

Ryan J. Orr (corresponding author)  
Research Fellow, Collaboratory for Research on Global Projects  
Stanford University, 298 Terman Engineering Center, Stanford, CA, 94305, USA.  
Phone: 650 387-6415  
Fax: 650 723-4806  
[rjorr@stanford.edu](mailto:rjorr@stanford.edu)

Raymond E. Levitt  
Director, Collaboratory for Research on Global Projects  
[ray.levitt@stanford.edu](mailto:ray.levitt@stanford.edu)

Title suggestions:

Long - Does Cultural Distance Matter? A “Large-N” Study of Global Partner Satisfaction in the High Tech Industry

Short - Does Cultural Distance Matter?

### **Abstract**

This article tests two hypotheses concerning the impact of cultural distance on the overall satisfaction of channel partners in the high tech industry, using the largest ever sample of global partnership data. This satisfaction data was collected by three US high tech firms from more than 4500 foreign partners in 44 countries. Distance in cultural values, practices and leadership styles were calculated from the GLOBE study findings. No significant correlations were discovered. Although unexpected, these findings reinforce the growing sentiment in the literature that a unidimensional cultural distance metric offers little insight into the performance of global partnerships.

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Many researchers have looked to metrics of cultural distance (CD) to quantify the complex, elusive and intricate nuances of cultural differences between global business partners and to explain various aspects of the performance of global alliances (GAs) such as international joint ventures (IJVs), foreign subsidiaries, global partnerships and other foreign affiliates. Reports that 40 to 80 percent of cross-cultural strategic partnerships perform poorly or fail entirely (Geringer & Herbert, 1990; Beamish, 1993; Hill & Hellriegel, 1994; Beamish & Delios, 1997) have been frequently cited as a motivation in this line of investigation. Yet, this growing body of scholarly work is not without controversy. Indeed, researchers have reported as many unexpected negative and neutral relationships between CD and GA performance as hypothesized positive relationships. The question, “Does CD impact the success of GAs?” remains unresolved.

The objective of this paper is to apply fresh data from global partnerships in the high-tech industry to test the hypothesis that CD impacts the performance of international partnerships. This new data includes two components. First, the largest ever sample of partner satisfaction scores collected by three US high tech firms from more than 4500 partners in 44 countries. Second, a measure of CD calculated from the recent GLOBE study findings (House et. al, 2004). By testing for correlation between partnership outcomes and CD, this article responds both to the question asked by many managers “Does culture matter?” and the inconclusive results in the scholarly literature.

## **Theory**

Many researchers hypothesize that cultural similarity increases harmony and reduces friction (Shenkar, 2001) in cross-cultural strategic partnerships. For example, authors of the GLOBE study (House et. al., 2002) propose that,

*From a practical point of view, the complexity of cross-national negotiations, mergers, assignments, and leadership probably depends on the extent of the difference between the two cultures.*

Arguments to support this proposition build on three primary insights. First, culturally similar managers are more likely to share the same attitudes, values, beliefs, knowledge, management systems (Lasserre, 1999), leadership styles and scripts of behavior, as well as business, organizational and administrative practices (Kogut & Singh, 1988). Second, such cultural

similarities facilitate and enhance the ability to communicate, cooperate, integrate knowledge and develop trust (Killing, 1983). Third, cultural dissimilarities increase the frequency and severity of communication difficulties (Browne, Rugman & Verbeke, 1989), miscommunications (Park & Ungson, 1997), conflict (Sim & Ali, 2000), uncertain situations in conflict resolution (Lin & Germain, 1998), and misinterpretation of a foreigner's intentions, whether honest or opportunistic. In brief, past theoretical arguments can be captured in a single statement: cultural similarity increases harmony and decreases friction in cross-cultural interactions and *vice versa*.

Friction occurs both internal and external to the boundary of a GA. Internal friction arises when culturally dissimilar managers and staff who come from different home and host countries interact, negotiate and coordinate within a joint venture or partnership (Killing, 1983). External friction arises when foreign managers or staff are dependent on unfamiliar institutions and actors in an unknown, foreign, human-devised legal, political and business environment (Kogut & Singh, 1988). These two types of friction are similar in that they both originate from cross-cultural interaction, yet, dissimilar in where they occur relative to the boundary of a GA.

The difference between internal and external friction can be further differentiated, from a cost-growth perspective. Internal friction (Horii et. al, in press) includes increased coordination costs (Galbraith, 1973) and agency costs (Woodcock & Geringer, 1991). In contrast, external friction (Eriksson, et. al., 1997) includes increased transaction costs (Milgrom & Roberts, 2003) and opportunity costs (Buchanan, 1987). It is helpful to describe in more detail how cultural differences can trigger these different types of cost growth:

- Coordination Costs – Coordination costs arise when reciprocally interdependent (Thompson, 1967) activities require that actors coordinate face-to-face to resolve negatively interacting sub-goals (Thomsen, 1997). Coordination costs can grow when activities that involve cross-cultural coordination or negotiation are impeded by miscommunications, reduced harmony, inefficient information sharing, more frequent exceptions, higher decision wait times, or increased rework volumes (Jin & Levitt, 1996).
- Agency Costs – Agency costs arise when the interests of an agent conflict with the interests of the principal (Woodcock & Geringer, 1991). Agency costs can grow when

differences in cultural beliefs, values and norms make it more complex to understand and monitor an agent's activity and thus principal-agent problems become more frequent, more severe, and less routine to resolve.

- Transaction Costs – Transaction costs arise when locating trading partners and executing transactions with these partners (Milgrom & Roberts, 2003). Transaction cost growth can occur when expatriates who are unfamiliar with locally expected and enforced protocols and practices of transacting face heightened levels of uncertainty in establishing trade relations; negotiating, writing and monitoring contingent claims contracts; and resolving disputes.
- Opportunity Costs – Opportunity cost is the cost of something in terms of an opportunity foregone (Buchanan, 1987). Cultural differences can lead to growth in opportunity costs when expatriate decision makers face greater uncertainty about the business and institutional environment in a foreign location (Eriksson et. al., 1997), such as how to set strategy, commit resources and maneuver effectively and efficiently within the formal and informal “rules of the game” (North, 1990), which lead to sub-optimal strategies, imperfect resource allocations and unexpected outcomes.

Summing up, internal and external friction arise from cultural differences and can be defined in terms of coordination, agency, transaction and opportunity cost growth, all of which negatively impact the performance of GAs.

## **Background Research & Hypotheses**

This section provides relevant background, shows how past studies have been different in their approaches and conclusions and draws out the hypotheses for the present empirical investigation.

### *A brief history of studies to quantify culture*

Research to quantify culture has been ongoing for nearly 45 years. In 1961, American anthropologists Kluckhohn and Strodtbeck developed a framework of six dimensions to describe the values orientation of a culture. In 1976, Hall suggested that national cultures could be classified and compared along a dimension of high-context versus low-context communication styles. A few years later, Hofstede (1984) published the first and perhaps most influential large

sample set of cross-cultural findings (for summaries, see Chandy & Williams, 1994; Redding, 1994; Sondergaard, 1994), which were followed by a series of related studies such as the ones published by Ronen & Shenkar (1985), Schwartz & Bilsky (1987), Smith et. al. (1989), Inglehart (1997), and Trompenaars & Hamden-Turner (1998). The most recent and comprehensive of studies along this thrust is the GLOBE study of 62 societies (House et. al., 2004). The GLOBE study quantifies both cultural values and practices along nine dimensions and corrects for several methodological flaws that had undermined the validity of earlier studies. Most notably, the constructs were designed and the data were collected by a network of 170 investigators local to each of the countries studied. Thus, the GLOBE study marks the most recent contribution in a 45 year research effort to abstract, dimensionalize and quantify differences across national cultures.

### *The CD index*

After researchers had quantified culture, the CD index emerged naturally and diffused rapidly throughout the international business literature. The CD index is a metric intended to quantify the degree of similarity, or dissimilarity, between two national cultures. It is prepared by aggregating CD calculated on several supposed linear dimensions (such as collectivism, power distance, uncertainty avoidance, etc.) into a unidimensional index. The algebraic form<sup>1</sup> of the index cited most frequently in research articles was first crafted by Kogut and Singh (1988) from Hofstede's (1984) cultural dimensions. Critics of the index have argued that it may oversimplify the complex, intricate and elusive concept of CD (e.g., Shenkar and Zeira, 1992). Yet, this intrinsic promise to simplify the subtle and intangible nuances of culture is perhaps the very reason why the CD index has been so widely adopted. Indeed, it offers a simple-to-calculate numeric measure that is intuitive to grasp, discuss and apply in business, educational and research situations. Consequently, the CD index has been utilized in a wide range of empirical investigations across most of the sub-disciplines of international business studies including management, human resources, strategy and marketing.

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<sup>1</sup> The Kogut and Singh (1988) index was first calculated based on score differences along each of Hofstede's (1980) four cultural dimensions (i.e., uncertainty avoidance, power distance, masculinity, and collectivism) between each partner country and the parent country, corrected for differences in the variances of each dimension and then arithmetically averaged. Algebraically:  $CD_{jp} = \sum_{i=1,2,3,4} [(I_{ij} - I_{ip})^2 / V_i] / 4$ , where  $CD_{jp}$  is the cultural distance between partner country  $j$  and the parent country  $p$ ,  $I_{ij}$  is partner country  $j$ 's score on the  $i^{\text{th}}$  cultural dimension,  $I_{ip}$  is the score of the parent country on this dimension, and  $V_i$  is the variance of the scores for this dimension.

For example, it has been applied as an independent variable in an attempt to explain such other dependent variables as the sequence of foreign direct investment (Thurnbull, 1987; Benito & Gripsrud, 1992; Sullivan & Bauerschmidt, 1990), the choice of entry mode (Kogut & Singh, 1988; Erramilli, 1991), the use of expatriates (Boyacigiller, 1990; Gong, 2003) and the performance of international invested affiliates (Park & Ungson, 1997; Barkema & Vermeulen, 1997). In spite of the popularity of applying the CD index to explain various aspects of the expansion, management and success of international business operations, the findings at a meta-level of analysis within these various threads of research are largely inconsistent (Robson et. al., 2002; Shenkar, 2001). After reviewing these inconsistencies, Shenkar (2001) questions the methodological and theoretical rigor of the CD index itself. In brief, the CD index has become broadly established across the international business research agenda, yet many of the findings associated with this variable remain contradictory.

#### *CD applied to explain partner performance*

Table 1 cites the findings of 12 prior empirical studies that test CD as a factor influencing the performance of GAs. Similarly, the present study examines CD as a determinant of the performance of global high tech partnerships. The purpose of Table 1 is to show that the conclusions drawn across these various studies are inconsistent. Note that four studies identify a positive relationship between CD and GA performance; four find no significant association; and, ironically, the remaining four suggest that CD actually enhances performance. The following statements, quoted from three of these articles, were selected to illustrate the discrepant nature of these conclusions. Barkema & Vermuelen (1997), finding the negative relationship they had hypothesized between CD and performance, state that,

*Cultural distance – measured at an aggregate level – does indeed hurt IJV survival, in particular if all five dimensions are included in the CD index.*

Beamish and Kachira (2004), identifying no significant correlation, conclude,

*Another interesting finding was that there was no relationship between CD between partners and performance. This is important as it counters a great deal of extant IJV research that attributes low performance and failure in IJVs to cultural asymmetries.*

Park and Ungson (1997), admitting correlation inverse to the expected direction, remark,

*A popular belief in both academic and business quarters is that cross-border joint ventures are more unstable than national joint ventures. This belief is not supported in our study. In fact, the reverse appears to be the case: cross-border joint ventures with partners from culturally distant countries have longer durations and are less likely to end.*

So, the literature is not clear concerning either the strength, or the direction, of the relationship between CD and GA performance.

Why is there so little consistency across the set of studies shown in Table 1 when they all purportedly test the relationship between CD and GA performance? Over the following pages, four issues are discussed that limit meta-level comparability across the studies. The first issue is that the individual studies utilize dissimilar measures of IJV performance. For example, alternative measures of performance have included duration (e.g., Barkema et. al., 1997), stability (e.g., Sim & Ali, 2000), financial performance (e.g., Luo, 1997), satisfaction (Lin & Germain, 1999) and other multi-dimensional measures (e.g., Mjoen & Tallman, 1997). Hence, this dissimilarity in the way that performance is defined and measured lowers comparability across the studies.

The second issue is that there is immense variation in the approaches used to prepare the independent variable, the CD metric. Not all of the studies use the earlier-described CD index approach (Kogut & Singh, 1988), although this is probably the earliest approach recorded in the literature. Figure 1 uses a two-dimensional space to classify the various approaches; and, the numbers in Figure 1 stand for the studies cited in Table 1. The x-axis shows that three different units of cross-cultural analysis have been used: (1) the partnership, (2) the country, and (3) the regional country cluster. The y-axis shows that three different approaches to calculate the CD metric have been applied: (1) a dummy variable based on the country or region of origin, (2) an index calculated from Hofstede's (1984) data with the Kogut and Singh (1988) method of preparation, and (3) a field-survey measure based on the opinions and attitudes of managers towards the culture of the unfamiliar half of the global alliance.

**TABLE 1**

**Prior Research to Investigate the Correlation between CD and Invested Affiliate Performance**

Author (Year)	Unit of Analysis	Sample	Cross-Cultural Interactions	Independent CD Variable	Dependent Variable	Findings <sup>†</sup>	Conclusion	
1	Hu & Chen (1996)	IJVs	2442 joint ventures in China formed b/w 1979-1990. Range of industry segments.	China to: US, Europe, Japan, Hong Kong clusters	CD approximated using country of origin as dummy variable.	% of Success (Stability)	Chi Squared = 11.569 **	CD Improves Performance
2	Park & Ungson (1997)	IJVs	137 US-foreign and 49 US-US JVs formed b/w 1979-1988. Electronics.	US to: Anglo, North European, Latin, and Japanese clusters	CD calculated with Hofstede data using Kogut and Singh index based on average composite scores for each region.	Survival Rate (Stability) Longevity	+ 0.08 ** + 0.33 **	
3	Sim & Ali (2000)	IJVs	59 private sector IJVs from both developed and NIE countries w/ > 3yrs operations in Bangladesh.	Bangladesh to: Asia and Europe clusters	Percieved CD measured by survey questionnaire on 9 items.	Stability	+ 0.15 *	
4	Morosini, Shane & Singh (1998)	Cross-Border Acquisitions	52 firms that engaged in cross-border acquisitions in Italy between 1987 and 1992.	Italy to: 12 other countries	CD calculated from Hofstede data using Kogut & Singh index.	Post Acquisition Performance	+ 0.13 **	
5	Mjoen & Tallman (1997)	IJVs	102 IJVs established by 37 Norwegian MNEs. Range of industry segments.	Norway to: undisclosed other countries	Percieved CD measured by survey questionnaire on 7 items.	Performance (Satisfaction, Met Objectives, Profitable Investment)	Not Significant	No Relationship between CD and performance.
6	Beamish & Kachra (2004)	IJVs	1335 Japanese JVs established before 1997. All industry sectors.	Japan to: 73 countries	CD calculated with Hofstede data using Kogut and Singh index, weighted to account for the different cultures in multi-partner JVs	Performance	Not Significant	
7	Sim & Ali (1998)	IJVs	59 private sector IJVs from both developed and NIE countries w/ > 3yrs operations in Bangladesh.	Bangladesh to: Asia and Europe clusters	Percieved CD measured by survey questionnaire on 9 items.	Performance (aggregate of 8 items)	Not Significant	
8	Luo (1997)	IJVs	116 IJVs in China formed b/w 1988 and 1991.	China to: other countries	CD approximated using developed or developing country status as a dummy variable.	Financial Performance	Not Significant	
9	Lin & Germain (1998)	IJVs	67 US-Chinese IJVs consisting of 94 IJV managers, with 34 US and 59 Chinese.	US to: China	Percieved CD measured between US portion and Chinese portion of the IJV on 2 items.	Performance	- 0.16 ~	CD Worsens Performance
10	Barkema & Vermeulen (1997)	IJVs & IWOs	828 foreign entries (228 IJV & 600 IWO) of 25 Dutch multinationals b/w 1966-1994.	Netherlands to: 73 other countries	CD calculated from Hofstede data in two ways: (1) Kogut & Singh index, (2) Euclidean index // Also tests several hypotheses based on individual dimensions.	Survival Rate	- 0.08 **	
11	Lasserre (1999)	Various partnerships	98 partnerships in 7 asian countries. All industry sectors.	US to: 7 Asian countries.	Percieved CD measured on 5 items selected after factor analysis.	Western Manager Satisfaction	- 0.57, ***	
12	Barkema, Shenkar, Vermeulen & Bell (1997)	IJVs & other foreign expansions	897 foreign expansions (244 IJV) of 25 Dutch multinationals b/w 1966 and 1994.	Netherlands to: 73 other countries	CD calculated from Hofstede data using Kogut & Singh index.	Longevity	- 0.13, **	

Notes: Significance:  
Two Tailed Test: \* p < 0.1; \*\* p < 0.05; \*\*\* p < 0.01  
One Tailed Test: ~ p < 0.05

<sup>†</sup> To promote ease of comparability, some of the signs have been altered from the direction reported in the original published findings.

Acronyms: IJV = International Joint Venture, IWO = International Wholly Owned Subsidiary, CD = Cultural Distance

It is useful to understand how the various approaches have differed.

- Perceived CD: While the most popular approach, perhaps as a matter of convenience, has been the Kogut and Singh index at the country level of analysis, the approach taken in more recent studies (Lassere, 1998; Sim & Ali, 1998; Lin & Germain, 1999) has been to measure perceived CD of managers by survey questionnaire. Often called ‘psychic’ distance, this field measurement is intended to capture the ‘foreignness’ of the country as perceived by managers due to diversity of languages, national cultures, business practices and work attitudes (Sim & Ali, 2000; Dichtl et al., 1990; O’Grady and Lane, 1996), all of which will be affected by the amount and nature of their prior experience in this country.
- Country: Researchers who have used country (Morris and Pavett, 1992; Ueno and Sekaran, 1992) or region of origin as a surrogate for CD argue that differences in home and host market structures, currencies and economic policies (Luo, 1997) as well as differences in management styles, and other factors such as economic endowment (Hu & Chen, 1996) are subsumed in this classification.
- Country Cluster: Researchers who have used the country cluster unit of analysis, such as Park & Ungson (1997), typically cite Ronen and Shenkar (1985) who identified eight culturally-similar clusters of countries labeled: Anglo, Germanic, Nordic, Latin European, Latin American, Far Eastern, Near Eastern and Arab. Advocates of the country cluster approach note that many deep-seated cultural values, such as the religious ethics of Confucianism, Christianity or Islam, are not contained by national boundaries, and thus recommend a regional unit of analysis.

Few researchers have applied multiple approaches in the same study, except for Park and Ungson (1997), who used the Kogut and Singh (1988) method to calculate CD both at the country and regional units of analysis. Summing up, the mixture of approaches that have been used to prepare of the CD metric, often at different units of cultural analysis, further obscures meta-level interpretation across the studies cited in Table 1.

FIGURE 1

Classification of Approaches to Prepare the CD Metric

Preparation of CD Metric	Measured by Survey	5,8,10		3,6
	Kogut & Singh Index		2,4,9,11	2
	Dummy Variable		1	7
		IJV	Country	Region
		Unit of Cultural Analysis		

The third issue is that CD alone is not enough to cause friction (Shenkar, 2001) because friction varies with the complexity and intensity of cross-cultural interaction. Yet, across the empirical studies, there has been little, or no control for factors that translate CD into internal or external cultural friction – such as reciprocal interdependence in a work process or dependence on local actors and institutions. It is helpful to expand on both of these examples to make this point clear.

The first source of cross-cultural interaction, which leads to internal friction, is reciprocal interdependence (Thompson, 1967) across tasks performed by each of the partners in the joint work process. When reciprocal interdependence is high, managers and staff need to iteratively negotiate trade-offs between negatively interacting sub-goals (Thomsen, 1997) through mutual adjustment and face-to-face coordination (Galbraith, 1973). Thus, as reciprocal interdependence increases, so do the complexity of interactions and negotiations, and the likelihood of coordination cost growth between cross-national actors. For example, in our research group, there is national representation from Canada, Malaysia, Iran, Japan, India and South Africa, and yet there is extremely little cultural friction. How can this be? One answer is that we are educated and have culturally competent personalities. However, a more compelling answer is that we all pursue independent research agendas and apart from a once weekly meeting and “hellos” in the hallway, we have very little interdependence across our various projects, minimal

interaction, and thus little, if any internal friction arising from coordination complexity. Therefore, the failure in prior studies to control for the level of cross-cultural reciprocal interdependence is a failure to understand that without the cross-cultural interaction that catalyzes friction, cultural distance is non-problematic.

The second source of cross-cultural interaction, which leads to external friction, is dependence of foreign actors on formal legal, political and economic institutions as well as informal practices and protocols (North, 1990; Scott, 1995). As this dependence on local institutions increases, CD is far more likely to cause transaction and opportunity cost growth. For example, the necessity and frequency of cross-cultural interaction, negotiation, and coordination is far greater for foreign real estate developers – who buy land, import building materials through customs, obtain multiple permits from local authorities, hire labor through local brokers, comply with local building codes and sign large numbers of locally regulated contracts – than it is for exporters of consumer electronics who simply market products through foreign licensing arrangements. Thus, the degree of interaction with, and exposure to, local institutions moderates the relationship between cultural distance and external friction, and prior studies have not taken this into account.

Clearly, the degree of cultural friction depends on both the cross-cultural dynamics of the work processes and the degree of dependence of the foreign entrants on local institutions. Nonetheless, few researchers have simultaneously controlled for factors like these that moderate the translation of cultural distance into friction, perhaps because they are extremely difficult to measure. On the contrary, many studies rely on aggregated data collected from a broad variety of industry sectors and programs of work. For example, the Mjoen & Tallman (1997) sample includes data from 37 Norwegian multi-nationals in marine engineering, construction, oil, aluminum, shipping and pharmaceuticals. Likewise, the Sim & Ali sample (1998; 2000) includes data from 59 IJVs in Bangladesh in textile and apparel, chemical, pharmaceutical, leather and shoes, electrical and metal products.

Few studies that have had these dual controls in place. One that did used two-digit standard industrial classification (SIC) codes to control for industry type with a sample restricted to IJV organizations (Hu & Chen, 1996). Another study to use dual controls recognized the following industry categories on a sample of IJV organizations: agriculture, forestry and fishing, mining, construction, manufacturing, transportation, wholesale trade, retail trade, finance, insurance and real estate, and services (Beamish and Kachira, 2004). Unfortunately, the IJV classification is of limited value in controlling for reciprocal interdependence, because project types, number of partners, team compositions and contractual obligations differ substantially across these temporary project-based organizations. On the whole, we speculate that the variety of industry types (each with varying levels of dependence on local institutions) and work processes (each with varying levels of reciprocal interdependence) across the set of studies listed in Table 1 partially explains the discordant nature of their conclusions concerning the impact of CD on GA performance.

The fourth and final issue that limits comparability across the studies cited in Table 1 is that few have controlled for the dynamic effects of learning; yet, one would think that friction arising from CD should diminish as learning accumulates between the parent and partner. For example, in the case of foreign entries, if both the entrant and the local host organizations mutually adapt their work practices and routines, they can learn to work together more harmoniously (Barkema et. al., 1997), and there should be less external friction. Similarly, in the case of IJVs, if a shared culture emerges as new rules, roles, and routines are coded into improved ways of making decisions and taking action (Levitt & March, 1988), internal friction should decrease. And finally, as expatriates gain familiarity with local institutions, they can learn to anticipate potential problems and deal with them more effectively. Several of the studies cited in Table 1 indicate that more controls are necessary in this area (e.g., Barkema, et. al., 1997; Hu & Chen, 1996). In the absence of controls for two-way accumulated learning, it is difficult to assess the initial impacts of CD and how these impacts diminish as experience accumulates over time.

In conclusion, across the set of studies summarized in Table 1, four issues encumber meaningful comparison and meta-level interpretation:

- (1) limited comparability of the performance measures (dependent variables);
- (2) lack of standard approaches to calculation of the CD metric (independent variables);
- (3) lack of controls for the levels of interdependence between cross-cultural actors and between the foreign actor and local institutions; both of these kinds of interdependencies determine the complexity and intensity of cross-cultural interactions (moderating variables); and
- (4) the lack of controls for mutual learning (moderating variable).

Thus, the connection between CD, friction and GA performance remains unclear and more controlled investigation is necessary to understand the complex and intricate relationship between these variables.

### *Hypotheses*

Building on these past studies, and on the theoretical contention that cultural similarity increases harmony and decreases friction, the present study examines the following research questions: First, does culture impact performance? Operationally, do US high tech firms, as a class, consistently achieve higher success rates in some partner countries versus other partner countries? Second, can cultural theory be used to predict performance in different national cultures? Operationally, does a CD index, calculated using the GLOBE study value dimensions, explain the pattern of partner performance across different national cultures? These two questions are the basis for the following two hypotheses:

**Hypothesis One:** If cultural similarity is a primary determinant of success, then similar firms, operating similar partnerships, should achieve similar relative levels of success in each foreign country, and thus a similar pattern of success across a portfolio of partnerships in a shared set of foreign countries.

**Hypothesis Two:** The greater the CD between US high technology firms and their foreign partners, the lower the overall satisfaction of their foreign partners.

## **Research Design**

This section presents the approach to data collection, the independent and dependent variables, and the strengths and limitations of the study.

### *Approach to Data Collection*

The approach we used was to collect and consolidate global partner satisfaction data from several U.S. high tech firms, into a single database for analysis. It is common for large U.S. high tech firms to manage a portfolio, or several portfolios, of global partners that include enterprise channel partners, solutions partners, value added resellers, systems integrators and affiliates. Such firms often have a department employing several research analysts who conduct annual partner satisfaction surveys to gauge success levels and trends in these various partner programs. After talking with managers employed in several of these departments, we learned that usually the first question, or the last question, on such surveys is worded, “Rate your overall satisfaction with the ‘High Tech Company X’ partner program.” Since most firms ask this generic question as a standard Likert scale response item, it was possible to combine the data collected by several different high tech firms into a single database, to analyze for cross-country and cross-firm trends.

To create value for the firms, we provided the following three deliverables: a custom report with graphs and tables benchmarking their level of success in international partnering against the mean and the variance of comparable firms in each foreign country; the results from an analysis to check if partnership outcomes could be predicted using existing cultural theory (i.e., the GLOBE study data); and, a reference list of helpful and relevant literature resources.

Two criteria were used in selecting a target population of firms: the presence of a global partner program noted on each firm’s corporate website, and the availability of an executive contact at each firm,. In the end, the target population included Cisco, Hewlett-Packard, IBM, Intel, Microsoft, Nortel Networks, Seibel, Sun Microsystems, VeriSign and Veritas. After several months of emails and teleconferences with managers and

executives at each of the firms listed above, we engaged sponsors at three firms. After signing an appropriate non-disclosure agreement, the sponsors were asked to email a spreadsheet containing their global partner satisfaction data. Specifically, they were asked to provide, at the minimum, two data fields from their 2003 partner satisfaction survey: (1) overall partner satisfaction level, and (2) partner country. The executives were largely unwilling to provide additional context and control data beyond these two fields, expressing concerns of confidentiality, and explaining that such data is “highly sensitive and core to competitiveness.” Although, Firm 2 did provide one additional data field of importance, an ordinal primary ID code indicating the sequence of partner establishment. This permitted us to control for accumulated partnering experience.

#### *Independent variable*

The main independent variable, CD, was calculated based on the value, practice and leadership dimensions published in the GLOBE study (see House et. al., 2004). The GLOBE study integrates 10 years of research, by a worldwide network of 171 social scientists in 62 countries, who sampled 17,000 middle managers in the food processing, financial and telecommunications industries. The study quantified values and practices along nine dimensions: performance orientation, assertiveness, future orientation, humane orientation, institutional collectivism, in-group collectivism, gender egalitarianism, power distance and uncertainty avoidance. Cultural values were measured with *Should Be* questionnaire responses, and cultural practices were measured with *As Is* questionnaire responses. In addition, the study quantified culturally endorsed dimensions of leadership, along six dimensions: charismatic/value-based, team oriented, participative, humane oriented, autonomous and self-protective. The leadership dimensions, which are significant at both the nation and country cluster levels of analysis, represent the mental models or beliefs shared by people in a common culture about the kinds of attributes, personality characteristics, behaviors and skills that contribute to effective leadership (Dorfman, et. al., 2004).

To test hypothesis one, the global partner’s country was used as a proxy for its national culture. To check hypothesis two, three variations of CD scores were prepared

using the Kogut and Singh (1988) method, with an aim of comparing the relative explanatory power of the value, practice and leadership dimensions as predictors of partner performance. The scores were computed as follows, on both individual and aggregate dimensions: (1) value distance (VD) between the US and each partner country, (2) practice distance (PD) between the US and each partner country, and (3) leadership distance (LD) between the Anglo societal cluster and the nine other societal regions defined by the GLOBE scholars (Dorman et. al., 2004). In addition, multivariate regression was performed to test if unique beta-weighted combinations of the individual VD, PD and LD dimensions could more accurately explain the variance in partner satisfaction.

#### *Dependent variable*

The dependent variable is the overall satisfaction of key managers within each partnership, as used in many prior studies (e.g., Killing, 1983; Hatfield & Pearce, 1994; Lasserre, 1999). Overall satisfaction is a subjective measure of performance. It is not a financial measure, such as profitability, market share or rate of return. Nor is it an objective measure, such as GA survival, duration, stability or number of contract renegotiations.

No single performance measure is without flaws (Katsikeas et. al., 2000). Measuring GA performance has always created difficulty for researchers because performance is a complex and multi-dimensional phenomenon. While objective and financial measures are the most concrete, they have two primary shortcomings (Lasserre, 1999). First, they are difficult to obtain in large-scale samples because they are deemed sensitive and confidential and firms seek to preserve competitive advantage by concealing all but consolidated corporate reports (Geringer & Herbert, 1989). Second, these measures often lack comparability, especially in the international arena, because accounting conventions, tax rates, currencies and purchasing power parity can vary tremendously across international borders. Likewise, subjective measures have also been criticized, with perceptual bias being the primary concern (Geringer & Herbert, 1989).

In spite of these criticisms, satisfaction, as a subjective measure of performance, has three primary advantages. First, researchers have found positive correlation between satisfaction and other objective measures including duration, stability (Geringer & Herbert, 1989) and survival (Beamish & Banks, 1987; Geringer & Herbert, 1989). This suggests that managers incorporate financial and objective aspects of performance into their perceptual performance evaluations when they answer questions about perceived satisfaction on survey questionnaires. Thus, overall partner satisfaction provides some, if limited, insight into the impact of CD on financial and objective attributes of performance. Second, even on its own, as Lasserre (1999) has pointed out, “satisfaction or dissatisfaction of the people involved in management reflects an important dimension of joint venture performance regardless of whether the joint venture is financially or commercially successful.” Third, subjective measures make it possible to collect large-scale, comparable samples by alleviating the concerns of confidentiality that are aroused in corporate sponsors who are reluctant to provide other more sensitive objective and financial data. For example, in the present study, the overall partner satisfaction measure of performance facilitates an unprecedented comparison of performance across three firms, 44 countries, and more than 4500 partnerships. Thus, a weakness in terms of objectivity, is a strength in terms of comparability. In summary, satisfaction is useful as a measure of performance not only because it is positively correlated to other financial and objective measures, but also because it has intrinsic value as an important dimension of performance and because it facilitates expansive data comparison across countries and companies.

Table 2 provides a summary of the raw satisfaction data provided by the three high tech firms and shows descriptive statistics and sample sizes for each partner country. This data was initially collected via an annual web-based partner satisfaction survey questionnaire from key local managers in each partnership. An examination of Table 2 shows that Firm One provided data from approximately 2300 partners in 40 countries; Firm Two, data from approximately 2000 partners in 29 countries; and Firm Three, data from approximately 300 partners in 14 countries. To prepare the data for correlation, all individual partner scores were standardized to z scores (not shown in Table 2). The z

scores indicate how far and in which direction each partner score deviates from its distribution's mean, expressed in units of the distribution's standard deviation.

TABLE 2  
Means, Standard Deviations and Partner Countries for the Dependent Variable

ID	Partner Country / Region <sup>a</sup>		Firm 1			Firm 2			Firm 3		
			Mean <sup>b</sup>	S.D.	n	Mean <sup>b</sup>	S.D.	n	Mean <sup>b</sup>	S.D.	n
1	Australia	A	6.72	2.03	159	3.86	0.71	117	8.25	1.54	12
2	Canada	A	7.32	1.89	410	4.07	0.72	57	6.73	2.59	33
3	Ireland	A	6.44	1.42	9						
4	New Zealand	A	7.07	1.49	42	3.60	0.65	34	6.00	3.78	8
5	South Africa	A				3.53	0.75	16			
6	United Kingdom	A	7.28	1.98	167	3.87	0.77	97	5.42	3.02	33
7	China	CA	7.76	1.53	213	4.01	0.68	603	7.44	1.94	9
8	Hong Kong	CA	6.85	1.59	104	4.15	0.72	145			
9	Japan	CA	7.55	2.21	87				6.13	2.36	16
10	Singapore	CA	7.43	1.50	14	3.93	0.71	75			
11	Taiwan	CA	7.17	1.57	46	3.74	0.80	30	5.00	2.14	8
12	Greece	EE	7.29	2.69	7	4.06	0.85	15			
13	Hungary	EE				4.02	0.71	145			
14	Poland	EE	7.83	1.27	12						
15	Russia	EE	5.91	2.17	11	3.99	0.65	83			
16	Austria	GE	6.00	2.45	9						
17	Belgium <sup>c</sup>	GE	8.41	0.91	29	3.54	0.78	13	8.17	0.75	6
18	Germany	GE	7.55	1.91	110	4.25	0.50	5	6.35	2.44	126
19	Netherlands	GE	7.76	1.28	33				6.73	2.15	15
20	Switzerland	GE	6.89	1.07	37	3.98	0.71	143			
21	Brazil	LA	8.26	1.55	144						
22	Chile <sup>c</sup>	LA	8.52	1.63	67						
23	Ecuador	LA	8.38	1.19	8						
24	Mexico	LA	8.13	1.36	31	4.07	0.84	60			
25	Panama <sup>c</sup>	LA	7.91	1.51	11						
26	Venezuela	LA	8.31	1.44	13						
27	Argentina	LE	8.07	1.89	26	3.94	0.86	16			
28	France	LE	7.57	1.83	108				7.4	1.52	5
29	Israel	LE	9.07	0.47	14	4	0.75	5			
30	Italy	LE	7.89	1.63	89	4.03	0.65	33			
31	Portugal	LE	6.79	1.45	34	3.94	0.43	16			
32	Spain	LE	7.22	1.71	73	3.98	0.83	98			
33	Turkey	ME	8.96	1.10	25						
34	UAE <sup>c</sup>	ME	5.33	2.34	6						
35	Denmark	NE				4.14	0.57	36			
36	Norway <sup>c</sup>	NE				4.40	0.80	25			
37	Sweden	NE	7.15	1.28	13				7.60	1.14	5
38	Colombia	SA	8.50	0.53	8				5.18	2.27	12
39	India	SA	6.75	2.28	40	4.15	0.71	46			
40	Indonesia	SA				3.78	0.54	44			
41	Malaysia	SA	6.63	2.45	8	3.79	0.69	27			
42	Phillipines	SA	7.29	1.98	7	3.86	0.68	50			
43	Republic of Korea	SA	8.33	1.73	30	3.82	0.45	10			
44	Thailand	SA	6.14	2.46	21						
	Total		7.47	1.74	2275	3.98	0.71	2044	6.39	2.40	288

<sup>a</sup> A = Anglo, CA = Confucian Asia, EE = Eastern Europe, GE = Germanic Europe, LA = Latin America, LE = Latin Europe  
ME = Middle East, NE = Nordic Europe, SA = South Asia

<sup>b</sup> The scores are based on a 10 point Likert scale for Firms 1 and 3, and a 5 point Likert scale for firm 2.

<sup>c</sup> GLOBE study data unavailable for these countries. Thus, cultural distance scores could not be calculated at the country unit of analysis for these countries. However, data for these countries was included at the regional unit of analysis, as specified.

### *Strengths and Limitations*

This study corrects the flaws of prior studies in three major areas. First, the partnerships are truly comparable. All of the data were provided by channel partners in the high-tech industry. Controlling for industry and partner type eliminates the variance introduced in prior studies, especially in studies of IJVs, which vary in terms of external dependence on local institutions and internal reciprocal interdependence between cross-cultural actors. Moreover, the nature of these high tech partnerships with almost zero potential for external friction in terms of transaction or opportunity cost growth, limits the source of potential friction arising from CD to internal origins within each partnership. Furthermore, the non-interdependent nature of the work process between the host and home managers severely reduces the possibility of coordination cost growth. Therefore, only principal-agent problems remain as a potential source of internal friction. Thus, this study offers a focused investigation into the severity of primarily agency cost growth as a source of internal friction between parent and partner.

Second, the GLOBE study data set and the performance data set were both collected at the same point in time, within a three year time span at the turn of the millennium. This mitigates the concern of researchers who are of the popular opinion that cultures, with pressures of globalization, are converging towards postmodern values (e.g., Inglehart, 1999) and have been skeptical of the explanatory power of Hofstede's dimensions in more recent periods (see Barkema & Vermeulen, 1997).

Third, the high tech performance data set provides a large number of partnerships in each partner country. This increases the potential significance of the findings and the potential generalizability of the result to other firms in the high tech sector.

The primary flaws of this study are two-fold: First, as previously discussed, the performance measure, overall partner satisfaction, lacks objectivity. Second, controls for learning of the parent and acculturation of the partners were not applied for Firm 1 or Firm 3. The implication is that the hypothesized negative impact of CD on level of satisfaction may be less than expected for the entire set of partners that belong to these

two firms, especially if older, more mature, partnerships had benefited from increased harmony and diminished friction as a result of adaptation of protocols and practices and other aspects of mutual learning between partner and parent.

## **Findings**

Hypothesis one states that if cultural similarity is a primary determinant of success, then similar firms, operating similar partnerships, should achieve similar relative levels of success in each foreign country, and thus a similar pattern of success across a portfolio of partnerships in a shared set of foreign countries. However, the evidence from the three high tech firms did not support this hypothesis. Instead, the relationship between the set of average partner satisfaction scores reported by each firm, and the intersecting set reported by the other two firms, shown in Table 2, was weak and insignificant. In other words, there was not a systematic pattern of the three firms achieving higher levels of partner satisfaction in country A, B and C, and lower levels in country X, Y and Z. Evidently, partner country alone is not a significant determinant of partnering success.

Hypothesis two asserts that the greater the CD between US high technology firms and their foreign partners abroad, the lower the overall satisfaction of their foreign partners. To test this hypothesis, CD was calculated in three ways: value distance (VD), practice distance (PD) and leadership distance (LD). Contrary to the hypothesis, Tables 3, 4 and 5 show that there is little, if any, support for a relationship between CD and performance for any of these three elements of CD. In fact, the only CD dimensions that were significantly correlated in the expected direction to partner satisfaction were the humane orientation PD dimension for Firm 2; and the performance orientation, gender egalitarianism, and aggregate VD index dimensions for Firm 3. Further, we found no single, aggregate, or even multivariate combination of VD, PD, or LD dimensions that could consistently predict performance across the three firms. When the ordinal partner establishment sequence data was used to control for mutual learning between Firm 2 and its partners, there was no improvement in the strength of the correlations. Thus, at least in the case of the high tech industry, the findings suggest that CD has limited applicability as a predictor of overall partner satisfaction.

Surprisingly, most of the correlations that were significant were negative to the expected direction, suggesting that CD actually enhances performance. Indeed, for Firm 1, significant, positive correlations were found on five of the nine individual VD dimensions, eight of the nine individual PD dimensions, four of the six individual LD dimensions, as well as all three aggregate VD, PD and LD index dimensions. Likewise, for Firm 2, significant, positive correlations were found on three of the nine individual VD dimensions, three of the nine individual PD dimensions, and all six of the individual LD dimensions, as well as both the aggregate VD and LD dimensions. These positive correlations, although weak, were unexpected. As a consequence, attempts at multivariate regression provided little additional insight. Accordingly, the study best fits into the literature with the first group of studies cited in Table 1, which imply that CD might actually enhance performance, if only very slightly (Hu & Chen, 1996; Park & Ungson, 1997; Sim & Ali, 2000; Morosini, Shane & Singh, 1998).

TABLE 3

## Means, Standard Deviations and Correlation Matrix of Value Distance (VD) at the Country Level

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1 Uncertainty avoidance VD	0.11	0.13												
2 Future orientation VD	0.14	0.17	0.38											
3 Power distance VD	0.17	0.17	0.11	0.24										
4 Institutional collectivism VD	0.11	0.14	0.30	0.01	0.06									
5 Humane orientation VD	0.12	0.12	0.03	0.09	0.09	0.07								
6 Perform orientation VD	0.18	0.26	0.32	0.64	0.24	0.22	0.09							
7 In group collectivism VD	0.23	0.20	-0.13	0.16	0.29	-0.10	0.17	0.06						
8 Gender egalitarianism VD	0.11	0.15	0.46	0.36	0.35	0.32	-0.01	0.23	0.16					
9 Assertiveness VD	0.24	0.29	0.13	0.02	-0.07	0.33	-0.25	-0.01	0.07	0.04				
10 Aggregate VD INDEX	1.42	0.81	0.52	0.65	0.49	0.47	0.18	0.66	0.40	0.59	0.41			
11 Firm 1 Overall Partner Satisfaction	0.00 <sup>a</sup>	1.00	0.02	0.04†	0.08***	0.08***	0.02	0.04†	0.06**	0.02	-0.03	0.06**		
12 Firm 2 Overall Partner Satisfaction	0.00	1.00	0.03	0.02	0.04†	0.01	0.00	0.05*	0.02	0.06**	-0.03	0.04†	0.09	
13 Firm 3 Overall Partner Satisfaction	0.00	1.00	-0.07	-0.03	0.03	-0.08	-0.01	-0.15*	-0.01	-0.11†	-0.07	-0.11†	0.06	0.06

Significance Levels for Two-Tailed t Test: † =  $p < 0.1$ , \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

<sup>a</sup> The mathematics of the z score transformation are such that if every item in a distribution is converted to its z score, the transformed scores will necessarily have a mean of 0 and a S.D. of 1. For the raw scores, Firm 1: Mean = 7.47 S.D. = 1.74, Firm 2: Mean = 3.98, S.D. = .70, Firm 3: Mean = 6.39, S.D. = 2.40

TABLE 4

## Means, Standard Deviations and Correlation Matrix of Practice Distance (PD) at the Country Level

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1 Uncertainty avoidance PD	0.19	0.20												
2 Future orientation PD	0.12	0.15	0.40											
3 Power distance PD	0.14	0.17	0.09	-0.08										
4 Institutional collectivism PD	0.24	0.27	0.48	0.14	0.57									
5 Humane orientation PD	0.12	0.33	0.06	0.01	0.33	-0.07								
6 Perform orientation PD	0.17	0.24	-0.05	0.01	-0.12	-0.18	-0.09							
7 In group collectivism PD	0.12	0.14	0.08	-0.01	0.26	0.02	0.04	0.12						
8 Gender egalitarianism PD	0.22	0.32	0.46	0.15	-0.20	-0.09	0.19	0.25	0.05					
9 Assertiveness PD	0.17	0.15	0.16	0.02	0.20	0.29	-0.06	0.35	0.35	0.00				
10 Aggregate PD INDEX	1.51	0.91	0.65	0.34	0.46	0.48	0.46	0.31	0.35	0.55	0.46			
11 Firm 1 Overall Partner Satisfaction	0.00	1.00	0.07**	0.08***	0.06**	0.13***	-0.03	0.05*	0.06**	0.04†	0.13***	0.10***		
12 Firm 2 Overall Partner Satisfaction	0.00	1.00	0.01	0.03	0.00	-0.03	-0.07**	0.02	0.04†	0.00	0.02	0.00	0.09	
13 Firm 3 Overall Partner Satisfaction	0.00	1.00	0.01	0.01	0.00	-0.04	-0.02	-0.01	0.06	0.02	0.01	0.00	0.06	0.06

Significance Levels for Two-Tailed t Test: † =  $p < 0.1$ , \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

TABLE 5

## Means, Standard Deviations and Correlation Matrix of Leadership Distance (LD) at the Regional Level

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1 Charismatic LD	0.36	0.57										
2 Team Oriented LD	0.15	0.19	0.72									
3 Participative LD	0.36	0.35	0.69	0.51								
4 Humane Oriented LD	0.23	0.28	-0.17	-0.31	-0.38							
5 Autonomous LD	0.16	0.14	-0.17	0.18	0.05	-0.18						
6 Self-Protective LD	0.28	0.24	0.50	0.58	0.88	-0.40	0.04					
7 Aggregate LD INDEX	1.54	1.11	0.90	0.77	0.85	-0.11	0.05	0.75				
8 Firm 1 Overall Partner Satisfaction	0.00	1.00	0.04†	0.18***	0.02	0.03	0.12***	0.07**	0.09***			
9 Firm 2 Overall Partner Satisfaction	0.00	1.00	0.06**	0.05*	0.05*	0.04†	0.06**	0.05*	0.08***	0.09		
10 Firm 3 Overall Partner Satisfaction	0.00	1.00	-0.02	0.00	-0.02	0.00	0.02	-0.04	-0.02	0.06	0.06	

Significance Levels for Two-Tailed t Test: † =  $p < 0.1$ , \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

## Discussion

Why are the correlations between CD and partner satisfaction, although small, counter to the expected direction? The answer to this question is central to interpreting the findings in the present study, and to deciphering the conflicting empirical findings cited in Table 1. To shed light on this question, we revisit the four issues discussed in Section 2.3, with emphasis on how these four issues may have affected the present study.

### *Shortcomings of the Subjective Performance Measure*

The first issue is that the partner satisfaction variable is subjective. There is reason to believe that cultural variation in response patterns on survey items, and in the perceived benefit of partnering, may have impacted the findings. Upon further inspection of the data, beyond hypothesis testing, it was discovered that Anglo-region partners had posted many of the lowest evaluations of overall partner satisfaction. So, instead of being among the best performers, as their low CD scores would have predicted, they were actually among the worst performers. Similarly, the Latin American-region partners, who, in spite of medium to high cultural distance, actually posted some of the highest average satisfaction scores.

There are two plausible explanations for this unexpected finding, both related to the subjective nature of Likert scales. The first explanation is that even if partners from different cultures perceive performance in similar ways, they may report it differently on survey questionnaires, guided by culturally-supported values and norms about how a partner *should* respond on a survey. It seems that some cultures are more openly forthright and honest, and yet others are more diffident and harmonious in their responses. For example, the Anglo-region partners, who are among the most individualistic, most performance oriented, least power distant and accustomed to an autonomous leadership style, might be more confident to provide candid and critical responses if they feel a partnership is performing poorly. In contrast, the Latin American-region partners, who are more collectivist, less performance oriented, more power distant, and less attuned to an autonomous leadership style, might refrain from open judgment on survey items. This explanation is supported by both the Firm 1 and Firm 2 data, which shows positive, and

significant, correlation between partner satisfaction and in-group collectivism (both VD and PD), power distance (both VD and PD), performance orientation (VD), and the autonomous dimension (LD).

The second explanation is that foreign partners evaluate performance against their local reference-frame, which includes attributes of the local economic situation, such as comparative business opportunities and expectations for fair profitability and investment growth. For example, Latin American partners, in less-developed countries, might perceive greater relative productivity gains, profits and reputational benefits from the training programs and technology transfer opportunities afforded them by a sophisticated U.S. high tech partner, than an equivalent Anglo partner from a more-developed country. This explanation is partially supported by the data, given the much higher satisfaction scores reported in the Latin countries. However, this explanation breaks down for other less-developed countries outside of Latin America, such as Russia, Malaysia and Indonesia, where the average satisfaction scores are well below average.

Upon presenting these possibilities to the managers at the three firms, they confirmed that some partner countries are routinely more critical in their evaluations, simply as a matter of habit. One manager summarized this best when he remarked,

*In country X, you need to get an 8.5 to know your partnership is in good shape, but in country Y, on the average they are much tougher raters, so you only need a 7.0 to be at a satisfactory [level of performance].*

Other researchers have noted the possibility of a cultural bias in responses to survey items, and have tried to design questionnaires to minimize this tendency. Making this very point, Lincoln and Kalberg (1992), quoting Dore (1973), state,

*In constructing our questionnaire attitude items, we took precautions to offset one kind of potentially troublesome response bias in contrasting the U.S. and Japan. An apparent manifestation of Japanese respondents to give average or noncommittal answers, while Anglo-American respondents are somewhat more prone to take strong, even extreme stands on issues (Dore, 1973). To offset this*

*tendency, we expanded the number of response codes in the Likert-scaled items on the Japanese questionnaire from five to seven..."*

In summary, the data suggest two possible explanations to account for the unpredicted positive correlations between CD and partner satisfaction, which can be traced back to the subjective performance measure. First, there may be cultural variation in how partner's express satisfaction and dissatisfaction, on surveys. Second, the relative level of development, economic opportunity and prosperity in a partner nation may impact the reference-frame against which satisfaction is perceived by local partners.

### *Shortcomings of the CD Metric*

The second issue pertains to shortcomings in the independent CD metric. Shenkar (2001) has recognized five illusions—symmetry, stability, linearity, causality and discordance—associated with the metric, all which cast doubt on its applicability as a predictor of cross-cultural performance. In addition, Harzing (2003) notes that, “an almost blind confidence in one specific measurement of CD, [has] led researchers in this field to systematically overestimate [its] role.” Barkema, Shenkar, Vermeulen and Bell (1997) raised similar questions when they wrote,

*Culture is a complex phenomenon and embodies a host of values, beliefs, and norms, many of which are subtle, intangible, and difficult to measure. Interpretation of culture as a unidimensional, aggregate phenomenon, although popular in the foreign trade literature, oversimplifies the complex construct and may explain the mixed results studies have yielded regarding the impact of CD on foreign expansion.*

At the theoretical root of approaches to dimensionalizing culture, there is considerable concern about the validity and measurement of the constructs. In an extensive review of the individualism and collectivism literature, Oyserman et. al. (2002a) present evidence that small differences in scales and samples generate large differences in results, and that European Americans are not necessarily more individualistic and less collectivistic than other American groups from different ethnic and national origins. In response to this study, several scholars join with Oyserman et. al. (2002a) in raising questions about the cross-cultural validity of attitudinal surveys (Kitayama , 2002), about the downplaying of contextual variation (Miller, 2002; Fiske, 2002), and about the disproportionate influence

that Hofstede's (1984) analysis and dimensions have had on the field. Therefore, the limitations of the CD metric may be partially to blame for the lack of hypothesis validation in the present study.

#### *Lack of Friction in High Tech Partnerships*

The third issue derives from the fact that varying degrees of internal reciprocal interdependence in a work process and external embeddedness in the local environment moderate the transfer of cultural distance into friction. Thus, another possibility for the lack of correlation between CD and satisfaction is that the target population of high tech partnerships may not have had enough cross-cultural interaction to generate friction at a level that could hinder performance. Compared to other types of GAs, high tech partnerships are relatively simple, without the coordination complexity and resulting intensity of cross-cultural interaction that might occur, for example, in a multi-partner IJV collaborating on a complex design task. Furthermore, in high tech partnerships, the U.S. parents have little, if any, dependence on local legal, economic and political institutions or other informal practices and protocols in the local host environments. Thus, the main potential for friction comes from the translation of cultural distance into principal-agent problems. Apparently, such principal-agent problems, when taken in relative isolation, as they were in this study, are not a fundamental driver of partner dissatisfaction.

#### *Limited Controls for Learning and Acculturation*

The fourth issue is that a lack of controls over the longitudinal effect of mutual learning may have diluted the potency of the measured impact of CD on performance. This point is especially salient with respect to the fact that U.S. high tech firms who operate global portfolios of partners constantly seek to improve their approach, staffing and management systems, which over time become quite sophisticated and robust, so that they become increasingly successful across a variety of different cultures. Furthermore, each of the foreign partners undergoes a process of acculturation. As the foreign partners adapt to the parent's systems and socio-cultural orientation, they experience a greater level of confidence and control. In the present study, controls for mutual learning were

only available from Firm 2. Yet, even with these controls in place, the effect of cultural distance on overall satisfaction was unexpectedly weak. Not having isolated the longitudinal effects of mutual learning for the other two firms, it was impossible to assess the initial negative consequences of CD, and how these might have diminished with learning of the parent and acculturation of the partners.

## **Conclusion**

International management scholars have long understood the difficulty of working abroad in a foreign cultural environment. However, there is no statistically significant evidence, from this study, nor from prior studies, that a one-dimensional metric that purports to measure cultural distance is a systematic determinant of GA performance. The contribution of this paper has been to synthesize discordant findings in the literature, examine the roots of this dissent, and present empirical data to shed further light on the lack of previously hypothesized relationships between CD and GA performance.

The present study reinforces a growing sentiment in the literature that an aggregate CD index has little predictive power concerning GA performance. The Kogut & Singh approach to calculate CD seems to have reached a dead end; there is little agreement across the findings of the empirical studies shown in Table 1, and the present study only serves to confirm this lack of correlation. As cautioned by Shenkar (2001), Barkema et. al. (1997), and Harzing (2003), unless researchers develop a more sophisticated approach, it is dangerous to continue to oversimplify culture with unidimensional distance measures. Thus, the primary value of this study has been to help upcoming researchers understand and avoid the pitfalls of duplicating this approach.

The following suggestions are intended to guide future research on the relationship between cultural distance, friction and performance.

- First, from a theoretical standpoint, more work is needed to establish the validity and measurement of culture and cultural distance. The socially contextualized model of cultural influences proposed by Oyserman et. al. (2002b) provides valuable suggestions for ways to enhance future research in this direction.

- Second, it is essential to analyze the variables that could mediate this relationship. Mutual learning is an obvious one. Less obvious, is the degree of dependence, or embeddedness of a firm in the foreign environment, which determines the necessity, complexity and intensity of cross-cultural interaction between the foreign parent and local partners.
- Third, researchers should de-emphasize CD as an independent variable (Shenkar, 2001), recognizing that the potential for friction is minimized through good work process and organizational design that reduces cross-cultural interdependencies, and also through accumulated learning and mutual adaptation between parent and partner.
- Fourth, there is a need for studies to sharpen the distinction between the different types of cross-cultural friction. A starting point for this might be the four kinds of frictional cost growth that we identified in our review of prior literature: transaction cost growth, opportunity cost growth, coordination cost growth, and agency cost growth. More scrutiny of the factors that influence the translation of cultural distance into these different types of friction could be productive. Case studies should focus specifically on how cultural friction is triggered, how it is resolved and how its consequences are manifested.
- Fifth, it would be beneficial to improve our understanding of how different cultures interpret survey scales, and how researchers can control and correct these biases.
- Finally, case studies by our colleagues in the Collaboratory for Research on Global Projects (<http://crgp.stanford.edu>) and others have confirmed that national values, the cornerstone of the Hofstede and Globe cultural distance dimensions, are only one component—the cultural-cognitive component—of the broader set of cultural-cognitive, normative and regulative “institutions” (North, 1990; Scott, 1995; Aoki, 2001; Greif, in press) that GA participants from a given country bring to a partnership. Differences in regulative institutions among cross-national partners, and in normative institutions (including industrial organization, and the roles played by different participants in the industry) are a common source of “institutional exceptions” (Horii et. al.,

in press) that cause friction between GA partners and thus generate unexpected “institutional transaction costs” (North, 1990) for GAs. This stream of work suggests that a broader institutional conception of national differences will be more highly correlated with GA outcomes, and hence might provide a more useful set of dimensions for future research on how national differences impact global alliances.

As there is no straightforward relationship between cultural distance and partner satisfaction, or any other measure of performance that we have found thus far, it is suggested that parent firms consider each nation-state and foreign partner individually. An individual approach recognizes that the interactions between cultural distance, mutual learning, perceived satisfaction and other measures of performance, as well as the personality, cultural competence and experience of key management, are complex and difficult to approach with a one-size-fits-all, corporate-wide solution to global partnering. The three US-based high tech firms demonstrate this point, each having achieved best and worst outcomes in entirely different sets of countries. The implication is that each of these firms, and every global firm, has an unlimited opportunity to enhance their partner programs and performance.

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