



The effect of cultural distance on entry mode choice, international diversification, and MNE performance: a meta-analysis

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Abstract

Although a growing literature indicates that cultural distance – that is, differences between national cultures – is an important determinant of organizational actions and performance, both empirical and theoretical concerns abound. In this study, the relationships of cultural distance with entry mode choice, international diversification, and MNE performance are examined by meta-analyzing data from 66 independent samples, with cumulative sample sizes ranging from 2255 to 24,152. Regression results failed to provide statistical evidence of significant relationships between cultural distance and entry mode choice, international diversification, and MNE performance. The examination of moderator effects, however, yielded important results. We found a strong negative association between cultural distance and entry mode choice for US-based MNEs. The cultural distance–international diversification relationship was negative for high-technology industries, while it was positive for other industries. Cultural distance also had a strong positive effect on MNE performance for developed country investments. A similar, strong positive relationship was found between cultural distance and international diversification in studies with more recent samples. Results of this study indicate that substantial additional research is needed before the role of cultural distance is fully understood.

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Introduction

Cross-border business transactions involve interaction with different societal value systems. Although national boundaries do not always correspond with homogeneous value systems, there are strong forces within nations to create and maintain a shared culture (Rokeach, 1973; Hofstede, 1980). Adapting to local cultural values that are transmitted through nations' political economy, education, religion, and language may create an additional burden for multinational enterprises (MNEs) operating in different countries (Schwartz, 1999). The study of principal differences in national cultures between the home country of MNEs and their countries of operation, that is, *cultural distance*, has gained a broad interest in international business research (Ricks *et al.*, 1990).¹

Underlying the employment of cultural distance in international business research is the assumption that differences between foreign and home country cultures increase the cost of entry,

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decrease operational benefits, and hamper the firm's ability to transfer core competencies to foreign markets (Bartlett and Ghoshal, 1989; Palich and Gomez-Mejia, 1999). Cultural distance has been used to explain a wide range of MNE strategies and organizational characteristics, such as entry mode choice (Barkema *et al.*, 1996), international diversification (Grosse and Trevino, 1996), subsidiary management (Roth and O'Donnell, 1996), and MNE performance (Gomez-Mejia and Palich, 1997; Morosini *et al.*, 1998).

Prior research, however, has provided mixed empirical evidence regarding the specific influence of cultural distance (Brouthers and Brouthers, 2001). Some studies have indicated a negative relationship between cultural distance and MNE performance (e.g., Luo and Peng, 1999), but other studies have found a positive effect (e.g., Morosini *et al.*, 1998). Further, managing portfolios of foreign operations with greater cultural distance has been found to increase transaction and operating costs, resulting in an increased survival hazard among MNEs (Li, 1995; Park and Ungson, 1997). Meanwhile, high cultural distance has been associated with low rates of joint venture failure (Park and Ungson, 1997). Similarly, past research has been unable to provide consistent evidence on the role of cultural distance in entry mode choice (Barkema *et al.*, 1996; Benito, 1997; Erramilli *et al.*, 1997).

Despite the growing popularity of the study of cultural distance effects, researchers have begun to discuss the construct's potential limitations. For example, Brouthers and Brouthers (2001) and Evans and Mavondo (2002) argue that the results derived from decades of research provide no clear consensus regarding the effect of cultural distance. Shenkar (2001) went further by suggesting that many conceptual properties of existing cultural distance measures are at best 'illusory'. Although these criticisms may be valid, we know very little about whether cultural distance is, in fact, a useful predictor of other important strategic and organizational constructs used in the international business literature. Therefore, a systematic assessment of the effects of cultural distance across studies would help to answer whether the construct should be part of future research (Hunter and Schmidt, 1990).

We set out to examine the effect of cultural distance on three important variables in the international business context: entry mode choice, international diversification, and performance. We used meta-analysis techniques to assess the bivari-

ate association of cultural distance with other variables. To increase the robustness of our analysis, we completed multivariate tests, using a typical sample size across studies. We also tested the effects of five moderators: measurement, MNE origin, industry, country of investment, and sample time frame. The empirical results we report below have been integrated from 66 independent samples published in 55 articles.

Background and hypotheses

The provision of an adequate definition of culture has been a challenging task for different areas of social research (Triandis, 1994). Culture, in general, is the homogeneity of characteristics that separates one human group from another. Culture provides a society's characteristic profile with respect to norms, values, and institutions that affords understanding of how societies manage exchanges (Hofstede, 1980; Trompenaars and Hampden-Turner, 1998). At the national level, culture is an aggregate of individual values. As personal experiences and shared societal values shape the views of individuals equally, there might be variation in their value priorities. The concept of culture at the national level attempts to capture the typical individual value priorities in a society, which 'reflect the central thrust of their shared enculturation' (Schwartz, 1999, 26).

Differences in national culture systems or the relative 'cultural distance' between countries have been an important concern in the study of MNE strategies and organizational characteristics (Barkema *et al.*, 1996; Brouthers and Brouthers, 2001). Researchers focusing on the transaction costs and risks associated with cross-border business operations and managerial decision-making in MNEs tend to consider the implications of cultural distance. Cultural distance in recent research most often refers to the underlying differences in national cultural values for managers between their MNE's home and foreign operations.

When examining the role of cultural distance, most studies theorize that, as the cultural differences between an MNE's home country and a host market increase, the underlying ability of the MNE to operate effectively in the host market decreases (Gomez-Mejia and Palich, 1997; Hennart and Larimo, 1998). Increased operational difficulties resulting from cultural distance are in general derived from a lack of understanding of the norms, values, and institutions that afford social exchange across markets. Cultural distance may also lead to



higher levels of complexity and uncertainty for managerial decision-making regarding MNE strategies and organizational choices (Shane *et al.*, 1995). To assess the consistency of cultural distance effects across studies, we summarize its implications for three important variables in prior literature: entry mode choice, international diversification, and MNE performance.

Entry mode choice

Entry mode choice refers to the initial preferences of MNEs when they decide to enter different foreign markets. Research typically classifies entry mode choice decisions according to the amount of equity invested. Joint ventures and wholly-owned subsidiaries (e.g., acquisitions and greenfield investments) tend to represent equity market entries. Non-equity entries include exporting and licensing (Li and Guisinger, 1992). The latent constructs underlying entry mode choice have generally been the degree of control embodied within each choice, and the desire to reduce risk (Anand and Delios, 1997; Hennart and Reddy, 1997; Brouthers and Brouthers, 2003).

One theoretical position is that the higher the cultural distance between the home and the foreign market, the higher the level of equity ownership in entry mode choice. According to this stream of the literature, large differences in cultures prompt MNEs to exert greater control in their entry in order to minimize transaction costs (Hennart and Reddy, 1997). Greater control might be necessary in a culturally distant market, because transactions in such markets generate higher information costs and are associated with greater difficulties in transferring competencies (Li and Guisinger, 1992). Through higher percentages of equity ownership, MNEs are able to establish greater control of their international operations, potentially mitigating differences in cultural values and institutions. Increased control may therefore improve social exchange across markets. Higher levels of control can also lead to an increase in overall operating effectiveness of the MNE. Thus:

H1a: Cultural distance is positively related to higher equity entry mode choice.

Although control is an important consideration, entry mode choice in relationship to cultural distance can also be explained by a risk-reduction rationale of MNE managers. In a recent study of Western European MNEs, Brouthers and Brouthers (2003) found that manufacturing MNEs preferred

joint ventures to wholly-owned subsidiaries as their mode of entry in uncertain Central and Eastern European markets. Gatignon and Anderson (1988) argue that, under conditions of high cultural distance, MNEs may require greater flexibility, resulting in preferences for modes of entry with lower control, such as licensing or a joint venture.

By relying on joint ventures as a primary mode of entry, MNEs are able to restrict their resource commitment and thus reduce their risk exposure in culturally distant markets, leading to a negative relationship between cultural distance and entry mode choice (Kim and Hwang, 1992; Grosse and Trevino, 1996). A number of other studies have found that greater cultural distance is associated with entry modes based on lower percentages of equity ownership (Barkema *et al.*, 1997; Barkema and Vermeulen, 1998). Some of these studies (e.g., Barkema *et al.*, 1996) further note that local partners' unique knowledge may help to reduce the risks associated with entry into culturally distant markets. Such local knowledge, therefore, can effectively compensate for the loss of control in lower equity entry modes. More formally stated:

H1b: Cultural distance is negatively related to higher equity entry mode choice.

International diversification

International diversification refers to the share of foreign operations (sales, assets, subsidiaries, or profit) within the MNE's business portfolio, thus capturing the firm's level of international involvement. It has been theorized that through diversifying internationally MNEs can obtain new resources and transfer their core competencies to new markets (Bartlett and Ghoshal, 1989; Kobrin, 1991). These benefits may lead to higher MNE performance and risk-adjusted returns (Kim *et al.*, 1993; Gomes and Ramaswamy, 1999). However, diversifying into international markets can increase an MNE's risk owing to the increased organizational complexity and the uncertainty related to operating in new markets. Among the likely dangers of increased international diversification is the management of an MNE's portfolio of foreign subsidiaries from a culturally diverse country base.

To avoid the potential complexities associated with the differences in values and institutions between their home country and foreign countries of operations, MNEs may initially select culturally similar locations for their foreign direct invest-

ments (Johanson and Vahlne, 1977). When firms enter foreign markets, greater similarities between cultures enable them to access new customers at a lower cost, establish and successfully manage manufacturing operations, and compete with a relatively homogeneous group of local firms (Barkema and Vermeulen, 1998). Owing to increased competition in culturally similar markets, MNEs are often forced to find opportunities in countries with dissimilar cultures. As the international diversification of an MNE increases, so does the cultural distance between its home country and its portfolio of foreign operations. Increased cultural diversity may lead to the noted trade-offs of international diversification, such as uncertain demand, increased competition, and management problems associated with local production (Benito, 1997). As an MNE expands into culturally distant country environments, managers may also face greater challenges in making decisions (Roth and O'Donnell, 1996; Geletkanycz, 1997). In summary, prior literature indicates a positive relationship between cultural distance and international diversification. Thus:

H2: Cultural distance is positively related to international diversification of MNEs.

MNE performance

MNE performance has been a dominant research theme, and a growing number of studies consider cultural distance in the MNE portfolio of operations an important predictor of performance (Luo and Peng, 1999; Palich and Gomez-Mejia, 1999). To increase their performance in the international environment, MNEs need to reduce production costs, increase customer demand for their products, and reduce the overall risk of their business portfolio. However, these tasks may become increasingly complex as the cultural distance in the MNEs' countries of operation increases.

Some researchers contend that doing business under conditions of higher cultural distance leads to lower performance for MNEs (e.g., Li and Guisinger, 1992; Chang, 1995). Luo and Peng (1999) argue that incongruence in national cultures results in lower performance when MNEs enter new markets. The theoretical argument underlying this hypothesis is that high cultural differences tend to lead to intra-organizational conflicts and poor implementation of organizational actions, given inconsistencies in values and institutions between

home and foreign market operations. MNE managers in culturally distant markets are also less able to take advantage of economies of scale and scope in relation to technology development, joint production, advertising, and distribution. Further, high cultural distance can limit MNE performance owing to increased training, monitoring, and control costs, as well as differences in managerial cognition of environmental and organizational issues (Egelhoff, 1982; Schneider and DeMeyer, 1991). At the extreme, cultural differences may lead to differences in investment preferences between partners, resulting in the failure of foreign operations of MNEs (Li and Guisinger, 1992):

H3a: Cultural distance is negatively related to performance of MNEs.

Alternatively, a number of studies consider cultural distance in the MNEs' portfolio as having a positive influence on performance (Gomez-Mejia and Palich, 1997; Park and Ungson, 1997). Rooted in internalization theory (e.g., Buckley and Casson, 1976), the performance-enhancing argument of cultural distance suggests that MNEs are often able to enter culturally distant markets because of the numerous organizational advantages their foreign operations can provide. Regardless of the differences in national value systems, MNEs can sustain their internal capabilities by acquiring key resources or by amortizing expenses across a larger customer base (Kotabe, 1990; Kobrin, 1991). MNEs may also realize innovation-related performance benefits in culturally distant markets by locating their foreign subsidiaries in advanced R&D environments (Birkinshaw, 1997; Håkanson and Nobel, 2001). Cultural distance from this perspective therefore enhances MNE performance because of the associated creativity benefits (e.g., Shane *et al.*, 1995). Along this line, as MNEs expand into culturally diverse markets, the integration of newly acquired skills with their existing resources can lead to unique resource combinations enhancing overall MNE performance (Morosini *et al.*, 1998). Thus:

H3b: Cultural distance is positively related to performance of MNEs.

Methods

Sample

In all, 67 articles studying cultural distance were initially identified through a systematic

search of: ABI/Inform and JSTOR databases; published reviews in the literature; and tables of contents of the *Academy of Management Journal*, *Administrative Science Quarterly*, *Journal of International Business Studies*, *Journal of Management*, *Journal of Management Studies*, *Management International Review*, *Management Science*, *Strategic Management Journal*, and other journals. Our article selection was confirmed through communication with researchers in this area and through the reviews of recent articles on cultural distance. Of the 67 articles, 55 included the correlation estimates between cultural distance and entry mode choice, international diversification, and performance. The 55 articles contained $k=66$ independent samples and constituted the final set of effect sizes for the meta-analysis.

A random subset of five studies was initially read for purposes of developing a standard method of coding effect sizes and study characteristics. Subsequently, all studies were read and effect sizes coded by two independent, trained judges (Cohen's $\kappa=0.83$). Consensus discussion took place to resolve any disagreements in coding. Correlations were harvested among measures of constructs reflecting cultural distance, entry mode choice, international diversification, performance, and two covariates (environmental uncertainty and firm size).

Independent and dependent variables

A common difficulty with secondary research is the use of different measures for the same construct. In this stream of research, we found that most studies rely on the same measure of cultural distance, providing an opportunity for a more robust meta-analysis. Cultural distance was measured using a Euclidian distance measure (Kogut and Singh, 1988) in 55 independent samples.² A total of 11 samples in the study used survey-based measures or absolute differences in cultural dimensions developed by Hofstede (1980). Entry mode choice was measured as the amount of capital invested, equity position, and the level of control in joint ventures, acquisitions, and greenfield investments. International diversification was measured in the studies as foreign sales divided by total sales, foreign assets per total assets, and the number of foreign subsidiaries as a percentage of the total number of subsidiaries. Performance measures included return on equity, return on investments, return on assets, and survey-based measures of performance.

Covariates

Two covariates (environmental uncertainty and firm size) were examined to partition variance more thoroughly in observed correlations across studies. Selection of covariates was based on extant theories or models of cultural distance. For example, Barkema and Vermeulen (1998) and Loree and Guisinger (1995) suggest that managers cope with increased levels of uncertainty operating in markets that are culturally different from their domestic market. Environmental uncertainty was measured by uncertain market conditions, government regulations, composite country risk measures, and survey items of environmental characteristics. Firm size has also been theorized to be important in this context. Large firms tend to have a portfolio of culturally diverse international operations. Small firms, by contrast, are vulnerable to cultural differences in their relatively narrow portfolio of foreign operations (Erramilli et al., 1997; Gomez-Mejia and Palich, 1997). Firm size was measured by the amount of sales and assets and the number of employees.

Meta-analytic procedures

All meta-analyses reported used Hunter and Schmidt's (1990) procedures to estimate: average correlations among variables weighted by sample size,

$$\rho = E(r) = \bar{r} = \frac{\sum_{i=1}^k n_i r_i}{\sum_{i=1}^k n_i}$$

where k =the number of studies; the observed variance of correlations across studies,

$$\sigma_r^2 = E(s_r^2), \quad s_r^2 = \frac{\sum_{i=1}^k n_i (r_i - \bar{r})^2}{\sum_{i=1}^k n_i};$$

the expected variance among correlations due to random sampling error,

$$\sigma_e^2 = E(s_e^2), \quad s_e^2 = \frac{(1 - \bar{r}^2)^2 k}{\sum_{i=1}^k n_i};$$

and the residual variance after correcting for the expected effect of random sampling error, $\sigma_\rho^2 = E(s_\rho^2)$, $s_\rho^2 = s_r^2 - s_e^2$. These statistics were derived from correlations reported between measures of cultural distance, entry mode choice, performance, international diversification, environmental uncertainty, and firm size (i.e., a 6×6 matrix of \bar{r} s).

Hunter and Schmidt's (1990) procedures provide simple estimates of the true population

Q1

correlation ρ between any two measures (i.e., \bar{r}) as well as the proportion of observed variance in r (s_r^2) due to random sampling error (s_e^2) vs residual variation (s_p^2). Note that if in fact all of the studies drew samples from a common population characterized by one $6 \times 6\rho$ matrix, then when all studies have been drawn from a population with a single value of ρ and in the absence of other statistical artifacts (e.g., range restriction), one would expect $s_p^2=0$ and that 50% of any s_p^2 estimates would be positive and 50% negative. When a study reported more than one correlation between any two variables (e.g., owing to the use of two measures of firm performance), correlations were averaged and counted as one effect size in subsequent meta-

analyses (Schmitt *et al.*, 1984; Hunter and Schmidt, 1990).

Results

Table 1 contains the 6×6 matrix of \bar{r} derived between measures of the constructs cultural distance, entry mode choice, international diversification, performance, environmental uncertainty, and firm size. Table 1 also includes variance in the observed correlations (s_r^2), expected variance among correlations due to random sampling error (s_e^2), residual variance after correcting for random sampling error ($s_p^2=s_r^2-s_e^2$), and the percentage of observed variance due to random sampling error (% error). Note that the range of Σn across the \bar{r}

Table 1 6×6 Meta-analytic \bar{r} estimates of ρ

	1	2	3	4	5
Cultural distance					
Entry mode choice	$\bar{r}=-0.0644$ $\Sigma n=24,152$ $s_r^2=0.0215$ $s_e^2=0.0011$ $s_p^2=0.0204$ % error=5.3%				
Performance	$\bar{r}=-0.0351$ $\Sigma n=7848$ $s_r^2=0.0152$ $s_e^2=0.0033$ $s_p^2=0.01119$ % error=21.7%	$\bar{r}=0.0538$ $\Sigma n=5484$ $s_r^2=0.0176$ $s_e^2=0.0015$ $s_p^2=0.0162$ % error=8.2%			
International diversification	$\bar{r}=0.0796$ $\Sigma n=7558$ $s_r^2=0.0520$ $s_e^2=0.0027$ $s_p^2=0.0493$ % error=5.3%	$\bar{r}=0.0798$ $\Sigma n=4713$ $s_r^2=0.0375$ $s_e^2=0.0013$ $s_p^2=0.0363$ % error=3.3%	$\bar{r}=0.0537$ $\Sigma n=2699$ $s_r^2=0.0051$ $s_e^2=0.0018$ $s_p^2=0.0033$ % error=3.6%		
Environmental uncertainty	$\bar{r}=0.0885$ $\Sigma n=17,840$ $s_r^2=0.0206$ $s_e^2=0.0011$ $s_p^2=0.0195$ % error=5.3%	$\bar{r}=-0.1229$ $\Sigma n=16,117$ $s_r^2=0.0223$ $s_e^2=0.0005$ $s_p^2=0.0229$ % error=2.4%	$\bar{r}=0.0185$ $\Sigma n=2255$ $s_r^2=0.0154$ $s_e^2=0.0022$ $s_p^2=0.0132$ % error=14.4%	$\bar{r}=-0.0078$ $\Sigma n=2911$ $s_r^2=0.0235$ $s_e^2=0.0024$ $s_p^2=0.0211$ % error=10.2%	
Firm size	$\bar{r}=-0.0265$ $\Sigma n=15,863$ $s_r^2=0.0120$ $s_e^2=0.0028$ $s_p^2=0.0093$ % error=23.0%	$\bar{r}=0.0250$ $\Sigma n=10,705$ $s_r^2=0.0127$ $s_e^2=0.0017$ $s_p^2=0.0110$ % error=13.3%	$\bar{r}=-0.0900$ $\Sigma n=7555$ $s_r^2=0.0199$ $s_e^2=0.0026$ $s_p^2=0.0173$ % error=13.1%	$\bar{r}=0.2116$ $\Sigma n=6832$ $s_r^2=0.0065$ $s_e^2=0.0021$ $s_p^2=0.0627$ % error=3.3%	$\bar{r}=-0.0169$ $\Sigma n=4491$ $s_r^2=0.0053$ $s_e^2=0.0027$ $s_p^2=0.0026$ % error=50.4%

reported in Table 1 varies from 2255 to 24,152. To put the \bar{r} in perspective of statistical tests conducted in traditional primary research, $r_{xy}=0.04$ rejects $H_0: \rho=0$ at $P \leq 0.05$ (two-tailed) when n is conservatively set at the lowest value found in Table 1 (i.e., 2255).

Initial examination of the results reported in Table 1 revealed two important trends. First, \bar{r} between cultural distance and all other measures are relatively small and close to 0. Indeed, only one \bar{r} in the entire matrix exceeds 0.20 ($\bar{r}=0.2116$ between firm size and international diversification). Second, using virtually any meta-analytic heuristic one might care to select (e.g., Sackett *et al.*, 1985; Hunter and Schmidt, 1990), a relatively small proportion of observed variance in r_{xy} across studies is due to random chance. The second finding suggests the set of $k=66$ effects sizes were obtained from samples of populations characterized by different values of ρ . Values of \bar{r} close to 0 could be due to samples drawn from populations with $\rho < 0$ being meta-analytically combined with samples drawn from populations with $\rho > 0$, yielding $\bar{r} \approx 0$. These results suggest that examination of moderators be pursued in order to detect the defining characteristics of these differing populations.

Table 2 reports the results of an OLS multiple regression analysis regressing entry mode choice onto cultural distance, performance, international diversification, and the control variables using a

Table 2 OLS regression of entry mode choice onto environmental uncertainty, performance, cultural distance, performance, international diversification, and firm size^a

Independent variable	Standardized regression coefficient	t	P (two-tailed)
Environmental uncertainty	-0.1179	-1.6581	0.0989
Performance	0.0505	0.7081	0.4797
Cultural distance	-0.0582	-0.8147	0.4162
International diversification	0.0788	1.0805	0.2812
Firm size	0.0093	0.1279	0.8983
R ²	0.0275		
F	1.0965		0.3637

^aAnalyses in Tables 2–4 were conducted using the 6×6 \bar{r} matrix reported in Table 1 as input into the Systat 10.2 regression module. As each \bar{r} estimate was derived on a different combination of effect sizes (r_{xy}), and hence yielded different Σn , we elected to specify a typical sample size across studies. The typical sample size is 200, the average of N from the largest Σn (24,152) and smallest Σn (2255). $N=200$ was used as N for purposes of estimating t statistics and their associated P-values.

typical sample size across studies ($N=200$). Results indicated that cultural distance did not significantly contribute to the prediction of entry mode choice in the presence of the other predictors. However, environmental uncertainty demonstrated a marginally positive relationship with entry mode choice. Table 3 summarizes the results of the OLS regression of international diversification onto the other variables. Again, cultural distance did not significantly contribute to prediction. Results suggested that firm size contributed significantly positively to international diversification prediction in the presence of the other predictors, consistent with the simple correlation estimate of $\bar{r}=0.2116$. Finally, results of an OLS regression of firm performance are presented in Table 4. The estimate of the multivariate relationship indicated that cultural distance was not meaningfully related to firm performance.

Given the lack of statistically significant results in the examined relationships via meta-analysis, we

Table 3 OLS regression of international diversification onto entry mode choice, environmental uncertainty, firm size, performance, and cultural distance

Independent variable	Standardized regression coefficient	t	P (two-tailed)
Environmental uncertainty	-0.0044	-0.0622	0.9505
Performance	0.0726	1.0385	0.3003
Cultural distance	0.0932	1.3333	0.1840
Entry mode choice	0.0759	1.0805	0.2812
Firm size	0.2187	3.1315	0.0020
R ²	0.0637		
F	2.6384		0.0247

Table 4 OLS regression of performance onto cultural distance, entry mode choice, international diversification, environmental uncertainty, and firm size

Independent variable	Standardized regression coefficient	t	P (two-tailed)
Cultural distance	-0.0432	-0.6007	0.5487
Entry mode choice	0.0510	0.7081	0.4797
International diversification	0.0761	1.0385	0.3003
Environmental uncertainty	0.0274	0.3804	0.7041
Firm size	-0.1080	-1.4820	0.1400
R ²	0.0186		
F	0.7337		0.5990

explored the potential moderator effects. Two judges coded the 66 independent samples according to five moderator variables:

- (1) measurement of cultural distance (Euclidian distance measure vs other measures);
- (2) MNE origin (US-based MNEs vs MNEs from other countries);
- (3) industry type (high-technology industries vs others);
- (4) investment country type (developed or developing countries); and
- (5) sample time frame (international business activities in the 1980s (early) vs the 1990s (late)).

The choice of measurement may be attributed to the lack of consistent relationships between cultural distance and the other variables. We found that the use of the Euclidian distance measure compared with other measures did not lead to significant relationships between cultural distance, entry mode choice, international diversification, and performance. We did, however, find a strong negative relationship ($\bar{r}=-0.2646$) between cultural distance and environmental uncertainty in the case of other cultural distance measures. This relationship was relatively weak and positive ($\bar{r}=0.1003$) across studies using the Euclidian distance measure.

The second moderator effect, whether the study focused on MNEs headquartered in the US or on MNEs from other countries, such as France, Germany, Italy, Japan, Korea, the Netherlands, Spain, Sweden, and the United Kingdom, was also investigated. Prior research implies that MNE behavior may be different depending on the origin or home base of MNEs (e.g., Forsgren *et al.*, 1995; Barkema and Vermeulen, 1998). In the case of entry mode choice, the MNE home base may indicate the MNE's risk propensity or its willingness to accept different transaction cost levels (Brouthers and Brouthers, 2003). The examination of this moderator yielded an important difference in the relationship between cultural distance and entry mode choice. Whereas studies focusing on MNEs from a diverse set of countries found little negative effect ($\bar{r}=-0.05311$), studies concerning the entry mode choice of US based MNEs showed a relatively strong negative effect for cultural distance ($\bar{r}=-0.3501$).³

Type of industry (high-technology vs other industries) was investigated, as prior literature suggests that MNEs from high-technology industries are motivated to internationalize to recoup their extensive investments in technology (Cant-

well, 1989; Kobrin, 1991). This moderator was important for the relationship between international diversification and cultural distance. Although the sizes of the correlations were relatively low, a significant difference was evident between international diversification in high-technology industries and in other industries. The relationship was negative for high-technology industries ($\bar{r}=-0.1200$), but it was positive for other industries ($\bar{r}=0.1038$).

The rationale behind comparing investment into developed countries with that into developing countries, our fourth moderator, is rooted in modernization theory. Despite the relative persistence of some cultural traditions, economic development tends to be associated with cultural changes toward an increasingly participatory, rational, tolerant, and trusting value system (Inglehart and Baker, 2000). Under these conditions, cultural distance may indicate favorable market conditions for MNEs. This moderator showed a significant difference between cultural distance and performance. The correlation coefficient was small and negative for developing country investments ($\bar{r}=-0.0374$), but it was strong and positive for developed country investments ($\bar{r}=0.3100$).

The last moderator, early or late samples, is a result of the median split of the time frame of research on cultural distance. Whereas early studies focused on MNE activities in a narrow set of countries, MNEs have been increasingly active in diverse emerging economies since the early 1990s. Among these newly open markets perhaps the most important is China, the focus of a number of recent studies (e.g., Luo, 1999, 2001a). This moderator showed a significant difference for the relationship between cultural distance and international diversification. The correlation coefficient was small and positive for the early samples ($\bar{r}=0.0108$), but a strong positive relationship was found for samples in more recent studies ($\bar{r}=0.2328$). This result suggests that international diversification is increasingly associated with a culturally diverse set of countries.

Discussion

The purpose of this study was to provide an empirical synthesis of prior research by exploring the relationships between cultural distance and entry mode choice, international diversification, and MNE performance. Meta-analytic results indicated that the relationship between cultural distance and the three key variables (and two control



variables) was near zero across the 66 independent samples. Further, when examined in a multivariate context, cultural distance again failed to contribute significantly to prediction. Hence, when explored in the context of the existing literature, our conclusion is that cultural distance is not directly related to the three key constructs of entry mode choice, international diversification, and MNE performance.

A potential explanation for the lack of findings might be moderator effects (Hunter and Schmidt, 1990). Our review of the original correlations suggested that the examination of moderators could provide greater insights: cultural distance was positively related to entry mode choice, level of international diversification, and MNE performance in some samples, and negatively related to these same variables in other samples. Moderator candidates examined included cultural distance measurement instrument, MNE origin, industry type, country of investment, and sample time frame.

Consideration of the instrument used to measure cultural distance provided little help in explaining the observed variation in cultural distance's relationships with the three variables of interest. The strong negative relationship between environmental uncertainty and cultural distance in the case of survey and other measures may indicate that survey respondents view the two variables as distinct constructs. It is also likely that the uncertainty of the political and economic systems in a country may overshadow the perceived differences in culture for MNE managers.

The result on the MNE origin moderator is consistent with the risk-minimization hypothesis in the literature. This hypothesis suggests that US-based MNEs tend to dedicate smaller amounts of capital and maintain lower equity positions in countries that present them with higher cultural distance. It is possible that, because of the governance system in the US (e.g., ownership concentration and managerial compensation), US MNE managers are more risk averse in their entry mode choice than their counterparts in other developed countries (e.g., Brouthers and Brouthers, 2003). Another reason for this result might be the potential learning benefits for MNEs. Studies from the organizational learning perspective note that greater cultural distance may be associated with entry mode choice with lower equity stakes (e.g., Barkema *et al.*, 1997).

The relationship between cultural distance and international diversification depends, to some

extent, on industry characteristics. High-technology industries exhibited a negative relationship between cultural distance and international diversification, while the relationship was positive in other industries. These results indicate that MNEs from high-technology industries face higher risk levels than do other MNEs due to the size of their investments in technology (e.g., Kobrin, 1991). These MNEs may hesitate to increase their further risk levels and thus seek to expand into markets with familiar cultures. Such behavior of high tech MNEs can also be explained by Vernon's (1966) product life cycle theory, as these MNEs tend to exhibit less interest in culturally dissimilar markets until customer demand in their home or existing markets becomes saturated.

Further moderator results indicate that high cultural distance may provide performance benefits when MNEs operate in other developed countries. This relationship may be due to the similarities in market conditions and their associated institutions across developed countries (Inglehart and Baker, 2000). This result is consistent with a stream of literature that associates cultural distance with innovation and creativity (e.g., Shane *et al.*, 1995). As MNEs expand into culturally diverse but developed markets, new knowledge and resources can lead to enhanced MNE performance (Morosini *et al.*, 1998).

Finally, we found a positive and significant association between cultural distance and international diversification in studies using more recent samples of MNEs. This relationship can be explained by the following recent changes affecting MNEs. First, MNEs increasingly locate their production and gain market share today in previously isolated emerging and transition economies. Even though these countries provide new business opportunities for MNEs, their national cultures are often quite different from the home cultures of many MNEs (Luo, 2002b). Second, managers of MNEs are more aware of cultural differences today than they were 20 years ago. Owing to their education and increased knowledge through media and communication technology, managers may be more comfortable diversifying into countries with dissimilar cultures. Third, geographically proximate and culturally similar markets have likely become saturated for many MNEs, thus forcing them to explore distant and often culturally different markets.

There are important implications of these results for future studies. Most importantly, cultural dis-

tance does not appear to be directly related to entry mode choice, international diversification, or MNE performance across prior empirical studies. Owing to the relatively weak bivariate relationships, we have gone beyond the conventional meta-correlations by completing a series of OLS regressions with a typical sample size across studies to test for multivariate effects. While disturbing, the lack of significant relationships in these tests accentuates the concerns raised in recent qualitative reviews of the literature. The articles by Brouthers and Brouthers (2001) and Shenkar (2001) outline a number of potential problems with the cultural distance construct, mostly scrutinizing its measurement properties.

Culture is extremely difficult to define. Kroeber and Kluckhohn (1952) identified over 140 conceptual definitions of culture. Given the plethora of definitions, it is probably unrealistic to expect that a single measure can fully and accurately discern the underlying differences resident across cultures in relation to a wide variation in topics studied. To gain better insights, additional research is needed to develop measures of the fundamental differences in culture *relevant to organizational decisions*. Some recent studies have offered alternatives to the widely used cultural dimensions that formed the basis of present cultural distance measures (e.g., Schwartz, 1999; Inglehart and Baker, 2000).

Q4

It is also important to note that most prior research employs a relatively narrow definition of cultural distance. Whereas empirical studies almost exclusively examined differences in cultural values, many other important dimensions can be considered for the development of future cultural distance measures. In addition to values, Triandis (1994) recommends studying national cultural differences across four other components: language (e.g., membership in language families), family structures, religion, and wealth (measured by GNP per capita). Alternative measures of cultural distance may provide an opportunity to improve the construct validity of future cultural distance measures.

A related issue is the appropriateness of cultural distance measures for organization, group, and individual level research. National cultural distance is constructed as an aggregate of perceived individual values in most studies. Such measures may not be suitable for different levels of analysis. For example, organizational culture and subsidiary differences within MNEs may create meaningfully different cultural phenomena. In a study of joint venture performance, Pothukuchi *et al.* (2002)

found that organizational culture differences account for more of the negative effects of partner dissimilarity on joint venture performance than national culture.

Meta-analysis can play an important part of the development of research fields by systematically integrating findings across published empirical tests. However, the technique is limited to examinations of variables that can be coded *post hoc* from already completed primary research. Although we found no significant results regarding the main relationships of our interest, the identification of moderator effects provided promising results for the existing cultural distance measures. Prior studies did not concentrate on moderating effects, with the exception of the research by Brouthers and Brouthers (2001) that identified investment risk of a target market to be a moderator of the relationship between cultural distance and entry mode choice. Our results of moderator effects across prior studies yielded some important findings that can be used in future research. Researchers exploring cultural distance in future studies also need to consider a greater range of moderator effects at the MNE level for the field to advance.

Alternative theoretical rationale may exist to explain the relationship of cultural distance with entry mode choice, international diversification, and performance. Present international business research models are overwhelmingly based on the theoretical assumptions of transaction cost economics (Caves, 1996). Even though operating in different countries may require different managerial skills and MNE strategies, national cultural differences may have little direct effect on specific strategic variables and MNE performance. It is possible, for example, that past experiences with international operations in culturally distant markets influence future perceptions and international expansion decisions more heavily than actual situations. Thus, deeper insights may be gained through the examination of decision heuristics from the perspectives of prospect theory and other theories.

Further, to improve the replicability of findings, authors and editors should include basic statistics, such as means, standard deviations, and correlations, in published articles. Although failure to report basic statistical information is likely due to journal page limitations, these data are necessary for secondary research, such as meta-analysis. That is not to suggest that reporting basic statistics should consume limited journal pages. Rather, to

overcome this limitation, authors and editors could make basic statistics of articles available on the journals' websites.

In conclusion, this study examined the relationship of cultural distance with entry mode choice, international diversification, and MNE performance. Results of the meta-analysis provided no evidence of a systematic direct effect of cultural distance. However, meta-analytic examination of moderators, such as measurement instrument used, MNE-origin, industry type, country of investment, and sample time-frame, have yielded important insights that can provide direction for building more rigorous research. The results of this study have important implications for the future development of the field. Most importantly, researchers need to guide their work by considering alternative theoretical reasons and methodological choices for the examination of the effect of cultural distance on international strategies and MNE performance.

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Notes

¹Studies examining the effects of cultural distance on international strategies and MNE performance tend

to focus on the differences in national value systems. Consistent with prior studies in this area, we rely on a *value-based conceptualization of culture*. National differences can be studied along other characteristics, such as religion, wealth, or membership in language families (e.g., Triandis, 1994).

²This measure is calculated as:

$$CD_j = \sum_{i=1}^4 [(I_{ij} - I_{ih}) / V_i] / 4$$

where CD_j stands for the cultural distance between the j th country and the home country (US), I_{ij} is the index of the i th cultural dimension (e.g., individuality, power distance, masculinity–femininity, and uncertainty avoidance), I_{ih} is the cultural dimension index for the multinational firm's home country (US), and V_i is the variance of the index in the i th dimension.

³To gain further insights into this issue, we conducted supplemental analysis employing the risk propensity of the MNE's home country, following the study by Brouthers and Brouthers (2003). We coded our studies as using samples of MNEs from high or low uncertainty avoidance cultures by employing the quartiles of Hofstede's (1980) uncertainty avoidance index. Results did not indicate a statistically significant association between cultural distance and entry mode choice for MNEs emanating from high uncertainty avoidance cultures ($\bar{r} = -0.0299$), such as Japan and Korea. However, we found a strong negative relationship between cultural distance and entry mode choice for MNEs from low uncertainty avoidance cultures ($\bar{r} = -0.2353$), such as Sweden, the UK, and the US.

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References marked with * indicate those studies included in the meta-analysis.

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