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ABSTRACT

This study compares national cultural distance (NCD) measures based on Hofstede and Project GLOBE to determine their relative ability to predict organizational commitment (OC) and workplace cultural distance (WCD). We also examine whether the influence of NCD on OC is mediated by WCD.

INTRODUCTION

Hofstede defined national culture as "the collective programming of mind that distinguishes the members of one human group from another" (1980: 25). National culture is hypothesized to act as a constraint on organizations in terms of what they can and cannot do, including with respect to how they manage people. *National Cultural Distance* (NCD) is defined as the degree to which the cultures of two countries are different (Kogut & Singh, 1988) and provides an overall measure of culture differences between two countries. National culture is believed to be a greater constraint on management practice to the degree that NCD is large. Conventional wisdom suggests that the greater the cultural distance (Kogut & Singh, 1988) between the home country and host country cultures, the more adaptation will be required (Hofstede, 1980; 2001) Otherwise, there is a risk of adverse reactions (i.e., negative attitudes and behaviors) among employees.

Kogut and Singh (1988) used national culture scores from Hofstede (1980) to compute NCD. A major focus of our study is to not only use this Hofstede-based measure of NCD, but also to construct two alternative NCD measures based on national culture scores (for values and practices) from the *Global Leadership and Organizational Behavior Effectiveness Research Program* (GLOBE; House, Hanges, Javidan, & Dorfman, 2004) and compare their ability to predict organizational commitment (OC), an important employee attitude.

Importantly, much research (on differences *between* nations) has been devoted to understanding the influence of national culture on organization practices and outcomes. However, researchers (e.g., Au, 1999; Gelfand, Nishii, & River, 2006; Gerhart & Fang, 2005; McSweeney, 2002; Nelson & Gopalan, 2003) have highlighted the importance of *within* nation variation in culture. Gerhart and Fang (2005) pointed out that country actually explained 2 to 4 percent of the variance in respondents' cultural values in Hofstede's (1980) data, leaving 96 to

98 percent unexplained. This large degree of within-country variance indicates that country level measures based on country level averages, including measures of NCD, may be of limited predictive utility in explaining individual and organization level differences in attitudes and other outcomes. We use a unique multilevel dataset consisting of employees nested in plants from multiple organizations (with no two plants being from the same organization) in multiple countries that enables us to examine nation effects in combination with plant effects (the primary unit of analysis in this study).

An important advantage of having plant/organization level data is that it allows us to study cultural distance at the workplace level, rather than just at the country level. If NCD has an influence on organization outcomes such as OC, it would seem that this influence would logically operate through cultural distance at the workplace level. We call this construct *workplace cultural distance* (WCD) and define it as the degree to which the cultures of different employee populations from different countries within the same organization perceive themselves as different. NCD is often assumed to affect employee reactions through WCD; yet, this assumption has not been tested. Given the increased attention to within-country variance in culture, there is reason to question this assumption. This study is the first to examine the magnitude of the NCD-WCD relationship and whether it is reasonable to use NCD (as it has, in effect, been typically used), as a proxy for WCD. We also examine the degree to which WCD mediates the effects of NCD on OC.

CONCEPTUAL DEVELOPMENT AND HYPOTHESES

NCD—WCD Relationship

Differing perspectives shed light on the nature of the NCD-WCD relationship. In the environmental approach (Barrett & Bass, 1976; Haire, Ghiselli, & Porter, 1966), individual enterprises are considered as passive agents of external environments. Accordingly, culture is often viewed "as a multilevel construct that consists of various levels nested within each other from the most macro-level of a global culture, through national cultures, organizational cultures, group cultures, and cultural values that are represented in the self at the individual level" (Leung, Bhagat, Buchan, Erez, & Gibson, 2005: 362). This perspective implies organizational cultures likely mirror the national culture of the country in which they are located, hence, constraining organizations with the outcome being reduced variance in organizational practices and cultures. Following this idea, the relationship between NCD and WCD should be strong.

Alternatively, the resource-based view (RBV; Barney, 1991) focuses on how organizations differentiate themselves by leveraging internal resources and capabilities that are rare, difficult to imitate, and not substitutable to build sustained competitive advantage (Amit & Schoemaker, 1993; Barney, 1986, 1991; Rumelt, 1984; Wernerfelt, 1984). Organizational culture is one such resource (Barney, 1986). The RBV suggests a lesser degree of variance restriction due to environmental constraints such as national culture and NCD. To the degree that frameworks like the RBV are correct, organizations and/or workplaces within the same country would have room to vary their management practices from the country norm. This, in turn, suggests that NCD would act as less of a constraint than sometimes believed, and that WCD, a workplace measure, would not necessarily correspond closely with NCD, a country level measure. Given these differing perspectives and the little empirical work comparing nation and organization effects, we base our hypothesis on the assumption that the two are strongly related.

Hypothesis 1: NCD will be positively related to WCD.

NCD (WCD)—OC Relationship

Organizational commitment (OC) is defined as "the strength of an individual's identification with and involvement in a particular organization" (Mowday, Steers, & Porter, 1979: 226). Researchers (e.g., Meyer & Allen, 1991; Weiner, 1982) have proposed that culture is an important antecedent to work attitudes. The cultural environment is argued to systematically influence employees' attitudes and behaviors (Paik, Vance, & Stage, 1996) because culture determines how people perceive the relationship of their job tasks to the value systems of their society (Oh, Kim, & Lee, 1993). The greater the cultural distance (i.e., NCD or WCD), the greater the uncertainty involved in the workplace (Kogut & Singh, 1988), which likely fosters more negative attitudes and behaviors. Therefore, we hypothesize:

Hypothesis 2: NCD will be negatively related to OC.
Hypothesis 3: WCD will be negatively related to OC.
Hypothesis 4: WCD will be more strongly related to OC than NCD.

Mediation of NCD by WCD

As discussed earlier, the assumption often seems to be made that NCD is a good proxy for WCD. A related conceptual model would envision WCD mediating the effect of NCD on employee attitudes such as OC:

Hypothesis 5: WCD will mediate the effects of NCD on OC.

Relative Predictive Power of Hofstede- and GLOBE-based NCD Measures

The Hofstede and GLOBE frameworks each have their own potential advantages and disadvantages. Hofstede's cultural dimensions are popular and have been shown to be robust. On the other hand, a potential concern is that because scores are based on data collected in the 1970s, Hofstede's framework could be out-dated and less likely to accurately describe national cultures than scores based on GLOBE, which is more recent. In addition to GLOBE scores being more recently developed, and thus perhaps more likely to reflect current societal values and practices, GLOBE is also potentially more inclusive of the full national culture domain, given that it conceptualizes and measures culture along nine dimensions for both practices and values (as opposed to five dimensions in Hofstede). Thus, we would also expect NCD based on Project GLOBE to have greater ability to predict employee attitudes such as OC, as well as the cultural distance experienced at the workplace level (WCD).

Hypothesis 6: NCD-GLOBE will better (relative to NCD-Hofstede) predict WCD.
Hypothesis 7: NCD-GLOBE will better (relative to NCD-Hofstede) predict OC.

METHOD

Sample

This study used data from the *Survey Research on the Labor Relations and Social Adjustment of Migrant Workers in Domestic Korean Companies and Native Workers in Overseas Korean Companies* conducted by the Korean Migration Research Network (KMRN) in 1998 and 1999. KMRN targeted establishments (i.e., plants) of Korean manufacturing companies. Each plant was affiliated with a different company in this sample. In total, 2440 migrant and non-migrant workers in 248 domestic and overseas plants were surveyed. Respondents included Korean, Korean-Chinese, Chinese, Vietnamese, Filipino, and Indonesian workers. An upper-level manager from each plant provided information on plant characteristics.

We excluded Vietnamese workers from the sample because Project GLOBE does not provide country level scores for this nationality. The final sample included 1941 employees (Korean, $N = 541$; Chinese, $N = 214$; Korean-Chinese, $N = 377$; Filipino, $N = 352$; Indonesian; $N = 457$) from 211 plants (Domestic = 165; Overseas = 56). The average number of employee respondents per plant in our sample was 9.20 ($SD = 8.78$), and the average number of foreign employee respondents per plant was 6.64 ($SD = 7.44$).

Measures

Three separate NCD variables were calculated based on Hofstede's culture dimensions (long-term orientation was excluded because Kogut and Singh's method does not include this dimension), GLOBE's cultural practices, and GLOBE's cultural values dimensions using Kogut and Singh's (1988) cultural distance index (Korea was the referent country). Korean-Chinese scores were not available; therefore, we calculated an estimate based on the average of Korea and China's cultural dimensions. NCD scores were assigned to individuals and then averaged across plants.

To measure WCD, non-Korean (Korean) employees responded to four items (e.g., *I have difficulties in communicating with Korean [Foreign] workers due to a different way of thinking*) assessing the cultural distance between themselves and Korean (foreign) workers in their workplace. A 5-point scale (1 = strongly disagree; 5 = strongly agree) was used and reliability was .70. Individual scores were averaged across employees in each plant. The ICC(1) and ICC(2) values were .10 and .51. These values are typical of perceptual agreement found in organizational research; however, had the average group size been 21, ICC(2) would have reached the .70 recommendation by Klein & Kozolowski (2000).

Organizational commitment was measured with three items from the 15-item Organizational Commitment Questionnaire (OCQ; Mowday et al., 1979). An example item was "*I am proud to tell others I am part of this company*." A 5-point scale (1 = strongly disagree; 5 = strongly agree) was used and reliability was .72.

Employee demographics (i.e., gender, age, marital status, education, occupation, job position, expatriate status, weekly work hours, and monthly wage) were controlled in level-1 analyses. Several plant variables (i.e., union status, plant size, industry) were included in the level-2 analyses to control for differences across plants.

Analyses

Hypothesized models were analyzed using HLM 6.04 (Bryk & Raudenbush, 1992) due to the data's multilevel nature. A two level HLM analysis was used in which employee represented level-1 and plant represented level-2. NCD, WCD, % Country, and plant characteristics (i.e., union status, firm size, and industry) were treated as level-2 variables and all other variables were considered as level-1 variables. Continuous variables were centered on their grand mean and random intercept models were adopted. Full maximum likelihood was used to estimate model deviance parameters and restricted maximum likelihood was used to estimate variance components. To compare the effects of our independent variables, we computed the proportion of variance in WCD and OC explained by each model. Due to instances of increases rather than decreases in some of the variance components, which can result in negative R^2, we relied on formulas proposed by Snijders and Bosker (1994; 1999).

RESULTS

Summary statistics for all variables in our study are available from the authors.

Results for analyses of null, or intercept-only models, indicated that significant between-plant variance existed for both WCD and OC, justifying further analyses. ICCs indicated that 10 percent in the variance in WCD and 22 percent of the variance in OC lies between plants.

H1 predicted a positive NCD-WCD relationship. After controlling for individual and plant level controls, results did not support this prediction. None of the three NCD coefficients were significantly related to WCD. NCD-Hofstede was positively related to WCD while both NCD-GLOBE scores were negatively related to WCD; however, none explained significant between-plant variance.

Next, we predicted that plants with higher NCD (*H2*) and WCD (*H3*) would have lower mean levels of OC. Interestingly, each of the NCD scores were positively and significantly related to OC, failing to support *H2*. One explanation is that Korean companies represented better job opportunities to foreign workers, increasing these workers' OC. Exploration of individual level correlations separated by expatriate status suggested that for individuals working abroad the NCD-OC relationship was negative and significant, which is in line with *H2*. The effect was opposite for individuals working locally. Plant level correlations provided similar results. Support was found for *H3*. WCD was negatively and significantly related to OC, indicating that plants with higher WCD have lower levels of OC.

H4 predicted that WCD would be a stronger predictor of OC than NCD; however, this was not supported. Based on a comparison of the additional variance in plant intercepts for OC explained by NCD and WCD beyond the controls only model, the three NCD measures explained additional variance in OC, whereas, WCD explained a smaller additional amount.

The direct effect of NCD on OC was predicted to be mediated by WCD in *H5*. Little support was found for *H5*. *H6* and *H7* predicted that NCD based on Project GLOBE would have more predictive ability than NCD based on Hofstede. These hypotheses were not supported. Of the three NCD measures, NCD based on Hofstede explained more variance in WCD and in OC than did NCD based on GLOBE.

DISCUSSION

This study took advantage of a unique multilevel dataset to examine nation effects in combination with plant effects. Results indicated that nation (NCD) and plant (WCD) effects

explained unique variance in plant OC. NCD accounted for more variance in OC than did WCD. As predicted, plants with higher WCD had lower levels of OC. In terms of the NCD-WCD relationship, none of the three NCD measures accounted for significant variance in WCD. This provides evidence that WCD does not correspond closely with NCD and that NCD is not a reasonable proxy for WCD. Additionally, the country and NCD effects on OC were largely direct as we found little support for mediation by WCD. Finally, we found that, despite being more recent, NCD based on GLOBE did not perform any better than did NCD based on Hofstede in predicting OC and WCD.

Interestingly, after teasing apart the NCD-OC relationship by expatriate status, we found that the NCD-OC relationship was positive for employees working in their home country and negative for expatriates. One explanation for this effect is that overseas Korean companies provide better job opportunities to local workers than do local companies.

This study has several theoretical implications. First, our study finds that differences in organizations impact employee attitudes. If, as this study finds, the nature of the organization has a considerable impact on employee attitudes, then examination of nation effects without consideration of organization (or other within-country differences) could bias, specifically overestimate, the nation effects (Gerhart & Fang, 2005). Second, our results suggest that the influence of NCD does not operate primarily through cultural distance at the workplace level (WCD), indicating that NCD is not likely a valid proxy for WCD. Third, the high level of consistency in the results across the two national cultural frameworks seems to indicate that NCD measures based on the more recent GLOBE data do not provide better predictive power than NCD measures based on Hofstede's data.

Our findings have practical relevance as well. Both research and practice have emphasized that national culture exerts great pressure on organizations to adapt to the national culture of a given country. To the degree that this is the case, our findings would have suggested that OC was constrained by NCD; rather our findings suggest that organizations have room to differentiate themselves. Additionally, our results show that cultural distance at the workplace level influences employee attitudes, but differently than cultural distance based on national level measures. Organizations could benefit by taking into consideration the actual perceptions of cultural differences in the workplace rather than relying solely on national level indicators of cultural distance.

Our study has some limitations as well. First, the cross-sectional nature of the data limits our ability in establishing causal relationships. Future research would benefit from a longitudinal study. Second, to the degree that range restriction exists in our measures of NCD, the effects of NCD may be underestimated. However, the variance in NCD scores for the five countries in this study is, in fact, comparable to variance in NCD scores for Asian countries and all countries, suggesting that range restriction is not likely to be an issue. Third, our study is limited by the fact that we imputed NCD scores for Korean-Chinese employees and excluded Vietnam workers because cultural scores were not provided by both national culture frameworks. Fourth, we acknowledge that common-method variance likely exists, particularly in the WCD-OC relationship. Using split samples (Ostroff, Kinicki, & Clark, 2002), however, we found that most of the plant level WCD-OC correlation remained after correcting for common method variance. Finally, this study looked at OC as a dependent variable. The inclusion of other organizational outcomes such as performance would also be useful.

REFERENCES AVAILABLE FROM THE AUTHORS