

The Antecedents of Psychic Distance

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ABSTRACT

This study investigates the antecedents of psychic distance. Building on original data in 25 of the world's largest economies, we investigate potential drivers of the perceived distance among a given pair of countries. Results confirm that psychic distance is indeed a multifaceted construct which is determined by cultural, geographic and economic factors. Furthermore, our results indicate that geographic distance accounts for the largest share of the explained variance, suggesting that future studies should attribute geographic distance a more prominent role when it comes to international market selection. They also suggest that, used in isolation, cultural distance – as measured by the so called Kogut and Singh index – is a poor predictor of distance perceptions.

Keywords: Psychic Distance, Cultural Distance

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1. Introduction

Among the first and most fundamental questions as firms internationalize their business activities are the selection of target markets and decisions regarding modes of establishment and forms of ownership. In the vast literature addressing these issues, one of the most enduring themes has been the determining impact of ‘psychic distance’ or ‘cultural distance’ on firms’ internationalization processes (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977; Kogut and Singh, 1988). In a parallel stream of research, these concepts have also been invoked to explain the relative performance of foreign business activities, following their establishment. The general line, so Ghemawat (2001), is that culturally distant nations require more product adaptations and adjustments of business models. In combination with the associated lack of information, psychic distance is assumed to affect the likelihood of success negatively.

Despite their centrality in the International Business (IB) literature, the profession has failed to reach agreement not only as to the precise meanings and possible operationalizations of the concepts, but also as regards their determinants and their relationships to one another. As several critical reviews point out, the lack of consistent definitions is matched by the lack of valid and reliable measuring instruments (Shenkar, 2001; Harzing, 2004; Stöttinger and Schlegelmilch, 1998; Sousa and Bradley, 2004; Brewer, 2007). In consequence, the empirical evidence regarding the effect of psychic distance on central remains fragmentary and inconsistent.

In the original conceptualization – the one adopted in this paper – ‘psychic distance’ was defined as the subjectively perceived distance to a given foreign country (Beckerman, 1956). Consistent with this definition, we assume that individuals may differ in respect of their per-

ceptions of distance to other countries. Through family ties, for example, vacation habits, foreign study leaves or other expatriate experiences, familiarity with and perceptions of other countries are bound to differ between individuals. In this view, the significance of the concept for IB theory is that the psychic distance, as perceived *on average* in a certain country, may help explain the *average* behavior of firms from that country. Since individuals' perceptions of larger and more dominant countries are likely to differ from those of smaller and less important ones, there is no reason to assume that average perceived distances are symmetrical between countries.

Subsequent usage of the term subtly departed from its original meaning. In the influential 'Uppsala school', 'psychic distance' became objectified as "factors preventing or disturbing the flow of information between potential and actual suppliers and customers (Vahlne and Wiedersheim-Paul 1973). Here too, it is implicitly recognized that psychic distances between countries can be *asymmetric*. (Obtaining relevant and accurate statistical data from the U.S for a company or person based in Ghana are easier and less costly than for a U.S. firm exploring market opportunities in Ghana (Ghemawat, 2001).) However, the concept is taken as an *objectively* measurable characteristic of a focal country, i.e. independent of the individual experiences of its inhabitants.

Departing yet again from the historical origins of the concept, the most prevalent proxy for 'psychic distance' employed in the literature is the 'cultural distance' index proposed by Kogut and Singh (1988). Calculated as the average difference in the country scores along the cultural dimensions defined by Hofstede (1980), the index provides a measure of the cultural differences between countries, which is – by definition – both objective and symmetric between pairs of countries.

As referenced above, the failure in the empirical literature to distinguish clearly, both conceptually and operationally, between these alternative conceptualizations of ‘psychic’ or ‘cultural’ distance has given rise to a lively, but largely theoretical, debate. This paper’s purpose is to make a primarily *empirical* contribution to this discussion, based on a unique data set on the perceptions of psychic distance by practicing managers in 25 different countries. It proposes a set of consistent definitions of the central concepts involved and formulates a number of testable propositions as to the antecedents of the perceptions of psychic distance. These are tested by means of data collected from more than 1000 respondents in the 25 countries, providing estimates of perceived ‘psychic distance’ between 600 pairs of countries. These estimates and a descriptive analysis of the responses provide an additional empirical contribution.

The paper is structured as follows. Drawing on a brief review of the literature, the following section outlines the theoretical foundation of the paper. Drawing on this discussion, section 3 formulates a set of hypotheses regarding the antecedents of perceived psychic distance. Section 4 describes the methodology employed and provides a descriptive analysis of the data. In section 5, the hypotheses are subjected to empirical testing, the results of which are discussed in the final section, indicating conclusions and implications for future research.

2. Theoretical foundations

2.1 The psychic distance concept

The concept of ‘psychic distance’ was introduced into the literature by Beckerman (1956), as an afterthought to a study on the impact of relative economic distance, i.e. factors such as geographical distance, transportation costs and tariffs, on trade patterns. In the last paragraph of his paper, he speculates on the role of ‘psychic distance’ for the observed tendency of

countries to concentrate their trade on ‘nearby’ countries (interestingly from the importer’s perspective rather than – as has become more common – that of the exporter):

... a special problem is posed by the existence of “psychic distance”. It is probable that that the manner in which the purchases of raw materials by a firm are distributed geographically will depend on the extent to which foreign sources have been personally contacted and cultivated. While the transport costs paid (directly or indirectly) by an Italian entrepreneur on a raw material supplied by Turkey may be no greater (as the material may come by sea) than the same material supplied by Switzerland, he is more likely to have contacts with Swiss suppliers, since Switzerland will be “nearer” to him in a psychic evaluation (fewer language difficulties, and so on), as well as in the economic sense that air travel will absorb less of his time. (Beckerman, 1956, p. 38)

‘Psychic distance’ is thus introduced as a subjective influence moderating the role of objective economic distance¹. The concept was picked up and introduced to the wider IB community by a group of scholars at Uppsala University, studying the choice of export markets and firm internationalization (Hörnell, *et al.*, 1973;; Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977). In the behavioral tradition of Simon (1947/1997), March and Simon (1958/1993), Cyert and March (1963) and Aharoni (1966), the group’s lasting contribution was to enforce the idea that internationalization processes (and other international business transactions) are not only determined by objective economic realities but are influenced also by the availability of information and by the decision makers’ cognitive capabilities.

Valuable as this contribution undoubtedly was, it introduced an ambiguity regarding the meaning of ‘psychic distance’ that has survived unto this date (Evans et al 2000; Sousa and Bradley 2005a, b). As the semantic origins of the term suggest, Beckerman’s intention must surely have been to point out the importance of *perceptions* in the formation of foreign trade relationships. However, in the Uppsala School’s original rendering of the concept, it meaning

¹ Over time, the origins of the idea have tended to be forgotten. Stöttinger and Schlegelmilch (1998, 2000), for example, suggest that psychic distance is a concept “beyond its due date” on the ground that export sales to psychically more distant countries are sometimes higher than to psychically proximate ones, as in the case of U.S. American exports to Mexico and Germany, respectively.

subtly changed. In the group's most influential contributions, 'psychic distance' is defined as "factors preventing or disturbing the flow of information between potential and actual suppliers and customers" (Vahlne and Wiedersheim-Paul 1973). In line with this conceptualization, 'psychic distance' is operationally measured by three groups of statistical items: (1) *characteristics of the target market*, such as its level of development and the education of its workforce, (2) *differences* between Sweden and the target market in these factors, but also in regard of language and culture, and (3) trade relations (the relative level of imports), as an indication of established *information channels*. The objective is to complement the traditional emphasis on the costs of moving *physical goods* (transport costs, tariffs) with a measure intended to capture the cost of transferring the *information* necessary to effect such transactions. The subjective or behavioral component is introduced by explicitly recognizing that firms' abilities to deal with (or overcome) psychic distance differ, depending on, for example, their size and previous experience.

With the benefit of hindsight, this departure from the semantic roots of the concept must be considered to have been an important cause for the unfortunate ambiguity that has subsequently plagued the idea. In the literature, 'psychic distance' is sometimes conceived of as a perceptual, subjective phenomenon, sometimes as an objective, collective construct – an inconsistency that has been perpetuated over time. The by far most commonly used measure, the Kogut and Singh index of cultural distance, has been used indiscriminately to measure both managers' *ex ante* perceptions of foreign countries prior to entry and the *ex post* ease or difficulty of operating in a foreign environment as well as a mediating influence for a range of other phenomena. But as pointed out by O'Grady and Lane (1996), managers' *ex ante* perceptions of psychic distance towards a foreign market may well differ from the objective distances, as experienced *ex post* an establishment there. Hence, perceptual measures appear to

be more relevant than objective ones when it comes to analyses of foreign market selection, entry modes and the like. Objective measures may be more appropriate for studies of, for example, foreign subsidiary performance or expatriate turnover.

Thus, a more consistent definition and usage of the concept is needed to allow progress in this field. Following Beckerman's (1956) original notion of the construct we here define 'psychic distance' as the subjective (perceived) distance between a home country and a given host country. This definition is not only consistent with the semantic origins of the term (from the Greek 'psychikos' = mind and soul), but is also in line with recent authors (Dow, 2000; Sousa and Bradley, 2005), for whom 'psychic distance' refers to individuals' perceptions of foreign countries. This conceptualization of 'psychic distance' opens to questioning its operationalization as a formative construct, regardless of whether it is based on a range of different indicators (Hörnell, *et. al.* 1973; Brewer, 2007) or – as has been more commonly the case – a more narrow selection, such as in the 'cultural distance' index developed by Kogut and Singh (1988). To what degree can such constructs serve as proxies for actual managerial perceptions of psychic distances to foreign countries? What factors determine such perceptions? In pursuit of this question, the following section develops a number of hypotheses regarding the antecedents of psychic distance.

2.2 Hypotheses

The prevailing view in the literature emphasizes *cultural distance* as a prime determinant of psychic distance. Values and norms determine what is considered appropriate and inappropriate behaviour in a society, and thus, facilitate interaction by providing an implicit code of conduct of what is expected from members of the society. To the degree that cultures differ, the mutual understanding of these norms and values gets blurred and communication more

difficult. Adler (1986/1997) points out that greater cultural distance will often lead to misunderstanding. Similarly, Erikson et al. (2000) suggest that interpretation of signals will be more difficult if cultural distance increases. Thus, the greater the cultural distance between the home and the host country, the more difficult it will be to accurately interpret available information (Sousa and Bradley, 2006). In consequence, cultural distance should have a direct bearing on psychic distance. Indeed, many studies employ the two concepts interchangeably (Eriksson et al, 2000) and those which maintain a distinction traditionally recognize cultural differences as one of the most important antecedents of psychic distance (Hörnell, et al, Johanson and Vahlne, 1977). We therefore propose the following hypothesis:

Hypothesis 1: The larger the cultural distance between two countries, the higher the perceived psychic distance between them.

Geographic proximity lowers transportation and communication costs and therefore favors interaction, information exchange and international trade (Johanson and Wiedersheim-Paul, 1975; Ghemawat, 2001). Of course, improvements in transportation and communication technologies have radically reduced the ‘friction’ of distance, in some instances – as in the case of Internet telephony – reducing it to zero. This has clearly had and will continue to have a massive impact on the international flows of both physical goods and information. However, here – as elsewhere in the social sciences – ‘history matters’. For centuries, the pattern of international interaction was largely determined by absolute geographical distances. The path-dependent legacy of this fact is perhaps most clearly evident in the content of the history curricula of schools and universities the world over, where proximate countries are given more weight and attention than more distant ones. A parallel situation pertains to the reporting of

foreign news – witness the relative attention afforded to foreign affairs in, for example, the U.S. and Australia, to that of European news media.

Hypothesis 2: The higher the geographic distance between two countries the higher the perceived psychic distance between them.

The information flows associated with commercial exchange relationships are of special relevance for the psychic distance perceptions of business managers. International trade flows are strongly influenced by a range of circumstances, including geographic distance (Beckerman, 1956), but also, for example, by similarities in income levels and demand structures (Burenstam-Linder, 1961; Vernon, 1966), relative market size and colonial ties (Hörnell *et al*, 1973; Ghemawat, 2001; Brewer, 2007). The relative importance of these factors differs between countries and over time. However, regardless of its driving forces, international trade is associated with information flows that reduce psychic distance².

Hypothesis 3: The larger the volume of trade between two countries the lower the perceived psychic distance between them.

Similarities in economic development favor international trade because economic development is associated with a range of political, institutional, socio-economic and demographic factors affecting the structure of demand, often subsumed under the title of ‘modernization’. It can be assumed that similarity in economic development and associated structural characteristics facilitate the flow of information and increase the confidence of its recipient as to its interpretation.

² Since, conversely, psychic distance is assumed to affect international trade patterns the effects are mutually reinforcing.

Hypothesis 4: The larger the differences in economic development between two countries the higher the perceived psychic distance between them.

As pointed out already by Vahlne and Wiedersheim-Paul (1973), well developed economies have better developed infrastructures for the collection, analysis and dissemination of economic data and market information. For an observer from a foreign country, the level and quality of information available is likely to increase with the economic development of the target country and the strength of its institutional infrastructure (Ghemawat, 2001).

Hypotheses 5: The level of economic development in the target country negatively affects the perceived psychic distance to it.

Large and economically strong countries are able to exercise their influence on surrounding countries or on the rest of the world more pervasively than small countries can. Large economies act as suppliers and buyers of large shares of manufactured goods and are able to influence geo-policy through military strength and political clout. In consequence, larger countries receive more news coverage than smaller nations do. The most obvious instance of the size factor is the pervasive cultural influence of the U.S. through movies, television and the Internet on the rest of the world. However, the influence of a dominating economy is evident also elsewhere. Austrian press coverage of Germany is significantly higher than German press coverage of its smaller neighbor³.

³ By the same token, regulatory spillovers are more likely to occur from economically strong and more powerful nations towards smaller ones than the other way around. Flight security procedures introduced by the U.S. after September 11 have had a direct affect on the smaller nations of Europe, in spite of being in conflict with European data protection codes. Similarly, the U.S. government's belief that it is in its best interest to keep reminding its electorate of the threat of terrorism has influenced the security controls imposed on air travellers not even contemplating to set foot on American soil.

Hypothesis 6: The larger the economy of the target country, the lower is the perceived psychological distance to it.

3. Method

3.1 Sample and dependent measure

Data collection on our dependent measure took place from fall 2003 till spring 2007. For the purpose of this study we selected the 25 largest countries (Basis: Absolute GDP in 2001): Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Denmark, France, Germany, India, Italy, Japan, Mexico, Netherlands, Norway, Poland, Russia, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom and USA.⁴ Collaborators were identified in all 25 countries to help with the collection of data in their respective home markets. Target respondents in all countries were academically trained managers with four or more years of business experience (typically executive MBA students or alumni of the partner universities)⁵.

All data were collected through an Internet based survey instrument. Prospective respondents were invited to participate in the study via a customized email, containing a link to the survey. Secure server access as well as the collection of the respondents IP address ensured that only invited participants could complete the survey and that responses were only collected once for each individual IP address. Our sampling efforts led to a total of 1052 usable responses.⁶ On

⁴ Saudi Arabia (rank 23) was substituted by Turkey (rank 27) since one of the objectives of our study was to compare our data on perceived psychic distance index with Hofstede's (1980) cultural dimensions, for which we could not find estimates for Saudi Arabia.

⁵ It needs to be stressed that our study rests the perceptions of managers only. As managers are usually the ones making FDI decisions, they constitute a representative for many of the business problems we alluded to in this paper. However, attempts to extend our findings to other societal problems and phenomena need to be viewed with caution.

⁶ We decided to delete all data points where the nationality of the respondent did not match the country in which the survey was conducted (e.g. Turkish respondents living in Austria, or Chinese citizens studying in Australia), as those "bi-cultural" individuals potentially obscure our intended main effect.

average, respondents had 18 years of formal educations (e.g. a first university degree in most countries) and 12 years of work experience. 74% of our respondents were male. For a country breakdown and key descriptives of the sample see Table 1.

Insert Table 1 about here

The key objective of the study was to assess the psychic distance between the 25 countries. Respondents were provided with a definition of the psychic distance construct and a list of the countries under investigation. Adapting a methodology first employed by Nordström (1990) and with slight variations also by Dow (2000) and Ellis (2007), we anchored the scale by asking the respondents to set the distance to their home country to 0 and the distance to the country they perceive be most distant to 100. Respondents were asked to assign index values for the remaining countries so that they reflected their relative perceived distance from both their home country and the one they considered to be most distant. For countries that were judged to be of equal distance, respondents were asked to assign the same score. After assigning the country scores a sorted list was displayed to the respondents listing the countries in ascending order, allowing them to make corrections to where necessary. The dependent measure in this study is the computed average distance to each other country based on the perceptions of all respondents from that country (Table 2)⁷.

Insert Table 2 about here

⁷ For some countries response rate rather low. Excluding them did not change our results, but caution is needed, particularly for further studies trying to build a case for France, Norway and Belgium.

3.2 Independent Variables

Cultural distance. The by far most common measure of cultural distance employed in the literature is the index developed by Kogut and Singh (1988), where the cultural distance (CD_{x-y}) between country x and y is the average of the differences of Hofstede's (1980) country scores adjusted by the variance (v_i) of the corresponding dimension:

$$CD_{x-y} = \Sigma \{ (I_{ix} - I_{iy})^2 / V_i \} / 4$$

where I_{ix} stands for the index for the i th cultural dimension and country x, V_i is the variance of the index of the i th dimension, the subscript y indicates country y. In the literature, the Kogut and Singh index, computed as above based on the values of four of Hofstede's dimensions, has become by far the most common method of measuring 'cultural distance', usually without any discussion of possible flaws as regards its validity and reliability. As pointed out in several critical reviews (Shenkar, 2001; Harzing, 2004; Stöttinger and Schlegelmilch, 1998; Sousa and Bradley, 2004; Brewer, 2007) and, indeed, by the original authors themselves, the primary attraction of the index is the ease with which it can be computed rather than its validity or reliability – both of which appear to be rather dubious:

The indices of Hofstede can be criticized for a number of reasons, especially regarding the internal validity of the dimensions and the method of constructing the scales. Whereas the criticism has a sound basis, Hofstede's study has some appealing attributes, namely, the size of the sample, the codification of cultural traits along a numerical index, and its emphasis on attitudes in the workplace. (Kogut and Singh, 1988, p. 422).

It appears that the literature's preference for the Kogut and Singh index is based more on convenience than on theoretical deliberations. It is not clear, for example, whether the dimensions in the index are of equal importance or why they should be weighted by their respective variances. And, to our knowledge, no theoretical grounds have been advanced for why Hofstede's 5th dimension, 'long term orientation', should be excluded from the calculation. Again, this practice seems to be more primarily a matter of convention and convenience – 'long term

orientation' is a later amendment and for many countries no values are available. Against this background, we explore the significance of cultural distance for psychic distance using the Kogut and Singh index, calculated both with both four and with five dimensions (ITIM, 2007). We also explore the relative importance of differences along the individual dimensions by including them separately in the regression.

Geographical distance. Geographical distances were collected from the distance matrices available by the Paris based *Centre d'études prospectives et d'informations internationales* (CEPII). CEPII provides pair-wise country distance measures (in kilometers) both based on the distances between countries' major cities (in most cases the capitals) or as a weighted average between major population centers. In the regression analyses, both gave near identical results. The results reported below are based on the former.

Trade. Two-way trade was assessed as the total volume of trade between pairs of countries (in USD million) on the assumption that both import and export transactions favor the development of commercial relations and associated information exchange (IMF, 2005).

Differences in economic development. Differences in economic development were measured as the absolute difference in gross domestic product per capita (in USD) in 2004 (CIA 2005).

Economic development. The level of development of the target country was approximated by its gross domestic product per capita (in USD) in 2004 (CIA 2005).

4. Findings and discussion

The hypotheses were tested by means of OLS regressions. Preceding our regression, we tested the assumptions of linear regression: linearity, equality of variance and normality. Plotting standardized residuals against standardized predicted values showed no major violations of these assumptions. Data was also carefully examined for multicollinearity among our independent measures. Descriptive statistics and correlations are presented in Table 3.

Insert Table 3 about here

4.1 *Cultural Distance*

In the absence of any clear theoretical reasons to prefer one operationalization over the other in the measurement of cultural distance, regressions 1-4 explored four different approaches, all based on the dimension and measurements of Geert Hofstede (ITIM, 2007). The results are reported in Table 4.

Insert Table 4 about here

The results fail to validate the suggestion made by Kogut and Singh (1988, p. 430) that... “[c]ultural distance is, in most respects, similar to the ‘psychic distance’ used by the Uppsala school” and the subsequent tendency in the literature to treat the one as a – more or less interchangeable – substitute for the other. ‘Cultural distance’ may well contribute to perceptions of ‘psychic distance’, but the two constructs clearly measure different things (Nordström and Vahlne, 1994; Dow, 2000; Ellis, 2007). This is especially true for the most commonly

employed measure, the Kogut and Singh index calculated on the basis of Hofstede's original four dimensions. As Regression 1 shows, the adjusted R^2 with 'Kogut Singh (4)' as the sole independent variable amounts to a mere .059, corresponding to a simple correlation of not more than .25. Interestingly, including differences also in 'long term orientation' in the computation of the Kogut and Singh index (Regression 3) increases its explanatory power dramatically. The same is true when differences in the individual culture dimensions are included separately (Regressions 2 and 4). It appears that differences in 'individualism' and 'long term orientation' are much more significant than those regarding 'masculinity' and 'uncertainty avoidance' as antecedents to psychic distance perceptions.

While tentatively confirming Hypothesis 1, i.e. a positive relationship between cultural distance and psychic distance, the results clearly suggest that inclusion of all five of Hofstede's cultural dimensions is preferable to the prevailing practice of only using four.

Insert Table 5 about here

4.2 Testing the hypotheses

As shown in Table 5, the analyses provide strong and consistent support for the Hypotheses 1, 2 and 5. Both cultural and absolute geographical distance between countries strongly increases the perceived psychic distance between them. As expected, increasing GDP/capita in the target country – as indicator of its level of economic development – tends to decrease the perceived distance to it.

According to Hypothesis 4, differences in per capita incomes were expected to positively affect psychic distance. Regression 5 confirms this assumption, but with the introduction of measurements for cultural distance in Regressions 6 and 7, the significance of this variable disappears. This is explained by the relatively high correlations between differences in GDP/capita and differences in the values for power distance, individualism, and uncertainty avoidance (Table 3). The corresponding association between many of the cultural dimensions and income levels is not surprising and was pointed out already by Hofstede (1980).

As indicated in Regression 7, the relative importance of the individual Hofstede dimensions differs from those obtained in Regressions 2 and 4 (Table 4). Most strikingly is the lack of significance for individualism, reflecting a multicollinearity problem with the difference in GDP/capita. As before, the inclusion of the individual cultural dimensions individually increases R^2 , but only marginally so.

The analysis gives mixed support for Hypothesis 6 – that larger and more dominant countries are perceived as being closer than smaller ones. The absolute level of GDP of the target country significantly reduces the perceived distance to it only when cultural distance is included in the regression (Regressions 6 and 7). Without cultural distance, the variable takes the correct sign but only approaches significance ($t = -1.505$; $p = .133$).

Surprisingly, the analysis provides no support for the assumed importance of trade on perceived psychic distance. A probable reason for this paradoxical result is the crudeness of the measure employed which does not take into account the composition of trade flows or the number of firms and transactions involved.

5. Conclusion

5.1 Implications

Our study has important implications in a number of areas. Above all, our results demonstrate that perceived psychic distance is influenced by a complex array of factors and cannot reliably be approximated by cultural distance only. Geographical proximity and economic factors are also powerful determinants of perceived psychic distances between countries. Indeed, simple geographical distance turns out to be twice as important as cultural distance (as measured by the Kogut and Singh index employing all five of Hofstede's dimensions. This suggests that cultural distance alone is a weak predictor when it comes to international market selection, entry modes and the like (Harzing, 2004), especially in the prevalent form of using only the original four dimensions. Scholars trying to explain export behavior and FDI are strongly advised to employ the five-dimensional version of the construct and to include at least absolute geographical distance as a correlate.

The results also have implications for the construction of formative psychic distance constructs (Brewer, 2007; Vahlne and Wiedersheim-Paul, 1977), as our results suggest that economic, geographic and cultural distance should not be equally weighted. Studies that attempt to capture perceptual distances by means of a simple cultural distance index run the risk of making attribution errors (Shenkar, 2001). The failure to include other distance-related variables may lead to erroneous conclusions as to the influence of cultural distance on decisions regarding market selection, entry modes or foreign subsidiary performance.

5.2 Avenues for further research

The argument outlined in this paper is based on a distinction between 'objective' and 'perceived' psychic distance – an idea that has rarely been explicitly discussed, but that we

believe to be consistent with the implicit assumptions of most of the literature. It has long been assumed, for example, that the significance of absolute and cultural distance tends to diminish with experience (Benito and Gripsrud, 1992). Since experience is idiosyncratic to the individual, its effect will tend over time and through unique personal experience to vary in ways that are difficult to predict. In the above analysis, we assumed – supported by statistical analysis – that the effects of idiosyncratic individual experience can be included in the error term, i.e. they are generally small, normally distributed and have an expected value of zero. On the basis of this assumption, predictions of average firm behaviour can be based on measures of average psychic distance. However, whether or not this assumption can be upheld is an issue in need of empirical investigation. The ‘born global’ phenomenon of firms rapidly entering very distant markets suggests, for example, that the variance in the psychic distance perceptions of individual managers has increased over time.

One criticism of previous studies has been the – usually implicit – treatment of cultural and psychic distances symmetric (Shenkar, 2001), i.e. assuming that such distances (like geographic ones) are the same regardless of direction. Our data and statistical analyses confirm the validity of this criticism and suggest some of the probable reasons for such asymmetries. Future studies should explicitly address the nature and causes of these asymmetries.

Of course, measures of ‘psychic distance’ – as here defined – are relevant primarily to decisions and behavior influenced by managerial perceptions. They do not necessarily throw much light on questions regarding, for example, the performance of foreign subsidiaries, which can be expected to depend on ‘objective’ differences – such as ‘cultural distance’ – between home and target countries. However, as suggested by O’Grady and Lane (1996), the relationship between perceived and real distances is an area worthy of further research. The

fact that such perceptions are not symmetrical suggests that the ‘psychic overconfidence’ may be a more important issue for firms from some countries than from others (Evans and Mavondo, 2002; Fenwick *et al.*, 2003; Pedersen and Petersen, 2004).

Another interesting avenue is to determine the role of environmental contingencies for both perceptions and actual behavior. As Ghemawat (2001) suggest, industry might be one such contingency. For example, bulky products may be much more sensitive to changes in geographical distance, whereas marketing intensive (or sensitive) industries may be much more driven by cultural distance, as product adaptation is often key to avoid marketing flops.

By dismantling the antecedents of psychic distance and by determining their relative weights, our study offered an improved way in looking at psychic distance. However, it is probable that other variables – not included in this study – also impact the perceived distance between countries. Thus, other, potentially finer grained, measures (e.g. political, institutional, and linguistic distances) should also be investigated.

Table1: Sample Characteristics across all 25 Countries

Country	n	Age	Male share (%)	Business Experience	Time aboard (years)	Education (years)
Argentina	91	36	86%	10.2	3.08	19.5
Australia	63	39	83%	14.3	7.65	17.8
Austria	56	38	62%	10.9	3.73	16.8
Belgium	19	38	79%	13.0	2.74	19.1
Brazil	39	38	69%	13.5	0.69	20.8
Canada	24	36	67%	9.7	8.21	18.4
China	29	35	52%	9.0	4.86	16.2
Denmark	52	39	79%	13.0	1.96	16.7
France	15	43	80%	16.1	6.60	15.1
Germany	32	36	75%	6.1	2.78	18.9
India	40	33	100%	4.5	2.05	18.5
Italy	26	32	69%	5.0	8.9	18.2
Japan	21	33	62%	9.7	9.29	15.9
Mexico	88	37	59%	10.9	3.03	19.2
Netherlands	21	40	86%	10.5	6.76	18.7
Norway	17	40	76%	12.4	5.71	14.9
Poland	26	37	58%	10.0	1.15	16.9
Russia	57	38	51%	10.7	1.95	17.8
South Korea	20	41	90%	7.9	4.85	17.2
Spain	18	38	78%	9.6	2.22	20.4
Sweden	61	44	76%	15.4	4.11	17.5
Switzerland	71	43	94%	16.2	4.04	18.6
Turkey	45	37	80%	10.8	1.96	17.8
UK	72	40	78%	13.4	5.06	18.1
USA	41	38	61%	11.5	3.20	17.4

Table 2: Psychic Distance between the 25 Countries

<i>Distance to</i>	<i>Distance From</i>																								
	AR	AU	AT	BE	BR	CA	CN	DK	FR	DE	IN	IT	JP	MX	NL	NO	PL	RU	SK	ES	SE	CH	TR	UK	US
Argentina (AR)	0	69	68	75	12	50	90	72	51	67	71	48	74	28	67	71	60	82	77	27	75	68	77	67	58
Australia (AU)	60	0	57	74	61	57	48	40	47	47	44	68	36	68	47	41	40	81	44	60	49	57	80	41	54
Austria (AT)	60	57	0	24	60	45	64	25	26	10	65	28	52	61	21	30	29	38	63	39	30	11	44	29	52
Belgium (BE)	57	58	24	0	56	43	63	23	10	17	61	33	54	58	6	34	26	40	63	29	27	22	43	25	50
Brazil (BR)	12	69	70	71	0	51	73	74	49	66	59	55	66	30	69	74	59	78	71	39	67	69	74	67	49
Canada (CA)	43	29	46	46	40	0	50	35	29	35	47	57	42	26	32	33	38	59	36	51	36	40	63	29	10
China (CN)	91	60	89	80	81	79	0	86	79	92	42	92	30	76	89	88	88	55	19	84	83	91	78	87	77
Denmark (DK)	62	55	23	23	63	44	63	0	28	17	59	41	54	64	13	9	26	41	63	42	15	25	53	25	55
France (FR)	47	50	25	8	42	38	49	29	0	25	51	18	48	45	18	37	26	34	43	18	33	13	38	24	48
Germany (DE)	53	49	8	11	52	42	51	16	20	0	52	30	42	53	9	25	23	30	45	29	22	8	31	24	42
India (IN)	85	60	81	77	75	76	49	81	68	80	0	80	47	77	75	74	80	65	47	83	74	75	77	59	76
Italy (IT)	35	48	19	21	36	44	58	34	15	28	47	0	47	42	25	42	20	33	47	16	35	15	28	31	47
Japan (JP)	83	50	79	81	78	75	27	74	79	76	54	87	0	74	79	83	79	70	17	87	74	74	69	73	55
Mexico (MX)	23	70	68	62	25	34	77	71	48	62	62	50	56	0	64	73	62	75	65	31	65	65	74	64	20
Netherlands (NL)	59	54	21	7	61	44	62	17	25	15	58	35	56	64	0	21	26	40	46	35	20	20	44	20	55
Norway (NO)	67	58	27	30	70	46	61	9	31	25	69	45	56	69	19	0	32	40	66	52	10	30	56	29	58
Poland (PL)	68	71	36	38	74	55	66	44	45	41	69	44	58	69	38	44	0	19	69	57	36	49	48	47	69
Russia (RU)	75	77	57	56	82	66	42	61	59	60	48	55	52	77	63	66	20	0	56	71	55	63	41	60	71
South Korea (SK)	87	61	86	89	84	80	22	85	89	85	58	91	32	82	85	85	85	70	0	90	82	85	75	83	69
Spain (ES)	26	59	28	20	31	46	62	34	14	29	52	15	52	29	26	38	24	38	58	0	34	26	35	28	47
Sweden (SE)	63	58	24	25	64	44	65	9	27	23	62	41	52	65	17	8	27	39	59	44	0	25	56	27	56
Switzerland (CH)	60	55	13	23	60	41	64	25	19	15	55	25	55	61	19	30	32	42	51	35	27	0	47	29	51
Turkey (TR)	79	76	54	40	78	70	79	60	56	53	59	51	59	76	52	66	57	35	48	66	57	51	0	54	79
UK (UK)	47	29	28	18	46	28	47	18	24	18	32	36	41	46	16	22	33	34	39	24	20	23	42	0	27
USA (US)	36	27	49	45	30	9	41	29	31	32	41	56	31	17	27	30	38	55	21	33	31	38	50	28	0

Table 3. Descriptive statistics

Variable name		Mean	Standard deviation
1	Mean Psychic Distance	48.8	21.1
2	Kogut/Singh (4)	2.08	1.4
3	Kogut/Singh (5)	2.00	1.5
4	PDI difference	23.7	16.5
5	IDV difference	24.7	17.6
6	MAS difference	24.6	19.2
7	UAI difference	25.3	17.8
8	LTO difference	25.5	23.0
9	GDP/Capita difference	12640	9711
10	GDP destination	1,773,700	2,541,590
11	Trade volume	11,121	39,005
12	Geographic distance (log)	3.62	.48

Correlation matrix (n=600)

	1	2	3 ¹⁾	4	5	6	7	8	9	10	11	12
1	--											
2	.247*	--										
3 ¹⁾	.468*	.891*	--									
4	.211*	.663*	.593*	--								
5	.409*	.475*	.673*	.264*	--							
6	-.046	.501*	.269*	.088*	-.132*	--						
7	.064	.611*	.368*	.295*	.132*	.184*	--					
8 ¹⁾	.546*	.515*	.794*	.364*	.685*	-.029	.080	--				
9	.355*	.381*	.421*	.469*	.490*	-.092*	.055	.409*	--			
10	.076	.042	.174*	-.019	.196*	-.109*	.013	.227*	.155*	--		
11	-.145*	-.139*	-.144*	-.158*	-.035	-.126*	-.050	-.090	-.034	.225*	--	
12	.735*	.056	.277*	.006	.413*	-.135*	-.065	.423*	.252*	.165*	-.104*	--

Correlation is significant at the 0.05 level (2-tailed).

Note: ¹⁾ n = 420

Table 4. The influence of Hofstede's cultural dimensions on perceived psychic distance.

Regression no	1	2	3	4
N	600	600	420	420
Kogut/Singh (4)	.247*** (6.230)			
Kogut/Singh (5)			.468*** (10.831)	
PDI difference		.117*** (2.904)		.076* (1.727)
IDV difference		.380*** (9.709)		.299*** (5.411)
MAS difference		-.003 (-.066)		.025 (.603)
UAI difference		-.020 (-.510)		-.017 (-.406)
LTO difference				.316*** (5.619)
Adjusted R ²	.059	.173	.217	.343
Standard error	20.529	19.244	19.277	17.658
F-value	38.817***	32.426***	117.310***	44.803***

t-values in parenthesis. two-tailed tests

* p< .1. **, p<.05. *** p<.01

Table 5. Determinants of average perceived psychic distance

Regression no	5	6	7
N	600	420	420
Geographical distance (log)	.633*** (25.141)	.634*** (23.673)	.628*** (21.511)
Trade volume	-.019 (-.766)	.019 (.724)	.034 (1.299)
GDP/capita difference	.131*** (5.255)	.027 (.915)	.023 (.711)
GDP/capita destination	-.319*** (-12.859)	-.328*** (-12.154)	-.338*** (-12.347)
GDP destination	-.037 (-1.505)	-.070*** (-2.634)	-.058** (-2.201)
Kogut/Singh (5)		.221*** (7.911)	
PDI difference			.097*** (3.213)
IDV difference			.038 (1.049)
MAS difference			.107*** (4.132)
UAI difference			.028 (1.077)
LTO difference			.124*** (3.497)
Adjusted R ²	.667	.748	.754
Standard error	12.213	10.938	10.809
F-value	241.047***	208.290***	129.345***

Standardized regression coefficients. t-values in parenthesis. two-tailed tests

* p< .1. **, p<.05. *** p<.01

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