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CROSS-NATIONAL DISTANCE: CONCEPTS, MEASURES AND RELATIONSHIPS

ABSTRACT

Cross-national distances between national cultures and national institutions have been studied extensively in the last two decades, particularly with respect to their effects on the conduct of international business. Yet varying levels of analysis, inconsistent definitions, and different operationalizations of cross-national distances inhibit theoretical and empirical advances. Three approaches to non-geographic cross-national distance permeate the literature: psychic distance, national cultural distance, and institutional distance. The meaning of psychic distance has become muddled by evolving operationalizations, from objective indicators to individual perceptions. National cultural distance has been confused with both psychic distance and institutional distance. Various and inconsistent institutional arrangements and business practices are used as measures of institutional distance. This article reviews overlaps, inconsistencies, and ambiguities in the definitions and measurements of psychic, national cultural and institutional distance; suggests a way to rationalize the three constructs; and offers two competing models to explain the role of all three distances in international business decisions.

Key Words: cultural distance, psychic distance, institutional distance, cross-cultural management

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INTRODUCTION

Cross-national distances among countries have become a critical element in international business research in the last two decades, invoked to explain successes and failures of mergers, product introductions, alliances, investments, and management practices. Three concepts and multiple measures of non-geographic distance between countries permeate the international business literature, leading to conceptual confusion, inconsistent empirical results, and slow growth in the understanding of cross-national distances for international business.

This paper first reviews research results for three concepts of cross-national distance: psychic distance, national cultural distance, and institutional distance. Geographic distance will not be addressed in any detail because, though important, (e.g., Ambros and Ambros, 2009; Berry, Guillen, and Zhou, 2010; Ghemawat, 2001; Hakanson and Ambos, 2010) its measurement is much less controversial and less convoluted than measurement of the other three cross-national distances.

Second, this review offers a definition, level of analysis, and means of measurement for each of the three that clearly distinguishes among them conceptually and empirically. Third, it proposes two competing models of international business decisions that incorporate all three concepts of distance but with different inter-relationships. Finally, it identifies several issues for future research that should be addressed so that the effects of distances can be understood correctly and be taken into account in international business decisions.

THREE CONCEPTS OF CROSS-NATIONAL DISTANCE

Psychic Distance

The concept of psychic distance was introduced in the English-language international business literature by Beckerman (1956) to describe differences between countries, but psychic distance research did not take off until scholars at Uppsala University developed and popularized the concept as part of their work on understanding the success of foreign market development efforts (e.g., Johanson and Vahlne, 1977; Vahlne and Wiedersheim-Paul, 1973). They defined psychic distance as, “the sum of factors preventing the flow of information from and to the market.” (Johanson and Vahlne, 1977: 24). They suggested that psychic distance was market-specific knowledge about the business climate, and characteristics of customers and country customs.

Though Beckerman defined psychic distance as subjective perceptions of managers, the Uppsala School researchers operationalized psychic distance in objective terms, using data available from government sources. Their measures included level of economic development and education in the host country as well as differences between Sweden and the host country on these dimensions. They also included differences in business language, differences in culture and local language, and whether or not trading channels already existed (from Nordstrom and Vahlne, 1994). The assumption was that distance led to uncertainty and risk in international business decisions.

Subsequent researchers changed the definition and operationalization of psychic distance, leading to some of the conceptual and methodological confusion we see today. For example, O'Grady and Lane (1996) define psychic distance as, "a firm's degree of uncertainty about a foreign market resulting from cultural differences and other business difficulties that present barriers to learning about the market and operating there" (1996: 330). Unfortunately, O'Grady and Lane go on to use psychic distance and national cultural distance (next section) interchangeably, as do others (e.g., Conway and Swift, 2000; Eriksson, Majkgard, and Sharm, 2000; Fletcher and Bohn, 1998; Sethi, Guisinger, Phelan, and Berg, 2003), adding confusion to the concept. However, O'Grady and Lane do make a very important contribution; they define psychic distance as individual *perceptions*, (as did Beckerman originally) not objective measures of differences. While this is not what the Uppsala researchers meant by psychic distance, it is consistent with the way in which the research literature has evolved in the last decade (e.g., Evans, Mavondo, and Bridson, 2008; Hakanson and Ambos, 2010; Sousa and Bradley, 2005) and it helps us differentiate among various concepts of distance and different levels of analysis of distance.

Perhaps the clearest discussions of psychic distance as perceptions come from Sousa and Bradley (2005, 2006) and Evans et al. (2008). They define psychic distance as individual-level perceived differences between countries. Psychic distance is measured by asking decision-makers about their perceptions of differences between countries on a number of criteria. These are intentionally not objective measures. In their conceptualization, (perceived) psychic distance is an individual-level phenomenon that helps explain why decision-makers pursue one direction over another. This notion of psychic distance allows differences in decision-makers' information processing to affect outcomes. The assumption is that perceived distance affects business decisions along with more objective country-level distance.

Sousa and Bradley measure psychic distance as perceptions of climate, consumer purchasing power (wealth), life styles, consumer preferences, literacy and education, language, and cultural values. They find that psychic distance predicts a number of market entry decisions (Sousa and Bradley, 2005). They also show that psychic distance is not the same as national cultural distance, consistent with others (e.g., Ellis, 2008; Hakanson and Ambos, 2010; Nordstrom and Vahlne, 1994), but is predicted by national cultural distance and by managers' values and experience (Sousa and Bradley, 2006).

Evans et al. (2008) advance the study of psychic distance through much more rigorous measurement. They operationalize psychic distance as managers' perceptions of business distance and cultural distance, measured separately and averaged. Business distance includes perceptions of the legal and political environment, market structure, the economic environment, business practices, and language. Cultural distance is measured as perceptions of Hofstede and Bond's (1988) five dimensions of national culture. Their contribution is in elaborating what should go into a measure of psychic distance – perceptions of a variety of factors that should influence business decisions. By including perceptions of the “hard” context of business (e.g., legal, economic, and political arrangements) along with perceptions of the “soft” context of business (cultural norms and values), they provide a robust measure of psychic distance. Taken together with Sousa and Bradley's concept of psychic distance, we have a very good enumeration of the elements of psychic distance.

Recently Dow and his colleagues (Dow and Karunaratna, 2006; Dow and Larimo, 2009) helped illuminate the difference between psychic distance and the objective features (stimuli) in a society that might create perceptions that make up psychic distance. Their objectively measured country-level stimuli include differences in religion, industrialization, education, language, and political systems. These objective differences are indicative of institutional distance, to be discussed in the following sections of this review. Managerial *perceptions* of these differences are psychic distance. The contributions that Dow and his colleagues make here are to (1) differentiate between psychic distance (perceptual) and the more objective stimuli that create perceived differences and (2) enumerate key dimensions of institutional distance (discussed further below) that should be reflected in any perceptual measure of psychic distance.

This review suggests that psychic distance should be defined as individual decision-makers' perceptions of differences between two countries about the conditions under which business is conducted (see Table 1). This definition does not convolute psychic

distance and other concepts and constructs of distance. Psychic distance is a perceptual measure, assessed at the decision-maker level or the firm level, based on aggregate decision makers' perceptions (e.g., Zaheer, Schomaker, and Nacham, 2012). It affects decision-makers' comfort with distances, how they translate distance into uncertainty and risk, and how they process information, weigh alternatives, and make choices.

Table 1: Summary of Three Constructs of Cross-National Distance

Construct →	Psychic Distance	National Cultural Distance	Institutional Distance
Level of Analysis	Individual	National	National
Definition	Individual decision-makers' perceptions of differences between the home country and target country concerning the context for business conduct.	Cross-national differences in "the collective programming of the mind which distinguishes the members of one human group from another."	Difference between countries with respect to institutional factors such as education, legal and, political system, industrialization, and language affecting the conduct of business.
Measurement	Decision-makers' perceptions	National indices, based on large scale surveys about cultural norms and values	National indices, based on objective or expert data about the context for business
Relationship to Decision-Makers	Incorporates individual decision-makers' biases, preferences, knowledge, and experience	Independent of individual decision-makers	Independent of individual decision-makers
Confounding Factors	Individual differences in experience and comfort with differences	Macro-economic change that affects culture indicators (e.g, national wealth)	Reliance on expert or objective data that may be flawed

Psychic distance derives from perceived differences between countries on a number of dimensions, including, consumer purchasing power, consumer preferences, literacy and education, language, legal and political environment, market structure, economic environment, business practices, and cultural values (see Table 2). Evans et al. (2008) measure their constructs with an elaborate array of items posed to executives. Sousa and Bradley (2005, 2006) measure theirs more simply, with one item per construct. We need to develop one measure of psychic distance that incorporates the various dimensions enumerated above, that is more complex than Sousa and Bradley's yet simpler than Evans' et al. (2008), that can be used across studies so that when we measure psychic distance, we

do so consistently. Because psychic distance is measured as decision-makers' perceptions, it will have to be assessed anew in any study that includes managers' perceptions as a variable.

Table 2: Measuring Three Constructs of Cross-National Distance

Psychic Distance: Use a scale to measure perceived similarity between home and host countries on the criteria below. Develop 2-4 indicators for each element of psychic distance and scale responses for analysis. Build upon Evans et al. (2008) and Sousa and Bradley (2005, 2006)	
Consumer purchasing power (wealth)	Legal, regulatory, and political systems
Consumer preferences (tastes)	Language
Market structure (industrial development)	Level of literacy and education
Economic environment (macro econ)	Cultural norms and values
National Cultural Distance: Use Hofstede's cultural dimensions	
1. Calculate the distance between countries using Kogut and Singh's (1988) arithmetic average, Barkema and Vermeulen's (1997) Euclidean distance formula, or Berry et al.'s (2010) Mahalanobis distance. Unless there is a strong theoretical reason to use the aggregated measure, use only disaggregated measures.	
2. Use the concept of congruence or fit between a cultural dimension and a management practice or firm decision, based on theoretical arguments. Never aggregate dimensions in this case.	
Institutional Distance: Objective or expert-based context for business, building on the work of Dow and Karunaratna (2006), Gaur and Lu (2007), and Berry et al. (2010).	
Economic development	Financial sector development
Macroeconomic factors	Political stability
GDP per capita	Political system (democracy vs. other)
Debt/GDP	Language
Transparency	Religion
Rule of law, legal system	Knowledge (patents)
Intellectual property protection	Education

National Cultural Distance

National cultural distance is most often based on the work of Hofstede (1980, 2001). Using managers from one multinational (IBM) in forty countries, Hofstede initially identified four dimensions along which countries vary: power distance, individualism, masculinity, and uncertainty avoidance. Since his early work a fifth dimension has been added, long-term orientation, which captures cultural characteristics in Asia that went undetected in the earlier work (Hofstede and Bond, 1988).

Hofstede defined culture as, "the collective programming of the mind which distinguishes the members of one human group from another" (Hofstede, 1980: 25). He aggregated data at the country level and developed an index number for each country on each of the four (now five) dimensions.

Despite the fact that his data were collected between 1967 and 1973 from one US-based multinational, his original four dimensions have stood the test of time and continue

to be used widely today. While his work is not without its critics (e.g., Brett and Okumura, 1998; Denison and Mishra, 1995; Schwartz, 1994; Shenkar, 2001; Steenkamp, 2001), others have validated the strengths of the dimensions over time (Barkema and Vermeulen, 2001), shown his framework to have greater impact than any other (Sivakumar and Nakata, 2001), and shown that his dimensions predict outcomes similarly to other measures of values (Berr et al., 2010; Drogendijk and Slangen, 2006; Kim and Gray, 2009). The community of scholars has continued to use Hofstede's framework more than any other (Erramilli, 1996) even though there is some evidence that economic development (increase in GDP per capita) is associated with changes in some country-specific index numbers (Tang and Koveos, 2008).

Two of the biggest criticisms of Hofstede's work are (1) an implicit assumption that cultures do not change over time and (2) that his culture dimensions reduce a much more nuanced set of values and institutions to a (too) small number of dimensions. Regarding the former, as noted above there is evidence that countries become more individual as per capita income increases but that otherwise the dimensions have persisted over time. For example, the Hofstede measures predict foreign market entry similarly to other measures such as the World Values Survey that is updated every few years (Berry et al., 2010).

Regarding the latter criticism, this review is an attempt to address the problem of overly simplistic cultural dimensions in Hofstede's work by offering other measures of cross-national distance separate from national cultural values. Consistent with this criticism, this review will argue that institutional distance should be measured separately from cultural distance (next section).

Whether Hofstede's dimensions of national culture are used or Schwartz's (1994) or the GLOBE dimensions (House, Hanges, Javidan, Dorfman, and Gupta, 2004) or the World Values Survey (Berry et al., 2010), the important point is that national culture is not an individual-level construct but a country-level construct, a *collective* programming of the mind, a set of norms and values that differentiate one culture from another and that predict behavior. The norms and values are determined by aggregating thousands of survey respondents' ratings. Once determined, the indices and distances are invariant across studies, save for periodic updating.

One of the most influential international business articles in the last twenty-five years was Kogut and Singh's (1988) study of foreign market entry mode, using a national cultural distance measure based on Hofstede's work. They measured national cultural distance as the difference between two countries, using Hofstede's index numbers,

corrected for differences in variances, and arithmetically averaged over all four dimensions. They found that national cultural distance was a significant predictor of market entry choice and started a cottage industry of scholars who would use national cultural distance to predict numerous international business phenomena. The fact that they have been criticized for combining all four dimensions into one measure (see below) does not diminish the fact that their article ushered in an explosion in studies of the effects of national cultural differences on business decisions.

Barkema and Vermeulen (1997) introduced a slightly different way of calculating cultural distance, using Euclidean distance rather than Kogut and Singh's arithmetic distance. There may be good theoretical reasons for using one over the other (i.e., not assuming that all distance intervals are the same) but empirically, the two yield very similar results (Barkema and Vermeulen, 1997; Drogendijk and Slangen, 2006). Morosini, Shane, and Singh (1998) offer yet another variation on the distance measure, not controlling for the variance of the dimensions as Kogut and Singh did (See also Brouthers and Brouthers, 2001). It, too, appears to behave empirically about the same as the other measures. And Berry et al. (2010) used yet another variation, Mahalanobis distance, with a similar result. The magnitudes of effects changes but their direction and significance do not.

While the Kogut and Singh measure of distance (or one of its variants) is the most widely used in the literature, it has been criticized for combining all four (or five) Hofstede dimensions into one broad-brush distance measure. Many scholars use the composite measure, combining all four or five of Hofstede's dimensions, though others have cautioned against using the composite single measure (Kirkman, Lowe, and Gibson, 2006; Shenkar, 2001). Others use only those dimensions that are theoretically relevant (e.g., Barkema and Vermeulen, 1997; Jones and Teegen, 2001; Shenkar and Zeira, 1992).

Some do not use the distance measure at all but rather, the notion of congruence or fit. Newman and Nollen (1996) examined the congruence between each of Hofstede's five dimensions of national culture separately and specific management practices. They found generally that the greater the congruence between management practices and local national culture, the higher the work unit performance (see also Robert, Probst, Martocchio, Drasgow, and Lawler, 2000). Others have examined one or several measures in relation to specific management practices (e.g., Schuler and Rogovsky, 1998; Shane, 1995) and FDI (e.g., Bhardwaj, Dietz, and Beamish, 2007).

Thus while Kogut and Singh identified a global measure of distance and related it to choice of market entry, the notion of national cultural distance can be taken down to the

managerial level, allowing firms to tailor their practices to fit with the host country culture. Scholars will argue about whether national cultural distance ought to be used in its aggregated form or disaggregated, to reflect more specific theoretical predictions. This review suggests that the measure to use should depend upon what is being studied and the theory underpinning the study. In most cases, the disaggregated measures of distance are more likely to be appropriate than the single aggregated measure. Based on the results reviewed here (especially Ambos and Ambos, 2009 and Berry et al., 2010), the Hofstede measures of national culture are the appropriate choice for measuring national cultural distance.

Institutional Distance

In the last decade a related stream of research has developed using institutional distance as a critical measure of the non-geographic distance between countries (Berry et al., 2010; Bhardwaj et al., 2007; Brouthers, 2002; Busenitz, Gomez, and Spencer, 2000; Daude and Stein, 2001; Dow and Karunaratna, 2006; Gaur and Lu, 2007; Kostova, 1999; Kostova and Roth, 2002; Kostova and Zaheer, 1999; Sethi et al., 2003; Xu and Shenkar, 2002). Perhaps because of its relative newness in international business research, this is the distance measure about which there is the least agreement. Yet ironically, it is the closest to the early notion of psychic distance as defined by the Uppsala researchers many years ago. Institutional distance is the difference between two countries on relatively objective contextual factors that influence business conduct.

Dow and Karunaratna (2006) and Dow and Larimo (2009) made significant strides in measuring institutional distance between countries relatively objectively. As noted earlier, Dow and his colleagues refer to this measure as psychic distance stimuli – those things about a country that are likely to trigger perceptions of distance in the minds of decision-makers. Their notion of psychic distance stimuli is the same as the definition of institutional distance suggested here, relatively objective measures of country-level characteristics that may affect business conduct.

Part of the confusion in this literature stems from conflicting definitions of institutions. Kostova and her colleagues define institutional distance based on Scott's (1995) work. Scott argues that firms become isomorphic with existing institutional pressures as a way of surviving. He elaborates three pillars in a country's institutional environment. The first is the regulative pillar that refers to the laws, regulations, and enforceable rules of the game. The second is the cognitive pillar that refers to peoples'

understanding of business. It includes common understandings and ways of interpreting data. Third is the normative pillar that is the values and beliefs that underlie behavior and that form the basis for legitimacy in action. To the extent that firms' structures and practices are consistent with societal institutions, they should perform better (the isomorphism effect). Institutional distance speaks to differences between the institutional environment in the home and target countries.

In this conceptualization, the normative pillar in society is likely to be much like Hofstede's software of the mind – norms and values that undergird activity. The cognitive pillar refers to knowledge and has been operationalized with reference to specific issues, for example quality (Kostova and Roth, 2002) and entrepreneurship (Busenitz et al., 2000). It is not clear how it could be operationalized at the country level in a general sense and it would almost have to be measured perceptually (as these authors did).

Berry et al. (2010) take a different approach to institutional distance, more consistent with that of Dow and Karunaratna (2006) and Gaur and Lu (2007). They identify three theoretical frameworks that inform cross-national institutional distance: a national business systems view (Whitley, 1992), a governance view (Henisz and Williamson, 1999), and a view that emphasizes connectedness and innovation (Nelson and Rosenberg, 1993). The national business systems approach includes such factors as economic, financial, political and legal practices and institutions. The governance approach focuses on the activities of corporate stakeholders and can also include legal and political institutions that convey legitimacy and power to various stakeholders. Finally, the last framework includes differences in patents and Internet use.

Institutional distance adds considerable value to the conversation about distance, because (1) it can be measured relatively objectively, (2) it is different from psychic distance and cultural distance, and (3) it provides a link to the concept of institutions which comes out of the economic development literature. Institutions include such things as the political system, rule of law, transparency, regulatory environment, education, language, wealth, size of the economy, and perhaps religion (Berry et al., 2010; Bhardwaj et al, 2007; Daude and Stein, 2001; Dow and Karunaratna, 2006; Dow and Larimo, 2009; Gaur and Lu, 2007). Berry et al. (2010) measure several dimensions separately while others combine measures of institutional distance into a composite scale. Berry et al.'s conceptualization of institutional distance is comprehensive and their results suggest that their various measures of institutional distance produce effects that are similar in magnitude and direction.

Institutional distance encompasses many aspects of the business environment across countries that define the context for business, the difficulty in doing business, and should account for significant variation in international investment and foreign market development. This review suggests adopting a measure of institutional distance akin to that used by Dow and Karunaratna (2006), Gaur and Lu (2007), and Berry et al. (2010) as summarized in Table 2. Measures should be developed apart from managers' perceptions and standardized across countries for use across studies, as has been done with Hofstede's national culture measures.

THE ROLE OF PSYCHIC DISTANCE

Knowledge accumulation in new fields is uneven and episodic. This is especially true when scholars from different disciplines contribute to a fund of knowledge from very different backgrounds, research traditions, and literatures. Such is the case with conceptual and methodological development in the area of non-geographic distance between and among countries. The literature is well populated with studies in which cross-national distance, measured one way or another, is a key independent variable. Yet our empirical results are not consistent, whether addressing foreign market expansion, success of joint ventures, or efficacy of management practices. Definitions and operationalizations of cross-national distance have not been consistent. Because of this, theory development concerning the effects of cross-national distance has suffered.

We have been too simplistic in our conceptualization of cross-national distances and we have been plagued with the problem of inconsistent measurement of the construct, however it is defined (e.g., Brewer, 2007). Three conceptually distinct non-geographic distances have been defined that should be measured differently from each other but consistently across future studies.

In this section, two competing models are proposed that address potential inter-relationships among all three types of distance and their hypothesized effects on international business decisions (Figure 1). As mentioned at the outset, geographic distance has been excluded because its measurement is less controversial and less convoluted than measurement of the other three cross-national distances.

As indicated in Figure 1, there are two competing hypotheses about the role of psychic distance. Greater psychic distance implies perceptions of greater costs of doing business, greater uncertainty, and greater risk. But the question that has not been addressed carefully in the literature is how psychic distance affects business decisions in

the context of cultural and institutional distance. Put simply, does psychic distance mediate or moderate the relationship between national cultural distance and international business decisions on the one hand and institutional distance and international business decisions on the other?

Psychic Distance as a Mediator

The top panel in Figure 1 suggests that the effects of cultural and institutional distance on international business decisions are mediated by psychic distance. That is, psychic distance is influenced by cultural and institutional distance and psychic distance predicts international business decisions. This model assumes a behavioral approach to decision-making (i.e., Cyert and March, 1963) whereby individuals make decisions based on objective data as well as subjective interpretations of data, limited search for additional information, risk and loss tolerance, and cognitive capabilities. The sense-making process that represents individual decision-making absorbs information from objective cultural and institutional distance into psychic distance. Psychic distance is not purely a function of objective data but rather, is affected by the nature of human information processing. Psychic distance also may be influenced by decision-makers' comfort with differences, experiences in different cultures, personality types and a host of other individual factors. Hence, while psychic distance mediates the effects of cultural and institutional distance, it does not mediate all of their effects. In other words, in this model there are still direct effects of the objective measures of distance on business decisions, though taking into account psychic distance diminishes their magnitude.

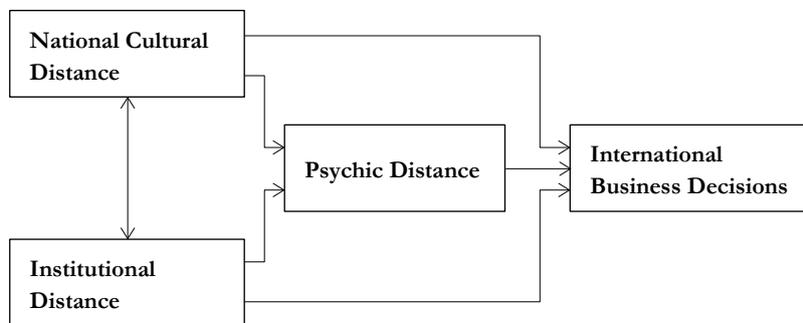
For example, assume the decision in question concerns foreign market entry. We might hypothesize that greater cultural distance and greater institutional distance lead to a preference for joint ventures over wholly owned subsidiaries in order to mitigate the costs and uncertainty associated with greater distance by having a host country partner (e.g., Erramilli and Rao, 1993; Kogut and Singh, 1988). We would expect the direct effects of cultural and institutional distance to diminish once psychic distance is taken into account. The mechanism by which objective distance in culture and institutions is brought to bear on decisions is through psychic distance – the human information processing activity that results in a decision. However, because of imperfections in human decision-making, direct effects of cultural and institutional distance are likely to remain. If human information processing were perfectly rational and if psychic distance were only a function of cultural and institutional distance, psychic distance would completely mediate the effects of

cultural and institutional distance on business decisions. This yields our first research proposition:

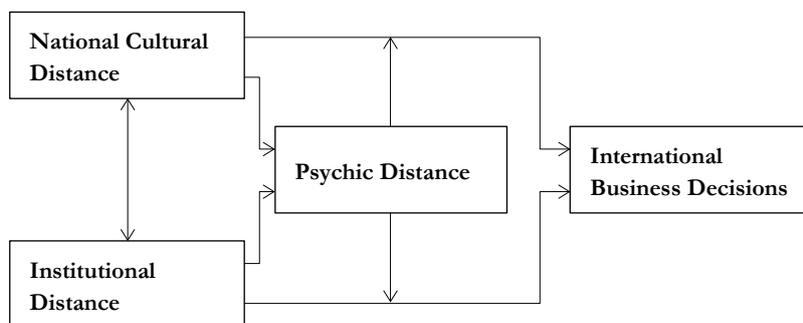
Proposition 1: Psychic distance partially mediates the relationships between cultural distance and institutional distance on international business decisions.

Figure 1: Psychic Distance as Mediator or Moderator?

A. Mediator: Psychic distance partially explains the effect of cultural and institutional distance on international business decisions



B. Moderator: Psychic distance interacts with the effects of cultural and institutional distance on international business decisions



Psychic Distance as Moderator

An intriguing possibility is shown in the lower panel of Figure 1 in which psychic distance acts as a moderator of the relationships between cultural distance and institutional distance on international business decisions. In a way this model represents a full circle back to Beckerman’s (1956) definition of psychic distance as a subjective moderator of

the effect of economic distance on business decisions (Hakanson and Ambos, 2010). A moderating effect would cause the magnitude of the relationship between cultural distance and institutional distance on business decisions to fluctuate, based on the level of psychic distance. Going back to the example of entry mode, if psychic distance were a moderator we would find that when it is high, greater cultural and institutional distances are likely to result in wholly owned subsidiaries rather than joint ventures because of the transaction costs of doing business under high uncertainty (e.g., Erramilli and Rao, 1993). And when psychic distance is low, the tendency for high cultural or institutional distance to produce a joint venture decision is greater because the transaction cost of doing business is expected to be less.

Brouthers and Brouthers (2001) offer support for this argument if we are willing to agree that their measure of perceived risk is a reasonable surrogate for psychic distance. They found that perceived risk interacted with cultural distance to produce a higher likelihood of a wholly owned subsidiary choice when perceived risk was high than when perceived risk was low (they did not measure institutional distance). Ambos and Ambos (2009) offer additional indirect support for the moderating effect of psychic distance, though they did not measure psychic distance as has been discussed here. In their study of knowledge transfer effectiveness across borders, they found that when cultural distance was low (using Kogut and Singh's measure) the relationship between personal coordination methods and knowledge transfer was positive. When cultural distance was high, the relationship was negative. While no one would argue that using personal forms of coordination (face-to-face meetings, for example) is a surrogate for psychic distance, it might be inferred that in high psychic distance circumstances, using personal forms of coordination would be more problematic.

Additional tangential support for a moderating model comes from Bhardwaj et al. (2007). They did not measure psychic distance but found that uncertainty avoidance interacted with the relationship between national trust and FDI. Again, this study is not a test of the model, but it does provide support for the idea that international business decisions are not purely linear processes. This leads to a competing research proposition:

Proposition 2: Psychic distance moderates the relationships between cultural and institutional distance and international business decisions.

These two models, one suggesting that psychic distance acts like a sponge for more objective cultural and institutional distance (mediator) and the other suggesting that psychic distance acts as an amplifier or dampener of the effects of cultural and institutional distance on international business decisions (moderator), remain to be tested empirically.

CONCLUSIONS

The purposes of this paper were to bring some conceptual clarity to the field of cross-cultural distance; to advance methodological clarity; and to contrast two specific models to guide future research. Institutional distance is a country-level construct, based on relatively objective measures of country business, social, political, economic, and demographic conditions. National cultural distance is a country-level construct, based on the Hofstede framework of culture as the software of the mind. It consists of norms and values about how things are done in the country, measured on his four or five dimensions. Finally psychic distance is managers' perceptions of differences in business conditions between the home and host country and reflects the perceived cost, uncertainty, and risk of doing business in the host country. Three constructs measured independently at different levels of analysis will clarify international business research and the role of non-geographic distance in making international business decisions.

The role of psychic distance as either a mediator or moderator is a promising area for future research. Do decision-makers act like efficient information processors (mediating effect) or like information distorters (moderating effect)? To what degree are decisions distorted by the information processing capabilities of humans? And further, to what degree are factors outside psychic distance a factor in processing distance information? We might hypothesize that people who have had previous business experience in the host country would process the cultural distance and institutional distance data differently than people who had no experience in the host country or no experience internationally, such that the relationship between cultural or institutional distance and business decisions would be weaker in the former case and stronger in the latter case. Similarly, managers with a preference for stability and security would translate cultural and institutional distance into more psychic distance than managers with a preference for change and risk.

Psychic distance measurement is still in need of some work, to rationalize differences between Sousa and Bradley (2005, 2006) and Evans et al. (2008), but we have a good foundation from which to work. A generic measure for psychic distance can be developed

across disciplines and research questions. Sousa and Bradley's results as well as Evans et al. (2008) suggest that a number of dimensions of psychic distance can be aggregated or scaled, but further research may shed light on the aggregation-disaggregation issue. For example, Dow and Larimo (2009) suggest (but do not test) that language and religion differences produce different effects on psychic distance than do economic variables.

Measurement of institutional distance is well on its way, thanks to the work of Dow and Karunaratna (2006) and Gaur and Lu (2007), and Berry et al. (2010). These authors have made their data available to researchers, thus augmenting the process of finding appropriate common measures of institutional distance.

With respect to national cultural distance, we have a good measure, based on Hofstede's work, and we ought to continue to use it. Measures of national cultural distance should be aggregated or disaggregated to reflect the theoretical questions at hand.

The interest in psychic, national cultural and institutional distance is heartening. Scholars from management, international business, marketing, and economics are pursuing the effects of distance on economic development, investment decisions, and management practices. Conceptualizing, measuring, and understanding the effects of similarity and difference are necessary prerequisites to the more effective conduct of international business. If we can agree on definitions and operationalizations of each, we can advance our understanding of the effects of cross-national distance, geographic and otherwise, on international business decisions.

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