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CROSS-NATIONAL DISTANCE IMPACT ON PORTUGUESE INWARD FOREIGN DIRECT INVESTMENT: EVIDENCE FROM EUROZONE AND IBERO-AMERICA

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Abstract

Purpose: This paper aims to analyse the patterns of Portuguese inward foreign direct investment (FDI) from the Eurozone and Ibero-America through the lenses of cross-national distance framework proposed by Berry, Guillén, and Zhou (2010), assessing if closer relationships with investing countries moderate the impacts of distance on Portuguese inward FDI.

Methodology: To this end, we developed a panel dataset composed by 35 national origins of Portuguese FDI during the period of 2003 to 2015 and analysed it through a series of multiple regressions with interaction terms.

Findings: Results suggest that Portugal's proximity to both Eurozone members and Ibero-American countries influences the relationship between cross-national distance and inward FDI to the country, mainly alleviating the negative impact of several dimensions of distance.

Originality: This paper offers validation of the cross-national distance framework to International Business (IB) literature, in the sense that it comprehends a richer set of country's characteristics, capable of affecting international business, than other previous distance constructs. Also, it is applied to the unique context of Portugal which, besides being a small and open economy, is part of a large economic union and has historic and cultural ties in almost all continents.

Keywords: Cross-national distance. Eurozone. Foreign direct investment. Ibero-America. Portugal.

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O IMPACTO DA DISTÂNCIA TRANSNACIONAL NA ENTRADA DE INVESTIMENTO DIRETO ESTRANGEIRO EM PORTUGAL: EVIDÊNCIAS DA ZONA EURO E IBERO-AMÉRICA

Resumo

Propósito: Este artigo tem como propósito analisar os padrões de entrada de investimento direto estrangeiro (IDE) em Portugal, com origem na Zona Euro e em países Ibero-Americanos, através do modelo da distância transnacional proposto por Berry, Guillén e Zhou (2010), aferindo se estas relações de proximidade com os países investidores moderam o impacto da distância na entrada de IDE no país.

Metodologia: Para este fim, desenvolvemos uma base de dados em painel composta por 35 países que se envolveram em IDE em Portugal no período de 2003 a 2015 e analisámo-lo através de uma série de regressões múltiplas com interações.

Resultados: Os resultados sugerem que a proximidade de Portugal tanto aos membros da Zona Euro, como aos países Ibero-Americanos, influenciam a relação entre a distância transnacional e a entrada de IDE no país, mais especificamente aliviando o impacto negativo de várias dimensões de distância

Originalidade: Este artigo oferece uma validação do modelo da distância transnacional para a literatura de Negócios Internacionais, na medida em que este compreende um conjunto de características de países, capazes de influenciar os negócios internacionais, mais rico do que modelos de distância anteriores. Mais ainda, o modelo é aplicado ao contexto particular de Portugal que, para além de ser uma economia pequena e aberta, faz parte de uma vasta união económica e tem laços históricos e culturais com quase todos os continentes.

Palavras-chave: Distância transnacional. Ibero-América. Investimento direto estrangeiro. Portugal. Zona Euro.

EL IMPACTO DE LA DISTANCIA TRANSNACIONAL EN LA ENTRADA DE INVERSIÓN DIRECTA EXTRANJERA EN PORTUGAL: EVIDENCIAS DE LA ZONA EURO E IBEROAMÉRICA

Resumen

Propósito: Este artículo tiene el propósito de analizar los padrones de entrada de inversión directa extranjera (IDE) en Portugal, desde la zona del euro y países Iberoamericanos, a través del modelo de la distancia transnacional propuesto por Berry, Guillén y Zhou (2010), evaluando si estas proximidades con los países inversores moderan el impacto de la distancia en la entrada de IDE en el país.

Metodología: Para este fin, desarrollamos una base de datos de panel compuesto por 35 orígenes nacionales de IDE de Portugal durante el periodo de 2003 a 2015 y lo analizamos mediante una serie de regresiones múltiples con interacciones.

Resultados: Los resultados sugieren que la proximidad de Portugal tanto a los miembros de la zona del euro como a los países Iberoamericanos influye en la relación entre la distancia transnacional y la IDE hacia el país, principalmente aliviando el impacto negativo de varias dimensiones de distancia.

Originalidad: Este artículo ofrece la validación del modelo de distancia transnacional a la literatura de Negocios Internacionales, en el sentido de que este comprende un conjunto más rico de características de países, capaces de afectar a los negocios internacionales, que otros modelos de distancia anteriores. Además, se aplica al contexto único de Portugal que, además de ser una economía pequeña y abierta, es parte de una gran unión económica y tiene lazos históricos y culturales en casi todos los continentes.

Palabras-clave: Distancia transnacional. Iberoamérica. Inversión directa extranjera. Portugal. Zona Euro.

INTRODUCTION

The concept of distance is one of the most important concepts in international business (IB) theory (Dow, 2017; Hutzschenreuter, Kleindienst, & Lange, 2016; Zaheer, Schomaker, & Nachum, 2012). As Zaheer et al. (2012, p. 19) stated, “international management is management of distance”, not only in its geographical sense, but also in terms of culture, economic development, legal systems, and other factors (Conti, Parente, & de Vasconcelos, 2016). Therefore, distances are likely to affect MNEs’ strategic decisions, such as FDI decisions (Bailey & Li, 2015; Shenkar, 2001).

The study of distance has come a long way in the IB literature, with geographic distance being first used as a surrogate measure for transportation costs in the gravity model to predict trade flows (Anderson, 1979; Beckerman, 1956; Linnemann, 1966). After more than 60 years from Beckerman’s distance concept introduction, there is now some agreement on a multidimensional nature of this concept (Berry, Guillén, & Zhou, 2010; Dow, 2017; Dow & Karunaratna, 2006; Ghemawat, 2017). However, consensus on the impacts of the various dimensions of distance on FDI related decisions is still non-existent (Ghemawat, 2017; Hutzschenreuter et al., 2016; Malhotra, Sivakumar, & Zhu, 2009). On the one hand, Hutzschenreuter et al. (2016) argue that distance has only negative effects on firms’ international business outcomes. This argument is supported by previous empirical studies where, for example, Li and Guisinger (1992) found that increases in cultural distance did not increase the number of foreign affiliates of Triad regions’ MNEs. Another example is the study by Berry et al. (2010), where the authors found negative relationships between several dimensions of distance and foreign market entry by US manufacturing firms. On the other hand, Shenkar’s (2001) *illusion of discordance* states that distance does not necessarily have to imply negative outcomes. In fact, Malhotra et al. (2009), using a CAGE framework, found positive relationships of administrative and economic distances with the number of cross-border acquisitions by developing countries’ multinational firms. On another study, Zhang (2015) found that several dimensions of cross-national distance were positively related to

Japanese firms’ levels of ownership in foreign affiliates.

The extensive use of an uncountable number of distance variables and models may explain the lack of consensus in the literature, thus undermining the consolidation and validation of the distance concept itself. As Ghemawat (2017, p. 214) puts it, “Geographers tend to focus only on geographic distance, sociologists on institutional distance, anthropologists on cultural distance, and so on”. Therefore, in this paper we use the cross-national distance framework developed by Berry et al. (2010) for three reasons. First, we consider it a holistic approach to the distance concept since it embraces its multidimensionality by comprising nine separate dimensions of distance. Second, it uses the Mahalanobis distance to compute distances between countries, thus accounting for the variances of indicators and covariances between them, as well as their different scales of measurement. Third, the authors made their measurements freely available, allowing researchers to have a common ground on which to base empirical studies.

Therefore, this paper aims to validate the cross-national distance framework proposed by Berry et al. (2010), applying it to the behaviour of patterns of inward FDI in Portugal. This context was selected due to relevant features it presents. First, Portugal is, traditionally, a net recipient of FDI (Simões & Cartaxo, 2013). According to the World Bank, FDI outflows only surpassed inflows in three years since 2003. Second, the involvement in the creation of the European Free Trade Area in the 1960s, and Portugal’s entry in the European Economic Community (EEC) in 1986, led to an increase of FDI inflows in the country (Simões & Cartaxo, 2013). Third, besides being part of a large economic and monetary union, the Eurozone, Portugal also shares an historic and cultural past with several countries outside the European continent, with the larger among them being Brazil, Angola, and Mozambique. Lastly, but not in importance, the existence of a dual perception of Portugal as a destination for FDI. Several reports (e.g. EY, 2017, 2018; Simões & Cartaxo, 2013) indicate that firms already in the country perceive Portugal as specialised, thus conferring it added value. On the other hand, unestablished investors see Portugal as a less competitive country and with a less perceived value.

This paper also draws from Tobler's (1970) first law of geography, who states "everything is related to everything else, but near things are more related than distant things", by considering Portugal's geographic and monetary "proximity" to other Eurozone countries, as well as historic and cultural "proximity" to Ibero-American countries.

Accordingly, we intend to answer the question: are countries closer to Portugal less sensitive to the negative effects of cross-national distance than more distant counterparts? To answer our research question, we developed a panel dataset composed by Portuguese inward FDI from 35 home countries during the period of 2003 to 2015 and analysed it through a series of multiple regression techniques.

The contribution of this paper to IB literature is twofold. First, we make use of a distance construct seldom used in the literature to analyse FDI patterns, the cross-national distance framework, which is considered to be a holistic approach to the multidimensional nature of distance between countries (Ghemawat, 2017). Second, we apply it to the Portuguese context, in which distance research is relatively scarce.

Following this introduction, in section 2 we make a theoretical review of the main concepts abridged in this study. Next, in section 3, we present the empirical model along with the proposed hypothesis. Section 4 describes the data and methodology used. In section 5, we present the results and discuss them. Lastly, section 6 concludes with relevant findings and contributions, as well as with limitations of our research and future directions for research.

THEORETICAL BACKGROUND

The concept of distance can be traced back to Beckerman's (1956) study on trade flows, on which he proposed the existence of a psychic distance between countries, emulated by the geographic distance between them. According to Dow and Karunaratna (2006), the term has then seemed to disappeared from IB literature, being picked up latter by the Uppsala's internationalisation process model (Hörnell, Vahlne, & Wiedersheim-Paul, 1973; Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975; Vahlne & Wiedersheim-Paul, 1973), on which psychic distance is defined as "the sum of factors preventing the flow of information from

and to the market" (Johanson & Vahlne, 1977, p. 24).

Since then, several constructs of distance appeared in IB literature. Based on Uppsala's model, Kogut and Singh (1988) developed a cultural distance construct from Hofstede's (1980) cultural values, which currently remains as the most widespread distance construct (Hutzschenreuter et al., 2016; Zaheer et al., 2012). Kogut and Singh (1988) used it to explain the influence of cultural distance on the entry mode choice and found that, when entering the United States market, foreign firms preferred a lower form of control when cultural distance was higher. On another study, Hennart and Larimo (1998) found a positive relationship between cultural distance and the preference of Finnish and Japanese firms to choose shared ownership in their US affiliates instead of full ownership. In a meta-analysis of the effects of cultural distance on entry mode choice, international diversification, and MNE performance, Tihanyi, Griffith, and Russell (2005) failed to find a statistical evidence of the relationship between cultural distance and the three outcomes, notwithstanding moderating effects found on such relationships.

In 2001, Pankaj Ghemawat put forth his CAGE framework, in which he measured distance along four dimensions, Cultural, Administrative, Geographic, and Economic, thus encompassing two previously used distance variables in more holistic framework. Malhotra et al. (2009), using this framework, found that the number of cross-border acquisitions by emerging countries' firms was negatively influenced by cultural and geographic distances, and positively by administrative and economic distances.

A more recent stream in distance research draws from institutional theory (North, 1990; Scott, 1995) to develop distance constructs, which usually take one of two forms. Those based on North's (1990) definition of formal and informal institutions and those based on Scott's (1995) pillars of institutions, regulative, normative, and cultural-cognitive. Besides the theoretical distinction between these two approaches, authors often relied on a very different set of variables to operationalise them. For instance, while Estrin, Baghdasaryan, and Meyer (2009) used the "Regulatory Factor" from Heritage Foundation's Economic Freedom, others have used the complete Economic Freedom Index to capture formal institutions (Golesorkhi, Mersland, Randøy, & Shenkar, 2019; Liou, Chao, & Yang, 2016), with other authors using even different variables to capture the same concept (Arslan & Larimo, 2011;

Dikova, 2009; Schwens, Eiche, & Kabst, 2011; Shirodkar & Konara, 2017). To capture informal or normative institutions, most authors relied on cultural data (Dikova, 2009; Estrin et al., 2009; Goleorkhi et al., 2019; Ionascu, Meyer, & Estrin, 2005; Liou et al., 2016), be it from Hofstede (1980), the GLOBE study (House, Hanges, Javidan, Dorfman, & Gupta, 2004), or the World Values Survey (WVS), while others used items from the Executive Opinion Survey of the World Economic Forum (Arslan & Larimo, 2010, 2011; Chao & Kumar, 2010; Gaur & Lu, 2007; Xu, Pan, & Beamish, 2004).

This panoply of distance constructs led to confounding results. For instance, Estrin et al. (2009) found that higher formal institutional distance increased the probability of a firm to choose greenfield FDI over other forms of entry, Arslan and Larimo (2011) found an opposite effect, with firms preferring acquisitions over greenfield FDI when formal institutional distance was higher. In another example, Xu et al. (2004) found that both regulatory and normative distances had a negative effects on the degree of ownership on foreign affiliates, while Arslan and Larimo (2010) found nonsignificant and positive effects, respectively.

As inconsistencies of results accumulate, it becomes necessary to find common ground on which to base distance research. To that end, in a somewhat radical departure from institutional distance constructs, Berry et al. (2010) developed a cross-national distance construct aimed at capturing the multidimensional set of country's characteristics that can affect international business. Its nine dimensions (administrative, connectedness, cultural, demographic, economic, financial, geographic, knowledge and political) are drawn from systems theories, namely national business systems (Whitley, 1992), national governance systems (Henisz, 2000; Henisz & Williamson, 1999; Kester, 1996; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998), and national

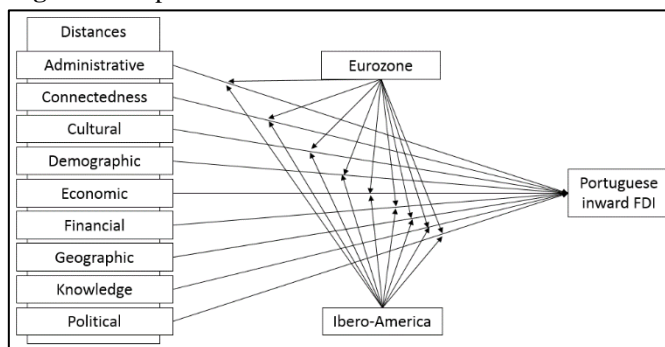
systems of innovation (Freeman, 1995; Lundvall, 1992; Nelson & Rosenberg, 1993).

Previous research has found relationships between cross-national distance dimensions and several types of FDI decisions. Berry et al. (2010) themselves, found a negative association of cultural, financial, administrative, demographic, knowledge, and geographic distances with US firms' foreign entry decisions. Although using them as control variables, Lu, Liu, Wright, and Filatotchev (2014) found a positive effect of economic distance on Chinese firms' subsequent entries in foreign markets, also finding no significant effects of connectedness, political, administrative and geographic distances. Regarding decisions on the level of commitment in foreign subsidiaries, Contractor, Lahiri, Elango, and Kundu (2014) did not found a statistically significant relationship between financial distance and the ownership levels in emerging market subsidiaries. Likewise, Zhang (2015) did not found significant effects of both financial and political distances on Japanese firms' equity stakes in foreign subsidiaries. Nonetheless, the author found negative effects of administrative and cultural distances, and positive effects of economic, knowledge, connectedness, and geographic distances on the ownership levels in foreign affiliates. As for FDI patterns, Konara and Wei (2019) found negative impacts of cultural and geographic distances on bilateral FDI flows. Similar results were obtained by Bailey and Li (2015), who also found a negative effects of administrative and political distances on US FDI outflows.

CONCEPTUAL MODEL AND HYPOTHESIS

Figure 1 shows the proposed conceptual model used, in which arrows represent the direct and interactive effects summarised in the hypothesis developed below.

Figure 1. Empirical model



Source: Authors.

Empirical research suggests a link between European monetary integration (i.e. the creation of the Eurozone) and an increase in FDI received by its members (Barbosa, Guimarães, & Woodward, 2004; De Sousa & Lochard, 2006; Kilic, Bayar, & Arica, 2014), likely due to the reduction of transaction costs by means of eliminating the exchange rate volatility, stabilizing nominal wages and inflation, and increasing price transparency (De Sousa & Lochard, 2006). De Sousa and Lochard (2006) also found that peripheral countries, such as Portugal, had a greater benefit of monetary integration relative to the core countries of Europe. In fact, Barbosa et al. (2004) and also Simões and Cartaxo (2013) recognized that Portugal's 1986 admission to the European Economic Community (EEC) and further economic integration led to an increase of FDI inflows to the country. Therefore, due to their monetary and economic proximity, it is probable that the negative effects of cross-national distance have a lesser impact on Eurozone members when investing in Portugal than on non-members.

H1: Portuguese inward FDI from Eurozone member countries will present less sensitivity to cross-national distance negative effects than non-Eurozone members.

Historical or colonial ties are recognized as having a positive impact on trade and FDI (Ghemawat, 2001; Siegel, Licht, & Schwartz, 2013; Tocar, 2018). For instance, Ghemawat (2001) pointed that a colonial link boosted trade

between two countries by 900%. Also, Siegel et al. (2013) and Blonigen and Piger (2014) found that a colonial heritage is a probable determinant of FDI. In the Portuguese case, Silva (2008) realized that Spain and Brazil were Portugal's main trading partners. Accordingly, Cechella (2010), Cechella, Franco, Silva, and Dentinho (2014) and Cechella, Silva, Silveira, and Dentinho (2009) found evidence of Portugal's strategic position for Brazilian MNEs due to historic and cultural affinities. In this sense, it is likely that investors from Ibero-American countries, by having historic and cultural ties with Portugal, will feel less hindered by cross-national distance when investing in Portugal than investors from other countries.

H2: Portuguese inward FDI from Ibero-American countries will present less sensitivity to cross-national distance negative effects than other countries.

RESEARCH METHODOLOGY

To test the proposed hypothesis, we developed a panel dataset of Portuguese inward FDI from 35 countries (Table 1) during the period 2003-2015. With an inclusion of two qualitative variables, representing Eurozone member countries and Ibero-American countries, we are able to assess sensitivities to cross-national distance of four different groups of MNEs from countries which invest in Portugal, Eurozone members, non-Eurozone members, Ibero-American countries, and non Ibero-American countries.

Table 1. FDI origins

Angola	Lithuania
Australia	Luxembourg
Austria	Malta
Belgium	Mexico
Brazil	Morocco
Canada	Mozambique
Cyprus	Netherlands
Czech Republic	New Zealand
Denmark	Norway
Finland	Saudi Arabia
France	South Africa
Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom
Italy	United States of America
Japan	Venezuela
Korea, Republic of	

Source: Authors.

The selection of Portugal as the context for this study was based mainly on four reasons. First, Portugal is, traditionally, a net recipient of FDI (Simões & Cartaxo, 2013). According to the World Bank, FDI outflows only surpassed inflows in three years during the period of 2003 to 2017. Second, the involvement in the creation of the European Free Trade Area in the 1960s, and Portugal's entry in the European Economic Community (EEC) in 1986, led to an increase of FDI inflows in the country (Simões & Cartaxo, 2013).

Third, besides being part of a large economic and monetary union, the Eurozone, Portugal also shares an historic and cultural past with several countries outside the European continent, with the larger among them being Brazil, Angola, and Mozambique. Lastly, the existence of a dual perception of Portugal as a destination for FDI. Several reports (e.g. EY, 2017, 2018; Simões & Cartaxo, 2013) indicate that firms already in the country perceive Portugal as specialised, thus conferring it added value. On the other hand, unestablished investors see Portugal as a less competitive country and with a less perceived value.

Data and Sample

Stocks of inward FDI were collected from United Nations Conference on Trade and Development (UNCTAD), Organizations for Economic Co-operation and Development (OECD), and Banco de Portugal (BP). Although different sources of FDI data are used, all of them base their FDI compilations on the Benchmark Definition of FDI: Fourth Edition (BMD4, OECD, 2008).

Distance data was obtained from Berry et al. (2010) and from Hofstede's website, while control variables data were obtained from the World Bank, International Monetary Fund, UNCTAD, CIA Factbook, and Community of Portuguese Language Countries (CPLP) and. Table A1 in appendix summarizes the sources and descriptions of the variables.

The resulting panel was an unbalanced one, composed by 35 national origins of FDI during the period 2003-2015. The sample represents about 92% of the total inward FDI in Portugal during the period of the study, according to the latest World Investment Report (WIR, UNCTAD, 2018).

Variables

Dependent variable

As dependent variable in this study we used the stocks of Portuguese inward FDI (FDI), measured in millions of US dollars and deflated by the Portuguese deflator (base year 2010), which was obtained from International Monetary Fund's (IMF) International Financial Statistics (IFS). FDI stock were used, rather than flows, since "foreign investors decide on the worldwide allocation of output, hence on capital stocks" (Bénassy-Quéré, Coupet, & Mayer, 2007, p. 769). Bénassy-Quéré et al. (2007) also stress the volatility of flows over stocks in relatively small economies, given that the former can be hugely influenced by one or two takeovers.

Independent variables

The explanatory variables are eight of the nine dimensions of distance proposed by Berry et al. (2010). *Administrative distance* (ADM) refers to differences in religion, legal system, and the presence of colonial ties.

Connectedness distance (CON) refers to differences in internet use and international tourism receipts and expenditure. *Demographic distance* (DEM) refers to differences in population structure. *Economic distance* (ECO) refers to differences in income, inflation and international trade. *Financial distance* (FIN) refers to differences in composition of the stock market and domestic credit to private sector. *Geographic distance* (GEO) is measured using the great circle distance between the geographic centre of countries. *Knowledge distance* (KNO) refers to differences in patent activity and scientific articles. *Political distance* (POL) refers to differences in political stability, democratic character, size of state, and membership in trade organizations. *Cultural distance* (CUL) is based on Hofstede's (1980) scores, due to insufficient data by Berry et al. (2010). Except for geographic distance, all other distances between two countries (including cultural distance based on Hofstede's data) were calculated using the Mahalanobis distance (Mahalanobis, 1936), which can be written mathematically:

$$d(a,b)^2 = (a - b)^T C^{-1} (a - b)$$

Where a and b are two vectors of different characteristics, of two countries, in a given year, and C is the covariance matrix of a $(n \times p)$ matrix,

with p columns representing the characteristics and n rows representing each country in each year.

By including a one-year time lag becomes possible to capture causal relationships between the dependent and independent variables (Guler & Guillén, 2010; Jiménez & de la Fuente, 2016; Lavie & Miller, 2008), with the exception being made in time-invariant variables (administrative, cultural and geographic distances).

Due to the existence of missing values in several dimensions of distance, which reduced the number of observations by 42%, we adopted a method for replacing them as follows. In a given distance dimension, two situation appear: first, no values exist in the period of the analysis; second, the missing values for a certain country in a certain distance dimension can be concentrated at the beginning of the period, at the end of the period or in the middle of the period. Consequently, we did not substitute values where no distance/country observation existed. Where values were missing in the middle of the period, we used linear interpolation to obtain them. Regarding missing values in the beginning or in the end of the period, we used two different approaches: when six or more values existed, we used linear trend at point to input the missing values; when less than six values existed, we kept the last observed value constant throughout the remaining period. With this method we were able to increase the number of country-year observations, from 266 (58.46%) to 321 (70.55%).

Some controversy is expected regarding this method of inputting data. Our goal was to minimize interference on the data and the introduction of biases. We believe that the increased number of observations surpasses the methodological issues at hand, and that this method is a good approximation to the real values.

Control variables

To attempt to isolate the effects other variables could have on Portuguese inward FDI, five controls were added to the models. Previous research has used GDP to proxy for countries' market size (Bénassy-Quéré et al., 2007; Buckley et al., 2007; Kokores, Kottaridi, & Pantelidis, 2017). Therefore, we use purchasing power parity GDP, in current international dollars, in its logarithmic form ($\ln GDP$). According to

Buckley et al. (2007), an underrated exchange rate encourages exports but deters FDI. In this sense, we include an exchange rate variable (XR) with a one-year time lag, obtained from IMF's International Financial Statistics. Since Portugal has joined the Eurozone, other members will present a constant (*one*) in this variable. We also include a dummy variable (BIT), which takes the value *one* if a country, in a given year, has a Bilateral Investment Treaty in force with Portugal and *zero* otherwise, since BITs have previously been found to have a positive relationship with FDI flows (e.g. Busse, Königer, & Nunnenkamp, 2010; Egger & Pfaffermayr, 2004). Previous studies have found significant relationships between FDI and the presence of a common border between two countries (e.g. Bénassy-Quéré et al., 2007; Choi, Lee, & Shoham, 2016; Konara & Wei, 2019). Therefore, since Spain is the only country bordering Portugal, and one of the most prominent Portuguese trade and FDI partners, we included a border dummy (Border) to capture its effect. Lastly, given that the last update of distance dimensions excludes the common language item from administrative distance, we include it as dummy variable (PT), which takes the value of *one* if a country has Portuguese as official language and *zero* otherwise. Differences in language between countries is one of the factors Johanson and Vahlne (2009) refer that affects the flow of information from, and to the market, thus being able to influence MNEs' FDI decisions.

Interaction terms

To analyse the different sensitivities to cross-national distance we have created two dummy variables and made them interact with each distance dimension.

Eurozone dummy variable takes the value of *one* if country i at year t is a Eurozone member and *zero* otherwise. *IberoAm* dummy variable takes the value of *one* if country i is an Ibero-American country and *zero* otherwise. Therefore, two groups of nine interaction terms were created by multiplying each distance dimension with each dummy variable. Note that the dummy variables do not enter any regression, only the interaction terms.

Model Specification

Since we are using a panel dataset it is important to understand which model to use to estimate the regressions. According to Baltagi

(2015), the most common models to estimate linear regressions are Pooled Ordinary Least Squares (pOLS), Fixed Effects (FE), and Random Effects (RE). This study uses a RE model, mainly due of the presence of time-invariant explanatory variables, which, in a FE model, would be dropped.

Aside from the theoretical discussion of model selection (see Hsiao, 2004), Baltagi (2015) recommends a Hausman test, which compares FE and RE models. In addition, we used three different tests to choose between the three estimators, namely an F test (H0: pOLS; H1: FE), a Breusch-Pagan test using a Lagrange Multiplier (H0: pOLS; H1: RE), and the Hausman test (H0: RE; H1: FE).

The regression model for the main effects is presented as follows:

$$FDI_{it} = \beta_0 + \beta_1 ADM_{it} + \beta_2 CON_{it-1} + \beta_3 CUL_{it} + \beta_4 DEM_{it-1} + \beta_5 ECO_{it-1} + \beta_6 FIN_{it-1} + \beta_7 GEO_{it} + \beta_8 KNO_{it-1} + \beta_9 POL_{it-1} + \delta_{10} \ln GDP_{it-1} + \delta_{11} XR_{it-1} + \delta_{12} BIT_{it} + \delta_{13} Border_{it} + \delta_{14} PT_{it} + \varepsilon_{it}$$

Where FDI_{it} is the dependent variable for each individual i in each period t , β_0 is the constant term, β_1 to β_9 are the coefficients of each distance dimension, δ_{10} to δ_{14} are the coefficients of each control variable, and ε_{it} is the random disturbance term, which, in the RE model, can be decomposed in $\varepsilon_{it} = \mu_i + v_{it}$, where the first term represents the individual random effects that don't vary over time and the second term represents the unobserved variables. When regressing with a RE model, we used the transformation proposed by Baltagi and Chang (1994) since our panel is an unbalanced one.

According to Wooldridge (2016), when using interactions with dummy variables, the interpretation is as follows: the coefficient of the independent variable refers to its marginal effect on the dependent variable when dummy = 0 (i.e., it measures the effect of a certain dimension of distance on Portuguese inward FDI for countries outside the Eurozone, or non Ibero-American), while the marginal effect observed for Eurozone members, or Ibero-American countries, is given by the sum of the independent variable coefficient and the interaction term coefficient. Below is an example of a regression with the interaction term:

$$FDI_{it} = \beta_0 + \beta_1 ADM_{it} + \beta_2 CON_{it-1} + \beta_3 CUL_{it} + \beta_4 DEM_{it-1} + \beta_5 ECO_{it-1} + \beta_6 FIN_{it-1} + \beta_7 GEO_{it} + \beta_8 KNO_{it-1} + \beta_9 POL_{it-1} + \delta_{10} \ln GDP_{it-1} + \delta_{11} XR_{it-1} + \delta_{12} BIT_{it} + \delta_{13} Border_{it} + \delta_{14} PT_{it} + \theta_{15} ADM * Eurozone_{it} + \varepsilon_{it}$$

Where θ_{15} is the coefficient of the interaction term.

Please note that two groups of nine regressions were made (one with *Eurozone* and another with *IberoAm* interaction), interactions are regressed separately for each dimension of distance, and corresponding coefficients are highlighted to facilitate visualization. These interactions were regressed separately to prevent problems of multicollinearity between the independent variables and the interaction terms.

RESULTS AND DISCUSSION

Table 2 shows the variables main descriptive statistics, correlation matrix, and the variance inflation factors (VIF). Since the highest VIF value is 3.54 for administrative distance, well below the rule of thumb of 10.00 (O'Brien, 2007), multicollinearity does not seem to be a problem.

By examining the correlations matrix, we can observe that there are several significant correlations between variables. Although VIF tests did not indicate the presence of multicollinearity, we have mean-centred the explanatory variables to further reduce such problem, as proposed by Aiken and West (1991).

Table 3 displays the results of the main effects regressions. Starting with the controls (column 1, table 3), we can see that panel tests indicate that a FE estimator is adequate, however, since three of the five controls are dummy variables and the FE estimator would drop them, we relied exclusively on the RE estimator. When introducing the explanatory variables (column 2, table 3), panel tests indicate that a RE approach is more adequate. Pooled OLS and RE specifications are presented, however only the results from RE are discussed.

On column 3 (table 3), we can observe that the *Border* variable has a strong, positive and statistically significant effect on Portuguese inward FDI below the 1% level, which is in line with the results of previous studies (Bénassy-Quéré et al., 2007; Konara & Wei, 2019). Also,

lnGDP shows a significant positive effect ($p=0.0239$), as was expected. The negative relationship between *BIT* and inward FDI is somewhat unexpected, however, studies on their impact on FDI have found mixed results (e.g. Busse et al., 2010; Hallward-Driemeier, 2003; Kerner, 2018).

When regressing the nine dimensions of distance (column 4, table 3), only *Border* and *lnGDP* maintained their statistical significance and sign. On the distance dimensions, it can be seen that administrative distance had a negative and statistically significant effect ($p=0.0543$) on Portuguese inward FDI. This result is in line with previous research (Bailey & Li, 2015; Duarte & Carvalho, 2018; Zhang, 2015), as well as with finding by reports on Portugal's attractiveness to FDI (e.g. EY, 2017, 2018), where legal

constraints are highlighted as factors deterring FDI into the country. Economic distance revealed a positive and significant effect below the 5% level ($p=0.0196$). Previous studies also found a positive relationship between economic distance and FDI flow (Duarte & Carvalho, 2018; Mingo, Morales, & Dau, 2018; Zhang, 2015). Financial distance showed a significant, negative effect on Portuguese inward FDI ($p=0.0578$).

This variable corresponds to the increasing/decreasing dissimilarity on obtaining financing in the home country when comparing to Portugal. This result suggest that Portugal's foreign investors are more likely to seek financing in their home country to cover their Portuguese projects.

Table 2. Correlations matrix, means, standard deviations and VIF values

	Variable	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	lnFDI	2 999.60	6030.70	-337.37	33 640.00	1														
2	ADM	44.18	35.42	0.06	142.05	-0.41	3.54													
3	CON _{t-1}	2.24	2.30	0.03	17.75	-0.11	0.57	2.36												
4	CUL	1.68	1.08	0.17	4.32	-0.09	0.17	0.44	1.52											
5	DEM _{t-1}	6.35	7.83	0.04	37.33	-0.25	-0.03	0.00	-0.26	2.35										
6	ECO _{t-1}	5.20	8.05	0.12	52.14	0.12	-0.08	0.10	0.15	-0.17	2.40									
7	FIN _{t-1}	3.85	3.41	0.07	15.78	-0.08	-0.22	0.04	-0.21	0.40	0.09	1.89								
8	GEO	4 762.60	4352.00	346.84	19 801.00	-0.31	0.11	0.05	0.04	0.30	-0.19	0.04	2.03							
9	KNO _{t-1}	5.89	9.87	0.00	71.43	-0.14	0.30	-0.01	-0.02	-0.00	0.03	-0.19	0.21	2.07						
10	POL _{t-1}	162.40	60.88	57.21	238.42	-0.24	0.32	0.18	-0.09	0.21	-0.05	0.09	0.47	0.34	2.11					
11	lnGDP _{t-1}	26.69	1.70	22.85	30.49	0.20	-0.14	-0.31	-0.15	0.04	-0.32	-0.19	0.15	0.37	0.19	2.92				
12	XR _{t-1}	0.58	0.49	0.00	2.34	0.37	-0.49	-0.30	0.06	-0.47	0.14	-0.10	-0.34	-0.22	-0.43	-0.03	3.00			
13	BIT	0.23	0.42	0	1	-0.21	0.09	-0.13	-0.24	0.29	-0.21	0.07	0.06	-0.05	-0.05	-0.06	-0.43	1.87		
14	Border	0.03	0.17	0	1	0.59	-0.21	-0.14	-0.20	-0.11	-0.10	-0.02	-0.17	-0.10	-0.12	0.13	0.15	-0.10	1.25	
15	PT	0.09	0.28	0	1	-0.08	0.01	0.04	-0.20	0.31	-0.08	0.07	0.17	-0.04	-0.04	-0.09	-0.21	0.16	-0.04	1.49

Note: VIF values are presented diagonally, in bold.

Correlations with absolute value above 0.09 are significant at the 5% level (two-tailed).

Source: Authors.

Table 3. Main effects regressions

	Pooled OLS	Pooled OLS	RE	RE
	(1)	(2)	(3)	(4)
Constant	-14 465.40	-29 833.50†	-27 921.60*	-58 069.70*
	(9 017.08)	(17 305.10)	(13 014.20)	(27 988.80)
<u>Distances:</u>				
ADM	-	-77.56	-	-69.89†
		(61.14)		(36.32)
CON _{t-1}	-	1 493.46	-	420.31
		(1 234.98)		(314.75)
CUL	-	-122.50	-	130.84
		(501.03)		(500.78)
DEM _{t-1}	-	30.62	-	3.09
		(77.38)		(154.99)
ECO _{t-1}	-	135.06	-	257.57*
		(132.23)		(110.33)
FIN _{t-1}	-	-191.04	-	-543.03†
		(331.26)		(286.23)
GEO	-	-0.19	-	-0.38†
		(0.16)		(0.22)
KNO _{t-1}	-	-1.66	-	-43.75†
		(62.27)		(26.33)
POL _{t-1}	-	-7.96	-	14.27*
		(9.89)		(6.74)
<u>Controls:</u>				
lnGDP _{t-1}	553.76	1 181.05†	1 139.64*	2 198.37*
	(342.51)	(605.50)	(504.61)	(1 037.93)
XR _{t-1}	3 737.37**	1 304.94	424.02	1 160.72
	(1 369.69)	(1 287.81)	(578.21)	(1 193.23)
BIT	-660.41	936.87	-1 861.36†	845.91
	(595.75)	(1 674.27)	(1 030.54)	(1 697.57)
Border	18 814.10***	17 919.50***	19 201.30***	16 662.70***
	(1 394.80)	(1 506.82)	(1 635.24)	(2 903.62)
PT	686.38	-580.93	-144.37	-573.53
	(798.64)	(1 572.84)	(1 443.21)	(2 142.19)
N	386	296	386	296
Adj. R ²	0.4527	0.5732		
Corr (y, ŷ) ²			0.3783	0.5265
Panel tests:				
F (31, 349)	38.81***			
F (20, 262)		34.48***		
Breusch-Pagan	1 161.96***	690.45***		
Hausman	13.10**	8.98		
Chow tests:				
Eurozone				
F (4, 376)	8.46***			
F (13, 268)		13.77***		
IberoAm				
F (4, 376)	16.26***			
F (9, 276)		6.83***		

†p≤0.1; *p≤0.05; **p≤0.01; ***p≤0.001

Below each coefficient are the heteroskedasticity and autocorrelation consistent (HAC) standard errors, shown in parenthesis.

Dependent Variable: Portuguese inward FDI.

Source: Authors.

In line with the gravity model of FDI (Bénassy-Quéré et al., 2007), geographic distance presents a negative relationship with Portuguese inward FDI ($p=0.0852$). Knowledge distance also presents a negative, although nearly insignificant ($p=0.0966$), relationship with the dependent variable. Lastly, political distance revealed a positive and significant impact ($p=0.0342$). Although previous research found negative and non-significant effects of political distance on FDI outflows (Bailey & Li, 2015; Zhang, 2015), we believe that an internalization perspective could explain our results. To the extent a MNE perceives the political environment in the host country to be increasingly uncertain, the more likely it internalizes its foreign operations in order to exert greater control rather than depending on foreign agents (Buckley & Casson, 1998; Rugman, 1980). We did not find significant effects of connectedness, cultural, and demographic distances on Portuguese inward FDI.

Additionally, we performed a Chow test (Chow, 1960) to verify the existence of a structural break along *Eurozone* and *IberoAm* dummies. The null hypothesis states that all parameters in each group are the same.

Since the test rejected the null hypothesis, we can assume that countries inside the Eurozone may have different sensitivities to cross-national distance versus countries outside the Eurozone when investing in Portugal, being the same argument valid for Ibero-American countries versus non Ibero-American countries. A deeper analysis of those differences is made in the following tables.

Tables 4 and 5 present the results of the regressions with *Eurozone* and *IberoAm* interaction terms, respectively. Both show RE regressions for brevity, but pooled OLS' are available upon request. In each column, the main effect of the interacted explanatory variable is highlighted, and columns 10 (in tables 4 and 5) show the sums of the coefficients highlighted and those of their respective interaction terms.

Starting with *Eurozone* interactions (table 4), results show that administrative distance has a negative and significant effect on Portuguese inward FDI from countries outside the Eurozone ($p=0.0926$).

As for Eurozone countries (column 10, table 4), administrative distance loses its statistical significance, albeit remains with a negative sign. This is in line with Duarte and Carvalho (2018) and Simões and Cartaxo (2013), who argue that Portugal's legal constraints could hamper inward FDI to the country. The results from Eurozone countries could be explained by common regulations among the union members.

Table 4. Random effects regressions with *Eurozone* interactions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	-57 334.90*	-51 378.00*	-61 215.30*	-56 247.10†	-58 497.90*	-57 023.50*	-59 276.40*	-59 324.20*	-62 642.10*	
	(26 778.50)	(23 629.10)	(28 989.40)	(29 529.90)	(25 768.10)	(27 431.70)	(28 164.10)	(28 211.90)	(29 210.20)	
<u>Distances:</u>										
ADM	-80.94†	-69.56*	-74.66*	-98.95*	-33.50	-69.33†	-79.73†	-67.38†	-77.09*	-50.53
	(48.13)	(35.27)	(37.50)	(45.28)	(25.17)	(41.65)	(43.13)	(40.06)	(37.21)	(33.47)
CON _{t-1}	439.56	438.87	480.55	406.59	415.27	419.85	427.89	388.28	427.12	443.55
	(330.43)	(307.16)	(317.13)	(308.40)	(315.76)	(323.99)	(318.09)	(345.23)	(324.70)	(406.29)
CUL	-26.10	138.14	-1 364.02	-181.31	222.74	126.01	82.53	180.40	65.61	842.28
	(513.65)	(492.28)	(1 050.49)	(624.29)	(520.01)	(544.04)	(453.71)	(517.54)	(463.61)	(865.54)
DEM _{t-1}	-2.00	17.99	-22.45	-157.28	1.19	4.23	-12.18	-2.32	37.25	714.26*
	(152.90)	(133.01)	(158.42)	(132.55)	(139.30)	(142.74)	(160.10)	(151.25)	(153.12)	(330.96)
ECO _{t-1}	271.74**	256.19*	278.83**	189.33*	-135.98	257.32*	271.68**	254.81*	268.07**	330.31***
	(102.48)	(105.04)	(100.30)	(80.25)	(134.36)	(105.76)	(103.87)	(108.20)	(103.51)	(75.87)
FIN _{t-1}	-544.32†	-525.53*	-541.90†	-462.35†	-511.92†	-530.18	-549.08†	-531.69†	-524.22†	-559.47*
	(287.11)	(263.83)	(283.02)	(271.21)	(265.67)	(413.37)	(291.04)	(302.20)	(282.80)	(275.52)
GEO	-0.41*	-0.35†	-0.46†	-0.69**	-0.44*	-0.37†	-0.46*	-0.37	-0.30	-0.00
	(0.20)	(0.19)	(0.25)	(0.26)	(0.21)	(0.21)	(0.22)	(0.23)	(0.20)	(0.46)
KNO _{t-1}	-43.16†	-43.65†	-42.52†	-24.35	-33.74	-43.51†	-43.31†	-42.45†	-34.65	-123.53
	(25.68)	(24.83)	(25.30)	(19.43)	(25.73)	(25.17)	(25.95)	(25.26)	(22.74)	(165.46)
POL _{t-1}	13.95*	13.30*	14.15*	12.93*	14.89*	14.24*	14.08*	14.47*	-13.59	20.92
	(6.55)	(6.48)	(6.79)	(6.59)	(7.37)	(6.45)	(6.57)	(6.61)	(11.60)	(13.45)
<u>Controls:</u>										
lnGDP _{t-1}	2 189.82*	1 954.01*	2 349.54*	2 276.55*	2 159.76*	2 159.16*	2 274.94*	2 235.60*	2 424.90*	
	(985.42)	(869.76)	(1 089.31)	(1 088.42)	(952.14)	(1 020.57)	(1 047.39)	(1 050.00)	(1 097.74)	
XR _{t-1}	795.40	1 147.52	88.76	-1 954.29	3 467.47**	1 181.28	670.30	1 283.73	-3.91	
	(1 542.81)	(1 228.35)	(1 427.51)	(1 537.14)	(1 119.29)	(1 448.22)	(1 440.48)	(1 347.63)	(1 236.17)	
BIT	532.10	827.46	-872.82	-837.93	88.69	832.99	579.47	997.61	285.94	
	(1 735.72)	(1 589.92)	(1 914.70)	(2 021.83)	(1 664.44)	(1 706.82)	(1 628.55)	(1 778.66)	(1 565.87)	
Border	17 144.90***	17 059.90***	16 982.70***	16 348.60***	17 718.40***	16 733.60***	17 380.20***	16 394.90***	16 601.00***	
	(3 025.50)	(2 714.69)	(2 712.24)	(3 150.43)	(2 506.94)	(2 942.40)	(2 920.71)	(2 681.02)	(2 987.36)	
PT	-952.57	-509.78	-2 523.07	-1 806.24	-1 005.02	-554.69	-1 017.82	-387.90	-2 197.04	
	(1 960.96)	(1 841.07)	(2 638.28)	(2 305.65)	(2 115.97)	(2 065.98)	(2 136.35)	(2 164.45)	(2 235.66)	
<u>Interactions:</u>										
ADM x	30.41									
Eurozone	(46.74)									
CON _{t-1} x		4.68								
Eurozone		(366.57)								

CUL x	2 206.30								
Eurozone	(1 418.70)								
DEM _{t-1} x	871.54**								
Eurozone	(319.39)								
ECO _{t-1} x	466.29***								
Eurozone	(133.93)								
FIN _{t-1} x	-29.30								
Eurozone	(483.25)								
GEO x	0.46								
Eurozone	(0.41)								
KNO _{t-1} x	-81.08								
Eurozone	(161.50)								
POL _{t-1} x	34.51†								
Eurozone	(18.21)								
N	296	296	296	296	296	296	296	296	296
Correlation (y, ŷ) ²	0.5192	0.5388	0.5329	0.4261	0.5660	0.5289	0.5157	0.5204	0.5338

†p≤0.1; *p≤0.05; **p≤0.01; ***p≤0.001

Below each coefficient are the heteroskedasticity and autocorrelation consistent (HAC) standard errors, shown in parenthesis.

Dependent Variable: Portuguese inward FDI.

Source: Authors.

Both connectedness and cultural distances did not show statistical significance for FDI from Eurozone and non-Eurozone members, however, cultural distance changed to a positive sign for Eurozone countries. Demographic distance presented a negative, although not significant, effect on Portuguese inward FDI from non-Eurozone members. However, this dimension of distance revealed a positive and significant influence on FDI from the Eurozone ($p=0.0309$). Demographic distance is likely to have an industry specific effect, rather than a national level effect on FDI. For example, Berry et al. (2010) found that demographic distance was significant to choose entering a given country for high R&D intensity US firms, where the same didn't apply to low R&D intensity US firms. There is a possibility that Eurozone FDI to Portugal come, to some extent, from high R&D intensity firms, thus the positive effect found for this group of countries. Likewise, economic distance revealed a negative, non-significant, effect on FDI from non-Eurozone member, and a strong positive and significant effect from their counterparts ($p \leq 0.0000$). One of the premises of gravity models applied to FDI (Bénassy-Quéré et al., 2007) is that investment tends to flow to larger countries (i.e., larger GDP and trade). Our results could imply that MNEs in Eurozone countries, which are usually more economically developed than Portugal, see the country as an export platform, as suggested by Barbosa et al. (2004). Financial distance showed a negative influence on Portuguese inward FDI from both groups of countries, although without attaining statistical significance in non-Eurozone members. Having Portugal an underdeveloped financial market, compared to most of other Eurozone members, it is probable that MNEs from those countries find it easier to fund their Portuguese operations in their home countries, thus being inhibited by an increase in financial distance. Similarly, geographic distance also presented negative effects, however it only attained statistical significance for non-Eurozone members. This could be explained by the physical proximity of Eurozone members to Portugal. Knowledge distance revealed negative effects in both groups of countries, attaining a moderate statistical significance only in non-Eurozone members

($p=0.0929$). Lastly, political distance did not show statistical significance in both groups of countries, nevertheless it changed to a positive sign on FDI from Eurozone members.

When comparing the effects of the nine distance dimensions on Portuguese inward FDI from Eurozone and non-Eurozone members, we can observe an alleviation of their negative effects due to Portugal's proximity to Eurozone member countries, thus partially supporting our hypothesis H1. More precisely, demographic and economic distances changed to a positive sign with statistical significance, the negative impact of administrative, geographic, and knowledge distances lose their statistical power, and cultural and political distances, albeit without significance, changed to a positive sign. Only the negative impact of financial distance became significant to Eurozone members.

Table 5 shows the results of regressions with *IberoAm* interaction.

Following the previous analysis, we found a negative and statistically significant effect of administrative distance on Portuguese inward FDI from non Ibero-American countries ($p=0.0334$), while the effect on the investment from their counterparts loses its significance and changes to positive. Again, connectedness distance failed to attain statistical significance in both groups of countries. As for cultural distance, results show a large positive effect, significant below the 10% level, on investment coming from Ibero-American countries, losing its significance for their counterparts. This result, although not consensual in the literature, finds support in Kogut and Singh (1988), who found that Japanese firms were more likely to set up new ventures in culturally distant countries. Similarly, Gooris and Peeters (2014) found that firms favoured FDI over licencing when cultural distance was higher. Demographic distance, although never attaining statistical significance, changes to a negative sing when considering Ibero-American investors. Economic distance maintained its positive and statistically significant impact in both groups of countries, losing its statistical power in explaining the investment made by Ibero-American countries. Here, it is more likely that Ibero-American countries, namely those in South America, regard Portugal as key to serve the European

Union market. As for financial distance, it revealed a negative, statistically significant, effect on FDI made by non Ibero-American countries ($p=0.0774$), losing its statistical significance, albeit maintaining its negative sign, for Ibero-American investors. These results are in line with the discussion made for Eurozone countries. Geographic distance showed a significant negative effect on investment made by Ibero-American countries ($p=0.0305$), remaining with a negative sign but

without statistical significance for non Ibero-American countries. Knowledge distance showed a negative and significant impact on investment from non Ibero-American countries ($p=0.0875$), losing its significance for Ibero-American investors. Lastly, political distance revealed a significant positive effect on FDI from non Ibero-American countries ($p=0.0063$), while for their Ibero-American counterparts its effect remained positive but without statistical significance.

Table 5. Random effects regressions with *IberoAm* interactions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	-58 570.40*	-59 376.70*	-58 625.20*	-59 811.80*	-58 897.30*	-58 805.10*	-58 625.20*	-60 119.00*	-55 634.70†	
	(28 669.90)	(28 789.10)	(28 705.10)	(28 854.10)	(28 676.50)	(28 762.70)	(28 705.10)	(28 775.30)	(28 520.50)	
Distances:										
ADM	-78.13*	-69.22†	-78.14*	-72.02*	-81.16*	-69.96†	-78.14*	-68.98†	-61.36	104.51
	(36.73)	(37.29)	(36.74)	(35.50)	(35.55)	(36.59)	(36.74)	(37.30)	(38.02)	(98.59)
CON _{t-1}	419.58	448.73	419.54	483.51	472.58	428.38	419.54	502.06	235.00	78.11
	(317.11)	(307.28)	(317.24)	(299.44)	(316.89)	(325.86)	(317.24)	(313.24)	(307.85)	(1 262.47)
CUL	284.40	109.74	284.23	164.49	340.40	108.35	284.23	103.54	-12.54	21 371.20†
	(540.56)	(504.61)	(540.78)	(505.92)	(543.57)	(516.26)	(540.78)	(506.07)	(550.83)	(12 803.50)
DEM _{t-1}	4.55	11.82	4.41	33.87	34.05	0.28	4.41	42.38	-65.93	-80.64
	(158.13)	(185.53)	(158.28)	(203.72)	(170.78)	(158.51)	(158.28)	(199.13)	(188.03)	(79.44)
ECO _{t-1}	256.26*	255.49*	256.24*	251.87*	250.86*	256.82*	256.24*	250.35*	267.29*	1 527.30†
	(110.16)	(107.95)	(110.20)	(105.37)	(108.08)	(111.09)	(110.20)	(106.14)	(112.94)	(923.84)
FIN _{t-1}	-543.95†	-544.59†	-544.06†	-542.40†	-541.37†	-561.89†	-544.06†	-543.36†	-550.17†	-412.84
	(289.02)	(288.28)	(289.14)	(288.07)	(288.27)	(318.15)	(289.14)	(287.46)	(289.46)	(341.34)
GEO	-0.32	-0.40†	-0.32	-0.40†	-0.33	-0.39†	-0.32	-0.43†	-0.35	-1.28*
	(0.22)	(0.24)	(0.22)	(0.23)	(0.21)	(0.22)	(0.22)	(0.25)	(0.23)	(0.59)
KNO _{t-1}	-44.01†	-43.38†	-44.01†	-43.25†	-43.47†	-43.11	-44.01†	-42.76†	-43.68	-201.65
	(26.61)	(25.71)	(26.62)	(25.48)	(25.95)	(26.59)	(26.62)	(25.02)	(27.52)	(207.50)
POL _{t-1}	14.49*	14.54*	14.49*	14.73*	14.78*	14.46*	14.49*	14.64*	10.87**	69.71
	(6.83)	(6.77)	(6.83)	(6.77)	(6.95)	(6.77)	(6.83)	(6.83)	(3.98)	(62.46)
Controls:										
lnGDP _{t-1}	2 217.06*	2 247.50*	2 219.06*	2 266.20*	2 232.67*	2 225.57*	2 219.06*	2 278.85*	2 104.31*	
	(1 062.92)	(1 068.19)	(1 064.23)	(1 071.12)	(1 063.74)	(1 066.18)	(1 064.23)	(1 068.26)	(1 058.13)	
XR _{t-1}	1 128.19	1 176.28	1 128.31	1 172.37	1 127.50	1 137.54	1 128.31	1 177.74	1 017.92	
	(1 212.44)	(1 218.02)	(1 212.78)	(1 209.61)	(1 208.10)	(1 232.15)	(1 212.78)	(1 207.67)	(1 236.74)	
BIT	1 821.38	690.46	1 821.27	925.74	2 034.26	750.04	1 821.27	497.30	163.25	
	(2 068.71)	(1 870.58)	(2 070.24)	(1 656.30)	(2 031.11)	(1 777.05)	(2 070.24)	(1 843.28)	(2 169.95)	
Border	24 757.60***	15 885.70***	41 597.40***	16 014.70***	22 897.20***	16 631.90***	12 521.20**	15 591.80***	19 000.30***	
	(4 985.30)	(3 591.93)	(14 407.10)	(3 017.68)	(5 115.03)	(2 964.48)	(4 262.64)	(3 057.67)	(3 889.89)	
PT	-95.35	-992.46	24 237.90†	214.27	3 941.53	-459.17	1 859.15	-1 526.04	-787.49	
	(2 143.52)	(3 094.84)	(14 526.90)	(1 628.86)	(2 884.38)	(2 170.27)	(2 386.82)	(2 914.97)	(2 413.19)	
Interactions:										
ADM x	182.64†									
IberoAm	(108.62)									
CON _{t-1} x		-370.62								
IberoAm		(1 240.01)								

CUL x	21 087.00†								
IberoAm	(12 547.60)								
DEM _{t-1} x	-114.50								
IberoAm	(185.78)								
ECO _{t-1} x	1 276.44								
IberoAm	(884.68)								
FIN _{t-1} x	149.05								
IberoAm	(459.76)								
GEO x	-0.96†								
IberoAm	(0.57)								
KNO _{t-1} x	-158.89								
IberoAm	(194.00)								
POL _{t-1} x	58.85								
IberoAm	(61.98)								
N	296	296	296	296	296	296	296	296	296
Correlation (y, \hat{y}) ²	0.5321	0.5232	0.5320	0.5268	0.5323	0.5223	0.5320	0.5221	0.5119

†p≤0.1; *p≤0.05; **p≤0.01; ***p≤0.001

Below each coefficient are the heteroskedasticity and autocorrelation consistent (HAC) standard errors, shown in parenthesis.

Dependent Variable: Portuguese inward FDI.

Source: Authors.

Regarding the proximity of Ibero-American countries to Portugal, our results suggest a weaker alleviation of distance negative effects, compared with those of Eurozone, giving partial support for hypothesis H2. Nevertheless, we can observe that administrative distance loses its statistical power and changes to a positive sign, and cultural distance attains statistical significance and sharply increases its magnitude. Other alleviation effects can be seen in financial and knowledge distances, where their significant negative impacts on FDI from non Ibero-American countries, lose statistical power for Ibero-American investors. However, Ibero-American investments in Portugal seem to be hindered by some dimensions of distance, such as geographic and demographic distances.

Overall, results suggest that Portugal's proximity to both groups of countries alleviates the negative effects of cross-national distance on FDI originated among them.

CONCLUSION

The purpose of this paper was to validate the cross-national distance construct, proposed by Berry et al. (2010), by applying it to the behaviour of patterns of Portuguese inward FDI. Drawing from Tobler's (1970) law of geography, which states that closer things are more related than distance things, we have considered Portugal's "proximity" to other Eurozone members and to other Ibero-American countries. The former for their geographic and monetary proximity, and the latter for their historical and cultural proximity, and, by doing so, we intended to answer the question: are countries closer to Portugal less sensitive to the negative effects of cross-national distance than more distant counterparts?

To that end we conducted multiple regression analysis with a panel dataset composed by 35 countries with FDI stocks in Portugal during the period 2003-2015. Our results suggest that Portugal's proximity to both groups of countries decreases the negative effects cross-national distance has on investment originated in those countries. In other words, Eurozone and Ibero-American investors do not seem to feel as much constrained investing in Portugal as do investors from any other country.

The use of the cross-national distance framework allowed us to understand the effects of each distance dimension on Portuguese inward FDI, where several positive influences of distance were observed, namely on those groups of

countries "closer" to Portugal. Most of such influences are likely fitted in the internalisation theory (Buckley & Casson, 1976; Dunning, 1993; Rugman, 1980), where firms favour a higher resource commitment strategy to avoid increasing transaction costs, while others are likely driven by the perception of Portugal as an entry gate in the large European Union market. Another probable explanation is that distance could have asymmetric effects, depending on the levels of development of countries compared to Portugal.

Limitations and Future Research

Perhaps the most intriguing issue in our results is the fact that a non-trivial number of distance dimensions revealed a positive relationship with FDI. The common understanding in IB literature is that increases in distance decreases FDI flows (Bailey & Li, 2015; Bénassy-Quéré et al., 2007), however, both previous literature and our results could be "blinded" by Shenkar's (2001) *illusion of symmetry*. The underlining assumption of using absolute values to measure distance between countries is that each distance dimension is symmetrical, thus not accounting for the different levels of development each country has. For geographic distance, this assumption is valid, but for other dimensions the same is hardly true, as Zaheer et al. (2012, p. 21) stated "any relationship differs depending upon the perspective; being a parent is not the same as being a child". Therefore, the use of asymmetric measures of distance could improve our understanding of the patterns of FDI into Portugal.

One may argue that relevant perceptions of distance are best captured at individual-level, given that individuals are the ones responsible to make decisions inside firms (Sousa & Bradley, 2008). However, assessing distance by such approach could be extremely difficult, to say the least, since perceptions are neither stable throughout time, nor they may be homogenous inside firms, industries, or even countries (Hutzschenreuter et al., 2016). Also, perceptions are usually collected after the decision is made, thus the perception of a decisionmaker could be biased by the outcomes of such decision (Dow & Karunaratna, 2006).

Collected FDI data refers to the immediate investor, thus it may not be traced back to the ultimate country where the decision to invest was made. In order to fully understand the origin of Portuguese inward FDI decisions and its respective relationships with distance dimensions, a different collection methodology can be used. Particularly, one done at the company level.

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APPENDIX

Table A1. Variables description and sources

Variable	Description	Source
Portuguese inward FDI	Stocks of Portuguese inward FDI	UNCTAD; OECD; BP
Administrative distance	Colonial link; religion; legal system	Berry et al. (2010)
Connectedness distance	Internet users; international tourism expenditures and receipts	Berry et al. (2010)
Hofstede distance	Power distance; collectivism; masculinity; uncertainty avoidance	Hofstede (1980)
Demographic distance	Life expectancy; birth rate; population below 14 and above 65	Berry et al. (2010)
Economic distance	Income; inflation, total imports and exports	Berry et al. (2010)
Financial distance	Credit to private sector; market capitalization; listed companies	Berry et al. (2010)
Geographic distance	Great circle distance	Berry et al. (2010)
Knowledge distance	Patents; scientific articles	Berry et al. (2010)
Political distance	Political uncertainty; democracy; size of the state; membership in WTO and regional trade bloc	Berry et al. (2010)
GDP	Home country GDP (PPP, current international dollars)	World Bank
Exchange rate	Exchange rate of home country's national currencies to Euros	International Financial Statistics (IMF)
Bilateral Investment Treaty	Dummy variable which takes a value of <i>one</i> if a country has a treaty in force with Portugal in a given year	UNCTAD
Common Border	Dummy variable which takes a value of <i>one</i> if a country has common border with Portugal	CIA Factbook
Official Portuguese language	Dummy variable which takes a value of <i>one</i> if a country has Portuguese as its official language	CPLP

Source: Authors.