

# Post-entry strategic significance of export market: how does psychic distance work? The evidence from European SMEs\*

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## Abstract

The purpose of this study is to broaden our understanding of the post-entry effects of psychic distance by asking what markets – psychically close or distant – became over time the most strategically significant for European SMEs. Specifically, we analyse whether psychic distance is a valid predictor of the strategic significance of foreign market, as well as whether and how this relationship is moderated by export diversification. Contrary to expectations, the study findings reveal that psychic distance to the foreign market actually increases its post-entry strategic significance, providing support for the phenomenon of PD paradox.

**Keywords:** psychic distance paradox, strategic significance of export market, export diversification, SME

JEL: F23, M16

## Introduction

In order to ensure satisfactory export results, firms have to choose markets suitable for their products, services and dominant modes of operations. The choice of market is strategically important, and psychic distance between the home and the chosen foreign market or markets has been found to influence this decision. In this study, however, we examine the *post-entry* impact of psychic distance in the context of European small and medium-sized enterprises (SMEs) that are internationally oriented. First, we analyse whether and how psychic distance explains the post-entry strategic significance of the key foreign market for SMEs; second, we study the moderating effect of export diversification on this relationship.

In international business (IB) literature, the concept of psychic distance has been extensively used to explain strategic choices related to the international expansion of firms (Nebus/Chai 2014). On the one hand, within macro-level gravity

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models of foreign trade, geographic distance has been treated as a key variable explaining the trade between two countries (Tinbergen 1962; Hakanson 2014). On the other hand, theories describing the internationalisation of business at the microeconomic level have stressed that significant differences between the home and host markets pose a significant obstacle to internationalisation, described as a liability of foreignness (Hymer 1976; Johanson/Vahlne 2009; Bell et al. 2011). The popularization of research involving psychic distance as one of the focal variables is related to the use of this construct by Uppsala University researchers (Johanson/Vahlne 1977), who employed psychic distance to explain the dynamics of the internationalisation process of Swedish firms. Since the 1970s, the concept of psychic distance has become increasingly popular and has often been applied in research on the process and effects of internationalisation. In particular, it has been employed in studies examining the choice of destination market (Johanson/Vahlne 1977; Dow 2000; Ellis 2007; Dow/Ferencikova 2010); selection of entry mode (Brouthers et al. 1996; Drogendijk/Slangen 2006; Evans et al. 2008; Ojala/Tyrvaainen 2009; Kontinen/Ojala 2010); local market adaptations (Sousa/Lengler 2009); knowledge transfer and ability to learn (Pedersen et al. 2003; Prashantham/Floyd 2012); and internationalisation performance (Dow/Larimo 2011; O'Grady/Lane 1996; Dikova 2009; Sousa et al. 2010). However, in spite of the rich literature on the influence of psychic distance on internationalisation choices and performance, it still brings mixed results; one reason for this is the application of different psychic distance measures, as the measurement of psychic distance remains the subject of an on-going debate (Nebus/Chai 2014).

Our paper is positioned within the research stream that treats psychic distance as a key phenomenon influencing the internationalisation process, but it advances the extant research by adopting the *post-entry* perspective. As such, the purpose of this paper is to shed light on our understanding of the post-entry influence of psychic distance on European SMEs' export choices. Specifically, the paper addresses the following question: what markets – psychically close or distant – have become post-entry the most significant for internationalised SMEs, and how can this relationship be further explained by the SMEs' decisions on export diversification? This post-entry perspective on the role of PD is rarely considered in extant research, and thus it offers the possibility of providing new insights into PD research.

Recognizing that mixed findings of prior research are often attributed to different operationalisations of psychic distance, we examine the influence of psychic distance employing three popular and competing measurements: the cultural distance index of Kogut and Singh (1988), based on Hofstede's national culture dimensions; the psychic distance stimuli developed by Dow and Karunaratna (2006); and the psychic distance scale of Hakanson and Ambos (2010). This approach allows us to control for the robustness of our findings.

The paper is structured as follows. We begin by briefly reviewing the prolific literature on psychic distance and its impact upon firms' choices of market and performance in foreign markets. Building on this research background, we develop research hypotheses. In the following section, we introduce this paper's research methodology, addressing details of the sample and data selection procedure. We focus on SMEs because they represent an overwhelming majority of firms in any European economy. Our total sample consists of 1444 firms originating from 30 countries characterised by different levels of economic development and size in order to capture variations of possible internationalisation processes and the possible relationships with psychic distance. We then present our results and analysis. Finally, the paper concludes with a discussion of the study limitations and implications for future research.

## Theoretical background

### *The concept of psychic distance*

The concept of psychic distance was used for the first time in the analysis of the trans-European flow of goods by Beckermann (1956), who noticed that factors such as geographical distance, cost of shipping and price level are not the sole determinants of foreign trade. Beckermann (1956) indicated the need for further definition of distance within the theory of foreign trade, arguing that the distance between countries as perceived by managers and entrepreneurs depends, inter alia, on language differences. Nonetheless, the popularization of research involving psychic distance is related to the use of this idea in the 1970s by Uppsala University researchers (Johanson/Vahlne 1977), who analysed the process of internationalisation of Swedish businesses. Their seminal article defined the notion of psychic distance and set the foundations for the stage theory of internationalisation (the Uppsala Model). Psychic distance was defined by several factors disturbing the flow of information between the company and the market, including differences regarding language, systems of education, business practices, culture and level of development of the industry (Johanson/Vahlne 1977:24). These differences hinder firms' ability to learn about and understand foreign markets, and impact internationalisation choices and decisions in terms of foreign markets' and entry modes' selection.

Over the years, the definition of psychic distance and the operationalisation of this construct have evolved (see Table 1 for selected definitions). The original understanding of psychic distance as a perceptual and subjective phenomenon was replaced by more objective operationalisations of psychic distance as a set of factors disturbing the exchange of information between actors in host and home markets, and until recently the terms *psychic distance* and *cultural distance* were often used interchangeably (Sousa/Bradley 2006; Shenkar 2001). Due to the growing popularity of the Uppsala model, psychic distance became

identified with a set of relatively objective differences, including geographical, cultural, and institutional differences. Recently, some researchers advocate a return to a more psychological and perceptual view, arguing that: (a) managerial perception (awareness and understanding) of differences between markets rather than external factors *per se* play a key role (Evans/Mavondo 2002; Evans et al. 2000; O'Grady/Lane 1996), and (b) the literature on psychic distance effectively removed managers (who really make all internationalisation decision) from the picture. It led Nebus and Chai (2014:10) to the conclusion that IB literature on psychic distance exhibits symptoms of schizophrenic shifts between the cognitive, perceptual view and the factual, objective approach.

In this paper, we do not aim to resolve this on-going ontological debate. Although the arguments presented by Nebus and Chai (2014) are appealing, it is beyond the scope of the present work to examine whether psychic distance measured at the individual level of managers and entrepreneurs would bring different results than other common operationalisations of the construct. Instead, we employ three popular and competing measurements of the psychic distance construct to validate the study findings. Details concerning all operationalisations are presented in the methodological section.

**Table 1. Key definitions of psychic distance**

Author (year)	Definition
Johanson and Wiedersheim-Paul (1975: 308)	The sum of factors preventing or disturbing flows of information between firm and market.
Nordstrom and Vahlne (1994:42)	Factors preventing or disturbing firm's learning about and understanding a foreign environment.
Evans et al. (2000:165)	It is the mind's processing, in terms of perception and understanding, of the cultural and business differences.
Evans and Mavondo (2002 b: 309)	Psychic distance [can] be defined as the distance between the home market and a foreign market, resulting from the perception of both cultural and business differences.

### *Psychic distance and strategic significance of the foreign market*

Our theorising on the relationship between psychic distance and the post-entry strategic significance of the key foreign market builds on prior research that examined the psychic distance effects for market selection and performance/results in foreign markets. The starting point for research on location choice in the process of internationalisation (Ellis 2007), international market entry mode, or internal knowledge transfer (Pedersen et al. 2003) is the assumption that the greater the differences between the foreign and home market of a given company, the more difficult it will be for this company to collect, analyse and correctly interpret market-related data. The Uppsala model explains that the managerial

choices of particular foreign markets results from an attempt to limit psychic distance through focusing on those markets that are easier for the focal company to understand. According to the Uppsala model, companies begin their international expansion in those markets that are closest to their home market in terms of psychic distance and move towards more distant markets as their knowledge and experience of foreign operations increases (Johanson/Vahlne 1977).

Research evidence generally supports this pattern of choices and decisions for firms originating from both developed (Dow 2000; Rothaermel et al. 2006) and emerging economies (Wasawska/Obloj 2012; Ciszewska-Mlinaric/Obloj 2014; Wasowska et al. 2016). Pedersen et al. (2003) observed that psychic distance decreased the ability to transfer knowledge within a multinational corporation. In line with these assumptions, Dow (2000) found that psychic distance is a significant predictor of early export market selection for Australian SMEs, but its influence declines significantly between the first and second market entry decisions. The findings of Dow and Karunaratna (2006) reveal that the intensity of trade between countries is strongly related to the psychic distance stimuli of differences in education, degree of democracy, and religion, while there is also some support for the role of differences in language, industrial development, and the degree of socialism. Dow and Ferencikova (2010) observed that psychic distance stimuli, as applied to FDI in Slovakia, are still strong predictors of market selection.

The relationship between psychic distance and the results of firms' activities in foreign markets has been also theoretically and empirically analysed. Traditionally, it has been argued that excessive distance in terms of cultural norms and beliefs affects communication and limits the understanding of local business practices, thus negatively affecting the performance of business operations in the long run (Slangen/Hennart 2008; Zeng et al. 2013). However, research results do not consistently confirm the negative influence of psychic distance on firm results and performance in foreign markets (Dikova 2009). Likewise, there is evidence suggesting that selecting countries that are close in terms of culture does not ensure success in internationalisation (O'Grady/Lane 1996). Underestimating psychic distance between countries that are seemingly close in terms of culture may hinder performance, as the managers' assumption of the markets' closeness limits their sensitivity to small but crucial differences and their learning ability (Wasawska et al. 2016). This phenomenon has been called a paradox of psychic distance (O'Grady/Lane 1996).

Considering the extant research on the impact of psychic distance on market selection, performance outcomes and results of activities undertaken by firms in foreign markets, we adopt the dominant theoretical view, although we recognise that research findings offer mixed explanations as to the relationship between psychic distance and results. Specifically, we follow arguments indicating that

psychically close markets (i.e., those characterised by lower levels of cultural and business differences, among other factors) are likely to be easier to understand, so that activities undertaken by SMEs in these markets are likely to be more effective (in terms of sales revenues from the foreign market in total revenues) than they would be in psychically distant markets. Therefore, we expect that the post-entry strategic significance of a foreign market, which reflects how important the foreign market has become in overall SMEs' strategy, will be higher in psychically close markets and lower in psychically distant markets.

*Hypothesis 1: The psychic distance between the foreign and the origin market will be negatively associated with the strategic significance of the foreign market.*

It can be argued, however, that the relationship between the psychic distance from the foreign market and the strategic significance of this market for SMEs may be moderated by the firms' geographic diversification of export strategy (i.e. concentration vs. spreading strategy). Preceding research examined the direct influence of these strategies on SMEs' export performance (Ciešlik et al. 2012; Brouthers et al. 2009; Crick et al. 2000). Drawing on organisational learning theory, Brouthers et al. (2009) argued that small enterprises do not possess the managerial, organisational and financial resources to expand into several markets simultaneously. Their findings supported this line of theorising, showing that, in particular, companies that concentrate on one major market achieve greater perceived export performance. However, the findings of Ciešlik et al. (2012) did not fully support this argument, and the authors suggested that, while the concentration on one single market is a viable option for SMEs, it may at the same time hamper the growth of export sales. Thus, extant research offers competing explanations on the influence of geographic diversification on export performance.

From our point of view, however, it is interesting to consider the effect of export diversification strategy (concentration vs. spreading) on the relationship between psychic distance and post-entry strategic significance of foreign market. We hypothesise that a concentration strategy will be associated with a positive relationship between PD and the strategic significance of the export market, while for a spreading strategy this relationship will be negative for the following three related reasons.

First, we expect that firms pursuing a concentration strategy (i.e., firms that are characterised by high reliance on a single export market) make great efforts to understand and learn the key foreign market. This is particularly likely in situations in which SMEs' owners/managers decided to operate in the foreign market due to its size or other characteristics that make the market attractive (despite being psychically distant). Hence, firms' efforts may limit the negative effect of

psychic distance on the post-entry strategic significance of the market. Indeed, we expect that in case of geographically focused firms, not only will negative effects be eliminated but the relationship could actually be positive; in other words, under a concentration strategy, high psychic distance to the market may be associated with higher post-entry strategic significance of the market. Such a phenomenon would be explained in terms of the PD paradox (O'Grady/Lane 1996). O'Grady and Lane (1996) theorise that managers who take their companies into psychically close markets will generally underestimate the difficulties that can arise even from small differences, whereas managers that are responsible for expansion into more distant markets will be aware of the differences and will pay more attention to them. They will generally make a greater effort to understand the host market, particularly under the condition of a concentration strategy. In case of firms following a more diversified/spreading strategy (i.e., where one market does not account for a vast majority of export revenues), we expect that managers will have to divide their time and attention, as well as other company resources, among many markets, and this will limit their ability to cope efficiently with uncertainties created by PD.

Second, in every foreign market, managers must deal not only with PD but also with several other important contingencies. Recent research underlined two such contingencies as exceptionally important but often neglected in IB research – intra-country cultural variation and host country context (Harzing/Pudelko 2016). Host country cultural variation may lead companies to focus their internationalisation strategy on those segments of customers that are culturally closer to them, thus partially neutralizing the PD effects (Beugelsdijk/Mudambi 2013; Beugelsdijk et al. 2014). The implementation of such a strategy is more probable if companies perceive PD as high and can concentrate their attention. Also, managers must continuously monitor “hard” characteristics of the host country context, such as legal restrictions, political risk, economic developments, and their ongoing evolution. A concentration strategy makes such monitoring much easier and more effective compared to a spreading strategy in the case of SMEs operating in psychically distant markets, and thus the relationship between PD and the strategic significance of a particular export market will be positively associated with a concentration strategy.

Third, SMEs possess limited intangible (e.g., time and attention of top managers) and tangible resources (e.g., money and specialised personnel), and thus the dispersion of these resources among many markets can lower learning efforts to understand the key export destinations. Therefore, under the condition of a spreading strategy, negative effects of high psychic distance to the key foreign market will not be neutralised through greater efforts from managers, as they lack the resources to spread among several markets. It could also be argued that such diversification offers more diverse international experience; however, the resource scarcity and ‘liability of smallness’ (Aldrich/Auster 1986; Lee et al.

2012) limit both absorptive and exploitation capacities of such learning. Under the condition of a concentration strategy, we expect managers to make the effort to thoroughly learn about the market, and therefore we expect to observe the psychic distance paradox. Thus, we hypothesise that:

*Hypothesis 2: The relationship between PD and the post-entry strategic significance of the export market is moderated by the firm export diversification strategy, such that in the case of firms with low export diversification (concentration strategy), the relationship between PD and the strategic significance of the export market will be positive, whereas in the case of more diversified firms (spreading strategy) the relationship will be negative.*

## Data and method

### *Data collection and sample*

This study is based on a database that is unique in terms of size and reach; this database was developed as a result of a research project sponsored by the European Commission: *Internationalisation of European SMEs, European Commission, DG Enterprise and Industry, 2010*. The survey was commissioned by the Directorate-General for Enterprise and Industry of the European Commission and was implemented by the Dutch EIM Business & Policy Research. The original database contained data from 33 countries within Europe: the 27 EU states, plus Croatia (now an EU state as well), Iceland, Lichtenstein, Macedonia, Norway and Turkey. In total, 9480 micro, small and medium-sized companies were interviewed during January-April 2009, from which a total of 3669 (38.7%) reported that they had already exported between 2006 and 2008.

As the focus of this paper is the significance of psychic distance for SMEs' export strategy, we dropped from the sample all micro firms and included data only for small (10-49 employees) and medium-sized firms (50-249 employees) that have export activities. The sample was further reduced by removing companies from Lichtenstein and Macedonia, as currently none of the three distance measures are available for these countries. Finally, we dropped all observations for firms established before 1945, as well as those with missing values for variables employed in this study. This includes companies with missing data about the destination country, ratio of export sales to total sales, firm age or year of starting export activities, as well as those firms that exported to markets for which none of the psychic distance measures is available (i.e. Hakanson/Ambos 2010; Dow/Karunaratna 2006; Kogut/Singh 1988, based on values reported by Taras et al. 2012). Characteristics of the final samples, ultimately based on the availability of psychic distance measures, are presented in Table 2.

**Table 2. Characteristics of sample**

	N1*	N2**	N3***
No. of firms originating from European countries	1444 SMEs originating from 30 countries	1027 SMEs originating from 24 countries	562 SMEs originating from 13 countries
Austria	40	34	30
Belgium	40	35	33
Bulgaria	67	56	
Croatia	28		
Czech Republic	59	33	
Denmark	29	28	29
Estonia	66	56	
Finland	27	22	
France	62	51	48
Germany	61	53	48
Greece	34	25	
Hungary	38	28	
Iceland	25		
Ireland	22	21	
Italy	83	67	66
Latvia	59	52	
Lithuania	65	48	
Luxembourg	21		
Malta	26		
Netherlands	55	47	48
Norway	14	14	12
Poland	120	97	80
Portugal	33	30	
Romania	41	36	
Slovakia	46		
Slovenia	34		
Spain	95	82	66
Sweden	33	28	28
Turkey	54	25	24
United Kingdom	67	59	50
Total	1444	1027	562

		N1*	N2**	N3***
No. of firms originating from European countries		1444 SMEs originating from 30 countries	1027 SMEs originating from 24 countries	562 SMEs originating from 13 countries
Firm age (years)	Mean	22.60	23.31	27.72
	Std.deviation	14.12	14.49	15.96
	Range (min-max)	1-63	1-63	1-63
Firm size (no. of employees)	Mean	68.15	68.93	69.38
	Std.deviation	59.18	59.59	61.34
	Range (min-max)	10-249	10-249	10-249
Foreign sales to total sales ratio	Mean	31.28	30.44	31.16
	Std.deviation	30.67	30.39	28.78
	Range (min-max)	0.01-1.00	0.01-1.00	0.01-1.00

Note:

\*N1 consists of firms (=observations) for which there is data on psychic distance according to measurement developed by Dow and Karunaratna (2006).

\*\* N2 consists of firms (=observations) for which there is data on psychic distance according to measurement developed by Kogut and Singh (1988).

\*\*\*N3 consists of firms (=observations) for which there is data on psychic distance according to measurement developed by Hakanson and Ambos (2010).

Source: own elaboration based on *Internationalisation of European SMEs, European Commission, DG Enterprise and Industry, 2010*.

## Measures

*Strategic significance of export market.* To measure the strategic significance of the export market we used a variation of the often-used operationalisation of firm international performance, which is typically calculated as a ratio of foreign sales to total sales (e.g., Nummela et al. 2004; Kyvik et al. 2013). However, as the focus of our research is the strategic significance of a particular foreign market, we adapted the measurement to our study, so that it reflects the share of revenues from the most significant export market (i.e., the market that accounts for highest share in exports) in *total* firm revenues (i.e., domestic and foreign). This measurement indicates the overall significance of the market in SMEs' strategy. In other words, our measure of strategic significance of the key export market *reflects* the development of this market and a firm's approach and actions in this particular market, showing its significance in relation with total firm's revenues.

*Psychic Distance (PD).* There is an on-going debate regarding how to best measure the psychic distance concept. Most often, researchers employ one of three methods of operationalisation: the cultural distance index (Kogut/Singh 1988, based on Hofstede's national culture dimensions), psychic distance stimuli (Dow/Karunaratna 2006), or perceptual operationalisation of psychic distance developed by Hakanson and Ambos (2010). As one of the objectives of our study is to examine whether or not the study findings depend on the measure-

ment of psychic distance, we use all three operationalisations of the PD construct. The following section briefly discusses the three approaches to PD measurement.

(1) *Cultural Distance index (CD)*. The operationalisation of cultural distance developed by Kogut and Singh (1988) is based on Hofstede's (1980) theory of several dimensions of national cultures and uses the differences in the countries' scores on those dimensions. It has often been used by researchers as a proxy of psychic distance in the last few decades, with mixed results (Dow/Ferencikova 2010). More recently, the revised estimates of national cultural distance for 76 countries were updated and made available by Taras and Steel (2006) and Taras et al. (2012). Dow and Ferencikova (2010) found that Taras and Steel's (2006) revised estimates of national cultural distance are more appropriate than Hofstede's dimension values (1980) when combined into one single index of cultural distance (Kogut/Singh 1988). The revised estimates are also used in this study (Taras/Steel 2006; Taras et al. 2012) to calculate the cultural distance index ( $CD_{jk}$ ) (Kogut/Singh 1988). The differences between the culture scores of the  $j$ -th and  $k$ -th country in the  $i$ -th dimension are calculated. The average of those four values is taken and corrected by the variance ( $V_i$ ) of the  $i$ -th dimension.

(2) *Psychic Distance stimuli (Dow & Karunaratna, 2006)*. Dow and Karunaratna (2006) introduced a new approach to measuring psychic distance and developed an instrument that goes beyond cultural differences. Psychic Distance stimuli are based on macro-level factors that influence the manager's perception of a foreign market. These factors include differences in language, educational levels, industrial development, political system and religion. Subsequent studies validated the higher significance of these factors compared with the Kogut and Singh index (Dow/Larimo 2009; Dow/Ferencikova 2009; Dow et al. 2014). However, Dow and Larimo (2009) stressed that the factors of religion, education, industrial development and degree of democracy are highly correlated, leading to the combination of those factors into one (RIED) factor using confirmatory factor analysis. In this study, the same method is applied. The construct has a Cronbach's alpha of 0.738, which indicates high internal reliability (Nunnally/Berstein 1994).

*Differences in language*. As the four dimensions of the Dow and Karunaratna (2006) stimuli are combined as RIED, the fifth dimension, *PD\_Lang*, is treated separately as an independent variable, similarly to Dow and Larimo (2009).

(3) *Psychic Distance (Hakanson/Ambos 2010)*. The third representative measure of psychic distance was developed by Hakanson and Ambos (2010). In their study, executive MBA students from 25 countries were asked to assess their perceived psychic distance from 24 countries on a scale from 0 to 100. The respondents were presented with a definition of psychic distance as the "sum of factors (cultural or language differences, geographic distance, etc.) that affect the flow

and interpretation of information to and from a foreign country”); next, they were asked to score the most distant country as 100 and their home country as 0, to anchor the results for the other 23 countries. In total, the authors gathered 1052 responses that were used to calculate the average psychic distance as perceived by managers from each country to the other 24 countries. Hakanson and Ambos (2010) recognise the potential bias resulting from the calculation of a national average score based on individual perceptions, but they argue that such an approach is justified given the high within-group agreement and large between-group variance. As shown later by Dow et al. (2014), this approach is superior in predicting IB activities. Even though Hakanson and Ambos’ measurement of perceived PD might be the most accurate, Dow and Karunaratna’s (2006) approach still captures about 80% of the explained variance (Dow et al. 2014).

*Export diversification strategy.*<sup>1</sup> The export diversification strategy that a firm pursues was measured as a dichotomous variable (0, 1). The value “1” indicates that the firm is following a spreading strategy, characterised by a higher level of geographic diversification of firm exports. Conversely, when a firm follows a concentration strategy, characterised by a lower level of geographic diversification, it is represented by the value “0”. This dichotomous approach follows Crick et al. (2000) and earlier Katsikeas and Leonidou (1996) with the goal to clearly distinguish between the two strategies. Firms that accrue 70% (or more) of their total export revenues from a single market are considered to follow a concentration strategy, while firms with less than 70% from a single market are considered to follow a spreading strategy. We adopted the threshold of 70% from the strategic management field, where corporate diversification is classified as low/limited when 70% (or more) of revenue comes from a single business (Rumelt 1974).

*Control variables.* In order to increase the reliability of the study, we control for several variables at three different levels: decision, firm, and country of origin. At the decision level, we control for geographical distance, as well as development and size of the key destination market in the firm export strategy. *Geographical distance* between the country of origin and the destination country

1 Following the reviewers’ comments, we need to address the concern regarding a possible tautological relationship between operationalisations of the dependent variable (strategic significance of export market) and moderator (export diversification). Given that both measures employ the sales revenues from the export market in relation with either total sales (strategic significance) or export sales (which, after coding into a binary variable, represent the base of export diversification), intuitively it could be assumed that when a foreign market accounts for a majority of export revenues, it will have a high share of total revenues as well. However, the actual relationship is more nuanced, and a high share in export revenues does not necessarily imply a high share in total revenues. For instance, a firm may operate only in one foreign market (high concentration, 100% share in exports), but its export revenues may constitute only 5% of its total revenues. In such a case, the high share in exports (100%) does not indicate a high share in total revenues (5%).

was measured with the natural logarithm of the distance (in kilometers) between the capitals of the origin and destination countries. The data for the geographic distance variable was collected from the *Centre d'études prospectives et d'informations internationales* (CEPII, 2011). The CEPII is a major research institute in international economy in France and is part of the network coordinated by the Policy Planning for the French Prime Minister. *Market Development (destination)* and *Market Size (destination)* of the destination country are measured, respectively, with the natural logarithm of the 2008 GDP per capita of the destination country and the natural logarithm of the population size of the destination country. The data for market size and development are collected from the UNCTAD STAT database.

At the firm level, we control for firm age, firm size and international experience, as well as the industry in which the firm operates, which are typically used in firm export and international entrepreneurship research (e.g., Zahra et al. 2005; Nummela et al. 2004; Kyvik et al. 2013). The *firm age* is measured with the natural logarithm of the number of years the firm has been operating, and the *firm size* is measured with the natural logarithm of the number of employees. *International experience* is measured by the number of years the firm has been exporting. *Industry* is operationalised with three dummy variables: manufacturing (Industry 1), wholesale and retail (Industry 2) and others (Industry 3).

At the origin level, we control the size of the domestic country economy and its membership in EU15. *Market size (origin)* of the domestic country is measured with the natural logarithm of the population size. Additionally, we control for the origin country membership in EU15 using a dichotomous variable, which takes the value 1 if the domestic country of the exporting company is a member of the first group of European Union members. The inclusion of this variable allows us to control for the impact of the economic-institutional background of “Old and United Europe” (EU15) for SMEs’ strategies and international behaviour.

Correlations and descriptive statistics for all variables are shown in Table 3.

**Table 3. Correlations and descriptive statistics**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Strategic significance of export market	1																
2 PD stimuli (Lang) DK	.10**	1															
3 PD stimuli (REID) DK	.11**	.24**	1														
4 Psychic DistanceHA	.15**	.48**	.79**	1													
5 CDHOF	.11**	.14**	.17**	.20**	1												
6 Geographic distance	.06*	.30**	.45**	.79**	.13**	1											
7 Market development (destination)	.06*	-.09**	-.45**	-.72**	.03	-.12**	1										
8 Market size (destination)	.15**	.18**	.24**	.56**	-.01	.52**	-.13**	1									
9 Firm age	-.10**	-.07**	.01	.02	.02	.09**	.06*	.10**	1								
10 Firm size	.06*	.05	.03	-.03	-.01	.02	.02	.07**	.08**	1							
11 International experience	.07*	-.04	-.01	.06	.03	.12**	.11**	.14**	.60**	.11**	1						
12 Export diversification	-.08**	.12**	.05	.10*	-.03	.19**	-.02	.14**	.08**	.10**	.21**	1					
13 Industry 1	.18**	.10**	.00	-.01	.00	.02	.03	.08**	.02	.07**	.05	.06*	1				
14 Industry 2	-.12**	-.11**	-.04	-.01	.07*	-.06*	-.03	-.12**	.01	.05	-.01	-.07*	-.39**	1			
15 Industry 3	-.09**	-.01	.03	.02	-.05	.02	-.01	.01	-.03	-.11**	-.04	-.01	-.72**	-.37**	1		
16 Market size (origin)	-.14**	.13**	.12**	.22**	.05	.27**	-.04	.18**	.17**	.03	.11**	.07**	.05*	-.02	-.04	1	
17 EUT5 (origin)	-.19**	-.21**	-.13**	-.15**	-.01	.16**	.19**	.14**	.35**	-.07*	.34**	.09**	-.02	-.02	.03	.42**	1
Mean	.19	-.49	.41	24.83	1.49	2.89	4.45	4.41	2.92	3.83	14.68	.59	.43	.17	.41	4.08	.49
Std. Deviation	.21	1.13	1.39	17.71	1.47	.44	.36	.63	.67	.91	11.01	.409	.50	.37	.49	.63	.50
N	1444	1444	1444	562	1027	1444	1444	1444	1444	1444	1444	1444	1444	1444	1444	1444	1444

Note: \*\* Correlation is significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed).

## Analysis and results

In order to test H1, examining the relationship between psychic distance and the post-entry strategic significance of the foreign market, we run three regression models that employ three different operationalisations of the psychic distance concept as an independent variable. Model 1 uses the operationalisation put forward by Dow and Karunaratna (2006), Model 2 employs the operationalisation developed by Hakanson and Amboss (2010), and Model 3 uses the Cultural Distance Index of Kogut and Singh (1988) based on the Hofstede scale, with revised values by Taras et al. (2012). In order to test H2, examining the moderating effect of export diversification on the relationship between psychic distance and the post-entry strategic significance of the foreign market, we used a hierarchical regression analysis (Table 4). All models (Models 1-3) have three versions: *baseline*, examining only the effects of control variables; *main effects*, including of the independent (i.e., psychic distance) variable; and *full model*, also including the interaction effect (psychic distance  $\times$  export diversification). This approach allows us to see whether the explanatory power of the model increased after adding the independent variable in the first step and the interaction term in the second step. The moderation effect exists when the inclusion of the interaction term increases the explanatory power of the model in a statistically significant way (captured by the change in *R-squared* and significance of *F-change*) (Cohen/Cohen 1983). The interaction term (psychic distance  $\times$  export diversification) was calculated by multiplying the corresponding components that were previously centered (psychic distance variables' values were standardised, while the dichotomous variable of export diversification strategy was recoded into -1,1).

All three *baseline models* are statistically significant ( $p < 0.001$ ), as are the *main effects* models ( $p < 0.001$ ) (Table 4). The psychic distance variable was significant in Model 1 (operationalisation of PD based on Dow/Karunaratna,  $p < 0.001$ ) and Model 3 (operationalisation of PD based on Cultural Distance Index of Kogut/Singh,  $p < 0.001$ ), while in Model 2 psychic distance (Hakanson/Ambos operationalisation) was not statistically significant ( $p = 0.258$ ). Moreover, contrary to our expectations formulated in H1, psychic distance is actually positively associated with the post-entry strategic significance of the foreign market. In addition, although psychic distance was not significant in Model 2 (*main effects*), it is worth noting that the sign of the coefficient also indicated a positive relationship with the strategic significance of the foreign market; moreover, when adding the moderating effect (Model 2 *full*), the  $PD_{HA}$  is significant ( $p = 0.094$ ). These findings are largely in contrast with H1 and point to the paradoxical effect of PD. The implications are discussed in the next section.

Table 4. Linear regression results for Strategic Significance of Export Market

	Model 1			Model 2			Model 3		
	Baseline	Main effects	VIF	Baseline	Main effects	VIF	Baseline	Main effects	VIF
PD stimuli (Lang) /DK	0.026	0.027	1.266						
PD stimuli (REID) /DK	0.123***	0.136***	1.708						
REIDDK x Exp diversification		0.045†	1.110						
Psychic Distance/HA				0.056	0.096†	1.946			
PDHA x Exp diversification				0.076†	1.313				
CD/HOF							0.107***	0.107***	1.040
CD HOF x Exp diversification									
Geographic Distance	0.055†	-0.004	1.835				0.035	0.014	1.589
Market development (destination)	0.097***	0.143***	1.326				0.111***	0.105***	1.065
Market size (destination)	0.168***	0.170***	1.429	0.182***	0.152**	1.489	0.141***	0.154***	1.539
Firm age	-0.171***	-0.173***	1.658	-0.150**	-0.150**	1.576	-0.173***	-0.174***	1.689
Firm size	0.024	0.021	1.056	0.024	0.028	1.074	0.042	0.045	1.065
International experience	0.229***	0.225***	1.731	0.245***	0.250***	1.694	0.229***	0.224***	1.734
Export diversification	-0.140***	-0.136***	1.106	-0.157***	-0.160***	1.114	-0.149***	-0.143***	1.092
Industry 1	-0.055*	-0.047†	1.203	0.145**	0.146**	1.226	0.165***	0.161***	1.211
Industry 2	-0.095**	-0.108***	1.363	-0.044	-0.050	1.238	-0.025	-0.033	1.233
Market size (origin)	-0.207***	-0.177***	1.683	-0.167***	-0.159***	1.114	-0.131***	-0.134***	1.412
EU15 (origin)				0.140	0.142	1.146	-0.216***	-0.212***	1.482
R-Squared	0.166	0.177	0.178	0.126	0.126	0.129	0.185	0.196	0.202
Adjusted R-Squared	0.160	0.169	0.170	0.126	0.126	0.129	0.176	0.186	0.192
F-value	25.958***	23.579***	22.161***	9.971***	9.106***	8.562***	20.936***	20.595***	19.695***
Change in R-Squared	0.010	0.002		0.002	0.004		0.011	0.006	
F-Change	8.917***	3.241†		1.283	2.820†		13.920***	7.348**	

Note: Cell entries are standardized regression coefficients. †p<0.10; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001

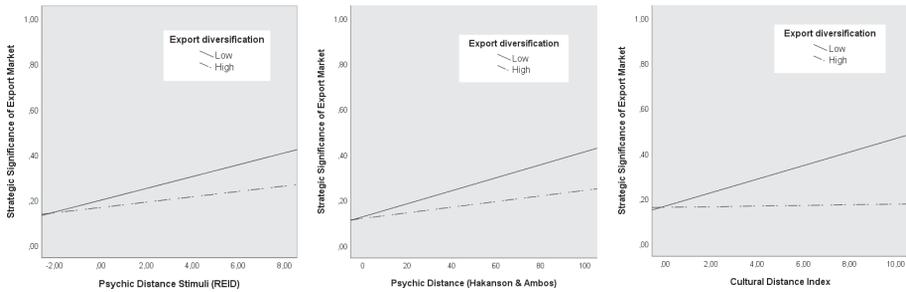
The three *full models* include the interaction effect (psychic distance  $\times$  export diversification), and all are statistically significant ( $p < 0.001$ ). The significance of the interaction effect of psychic distance (in all three operationalisations) and the export diversification was supported (Model 1:  $F$ -change = 3.241,  $p = 0.072$ ; Model 2:  $F$ -change = 2.820,  $p = 0.094$ , Model 6:  $F$ -change = 7.348,  $p = 0.007$ ). In order to illustrate the nature of the interactive effect, we have plotted three graphs (Figure 1 a, 1 b, 1 c), which indicate that the strategic significance of the foreign market increases with the psychic distance between the domestic and the foreign market, and this relationship is accentuated when a firm export strategy is characterised by low geographic diversification (i.e., concentration strategy). These results, however, should be interpreted very cautiously. Although the interaction terms were statistically significant, the actual effect size of interactions was very low ( $\Delta R$ -Squared between 0.02% and 0.06%). According to Aguinis et al. (2005), who analysed 256 articles published over 30 years in three top-ranking journals, this is not surprising, as the median effect size, which is a better descriptor of the central tendency than a mean, was equal to 0.002. Such a small effect size raises justified concerns regarding the reliability of the results.

Among the control variables, the three models (Model 1-3) produce similar results. On the one hand, the post-entry strategic significance of the foreign market increases with the level of development and size of the foreign market, as well as with the length of firm international experience. On the other hand, the firm age and the characteristics of the firm origin (EU15 membership and domestic market size) decrease the likelihood of high, post-entry strategic significance of the foreign market. Older firms, originating from EU15 countries and/or from the larger domestic markets, are likely to rely less on a single foreign market in their overall strategy. Interestingly, geographic distance does not significantly explain the post-entry significance of the foreign market. Geographic distance was not included in Model 2, as Dow, Hakanson and Amboss (2014) argue that geographic distance should be viewed as one of the antecedents of psychic distance. This argument finds support in our study, as the two variables – PD<sub>HA</sub> and geographic distance – are strongly and positively correlated ( $r = 0.79$ ; Table 3). As such a strong correlation could also lead to multicollinearity issues, we decided not to include it in Model 2. For the same reason, we did not include in Model 2 the control variable for the development of the destination market.

Employing three different operationalisations of PD enabled us to control for the study robustness by examining whether the obtained results are “measurement specific”. The statistical analyses produced similar results in the three models, indicating that PD is positively associated with the post-entry strategic significance of the foreign market and that this effect is further accentuated by a concentration strategy, though in the case of Model 2 (Hakanson/Ambos operationalisation) the positive relationship between PD and post-entry market signif-

icance is statistically significant only in the full version of Model 2 (which includes the moderating effect).

**Figure 1. Moderating effect of Export Diversification on Psychic Distance – Strategic Significance relationship**



## Discussion and conclusions

Our study offers a few interesting insights into psychic distance research by focusing on the post-entry effects of PD and asking –whether psychically close or distant markets have become over time the most strategically significant for European SMEs. To the best of our knowledge, our focus on the strategic significance of foreign markets in SMEs’ overall strategy brings a novel construct into PD research.

To answer the research question, we used a large, cross-country, cross-industry dataset of European SMEs, controlling for decision-level variables (i.e., geographical distance, development and size of destination market), firm-level variables (i.e., firm age, firm size, international experience, industry) and origin-level variables (i.e., size of domestic market, and EU15 membership). We have also employed three popular and competing measurements of PD to control for the stability of findings across different operationalisations.

Contrary to our expectations, we find that the relationship between psychic distance and the post-entry strategic significance of the foreign market is positive, supporting the paradoxical effects of psychic distance. Our findings reveal that the greater the psychic distance between domestic and foreign markets, the higher is the likelihood that the particular foreign market will gain post-entry significance in SMEs’ overall strategy, accounting for a higher percentage of total (i.e., domestic and foreign) revenues. The relationship is positive for all three operationalisations; however, it is statistically significant for only two of them – that is, the Dow and Karunaratna (2006) and Kogut and Singh (1988) measurements. These results suggest that even if ‘conventional’ theorising indicates that high psychic distance impairs performance, there might be several conditions that neutralise this relation in the case of post-entry strategic significance of foreign

markets. First, they can be technological, institutional or economical in nature (e.g. access to information or incentives/public support offered by governments to intensify exports). Second, it can be the result of the firm's specific capabilities and/or management experience or attitude. If the managers/entrepreneurs perceive the market as very difficult to conquer, they will allocate more time, attention and resources to operations in this market, thus increasing the probability of reaching a high sales level. Specifically, this is the case when foreign markets that are psychically distant are also attractive in terms of size and development. Indeed, our findings provide sound evidence that the post-entry strategic significance of the foreign market in SMEs' strategy can be also explained by the foreign market's size and development. This reasoning resonates well with arguments put forward by Ojala and Tyrvainen (2009) in the context of knowledge-intensive SMEs; they argue that psychic distance may exert an impact on market selection, but other factors such as market size or opportunity-seeking behaviour can make PD's influence less salient.

Third, it can be a matter of a learning curve. If a firm operates long enough in a particular (even if distant) market, the typical theoretical relation between psychic distance and performance (in our study, strategic significance) can lose its validity, due to the learning and knowledge absorption processes of the firm (Casillas et al. 2015). Our findings indicate that a firm's international experience (measured by the number of years the firm has been exporting) is significantly and positively associated with the post-entry strategic significance of the export market. Unfortunately, our data do not allow us to definitely state that such experience has been gained only in the particular market (although it holds for firms that operate only in one market, or when the particular market was the first target of a firm internationalisation strategy). While we recognise this limitation, we feel it is still justifiable to assume that SMEs' international experience in terms of time (which may reflect experience with the key market, fully or at least partially) provides learning opportunities that can be converted into performance gains in terms of sales level. As some researchers (Sousa et al. 2010) have recently found that companies achieve better results on more psychically distant markets, the phenomenon of the psychic distance paradox needs further explanation and elaboration in future research.

Considering the moderating effect of export diversification on the relationship between PD and the post-entry significance of the export market, we need to cautiously interpret the obtained results. Although the moderation effects were statistically significant in the case of all PD operationalisations, the effect size of interactions was substantially smaller "than what is conventionally defined as a small effect (cf. Cohen, 1988)" (Aguinis et al. 2005:103). Thus, we present these results as a possible avenue for future research rather than as a conclusive finding. In the case of SMEs pursuing an export strategy that reflects lower geographic diversification, the paradoxical effects of PD for the post-entry signifi-

cance of the foreign market might be stronger. When SMEs pursue more a diversified export strategy, the relationship between PD and the market significance would be weaker, but still positive. It may be argued that firms pursuing low export diversification, concentrating on opportunities present in a particular market and therefore allocating time, attention and other resources in a focused way, may be better positioned to understand and learn the specificities of the market, which would cause its post-entry strategic significance to grow. The above assumptions concern the situation only in one foreign market (specifically, its strategic significance) and do not imply whether or how, in general, export diversification impacts the overall export intensity of a firm.

In general, our findings provide support for the paradoxical impact of psychic distance, indicating that the foreign markets of highest strategic significance in SMEs' overall strategy are psychically distant markets. This finding demands further research at a more granular level.

One promising stream of future research is to explore the dynamics of the relationship between psychic distance and post-entry strategic significance of the export market (or performance in the export market) in different periods of the firm presence in the market. Such research would require a longitudinal approach and could provide valuable insights broadening our understanding of internal (e.g., changes/development of firm resources, capabilities, knowledge, dominant logic and/or managerial perceptions) and external (e.g., competitive, institutional and/or economic dynamism of the target market) contingencies explaining the relationship dynamics.

Our study has clear limitations. First, it is a cross-sectional study, with all of the limitations related to such studies, and we have to keep the variable related to firm-level internationalisation choices to a minimum in order to have a parsimonious analysis. This approach does not allow us to identify firm-level choices and decisions at a more granular level to further examine the deep impact of psychic distance on international strategy process. Second, our sample consists only of small and medium-sized companies. The internationalisation decisions in SMEs are usually made by the entrepreneur and thus follow his or her personal preferences (Zanger et al. 2008), which creates a natural bias of possible results. It is likely that the internationalisation of SMEs follows different patterns than the internationalisation of their larger counterparts, and they thus might react differently to psychic distance because of age, size, experience, resources, and TMT characteristics.

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