relation between power distance and EI.

In addition to the identified cultural influences, gender, which was included as a control variable, had a significant influence on all four dimensions of EI. Female scored lower on self emotional appraisal and regulation of emotion than men. However, they scored higher in others' emotional appraisal and use of emotion. These results provide a more detailed understanding of gender in the development of EI. Prior research mainly operationalized EI as a composite measure including all four facets. As a result, the overall effect of gender on EI might have been diluted and might appear negative due to the moderately high negative effects compared to the smaller positive effects for the different facets. In this way, our results contribute to current research in this specific research area (e.g., Thory, 2013).

Practical implications

Cherniss (2001) observes that as one "looks deeply at almost any function that influences organization effectiveness you will find that emotional intelligence plays a role" (p. 4). EI clearly has a potentially important role to play in business practice, and this study suggests that cultural dimensions do have a relatively small, but significant, impact in our sample of university students explaining from 7 percent to 15 percent of the variance in the pooled sample for the four EI competencies.

Our results also suggest that national cultures differ in their impact on each of these EI competencies. Not only does this study raise the issue of the potential value in examining cultural dimensions at the individual-level when assessing EI during the selection of

personnel (Taras, Steele, & Kirkman, 2011), but also that these country differences may be used as areas on which to focus when assessing the level of developmental need in employees from different cultural settings, as well as in the design of training and development programs (Taras, Steele, & Kirkman, 2011). For example, our data suggests that new hires, especially those recently graduated from the university, coming from cultures with relatively low uncertainty avoidance, or who individually possess low uncertainty avoidance, may have a great need for training which emphasizes self emotional appraisal, while those individuals from long-term oriented cultural backgrounds, or who individually possess high long-term orientation, may need less developmental emphasis on the use of emotions.

Our pooled sample data suggest that women tend to have a greater ability to appraise the emotional status of others than do men, and men tend to have a stronger ability to regulate and effectively use their emotions than do women. This knowledge may assist both managers and human resource development departments in assessing and focusing on these skill areas. However, it is important to note that these data also suggest that when selecting and/or developing employees one should consider cultural dimensions to help guide them in their assessment. It is also important to recognize that each country's culture and its impact on EI components may differ significantly from culture-EI relationships within other countries and that the individuals with whom the manager is working may have a cultural profile which differs from the own profile, suggesting that managers use different HR tools to develop EI in the individuals they supervise (Herkenhoff, 2004).

Limitations and future research directions

As interpreting the results of our study, the following limitations should be considered, which also provide avenues for future research. First, our study is based on a student sample, which, on the one hand, allows comparing homogeneous samples across countries, but on the

other hand also limits the generalizability of the results. Future research might consider using a non-student sample. Second, our study presents a sample which, to our knowledge, is one of the largest examining EI as well as cultural dimensions at the individual level. However, we were able to cover only seven from the nine cultural clusters presented by Ronen and Shenkar (1985). Our study is missing samples from the Nordic countries as well as the Arab world. Third, using the recommended translation procedures as well as MGCFA procedure, we have tried to accomplish a comparability of the constructs and the results. Whereas the reliability for EI was good, the reliabilities for the cultural dimensions could be improved. Future research should use already available translations of the constructs of which validity and reliability has already been tested by previous studies in order to contribute to the development and improvement of relatively new scales, such as the cultural value scale by Yoo, Donthu, and Lenartowizc (2011). Fourth, we used the measure proposed by Wong and Law (2002) for EI. There are several other measures which could have been used (for an overview and critique see, e.g., Conte, 2005). Despite these limitations, our study contributes to a better understanding of the emergence and development of EI. We especially cast light on the culture specific aspects of the different dimensions of EI.

References

Abraham, R., 2005. Emotional intelligence in the workplace: a review and synthesis. In: Schulze, R., Roberts, R. (Eds.), Emotional Intelligence: An International Handbook. Hogrefe, Cambridge, MA, pp. 255–270.

Ang, S., Van Dyne, L., Koh, C., Ng, K.Y., Templer, K.J., Tay, C., Chandrasekar, N.A., 2007. Cultural intelligence: its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. Management and Organization Review 3 (3), 335–371.

Arbuckle, J.L., 2010. Amos Version 19.0. IBM SPSS, Chicago, IL.

Barbuto, J.E., Bugenhagen, M.J., 2009. The emotional intelligence of leaders as antecedent to leader-member exchanges: a field study. Journal of Leadership Education 8 (2), 135–146.

Basabe, N., Páez, D., Valencia, J., Rimé, B., Pennebaker, J., Diener, E., González, J.L., 2000. Sociocultural factors predicting subjective experience of emotion: a collective level analysis. Psicothema Suplemento 12, 55–69.

Bell, S.T., 2007. Deep-level composition variables as predictors of team performance: a meta-analysis. Journal of Applied Psychology 92 (3), 595–615.

Bono, J.E., Barron, L.G., 2008. Leaders as emotional manager, across cultures. In: Ashkanasy, N.M., Cooper, C.L. (Eds.), Research Companion to Emotion in Organizations. Edward Elgar, Cheltenham, pp. 489–511.

Browne, M.W., Cudeck, R., 1993. Alternative ways of assessing model fit. In: Bollen, K.A., Long, J.S. (Eds.), Testing Structural Equation Models. Sage, Newbury Park, CA, pp. 445–455.

Byrne, M.B., 2010. Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming. Routledge, New York.

Chang, S.-J., Van Witteloostuijn, A., Eden, L., 2010. Common method variance in international business research. Journal of International Business Studies 41 (2), 178–184.

Cherniss, C., 2001. Emotional intelligence and organizational effectiveness. In: Cherniss, C., Goleman, D. (Eds.), The Emotionally Intelligent Workplace. Jossey-Bass, San Francisco, CA, pp. 3–12.

Cheung, G.W., Rensvold, R.B., 2002. Evaluating goodness-of-fit indexes for testing measurement invariance. Structural Equation Modeling 9 (2), 233–255.

Conte, J.M., 2005. A review and critique of emotional intelligence measures. Journal of Organizational Behavior 26 (4), 433–440.

Day, A., Carroll, S., 2004. Using ability-based measure of emotional intelligence to predict individual performance and group citizenship behaviors. Personality and Individual Differences 36 (6), 1443–1458.

Ekermans, G., 2009. Emotional intelligence across cultures: theoretical and methodological considerations. In: Stough, C., Saklofske, D.H., Parker, J.D. (Eds.), Assessing Emotional Intelligence: Theory, Research, and Applications. Springer, Dordrecht and New York, pp. 259–290.

Ekman, P., 1972. Universal and cultural differences in facial expression of emotions. In: Cole, J.R. (Ed.), Nebraska Symposium on Motivation, 1971. University of Nebraska Press, Lincoln, NE, pp. 207–283.

Elfenbein, H. A., Ambady, N. 2003. When Familiarity Breeds Accuracy: Cultural Exposure und Facial Emotion Recognition. Journal of Personality and Social Psychology 85 (2), 276-290.

Engle, R.L., Nehrt, C., 2011. Conceptual ability, emotional intelligence, and relationship management: a multinational study. Management Policy and Practice 12 (4), 58–72.

Fernández-Berrocal, P., Salovey, P., Vera, A., Extremera, N., Ramos, N., 2005. Cultural influences on the relation between perceived emotional intelligence and depression. International Review of Social Psychology 18 (1), 91–107.

Franke, G.R., Richey, R.G., 2010. Improving generalizations from multi-country comparisons in international business research. Journal of International Business Studies 41 (8), 1275–1293.

Fukuda, E., Saklofske, D.H., Tamaoka, K., Lim, H., 2012. Factor structure of the Korean version of Wong and Law's emotional intelligence scale. Assessment 19 (1), 3–7.

Furnham, A., 2001. Self-estimates of intelligence: culture and gender difference in self and other estimates of both general (g) and multiple intelligences. Personality and Individual Differences 31 (8), 1381–1405.

Gardner, H., 1993. Multiple Intelligences: The Theory in Practice. Basic Books, New York.

Gross, J.J., 1998a. The emerging field of emotion regulation: an integrated review. Review of General Psychology 2 (3), 271–299.

Gross, J.J., 1998b. Antecedent- and response-focused emotion regulation: divergent consequences for experience, expression, and physiology. Journal of Personality and Social Psychology 74 (1), 224–237.

Harms, P.D., Credé, M., 2010. Emotional intelligence and transformational and transactional leadership: a meta-analysis. Journal of Leadership & Organizational Studies 17 (1), 5–17.
Herkenhoff, L. 2004. Culturally tuned emotional intelligence: An effective change management tool?. Strategic Change, 13 (2), 73–81.
Hofstede, G., 1980. Culture's Consequences. Sage, Beverly Hills, CA.
Hofstede, G., 1991. Cultures and Organizations: Software of the Mind. McGraw-Hill: New York, N.Y.
Hofstede, G., 2001. Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations across Nations, second ed. Sage Publications, Thousand Oaks, CA.
Joseph, D.L., Newman, D.A., 2010. Emotional intelligence: an integrative meta-analysis and cascading model. Journal of Applied Psychology 95 (1), 54–78.
Kitayama, S., Markus, H.R., 1994. Emotion and Culture: Empirical Studies of Mutual Influence. American Psychological Association, Washington, DC.
Leung, K., 2008. Methods and measurements in cross-cultural management. In: Smith, P.B., Peterson, M.F., Thomas, D.C. (Eds.), The Handbook of Cross-Cultural Management Research. Sage, Los Angeles, CA, pp. 59–73.
Libbrecht, N., De Beuckelaer, A., Lievens, F., Rockstuhl, T., 2012. Measurement invariance of the Wong and Law emotional intelligence scale scores: Does the measurement structure hold across Far Eastern and European countries? Applied Psychology. doi: 10.1111/j.1464-0597.2012.00513.x
Mandell, B., Pherwani, S., 2003. Relationship between emotional intelligence and transformational leadership style: a gender comparison. Journal of Business and Psychology 17 (3), 387–404.
Marsh, A. A., Elfenbein, H. A., Ambady, N., 2003. Nonverbal „Accents": Cultural Differences in Facial Expressions of Emotion. Psychological Science, 14(4), 373-376.
Matsumoto, D. et al., 2008. Culture, emotion regulation, and adjustment. Journal of Personality and Social Psychology 94 (6), 925–937.
Matsumoto, D., 1989. Cultural influences on the perception of emotion. Journal of Cross-Cultural Psychology 20 (1), 92–105.
Matsumoto, D., 1990. Cultural similarities and differences in display rules. Motivation and Emotion 14 (3), 195–214.
Matsumoto, D., 1996. Unmasking Japan: Myths and Realities about the Emotions of the Japanese. Stanford University Press, Stanford, CA.
Matsumoto, D., Nezlek, J.B., Koopmann, B., 2007. Evidence for universality in phenomenological emotion response system coherence. Emotion 7 (1), 57–67.
Mayer, J.D., Salovey, P., 1997. What is emotional intelligence? In: Salovey, P., Sluyter, D. (Eds.), Emotional Development and Emotional Intelligence: Educational Implications. Basic Books, New York, pp. 3–34.
Nimon, K., Reio, T.G., 2011. Measurement invariance: a foundational principle for quantitative theory building. Human Resource Development Review 10 (2), 198–214.
O'Boyle, E.H., Humphrey, R.H., Pollack, J.M., Hawver, T.H., Story, P.A., 2011. The relation between emotional intelligence and job performance: a meta-analysis. Journal of Organizational Behavior 32 (5), 788–818.
Paez, D., Vergara, A., 1995. Culture differences in emotional knowledge. In: Russell, J.A., Fernández-Dols, J.M., Manstead, A.S.R., Wellenkamp, J.C. (Eds.), Everyday Conceptions of Emotion. Kluwer Academic Press, Dordrecht, pp. 415–434.
Palmer, B.R., Gignac, G., Ekermans, G., Stough, C., 2008. A comprehensive framework for emotional intelligence. In: Emmerling, R.J., Shanwal, V.K., Mandal, M.K. (Eds.), Emotional Intelligence: Theoretical and Cultural Perspectives. Nova Science Publishers, New York, pp. 17–38.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., Podsakoff, N.P., 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. Journal of Applied Psychology 88 (5), 879–903.

Ronen, S., Shenkar, O., 1985. Clustering countries on attitudinal dimensions: a review and synthesis. Academy of Management Review 10 (3), 435–454.

Salovey, P., Mayer, J.D., 1990. Emotional intelligence. Imagination, Cognition and Personality 9 (3), 185–211.

Schimmack, U. 1996. Cultural influences on the recognition of emotion by facial expressions: Individualistic or Caucasian cultures? Journal of Cross-Cultural Psychology 27, 37-50.

Schmitt, N., Kuljanin, G., 2008. Measurement invariance: review of practice and implications. Human Resource Management Review 18 (4), 210–222.

Schutte, N.S., Malouff, J.M., Hall, L.E., Haggerty, D.J., Cooper, J.T., Golden, C.J., Dornheim, L., 1998. Development and validation of a measure of emotional intelligence. Personality and Individual Differences 25 (2), 167–177.

Sharma, S. Deller, .J. Biswal, R, Mandal, M., 2009, Emotional Intelligence: Factorial Structure and Construct Validity across Cultures. International Journal of Cross Cultural Management 9(2), 217-236.

Steenkamp, J.B., Baumgartner, H., 1998. Assessing measurement invariance in cross-national consumer research. Journal of Consumer Research 25 (1), 78–107.

Taras, V., Kirkman, B.L., Steel, P., 2010. Examining the impact of culture's consequences: a three-decade, multilevel, meta-analytic review of Hofstede's cultural value dimensions. Journal of Applied Psychology 95 (3), 405–439.

Thory, K. 2013. A gendered analysis of emotional intelligence in the workplace: issues and concerns for human resource development. Human Resource Development Review 12 (2), 221–244.

Triandis, H.C., Gelfand, M.J., 1998. Converging measurement of horizontal and vertical individualism and collectivism. Journal of Personality and Social Psychology 74 (1), 118–128.

Tsui, A.S., Nifadkar, S., Ou, Y., 2007. Cross-national cross-cultural organizational behavior research: advances, gaps, and recommendations. Journal of Management 33 (3), 426–478.

Van Rooy, D.L., Alonso, A., Viswesvaran, C., 2005. Group differences in emotional intelligence scores: theoretical and practical implications. Personality and Individual Differences 38 (3), 689–700.

Van Rooy, D.L., Viswesvaran, C., 2004. Emotional intelligence: a meta-analytic investigation of predictive validity and nomological net. Journal of Vocational Behavior 65 (1), 71–95.

Vandenberg, R.J., 2002. Toward a further understanding of and improvement in measurement invariance methods and procedures. Organizational Research Methods 5 (2), 139–158.

Vernon, P.A., Petrides, K.V., Bratko, D., Schermer, J.A., 2008. A behavioral genetic study of trait emotional intelligence. Emotion 8 (5), 635–642.

Walter, F., Cole, M.S., Humphrey, R.H., 2011. Emotional intelligence: sine qua non of leadership or folderol? The Academy of Management Perspectives 25 (1), 45–59.

Williams, L.J., Edwards, J.R., Vandenberg, R.J., 2003. Recent advances in causal modeling methods for organizational and management research. Journal of Management 29 (6), 903–936.

Wong, C.-S., Law, K.S., 2002. The effects of leader and follower emotional intelligence on performance and attitude: an exploratory study. The Leadership Quarterly 13 (3), 243–274.

Yoo, B., Donthu, N., Lenartowicz, T., 2011. Measuring Hofstede's five dimensions of cultural values at the individual level: development and validation of CVSCALE. Journal of International Consumer Marketing 23 (3/4), 193–210.

FIGURE 1: Conceptual Model

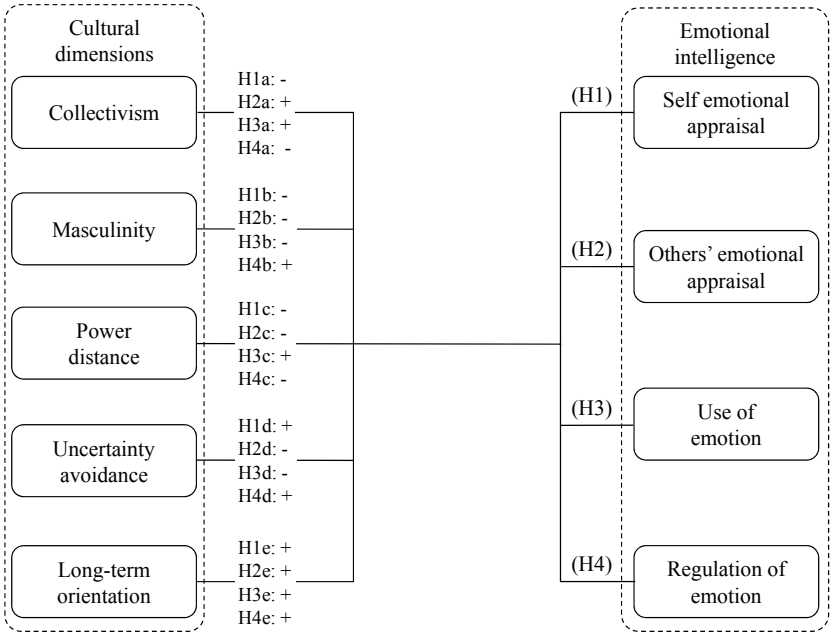

TABLE 1: Means and Standard Deviations (Individual Country Samples)

	China		Colombia		Germany		India		Italy		Russia		Spain		Turkey		USA	
	M	**s.d.**	**M**	**s.d.**	**M**	**s.d.**	**M**	**s.d.**	**M**	**s.d.**	**M**	**s.d.**	**M**	**s.d.**	**M**	**s.d.**	**M**	**s.d.**
Collectivism	3.01	.80	3.35	.73	3.29	.68	3.47	.79	3.29	.77	2.70	.79	3.42	.70	3.45	1.06	3.35	.66
Masculinity	3.47	.82	2.19	.77	3.08	.86	2.50	.98	2.42	.84	3.13	.96	2.06	.79	2.93	1.07	2.53	.65
Power distance	2.57	.78	2.00	.85	2.42	.74	2.16	.80	1.86	.73	2.53	.89	2.00	.78	2.39	.92	2.06	.65
Uncertainty avoidance	3.81	.74	3.94	.66	3.78	.62	3.86	.76	3.57	.65	3.73	.68	3.72	.63	3.91	.98	3.99	.69
Long- term orientation	4.23	.81	4.09	.80	3.84	.67	3.96	.77	3.99	.66	3.93	.69	4.17	.60	4.16	.75	4.06	.77
Self emotional appraisal	3.70	.67	3.71	.67	3.53	.74	3.73	.81	3.39	.90	3.78	.85	3.74	.63	3.65	.86	3.94	.63
Others' emotional appraisal	3.62	.70	3.89	.63	3.76	.62	3.91	.79	3.59	.84	3.75	.70	3.87	.63	3.79	.79	4.11	.57
Use of emotion	3.61	.66	4.03	.65	3.82	.68	3.87	.72	3.70	.83	3.83	.71	3.98	.59	3.71	.86	4.16	.64
Regulation of emotion	3.40	.75	3.50	.82	3.48	.85	3.51	.88	3.41	.97	3.57	.91	3.68	.77	3.44	.86	3.88	.77
Age	21.49	1.43	21.29	20.68	23.02	6.71	21.45	20.32	21.73	2.02	21.11	1.78	20.41	1.49	21.98	2.48	20.80	2.78
Gender (female)	.48		.52		.45		.61		.47		.48		.64		.46		.43	
N	261		202		255		276		198		224		185		196		270	

Note: Gender is given in percent. Correlations for all individual countries are available from the authors upon request.

TABLE 2: Regression Results Self Emotional Appraisal

Variable		**China**	**Colombia**	**Germany**	**India**	**Italy**	**Russia**	**Spain**	**Turkey**	**USA**	**Pooled**
Controls											
Age		.01	.02	-.01	.04†	.03	.02	.00	.00	-.01	.00
Gender (female)		.12	-.07	.03	-.26*	-.05	-.04	-.03	.01	-.15	-.23***
Cultural dimensions											
Collectivism	(H1a -)	-.06	-.07	-.08	.13*	-.01	.03	.12†	.03	.13*	.07*
Masculinity	(H1b -)	.17**	.00	-.05	-.13*	.11	.03	-.02	.02	-.09	.00
Power distance	(H1c -)	-.12*	.02	-.03	.06	-.04	.14*	.03	-.13†	-.02	-.02
Uncertainty avoidance	(H1d +)	.17**	-.05	.15*	.15*	.28***	.10	.07	.21**	.06	.08**
Long term orientation	(H1e +)	.13*	.11†	.20**	.13*	.12	.23*	.18*	.27**	.03	.12***
Constant		2.00**	3.24***	2.88***	1.73**	1.14	1.99***	2.22**	1.94**	3.74***	3.00***
Country dummies		-	-	-	-	-	-	-	-	-	included
F		7.22***	0.84	2.47*	4.94***	1.97†	4.07**	1.75	5.75***	2.29*	10.85***
R^2		.17	.03	.07	.12	.07	.09	.07	.18	.06	.08
Adjusted R^2		.15	.00	.04	.09	.03	.06	.03	.15	.03	.07
N		261	202	255	276	198	224	185	196	270	2067

Note: Unstandardized regression coefficients are presented. The U.S. sample is the baseline in the pooled sample regression model. Hypotheses and their respective direction are presented in parentheses.
$^{\dagger}p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

TABLE 3: Regression Results Others' Emotional Appraisal

Variable		China	Colombia	Germany	India	Italy	Russia	Spain	Turkey	USA	Pooled
Controls											
Age		-.02	.00	.00	.04†	.02	.01	.01	-.01	-.02†	.00
Gender (female)		.15†	.14	.23**	.10	.19	.18*	.30***	.07	.10	.16***
Cultural dimensions											
Collectivism	(H2a +)	.06	.00	.16**	.08	.11	.02	.19***	.04	.18**	.10
Masculinity	(H2b -)	.22***	-.02	-.04	-.09	.02	.01	-.02	.00	-.07	.01
Power distance	(H2c -)	-.06	.03	-.06	.02	.01	.05	.00	-.10†	-.08	-.03
Uncertainty avoidance	(H2d -)	.11†	-.03	.11†	.18***	.11	.06	.00	.17**	-.08	.09***
Long term orientation	(H2e +)	.14*	.09	.15*	.09	-.01	.22***	.25***	.34***	.11*	.15***
Constant		2.17**	3.46***	2.40***	1.83**	2.23**	2.43***	1.72*	2.09**	4.13***	2.77***
Country dummies		-	-	-	-	-	-	-	-	-	included
F		7.52***	0.78	5.08***	3.21**	1.08	3.00*	5.06***	7.96***	3.40**	18.14***
R^2		.17	.03	.13	.08	.04	.07	.16	.23	.08	.12
Adjusted R^2		.15	.00	.10	.05	.00	.04	.13	.20	.06	.12
N		261	202	255	276	198	224	185	196	270	2067

Note: Unstandardized regression coefficients are presented. The U.S. sample is the baseline in the pooled sample regression model. $^{\dagger}p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

TABLE 4: Regression Results Regulation of Emotion

Variable		China	Colombia	Germany	India	Italy	Russia	Spain	Turkey	USA	Pooled
Controls											
Age		.04	.02	.00	.01	-.01	.01	.00	.00	-.01	.00
Gender (female)		-.11	-.36***	-.36**	-.26*	-.25†	-.25†	-.03	-.12	-.25*	-.23***
Cultural dimensions											
Collectivism	(H3a +)	-.03	-.05	-.04	.12†	.08	.10	.11	.16*	.16*	.07*
Masculinity	(H3b -)	.09	-.02	.07	-.12*	.05	.01	-.12	.04	.03	.00
Power distance	(H3c +)	-.10	.03	-.04	.06	-.03	.22**	.20*	-.14*	-.01	-.02
Uncertainty avoidance	(H3d -)	-.02	-.16†	.06	.17*	.15	.08	.14	.03	.09	.08**
Long term orientation	(H3e +)	.16*	.11	.09	.13†	.07	.23*	.14	.21*	.06	.12***
Constant		2.09*	3.71***	3.06***	2.03**	2.57*	1.52**	2.19*	2.11**	3.00***	3.00***
Country dummies		-	-	-	-	-	-	-	-	-	included
F		2.66*	2.02*	2.52*	3.52**	1.03	5.47***	2.16*	3.19**	3.21**	10.85***
R^2		.07	.07	.07	.09	.04	.11	.08	.11	.08	.08
Adjusted R^2		.04	.03	.04	.06	.00	.09	.04	.07	.05	.07
N		261	202	255	276	198	224	185	196	270	2067

Note: Unstandardized regression coefficients are presented. The U.S. sample is the baseline in the pooled sample regression model. $^{\dagger}p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

TABLE 5: Regression Results for Use of Emotion

Variable		China	Colombia	Germany	India	Italy	Russia	Spain	Turkey	USA	Pooled
Controls											
Age		.02	.00	.00	.01	.06*	.02	.01	.02	-.01	.01
Gender (female)		.08	.10	.15†	.07	.06	.05	-.05	.12	.23*	.11**
Cultural dimensions											
Collectivism	(H4a -)	.14**	-.05	.00	.09	.02	.00	.08	.15*	.11†	.08***
Masculinity	(H4b +)	.07	.12*	.06	.00	-.08	-.06	-.01	.03	-.11†	.01
Power distance	(H4c -)	-.05	-.05	-.02	-.03	.04	.02	-.02	-.08	.02	-.02
Uncertainty avoidance	(H4d +)	-.04	.11	.03	.11†	.13	.02	-.02	.14**	.10†	.09***
Long term orientation	(H4e +)	.29***	.09	.30***	.20***	.42***	.59***	.41***	.31***	.11*	.24***
Constant		1.46*	3.13***	2.34***	2.12***	.38	1.59***	1.88*	.95	3.28***	2.42***
Country dummies		-	-	-	-	-	-	-	-	-	included
F		8.09***	1.28	4.41***	3.81**	5.70***	20.37***	5.63***	6.91***	4.82***	24.41***
R^2		.19	.04	.11	.09	.17	.32	.18	.21	.11	.16
Adjusted R^2		.16	.01	.09	.07	.14	.30	.15	.18	.09	.15
N		261	202	255	276	198	224	185	196	270	2067

Note: Unstandardized regression coefficients are presented. The U.S. sample is the baseline in the pooled sample regression model. $^{\dagger}p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.