

Does it Matter Where Countries Are?

Proximity to knowledge, markets and resources and MNE location choices

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ABSTRACT

We suggest that the proximity of a country to other countries is a factor that affects its choice as an MNE location. We introduce the concept of a country's proximity to the global distribution of knowledge, markets and resources, and frame this concept as a function of both geographic distance and the worldwide spatial distribution of these factors. We test our location model on a dataset comprising 138,050 investments undertaken by US MNEs worldwide. Our findings show that the proximity of a country to the rest of the world has a positive impact on MNEs choosing that country as a location. Proximity to the world's knowledge and markets are stronger drivers of location choice than is proximity to the world's resources, after accounting for the country's own endowments. Larger firms are able to benefit more from remote locations than are smaller firms.

This paper is the result of truly joint work, to which the three authors contributed equally.

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Key words: MNE location choice, countries' proximity to the world, distance, proximity to knowledge, markets and resources, sandwich estimators

1. Introduction

It is widely believed that Multinational Enterprises (MNEs) often locate in Mexico because of its proximity to the United States. Yet, most location models focus on Mexico's intrinsic characteristics in explaining the choice of Mexico as a location for investment, ignoring its proximity to the world's largest market. Current location models have provided deep insights into the effect of distance between countries on foreign investment and capital flows (Brainard 1997, Yeaple 2003, Tsang and Yip 2008) as well on firms' access to knowledge (Chung and Alcacer 2002, Alcacer and Chung 2007). With a few notable exceptions (Blonigen, Davies, Naughton and Waddell 2005, Blonigen, Davies, Waddell and Naughton 2007, Alfaro, Kalemli-Ozcan and Volosovych 2007), these approaches treat distance as bilateral and symmetric, and provide only partial explanations for the investment that countries such as Mexico receive. In this study, we directly address this issue by incorporating the proximity of a focal country with respect to other countries worldwide into the analysis of MNE location choice. We also adopt a nuanced view of proximity and suggest that its implications for MNE location choice differ based on what the country is proximate to. Specifically, we refer to the proximity of countries to the world's knowledge, markets, and resources, which together represent some of the most important influences on MNE location choice.

We advance hypotheses on how proximity to these different factors influences the likelihood of a country being chosen as a MNE location, after accounting for the country's intrinsic endowments. We test these hypotheses on a sample of 566 US MNEs making 138,050 location choices in 119 countries. We use a modified version of MacFadden's (1974) choice model, which takes into account the interdependencies between the multiple investments undertaken by an MNE, using 'sandwich estimators' (Lyn and Wei 1989). We include firm-specific attributes and regional effects in the model, thereby accounting for variation across firms and regions of the impact of a country's proximity on firm location choices. We also control for a range of geographic characteristics of a country such as climate, time zone, landlocking and islandness.

We find that a country's proximity to knowledge, markets, and resources in the rest of the world positively affects MNE location choices, over and above its own endowments. We also find that proximity to different factors has different implications for location choice. Thus, a country's proximity to the world's knowledge and markets increases the likelihood of it being selected as a location, while proximity to the world's resources does not have a statistically significant impact. Firm-specific attributes also affect location choices. Larger firms are more likely to select remote countries, perhaps because they are able to use their resources to mitigate the negative consequences of distant locations. The effect of the proximity factors varies across regions, suggesting that the geographic level of analysis matters in this case. Proximity to knowledge affects location choice in all regions but Africa. Proximity to markets affects location choices in all regions except in Europe. Other geographic characteristics of countries, such as climate, time-zone, landlocking and islandness also affect the likelihood of a country being selected as an MNE location.

With these findings, we make important contributions to theory and research. From a theoretical point of view, we introduce the concept of a country's proximity to other countries, and articulate its effect on MNE location choice. This concept greatly enriches existing location models by showing that the spatial context in which a country is embedded matters (Ghemawat 2003, Arino, Ghemawat and Ricart 2004). It also emphasizes the idea that countries don't exist in isolation but are part of a global context, and show how this affects their choice as an MNE location. We also develop the concept of a country's proximity to knowledge, markets and resources as a function of both geographic proximity and the spatial distribution of these factors worldwide. By linking physical proximity to some of the underlying factors that affect MNE location choices, we contribute a richer conceptualization of distance to the literature.

In the sections that follow, we develop the theoretical reasons for why different proximity dimensions will increase or decrease the likelihood of a country being chosen as an investment location. We then describe the model and the measures, and empirically test our predictions. We conduct an

extensive set of robustness checks to examine the sensitivity of our results to different specifications. We conclude with a discussion of our results and their implications for the strategy literature.

2. Theory and hypotheses

The importance of a node's structural position in a system is well established in a number of theoretical strands, at different levels of analysis. Network theories suggest that the position of individuals and organizations within a network affects a range of outcomes (Granovetter 1973, Burt 1992). Economic geographers maintain that position in space influences the level of integration in world systems, and apply this idea at different geographic units of analysis such as cities, countries and regions (Blainey 1968, Smith and Timberlake 2001). Political science scholars argue that the political and economic options of countries are determined in part by their positions in the world economy (Mahler 1980). These theories imply that outcomes are determined not just by the intrinsic characteristics of a node, but also by its structural position.

We draw on these ideas on the role of positional context in affecting outcomes, and apply them to the country level of analysis in the context of MNE location choices. Our starting point is that there is a spatial distribution of knowledge, markets and resources worldwide, and any particular country occupies a position within this distribution. This position determines the accessibility of these factors to firms located in that country. We introduce the concept of a country's *proximity to the world's knowledge, markets and resources*, and measure it by the aggregate distance of the focal country from the spatial distribution of these factors worldwide. In doing this, we treat countries as embedded in a geographical context rather than as stand-alone entities. In this sense, our approach is consistent with Arino, Ghemawat and Ricart's (2004) view of the need to envision countries '*as existing (and even occupying) space in relation to each other instead of as an array along a common yardstick*' (p. 5). Recent scholarly interest in regional effects (Ghemawat 2005, Rugman 2005, Khanna, Kogan and Palepu 2006) also acknowledges the embeddedness of countries in their immediate regional contexts, and the need to model FDI in a multilateral context (Blonigen, Davies, Waddell and Naughton 2007). Our approach allows for a less

rigid view of regional borders. By weighting influences that are proximate more than influences that are remote, we move away from artificial classifications of regions (e.g. “Middle East” or “South Asia”).

We argue that geographic proximity by itself is a narrow concept, in that it is informative only with regard to separation in physical space but is silent regarding the effects of this separation on other contextual influences. Hence, we introduce a notion of proximity in which geographic proximity is combined with the distribution of knowledge, markets and resources worldwide. For instance, a country being close to centers of knowledge differs qualitatively from it being close to markets, and this variation should affect MNE location choices. We advance hypotheses on how a country’s proximity to knowledge, markets and resources affects the likelihood of it being chosen as an investment location by MNEs. Theoretically, there are arguments that suggest that proximity could either drive or deter MNE location choice, resulting in alternative hypotheses on certain proximity factors.

A country’s proximity to the world’s knowledge

The proximity of a country to the distribution of knowledge worldwide is likely to influence the knowledge available within that country, due to the difficulty of accessing knowledge from a distance (Jaffe, Trajtenberg and Henderson 1993, Nachum and Zaheer 2005) and the increasingly important role of cross-border scientific exchange in the development of knowledge (Spencer 2003).

Geographic distance raises the costs of transferring knowledge and technology (Leamer and Storper 2001). Considerable empirical evidence documents the local nature of knowledge spillovers, and shows that knowledge is shared more effectively in geographic proximity (Marshall 1920, Jaffe, Trajtenberg and Henderson 1993, Almeida and Kogut 1999, Branstetter 2001, Storper and Venables 2004, among others). Keller (2002) found that at 1,200km distance from the source of knowledge, spillovers are reduced by half. Further, with the accelerating pace of knowledge development, the value of timely access to knowledge has increased, and geographic proximity that facilitates such access has become even more important (Gasper and Glaeser 1998). As a result of the high costs of knowledge transfer over distance, remote countries are likely to have a weak knowledge base, a country characteristic that is recognized as a critical element in affecting MNE location choices (Chung and Alcacer 2002).

Investments in geographically remote locations have been shown to be less profitable, because firms operating in remote countries suffer from information disadvantages (Coval and Moskowitz 2001, Grinblatt and Keloharju 2001). This suggests that countries that are close to the distribution of knowledge worldwide are more likely to be selected as MNE investment locations. Formally:

H1a: The proximity of a country to the rest of the world's knowledge increases the likelihood of that country being chosen as an MNE's investment location, ceteris paribus.

On the other hand, proximity to knowledge may also decrease the advantages of a country and reduce the likelihood of it being chosen as an MNE investment location. A major potential advantage of remote locations is in providing access to a variety of knowledge sources that are not commonly available at the center. Burt (1992) suggests that disconnected locations are a source of diverse and unique information. Access to diverse and geographically dispersed sources of knowledge and learning strengthens firms' innovative capabilities (Cantwell and Janne 1999, Rosenkopf and Almeida 2003), and improves their performance (Zaheer and Zaheer 1997) and survival (Audia, Sorenson and Hage 2001). With increasing integration and interaction between the world's major markets, the potential advantage of remote locations over proximate ones is increased.

As Dunk (2004) put it: '*...Unfortunately, today we encounter the same base – or just plain old – ideas in New York, London, Frankfurt, Tokyo, and Hong-Kong...Those desiring genuinely new approaches to pervasive problems should look past the usual large markets and trading partners...to countries that are...falling off the map. A surfeit of intellectual capital awaits importation from these overlooked countries*' (p. 19). Remote locations tend to be less bound by the consensus that typically dominates central locations and are thus likely to expose firms to different knowledge than that available at the center.

Further, there is also some evidence that suggests that remoteness may have become less of an impediment to the transfer of knowledge (Petersen and Rajan 2002, Kim, Morse and Zingales 2006), reducing the disadvantages of remote countries in this regard. Formally:

H1b: The proximity of a country to the rest of the world's knowledge reduces the likelihood of that country being chosen as an MNE's investment location, ceteris paribus.

A country's proximity to the world's markets

Proximity to the world's markets is an important driver of MNE location choice, and is likely to affect both MNEs seeking to use the country in question as an export platform as well as those driven by the intention to serve the market itself (market-seeking investment). For the former, countries close to large markets might be selected as low-cost production bases from which to serve these markets. This is particularly common when there are substantial cost differences between the countries in question (e.g., Mexico to the US, Eastern European countries to Western Europe). The proximity to markets makes these countries more valuable investment locations than they would be otherwise because it reduces transportation costs. Although new means of transportation that are less sensitive to distance have been developed, the world's fleets still carry about 90% of total world exports (The Economist 2005). Thus, transportation costs continue to be a significant element of overall production costs (Hummels 2001), and are likely to deter MNEs seeking export platforms from investing in remote countries.

For market-seeking MNEs, proximity to markets enables them to treat a country as part of a region. As MNEs increasingly organize their international activities on a regional basis (Enright and Scott 2000), the proximity of countries to others becomes an important factor affecting the location decision. Countries close to each other also tend to have regional trade agreements, which ease market access between them. In addition, proximity to markets is often associated with proximity on other dimensions, such as culture, economics and institutions (Craig, Douglas and Grein 1992, Khanna, Kogan and Palepu 2006), and this could ease the establishment of operations in the country in question to serve a regional market. Formally:

H2a: The proximity of a country to the rest of the world's markets increases the likelihood of that country being chosen as an MNE's investment location, ceteris paribus.

Notwithstanding these arguments, we suggest that there are also theoretical reasons that suggest that proximity to markets may confer some disadvantages, and thus make a distant country more likely to be chosen as a location. For example, remote geographic locations often have low competitive pressures, because this position creates natural barriers to competition from imports (Read 2004). A number of studies have shown that firms operating in locations where competitive pressures are lower experience low failure rates (e.g., Baum and Mezias 1992). This is consistent with work in industrial organization economics regarding the benefits of operating in less contested markets (Baumol, Panzar and Willig 1982), as well as with recent managerial literature that suggests that firms should seek out unexploited competitive spaces (Kim and Mauborgne 2005).

Yet another advantage of remote locations is risk diversification (Zaheer 2000a), as business cycles in distant countries tend to have low or negative correlations with those of central locations (Portes and Rey 2005). Greater integration through trade, investment and financial markets has caused the world's major markets to move in tandem. Investments in countries that do not follow similar economic trajectories can thus provide some risk diversification. Furthermore, proximity to markets reduces the likelihood of foreign investment replacing trade as a means to serve the market in question (Hummels 2001). Formally:

H2b: The proximity of a country to the rest of the world's markets reduces the likelihood of that country being chosen as an MNE's investment location, ceteris paribus.

A country's proximity to the world's resources

We define a country's resources as all tangible immobile production resources residing in a country, including the labor force, natural resources and raw materials. Investment seeking access to resources is often associated with a search for low cost production and trade (Carr, Markusen and Maskus 2001). The proximity of a country to the world's resources is likely to increase the likelihood of MNEs selecting it as an investment location for a variety of reasons, including closeness to global supply chains, and the impact of proximity on the quality and cost of inputs.

Being close to the world's supplies of resources facilitates the integration of the country in question into global supply chains, and thus increases the likelihood of production being located in these countries. Conversely, isolation from the world's resources implies that local resources in these countries are likely to be relatively undeveloped (Poot 2004). Being located on the periphery reduces the expected return on resources, and as a result, diminishes the incentive to invest in developing them (Redding and Schott 2003). Further, remoteness inhibits the learning associated with trade and the flow of technology that is embedded in products (Grossman and Helpman 1991, Salomon and Shaver 2005). Overall, proximity to resource-rich countries is likely to decrease the costs of local production by exposing the focal country to competitive international resource markets. Formally:

H3: The proximity of a country to the rest of the world's resources increases the likelihood of that country being chosen as an MNE's investment location, ceteris paribus.

3. Methodology

The model and measures

To test the hypotheses we use a variation of McFadden's conditional logit model (1974), a model designed to understand human choice behavior that is commonly applied to the location choices of firms (e.g., Bartik 1985, Head, Ries and Swenson 1995, Shaver and Flyer 2000, among others). The assumption underlying this model is that firms select locations with the greatest expected profitability, and that this profitability is a function of some observed country characteristics:

$$(1) \quad \Pi_{ij} = \beta'X_{ij} + \varepsilon_{ij}$$

Π_{ij} are the profits of firm i in location j . X is a vector of observed country characteristics for investment i in country j . ε_{ij} is an investment-location specific independent random disturbance that is attributable to errors associated with imperfect perception and optimization by firm i . The ε_{ij} is assumed to follow a Type I extreme value distribution, a distribution that puts probabilities only on the positive values. Maximization of profits with respect to location implies selecting the country with the highest Π .

McFadden (1974) shows that under these conditions, the conditional probability that firm i will select country j , given the pool of countries to select from, is represented by the following expression:

$$(2) \quad Pr I(Y_i = j) = \exp(\beta' X_{ij}) / \sum_j \exp(\beta' X_{ij})$$

The dependent variable $I(Y_i = j)$ equals 1 if a country j was chosen for investment by firm i , and 0 for the countries not chosen. Our model is a variant of MacFadden's model. The specification of the likelihood for any single investment follows McFadden's model, but we allow for dependence among investment choices made by a single firm. Most of the MNEs in our dataset have multiple investments (affiliates) in a single country. We first pooled the data by weighting the number of investments an MNE has in a particular country. In the McFadden model, investment decisions depend only on country characteristics. Therefore all investments of an MNE in a given country have the same covariate values and can be pooled together into a single case with a weight equal to the number of investments the firm has in a given country. The merit of this approach is that it is indicative of the magnitude of the MNE's investment in a given country. We account for the possible dependence among all investments made by a firm by using a 'sandwich estimator' (Lyn and Wei 1989). This estimation procedure does not require specific modeling of intra-firm, intra-country decision dependence, leading to robust estimates of the approximately log-linear selection probabilities. We estimate all model parameters using the Maximum Likelihood method.

The independent variables include the proximity measures and a set of control variables, combining unilateral geographic, economic and institutional characteristics of countries. We also introduce firm-specific attributes through interaction with the proximity measures, to examine possible heterogeneity across MNEs in terms of the effect of proximity on their location preferences.

The proximity measures

We begin by calculating a measure of geographic proximity of country i to the rest of the world by aggregating the bilateral distance between countries i and j across all countries, using capital cities as the actual points of measurement (Alfaro, Kalemli-Ozcan and Volosovych 2007). We standardize the basic proximity measures and calculate a country's proximity to the world's knowledge, markets and

resources by weighting the standardized geographic proximity measures by country values on the relevant factors. In the proximity measures below, higher values imply lower proximity. It is important to bear this in mind when interpreting the results, as negative coefficients imply positive effects of proximity.

- Proximity to knowledge: $PK_i = \sum_j [DIS_{ij} \times RD_j]$

Knowledge is measured by the \$ value of R&D investment in a country.

- Proximity to markets: $PM_i = \sum_j [DIS_{ij} \times PCGDP_j]$

Markets are operationalized by PPP per capita GDP.

- Proximity to resources: $PR_i = \sum_j [DIS_{ij} \times LABOR_j]$

In measuring resources, we focus on one resource, labor, that is particularly important for MNE location choice (Caves 1996). Resources are operationalized by the potential size of the labor force, i.e. number of people of working age, 15-64.

We transform these measures into indices ranging from 1-100. The lower the value of the index, the closer is the country in question to the rest of the world on that factor. Because we standardized the distance and multiplied standardized distance by the weighting factors, being close to a large knowledge (R&D) center becomes the smallest number in the index, while being far from a large knowledge center becomes the largest number in the index, i.e., the most remote position. The country proximity indices are presented in Supplement A of the online supplement to this paper.

We also measure the weighting attributes – R&D investment, per capita GDP, and the size of the labor force - for the focal country (country *i*). These measures reflect the argument that a country's own characteristics also affect the likelihood of its choice as a location by MNEs.

Control variables

We control for a number of geographic and economic characteristics of the focal country that are likely to affect MNE location choice. These attributes differ from the proximity measures in that they are unilateral country characteristics.

1. Islandness, to account for the high costs of water transportation on which islands are dependent (Hummels 2001), coded as a dummy variable (1=islandness). Our threshold to distinguish between an island and a continent is five million inhabitants. The literature on islands suggests that this distinction should be based on some sense of self-sufficiency (Read 2004).
2. Landlocking, because it entails specific costs of crossing the borders of countries blocking access to the sea, also coded as a dummy variable (1=landlocking).
3. Climate, because it has implications for production technologies, consumer behavior and the nature of demand (Schwartz 1992). We use the latitude of a country's capital city to measure climate.
4. Time zone, because activities in different time zones influence both MNEs' internal organization and their interactions with the market (Zaheer 2000b). Jointly modeling separation in time and distance, Espinosa and Carmel (2006) show how the costs of distance are affected by separation across time zones. It has been suggested that when technological advances reduce the costs of geographic distance, '*...time zones [and language groups] rather than mileage will come to define distance*' (Cairncross 1997, p. 3). We measure time zone by the longitude of capital cities.
5. Geographic size. This control is consistent with the probability-based dartboard approach (Ellison and Glaeser 1997), according to which larger areas are likely to get more investments. We measure it by area in square kilometers.
6. Remoteness dummies for the six most geographically remote countries, where there is a clear break point in terms of their aggregated geographic distance from the rest of the world. These are (in descending order): New Zealand, Fiji, Australia, South Korea, Papua New Guinea and Chile.
7. Transportation infrastructure, because '*...[efficient] transport is the enemy of distance. ... and [transport means are] the instruments that could defy distance*' (Blainey 1968, pp. ix-x). Head and Ries

(1996) and Chung and Alcacer (2002) show that transportation infrastructure affects the location choices of MNEs. We calculated a transportation index as the average of the standardized values of per capita aircraft departures and the size of the road and rail networks, adjusted to the size of the country.

8. GDP, as a measure of the economic size of countries.

9. Institutional environment, because substantial research shows that it shapes the investment opportunities within a country (Henisz and Delios 2002). Geography also affects the quality of institutions (Acemoglu, Johnson and Robinson 2002). We use a number of indicators drawn from literature in this area (Acemoglu, Johnson and Robinson 2002, La Porta, Lopez-De-Silanes and Shleifer 2002), to capture differences in institutional contexts across countries:

- i. A measure of economic freedom, calculated as an index of political rights and civil liberties.
- ii. A combined measure of business regulations, which includes tax laws, government intervention in the economy, cross-border regulations, and corruption.
- iii. Property rights, a measure of protection against expropriation.

We average the standardized values of these three indicators, reverse coding them where appropriate, and create a single measure of the institutional environment. Larger values of this measure represent a more conducive institutional environment.

10. FDI stock, to account for mimetic behavior in location choices and the signaling effect of existing investments for prospective investors (Gimeno, Hoskisson, Beal and Wan 2005).

11. FDI stock of neighboring countries, as a measure of spatial interdependence, which captures possible spillovers across a country's borders (Anselin, Florax and Rey 2004). This variable has been shown to affect the location preferences of MNEs (Head, Ries and Swanson 1995, Head and Ries 1996, Coughlin and Segev 2000, Blonigen, Davies, Waddell and Naughton 2007, Baltagi, Egger and Pfaffermayr, 2006).

We measure the aggregate FDI stocks of countries that share a common border (Anselin 1988). Formally:

$$NFDI_i = \sum_j b_{ij} * FDI_j$$

where $NFDI_i$ signifies the aggregated amounts of FDI of all neighboring countries to country i , b denotes the existence of a common border (a binary variable that gets the value 1 if i and j have a common border; 0 otherwise), i is the focal country and j all other countries.

12. Regional dummies, to account for the possible impact of regional location on the relationships we test. Such an impact can be exercised in a variety of ways, for instance via regional integration that diminishes the consequences of the geographic location of individual countries. We add four regional dummies for Africa, South-East Asia, Asia and Europe, and use the Americas as the benchmark region. These regional dummies also control for observed and unobserved heterogeneity across regions (Bartik 1985). They partially correct for potential bias that might arise as a result of violating McFadden's assumption of Independence of Irrelevant Alternatives (IIA) (McFadden 1974), because although countries within the same region do not display the IIA property, countries in different regions probably do (McFadden 1981).

Firm-specific variables

Our major interest in this paper is in modeling the effect of country proximity to the rest of the world on MNE location choice. However, recent studies have questioned the value of applying an identical location model to all MNEs, on the ground that this essentially implies that they all have the same utility function and location preferences (Shaver and Flyer 2000, Nachum and Wymbs 2005, Alcacer 2006, Alcacer and Chung 2007). Rather, these studies show that firms are not homogenous with respect to a single set of model parameters. We contend that similar variation may exist in relation to geography, and that MNEs probably assign different values to a country's position depending on their own characteristics. To account for this heterogeneity, we introduce two firm-specific attributes to the model: Size, measured by the number of employees, and sales per employee, as a broad measure of firms' performance. The multinomial choice model does not allow for the inclusion of firm main effects. In this model, the only possible independent variables that affect the probability of a country in question being selected for investment are country variables. In other words, only characteristics of the selected entities affect choice, and not any characteristics of the choice maker. Therefore, firm characteristics can only be modeled through interaction with country characteristics.

The data

Data for the dependent variable – MNE location choices – were taken from the *Directory of American Firms Operating in Foreign Countries* (Uniworld Business Publications, Inc., 2005, Millis, Mass. 18th edition). The *Directory* provides detailed information regarding the international activities of about 3,300 public and private US MNEs whose worldwide revenues were in excess of \$10 million in 2004, in relation to about 150,000 country/industry combinations of foreign subsidiaries, branch offices and affiliates. The total annual sales of these MNEs (in the US and overseas) were \$8.6 trillion in 2004, accounting for about 85% of the combined sales of US parents and their affiliates overseas (Bureau of Economic Analysis 2006).

We excluded 22 tax-haven countries (based on the OECD (2000) ‘black list of tax-haven countries’) because investments in these countries are driven by tax considerations and do not reveal the effect of the country characteristics of interest here on location choice. We also removed ten territories and colonies that appear in the database as separate units. The inclusion of these areas would be inconsistent with the use of countries as the unit of analysis in this study. A number of additional countries were excluded because of the extent of missing data.

The remaining 119 countries represent the alternative locations we considered in the analysis. We acknowledge that investing firms do not actively consider all 119 countries as alternative locations. However, based on a systematic study of the effects of the size of the choice set on conditional logit coefficients, Parsons and Hauber (1998) show that adding alternatives with low likelihood of being chosen has almost no effect. They conclude that the results of conditional logit models are not sensitive to the inclusion of alternatives not actively considered by all firms.

Due to computation constraints, we could not conduct the analyses on the entire database, and we randomly sampled 20% of the firms. This sample includes 25,667 country-MNE combinations representing 138,050 investments, depicting the investment activities of 566 MNEs across 119 countries. In Supplement B we present the breakdown of these investments by country. This breakdown is largely

consistent with the geographic patterns of US investment as a whole (Hanson, Mataloni and Slaughter 2002, Bureau of Economic Analysis 2006).

In Supplement C we list the variables included in the analyses and provide detailed descriptive statistics and the sources of the data. Table 1 presents the correlation coefficients between these variables. Most coefficients are low. The low correlations between the proximity measures are interesting in and of themselves, and speak to the importance of adopting a nuanced view of proximity. Highly dispersed and not normally distributed variables are introduced in logged form (the focal country measures, area, GDP and FDI stocks).

Table 1 about here

4. Results

A few caveats are in order before discussing the results. To begin with, our data source represents only existing companies and does not have a non-surviving group as control. It is thus potentially biased towards companies that survived (Ross 1997). Survival bias, however, is a common problem in most strategy research, primarily due to the difficulties of collecting data on non-existing firms (Denrell 2005). Yet another caveat is that the source of our data does not provide information regarding the time of entry, and only reports the location portfolio of US MNEs at a given point in time. We thus model an essentially dynamic phenomenon in static terms. The potential bias is that some of the location characteristics that attracted investments may have changed over time. We believe that this limitation is minimal in our case because the location attributes we examine are for the most part either exogenous (e.g., the geographic attributes) or tend to change slowly over time. Further, although firms are usually slow to respond to such changes by relocating, divestment decisions will correct for major changes in location characteristics.

In addition, with the data being silent about the timing and order by which countries were selected, we cannot account for the effect of MNEs' existing location portfolios on their subsequent location choices. A strength of this paper, however, is that we have taken the interdependence among a firm's investments into account in our analysis through the sandwich estimators. Yet another limitation is that our data are informative on the actual investment, but not on its drivers. For instance, we cannot

separate out export-seeking and market-seeking investments, on which distance may exercise different influences (Nachum and Zaheer 2005).

Other concerns relate to the measurement of countries' geographic positions. We followed the common procedure employed in research in this area (e.g., Brainard 1997, Carr, Markusen and Maskus 2001) and used capital cities as the point of measurement. This has the effect of disregarding intra-country variation, an approach that is particularly biased in relation to large countries. Further, capital cities may not be the relevant points of reference for all activities. The difficulty is that different products and activities usually have different centers within countries, and a study at the country-level cannot address such variations. Another concern is related to our operationalization of resources. We measure only one resource, labor, and it is possible that the effect of a country's proximity to other resources differs. However, as a first step towards establishing proximity as a factor influencing location decisions, these judgement calls are minor and do not detract unduly from the contribution of our work. Below we draw a number of conclusions from the estimates of the model reported in Table 2.

Table 2 about here

Overall, the findings provide strong support for the basic assumption underlying this paper, namely, that a country's proximity to other countries significantly affects MNE location choice, over and above the country's own endowments. While we had theorized that proximity could have either positive or negative influences on location choice, the effects of the proximity measures to knowledge and markets are positive, implying that the proximity of countries to the spatial distribution of these factors worldwide increases the likelihood of their being chosen as investment locations. US MNEs clearly exhibit a preference for countries that are centrally located in the world. These results are consistent with previous research that has found negative relationships between distance and foreign sales of US MNEs (Carr, Markusen and Maskus 2001, Markusen and Maskus 2002, Hanson, Mataloni and Slaughter 2002). Countries' own endowments of knowledge, markets and resources also consistently show positive effects on the location choices of US MNEs, in line with extant theory.

The inclusion of the proximity measures substantially increases the predictive power of the model (model 3) over a model that only includes countries' own endowments (model 2). This is indicated by the large reduction in the Akaike Information Criterion (AIC) and the increase in the likelihood ratio. A significance test of these differences ($\chi^2 (model\ 2) - \chi^2 (model\ 3) = 326157 - 325457 = 700 (9\ df)$, $p < .0001$) implies that the proximity measures significantly increase the predictive power of the model, supporting the need to take explicit account of these attributes of countries in location models..

The proximity of a country to the world's knowledge, markets and resources differentially affects the likelihood of US MNEs choosing that country as an investment location. The effect of a country's proximity to knowledge on location choice is positive, supporting H1a. The costs of accessing knowledge in a remote location appear to override the advantages that remoteness may provide, e.g., in affording access to diverse knowledge.

The effect of proximity to markets is also positive, supporting H2a, which stated that countries that are centrally located in the spatial distribution of the world's markets are more likely to receive MNE investments. This finding is consistent with the observation that Europe receives the majority of the investments of US MNEs (Supplement D1). This suggests that the costs of remoteness are more influential on location choice than the potential benefits that remote countries might provide in terms of lower competitive pressures.

The third hypothesis, which stated that proximity to the world's resources would positively affect location choices, is not supported. The proximity of a country to labor resources has no effect on the location choice of US MNEs. These results perhaps indicate that labor is largely restricted to its country of origin. Being close to countries with large labor pools does not mean that the focal country can access the benefits of that labor pool. For example, being Nepal, close to two major resource centers, India and China, does nothing for US MNE investment in Nepal.

We examined firm effects in this choice model by introducing two firm characteristics in combination with the proximity measures. As mentioned in the methods section, this is the only way to include characteristics of the chooser (in our case, the MNE) in a conditional choice model. The firm

characteristics we introduced are number of employees, a measure of size, and sales per employee, a measure of performance. The effect of all three proximity measures on MNE location choice is negative in interaction with the number of employees, but has no effect in interaction with sales per employee. This implies that the effect of a country's proximity to the rest of the world in influencing that country's choice as an investment location is sensitive to the size of the firm making the decision. Larger firms are more likely to select a remote country for investment. Larger firms appear to be better able to absorb the costs and take advantage of the benefits of distance than small firms, perhaps due to their ability to better manage dispersed operations (Bartlett and Ghoshal 1989) or to their possession of internal resources that enable them to overcome the adverse consequences of distance. These findings extend the research on heterogeneity across MNEs in terms of their location preferences (Shaver and Flyer 2000, Nachum and Wymbs 2005, Alcacer 2006), by showing that in addition to the location attributes identified in these studies, a country's proximity to the rest of the world carries different implications for MNEs with different characteristics.

Most of the control variables are highly significant and carry the expected signs. In part, this is consistent with previous studies of location choices, which have shown the importance of country attributes, such as GDP, the institutional environment and FDI stocks, in affecting MNE location choices (Caves 1996). The highly significant results of the set of geography measures, many of which have not been included previously in location models, speaks to the need to model geography as an important determinant of MNE location choices. A failure to do so could potentially lead to an incorrect emphasis on other location attributes.

In a few cases, the results of the control variables are inconsistent with our expectations and previous research. The positive sign of islandness is one, and perhaps in part can be explained by a number of islands in our study that receive substantial amounts of US investments (e.g. Ireland, New Zealand, Singapore). The short distances of some of the other islands to land masses (e.g., Bahrain, Cyprus, Jamaica, Madagascar, Sri Lanka, and Trinidad & Tobago) also probably eliminates the negative consequences of islandness (Poot 2004). The positive and highly significant results of GDP in Model 1,

which are in line with theory (Caves 1996, Blonigen, Davies, Waddell and Naughton 2007), change with the addition of the country's own endowments of knowledge, markets and resources, suggesting the effects of GDP are captured by these other country attributes.

The regional dummies are statistically significant, implying that relative to the Americas (the base region), regional affiliation affects the likelihood of a country receiving US MNE investments. The direction of the regional impact is mixed – it is negative in Europe and Africa and mixed in Asia and S E Asia. The data in Supplement D1 show considerable variation across the regions in terms of the number of US investments they receive. While the negative results for Africa are not surprising, it appears that being in Europe carries certain costs in terms of the ability of individual countries to draw US MNE investments. This might be a function of European integration, which eases the access to the entire European market from a single location, reducing the need for operations in every European country (Clegg and Scott-Green 2002). The mixed signs for Asia and S E Asia may reflect intra-regional variations in the likelihood of individual countries receiving US MNE investments.

In order to gain additional insights into regional variations on the impact of proximity, we add interaction terms of the region dummies and the proximity indices to the model (Model 4). The results show substantial variations across regions in the effect of the different proximity factors. The effect of proximity to knowledge on location choice in a regional context is negative in all regions except Africa. With the exception of Europe, the regional effect of proximity to markets is statistically significant in all the regions, but the direction of the impact is mixed. Proximity to resources is the least important in all the regions, reinforcing our findings regarding the limited importance of this proximity factor at the regional level as well. These interactions reflect considerable variations across regions, which were not observed at the global level, suggesting that the geographic level of analysis makes a difference in relation to the effect of proximity. These findings appear consistent with Khanna, Kogan and Palepu (2006) who found that convergence in governance patterns is greater within regions than across them, or on a global level.

The regional differences we find are also informative with respect to differences between investments flowing to developed vs. developing countries, also known as North/North and North/South investments (Carr, Markusen and Maskus 2001). US investment in Europe largely corresponds to North/North investment while investment in Asia and Africa is essentially of the North/South type. Online supplement D2 suggests that most US investment takes the North/North direction, that is, it flows from the US to advanced countries. Our results are consistent with research that shows that the factors determining the location choices of MNEs vary systematically across these groups of countries (Blonigen and Wong 2005, Blonigen, Davies, Waddell and Naughton 2007).

We conducted a large number of robustness tests to examine the sensitivity of our findings under different specifications (Online supplement E). While there are some changes in the magnitude of some coefficients and in their significance, overall the conclusions of our study hold also in these modified specifications.

Implications for theory and research

Our findings have important implications for theories of MNE location choice and clusters, as well as for theories of knowledge-seeking investments. To theories of MNE location choice (Caves 1996, Head, Ries and Swanson 1995, Alcacer 2006, Tsang and Yip 2008), we contribute by adding a multilateral view of a country's position relative to the rest of the world, to complement the unilateral view of country characteristics as drivers of MNE investment that has dominated research in this area. We also explicitly add geographic characteristics to the set of economic and institutional characteristics that have been the norm in location models. To the literature that examines the growth of clusters (Porter 2000), our findings add the understanding that the context of a given location matters, particularly its proximity to other locations, as well as its geographical context in terms of climate, time-zone etc.. With respect to the literature on knowledge-seeking MNE investments (Cantwell and Janne 1999, Chung and Alcacer 2002) we establish that, in addition to the knowledge stock in a given location, a country's proximity to other sources of knowledge matters as well.

The concept of proximity to knowledge, markets, and resources can readily be extended to smaller and larger geographic units, such as cities and regions. The theoretical approach outlined in this paper is therefore applicable beyond countries as the geographic level of analysis. The concept of proximity could also be used to explain other phenomena such as MNE subsidiary strategies, the success of international acquisitions, or relationships between headquarters and subsidiaries.

A methodological contribution of this study is the novel use of the sandwich estimator in conjunction with MacFadden's choice model to account for interdependency across multiple investments undertaken by a single MNE. This represents an important methodological improvement to current approaches to modeling MNE location choices, which do not account for these interdependencies.

This study opens up several avenues for future research. One important direction is to examine variation in the effect of distance on horizontal and vertical investments (Carr, Markusen and Maskus 2001, Markusen and Maskus 2002). Horizontal investment is in part driven by high transportation costs, and is often undertaken as a direct response to these costs. By increasing the costs of exports, distance is likely to have a positive effect on horizontal investment. By contrast, vertical investment, characterized by intensive internal MNE interaction and trade, is likely to diminish with the rising costs of trade as a result of distance. The two investment types may also be sensitive to different aspects of distance. Communication and coordination costs are likely to have a negative effect on vertical investment, while horizontal investment, replicating essentially the same activities in different countries, would probably be sensitive to the costs of knowledge transfer.

Another important direction for future research is the dynamic modeling of location choices (Paap and Franses 2000). This will enable researchers to take into account the dependencies between different investment decisions over time, and condition the choices made by MNEs on their prior location portfolios. Further, while we acknowledged the dependency between multiple investments undertaken by the same firm, we made no assumption about the nature of the dependency. Future research may explicitly model different forms of dependency, for example, via some Markov Process for sequential

firm decisions, or via firm random effects. Future research may also examine the interaction between country attributes such as wage rates and the proximity factors.

Implications for firm strategy

The significant effects of country position and geography on MNE location choice suggest that firms that explicitly incorporate these factors in their location strategies may be in a position to arrive at a more optimal configuration of locations worldwide. This could potentially be a source of differentiation and competitive advantage (Mosakowski and Zaheer 1999, Schoenberger 2000, King and Frost 2002). Further, a major source of value creation in international business lies in turning differences across countries into firm-specific advantages (Bartlett and Ghoshal 1989, Ghemawat 2003). Geography and distance vary considerably across countries, and thus represent a potential source of advantage for the MNEs that can leverage this variation. Seen in this way, distance need not always be an obstacle to be overcome.

The finding that different firms value proximity differently and perhaps benefit to different extents from geographic location suggests that strategy scholars and firms need to explicitly take these factors into consideration. For instance, it appears that larger firms are the ones best able to take advantage of the benefits of remote locations. Further, the differences we found in the impact of the three proximity dimensions on the likelihood of an MNE choosing to invest in a particular country speak to the need for firms to unbundle the concept of proximity when formulating strategy.

Attention to geography and distance is becoming ever more important as the location options available to MNEs widen and the variations across them increase. When most international activity was concentrated in the Triad (Ohmae 1995), the challenges and opportunities presented by geography were relatively limited. As additional countries become part of the location options available to MNEs (Prahalad 2005), and the variation across them increases, the advantage that MNEs can draw from location strategies is potentially greater.

More managerial attention to a country's proximity to the world's knowledge, markets and resources is warranted as MNEs spread their value-added activities in globally integrated supply chains

(Palmisano 2006). This mode of operation, which differs from the old model in which entire value-added chains were implemented in each market, turns proximity and geography into important elements in the international configuration of value-added activities.

5. Conclusion

In this study, we sought to deepen our understanding of the spatial context in which a country is embedded on its choice as a location by MNEs. We introduce the idea that the proximity of a country to other countries worldwide is a factor that needs to be taken into account in location models. We further advance the concept of a country's proximity to the global distribution of knowledge, markets and resources, and frame this concept as a function of both geographic distance and the worldwide spatial distribution of these factors. We develop and test hypotheses on the effect of a country's proximity to knowledge, markets and resources on their choice as a MNE location and test them on a sample of US MNEs. Our findings show that apart from a country's intrinsic characteristics and endowments, its proximity to other countries is a major driver of the location choices of US MNEs. These findings are consistent with research that suggests that distance matters significantly as an element of firm strategy (Ghemawat 2001, Alstynne and Brynjolfsson 2005). The empirical findings show that proximity to knowledge, markets, and resources differentially affects the likelihood of a country being selected as an investment location. Proximity to knowledge exercises the most significant influence, followed by proximity to markets, while proximity to resources is insignificant. The significant impact of these indicators suggests that a theory that does not incorporate country position in a spatial context would yield incorrect predictions about MNE location choices.

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Table 1: Correlations (Pearson coefficients)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-----------------|-------|-------|-------|-------|-----|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|------|----|
| 1 Knowledge | 1 | | | | | | | | | | | | | | | | | | | |
| 2 Markets | .05 | 1 | | | | | | | | | | | | | | | | | | |
| 3 Resources | -.20* | -.02 | 1 | | | | | | | | | | | | | | | | | |
| 4 Own knowledge | .06 | -.01 | -.08 | 1 | | | | | | | | | | | | | | | | |
| 5 Own markets | -.06 | -.17 | .02 | .07 | 1 | | | | | | | | | | | | | | | |
| 6 Own resources | .06 | .07 | .31** | .17 | .08 | 1 | | | | | | | | | | | | | | |
| 7 Islandness | -.05 | .25** | -.05 | -.07 | .09 | -.10 | 1 | | | | | | | | | | | | | |
| 8 Landlock. | -.00 | -.16 | -.03 | -.17 | .13 | -.01 | -.18* | 1 | | | | | | | | | | | | |
| 9 Time zone | .00 | .59** | .40** | -.03 | .03 | -.01 | .20* | .20* | 1 | | | | | | | | | | | |
| 10 Climate | .02 | .38** | -.14 | .53** | .10 | .04 | -.09 | .06 | .33** | 1 | | | | | | | | | | |
| 11 Area | .03 | .14 | -.09 | .20* | .08 | .45** | -.14 | -.09 | .07 | .10 | 1 | | | | | | | | | |
| 12 Remoteness | -.04 | .51** | .23** | .06 | .06 | -.04 | .25** | -.10 | .13 | .00 | .07 | 1 | | | | | | | | |
| 13 Africa | .03 | .42** | .13 | .44** | .03 | -.12 | -.01 | .05 | .24** | .35** | -.10 | -.16 | 1 | | | | | | | |
| 14 S E Asia | .22* | .53** | .61** | .08 | .14 | .01 | .19* | -.15 | .05 | -.17 | .02 | .56** | -.23* | 1 | | | | | | |
| 15 Asia | .02 | -.18 | .36** | .03 | .14 | .30** | -.04 | .20* | -.16 | .26** | .18* | -.10 | .31** | -.15 | 1 | | | | | |
| 16 Europe | -.14 | .35** | .05 | .40** | .05 | -.08 | -.14 | -.02 | .28** | .62** | -.16 | -.12 | .36** | -.17 | -.23* | 1 | | | | |
| 17 Transport | -.01 | -.08 | .07 | .25** | .01 | .05 | -.14 | .16 | -.02 | .35** | .10 | -.08 | .32** | -.14 | .01 | .26** | 1 | | | |
| 18 GDP | .51** | .07 | -.16 | .38** | .01 | .26** | -.13 | -.13 | -.03 | .23* | .17 | -.02 | -.21* | .19* | -.06 | .22* | -.15 | 1 | | |
| 19 Institutions | -.02 | .32** | .22* | .31** | .08 | .26** | .21* | -.17 | .25** | .09 | -.09 | .23* | .30** | .19* | .35** | .27** | .20* | .16 | 1 | |
| 20 FDI Stocks | -.19* | .03 | -.12 | .42** | .05 | .30** | -.12 | -.16 | -.06 | .28** | .22* | -.01 | .27** | .11 | -.07 | .34** | .19* | .53** | .20* | 1 |

| | | | | | | | | | | | | | | | | | | | | |
|-----------------------|-------|-----|-----|-------|-----|-----|------|-----|-----|-------|-----|------|-------|------|-----|-------|------|-------|------|-------|
| 21 Neighbor stocks | -.21* | .01 | .03 | .43** | .00 | .17 | -.18 | .05 | .02 | .32** | .17 | -.06 | .35** | -.09 | .00 | .36** | -.17 | .37** | .20* | .62** |
|-----------------------|-------|-----|-----|-------|-----|-----|------|-----|-----|-------|-----|------|-------|------|-----|-------|------|-------|------|-------|

* Correlation is significant at the 0.05 level; ** Correlation is significant at the 0.01 level (2-tailed).

Table 2: Regression results
 Conditional logit model estimated by maximum likelihood and Cox Hazard
 Regression coefficients (Chi-Sq) [Hazards]^a
 Dependent variable: MNE location choices (binary variable)

| Variables | Model 1 | Model 2 | Model 3 | Model 4 |
|--|-----------------------------|------------------------------|------------------------------|-----------------------------|
| Proximity measures (negative coefficients imply positive effects) | | | | |
| Knowledge | | | -.03 (17.57) [.97] **** | -.01 (2.79) [.99] * |
| Markets | | | -.00 (25.56) [.99]**** | -.04 (127.72) [.96] **** |
| Resources | | | -.00 (1.82) [.99] | -.00 (1.28) [.99] |
| Focal country measures | | | | |
| Own knowledge | | .03 (272.76) [1.03] **** | .03 (297.03) [1.03] **** | .04 (312.86) [1.04] **** |
| Own markets | | 1.12 (648.35) [3.05] **** | 1.29 (673.06) [3.63] **** | .36 (37.45) [1.44] **** |
| Own resources | | .78 (791.04) [2.18] **** | .92 (794.14) [2.51] **** | .68 (258.64) [1.97] **** |
| Control variables | | | | |
| Islandness | .21 (35.61) [1.24]**** | .18 (21.65) [1.20] **** | .25 (42.88) [1.29] **** | -.18 (16.19) [.83] **** |
| Landlocking | -.26 (78.20) [.77]**** | -.25 (76.00) [.78] **** | -.24 (64.31) [.79] **** | -.17 (25.23) [.84] **** |
| Climate | .01 (283.61) [1.01] *** | .00 (27.94) [1.00] **** | .00 (32.08) [1.00] **** | .02 (132.92) [1.02] **** |
| Time zone | -.00 (94.32) [.99] **** | -.00 (126.27) [.99] **** | -.00 (181.17) [.99] **** | .00 (81.11) [1.00] **** |
| Area | .07 (222.29) [1.07]**** | .05 (101.60) [1.06] **** | .04 (47.23) [1.04] **** | -.18 (237.42) [.84] **** |
| Remoteness | -.06 (5.09) [.94]* | -.20 (46.23) [.82] **** | -.23 (43.19) [.79] **** | .18 (13.87) [1.19] ** |
| Transport infrastructure | .51 (161.52) [.62]**** | .40 (93.63) [.67] **** | .34 (75.67) [.71] **** | .60 (85.30) [.55] **** |
| GDP | .29 (1196.19) [1.33]**** | -.49 (319.26) [.61] **** | -.61 (388.53) [.54] **** | .02 (.18) [1.02] |
| Institutional environment | .00 (11.14) [1.00] *** | .01 (112.43) [1.01] **** | .00 (10.00) [1.00] *** | .00 (9.40) [1.00] ** |
| FDI Stocks | .23 (924.12) [1.26]**** | .21 (711.17) [1.24] **** | .23 (664.54) [1.25] **** | .12 (55.94) [1.12]**** |
| FDI stocks neighboring countries | .02 (85.51) [1.02] **** | -.00 (.16) [.99] | .00 (.90) [1.00] | -.01 (16.18) [.98] **** |
| <i>Regional dummies</i> | | | | |
| Africa | -.73 (355.89) [.48] **** | -.64 (222.82) [.53] **** | -.47 (51.17) [.63] **** | -2.59 (7.34) [.07] ** |
| Europe | -.79 (439.61) [.45] **** | -.82 (425.83) [.44] **** | -.69 (127.35) [.50] **** | -4.26 (25.45) [.01] **** |
| Asia | .12 (10.87) [1.13] *** | -.13 (9.63) [.88] ** | .09 (1.77) [1.09] | -2.83 (46.94) [.06] **** |
| S E Asia | .13 (20.25) [1.14] **** | -.20 (35.78) [.82] **** | .47 (38.10) [1.60] **** | -3.33 (56.32) [.04] **** |

| Firm variables x Proximity (negative coefficients imply positive effects) | | | | |
|--|------------------|------------------|-------------------------|-------------------------|
| # employees x knowledge | | | .00 (14.26) [1.00] *** | .00 (13.00) [1.00] *** |
| # employees x markets | | | .00 (35.81) [1.00] **** | .00 (54.16) [1.00] **** |
| # employees x resources | | | .00 (17.93) [1.00] **** | .00 (18.99) [1.00] **** |
| Sales/employee x knowledge | | | -0.00 (.00) [1.00] | c |
| Sales/employee x markets | | | -0.00 (.00) [1.00] | c |
| Sales/employee x resources | | | -0.00 (.02) [1.00] | c |
| Regional dummies x Proximity (negative coefficients imply positive effects) | | | | |
| Africa x knowledge | | | | -.00 (.31) [.99] |
| Europe x knowledge | | | | .05 (49.33) [1.05] **** |
| Asia x knowledge | | | | .08 (36.97) [1.09] **** |
| S E Asia x knowledge | | | | .02 (33.99) [1.02] **** |
| Africa x markets | | | | .06 (76.70) [1.06] **** |
| Europe x markets | | | | -.01 (1.47) [.99] |
| Asia x markets | | | | -.07 (20.06) [.93] **** |
| S E Asia x markets | | | | .06 (54.27) [1.06] **** |
| Africa x resources | | | | -.01 (1.72) [.99] |
| Europe x resources | | | | -.01 (.61) [.99] |
| Asia x resources | | | | -.03 (9.11) [.97] ** |
| S E Asia x resources | | | | -.04 (4.25) [.96]* |
| Regression statistics | | | | |
| Likelihood ratio (DF) | 37,175 (15) **** | 38,281 (18) **** | 38,952 (27) **** | 42,012 (36) **** |
| AIC (with covariates) ^b | 327,167 | 326,067 | 311,861 | 308,819 |
| N | 138,050 | 138,050 | 138,050 | 138,050 |

Pr>ChiSq: ****p<0.0001; *** p<.001; ** p<.01; * p<.10

^a The Hazards inform one on changes in the likelihood of a country being selected due to increase/decrease of 1 unit in the variable in question. The greater the hazard value, the larger the probability that a country in question is being selected as an investment location. We refer to the hazards, rather than to the coefficients, because they relate directly to the probability of choice.

^b AIC (Akaike Information Criterion) = $-2 \cdot \log\text{-likelihood} + 2 \cdot \text{NIV}$, where NIV is the number of independent variables. This criterion provides a likelihood measure that accounts for the number of independent variables included in the model. The higher the number of independent variables, the higher the likelihood of the model, but the larger the instability of the model.

^cThe interaction variables with sales per employees were excluded from this analysis because they were not significant.