**TITLE:** Corruption distance and FDI flows into Latin America

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**ABSTRACT**

Studies of corruption and its relationship with Foreign Direct Investment (FDI) have yielded mixed results; some have found that corruption deters FDI but others have found the opposite. This paper replicates earlier studies within the OLI paradigm, but also seeks to advance our understanding of this relationship by introducing the concept of “corruption distance” between pairs of countries and applying it to the special context of Latin America.

After controlling for institutional variables, results show that corruption distance has an asymmetrical impact. Host countries enjoying “positive” corruption distance compared with home countries as sources of FDI experience no significant increases or reductions in levels of inward FDI. However, “negative” corruption distance suffered by host countries is associated with significantly lower levels of inward FDI. We argue that firms from a home country with relatively low levels of corruption are unfamiliar with the formal and informal institutions associated with corruption. Conversely, firms from home countries with high corruption are undeterred by high corruption in host countries.

**Key Words:** Corruption Distance, FDI, OLI Theory, Institutions.
1. Introduction

Corruption is usually defined narrowly as the abuse of public office for personal gain (Roy & Oliver, 2009). This definition is reflected in reported measures of the perceptions of national corruption levels (Transparency International, 2010). Such public corruption may have a corrosive effect on the integrity of a nation’s entire system (Voyer & Beamish, 2004): it may reduce operational efficiency, distort public policy, slow the dissemination of information, negatively impact upon income distribution, and increase the poverty of an entire nation (Chen, et al., 2010). In the international business (IB) discipline, the study of corruption only recently gained prominence as firms from developed countries engaged in operations in emerging and transition economies (Rodriguez, et al., 2006). However, despite the popularity of the subject, the issue of how corruption affects the attraction of foreign direct investment (FDI) to a highly corrupt host location is still not fully evaluated in the extant literature.

Multinational enterprises (MNEs) may use care when choosing host countries for their foreign subsidiaries because of their concern for the additional uncertainty and operational costs associated with corruption (Kwok & Tadesse, 2006). Corruption has, consequently, been considered a deterrent to FDI. A contrary view, however, does exist and has seen corruption as a necessary evil, a lubricant for transactions (Meon & Weill, 2010), particularly when “institutional voids” are prevalent in developing economies (Khanna, et al., 2010). In the words of Cuervo-Cazurra (2008, p. 13), corruption can be “sand or grease.” The recent surge in FDI flows into and from developing countries (often with high levels of corruption), each accounting for 50 per cent of total inflows and 30 per cent of outflows in 2010 (United Nations, 2011), calls for a reconsideration of corruption in the IB literature.

Corruption varies widely across different locations both in its scope in an economy and in the level of uncertainty it creates (Uhlenbruck, et al., 2006). Also, not all MNEs perceive and respond to corruption in the same manner. Besides the direct impact of host country corruption on inward FDI, however, formal institutions in the host country may interact with institutions in the home country, which may themselves interact with informal institutions (Holmes, et al., 2012) and therefore affect the behaviour of foreign investors (Cuervo-Cazurra, 2008). In that sense, the degree of uncertainty and the costs associated with corruption may vary depending on the country of origin of the foreign investors (Cuervo-Cazurra, 2006). For this reason, recent studies have concluded that MNEs located in countries with low levels of corruption would avoid investing in highly corrupt countries (Hbib &
Zurawicki, 2001). With little knowledge of dealing with this phenomenon at home (Pajunen, 2008), they are more likely to be deterred by high levels of corruption as well as their unfamiliarity with it abroad (Driffield, et al., 2013). On the other hand, firms which originated in highly corrupt environments may not be as sensitive to high corruption levels abroad; they may be attracted by the environment and even take advantage of corrupt activities (Suchman, 1995; Cuervo-Cazurra, 2006).

It has been explained that the relative differences between corruption levels in home and host countries may influence FDI (Habib & Zurawicki, 2002), and such an influence may be asymmetrical according to whether “corruption distance” is positive or negative. We therefore further the understanding of corruption and its effects on FDI by replicating earlier studies in the unique context of Latin America, where corruption is prevalent, and by furthering the concept of corruption distance, distinguishing the effects of negative and positive corruption distance. In this sense, we extend to corruption the familiar notion of the “distance metaphor”, a staple tool of social science in general and of IB in particular (Shenkar, 2001): psychic distance (Johanson & Vahlne, 1977); cultural distance (Shenkar, 2001); and recently, institutional distance (Schwens, et al., 2011; Eden & Miller, 2004). With this new concept to hand, do positive and negative corruption distances (to be defined later) have a differential effect on inward FDI?

We argue that not all foreign investors are affected equally by corruption in the host country and, specifically, that firms based in highly corrupt countries are not unduly affected by high levels of corruption abroad or by corruption distance. The next section addresses these research questions in relation to corruption and FDI by reviewing the theoretical literature on corruption. Subsequent sections deal with hypotheses, methodology, results and conclusions.

2. Theoretical background

The cost-of-doing-business-abroad (CDBA) approach initiated by Hymer (1960) embraced a wide range of economic and social variables to explain patterns of FDI. As part of the CDBA approach, Dunning’s OLI theory focused on economic efficiency and a wide variety of factors associated with geographic distance (Driffield et al., 2013). These covered the whole range of business functions, e.g. production, marketing and distribution, and involved such important economic distance-associated variables as transport and communications costs,
technological knowledge protected behind entry barriers, etc. Calhoun (2002) argues that modern IT and globalization have reduced the importance of these economic CDBAs.

As economic CDBAs have been gradually downplayed in the IB literature, so the social content of the CDBA has been developed in the form of the liability-of-foreignness (LoF) stream of research (e.g. Zaheer, 1995). LoF (Miller and Eden, 2004) emphasises hazards for foreign investors comprising unfamiliarity, discrimination and relational problems (managing relations with local citizens and firms), and Miller and Eden (2004) proceed to argue that these hazards are best viewed through the lens of institutional theory, employing the specific concept of institutional distance.

Institutional theory proposes that firms that are exposed for long periods to the same institutions – “…humanly devised constraints on human actions that shape human interaction” (North, 1990, 3) - seek legitimacy, pressured by local institutions towards isomorphism. These institutional pressures may be regulative, normative or coercive (DiMaggio and Powell, 1983), and they may comprise formal or informal pressures, where the latter includes phenomena that are elsewhere associated with national culture. For example, Kostova (1997, 180) defines normative institutional influence as comprising “…social norms, values, beliefs, and assumptions about human behaviour.”

While host country institutions present these hazards for foreign investors, “institutional distance” emphasizes the differences between formal and informal institutions in the host and home country, and greater distance puts greater pressure on investors to tailor their strategies to local institutions (Kostova and Roth, 2002).

In this context, “corruption distance” as a LoF can be seen as a unique subset of institutional distance that involves both formal and informal institutions in the form of both regulative and normative constraints. Local levels of corruption are determined by the formal institution of the law and its enforcement, but also by informal social norms on what is acceptable. Thus, for example, giving and taking a bribe may seem like a simple unskilled task, but a foreigner with limited knowledge of local laws and norms may risk exposure.

2.1 Corruption and the MNE in the host countries
Corruption is illegal conduct used by groups or individuals to gain influence over the actions of the bureaucracy (Leff, 1964). A wide range of definitions of corruption have been suggested by both scholars and practitioners (Macrae, 1982; Judge, et al., 2011). For example, in Kwok and Tadesse (2006, p. 767), corruption is defined as an arrangement that involves an exchange between two parties which (1) has an influence on the allocation of resources either immediately or in the future; and (2) involves the use or abuse of public or collective responsibility for private ends. However, we use the brief version that defines corruption as the abuse of public office for personal gain (Roy & Oliver, 2009). This definition is largely adopted by IB scholars since public sector corruption is employed as an example of how institutional differences can affect the MNE’s investment decision and entry strategies abroad.

Early studies dealing with the causes and consequences of corruption looked at how this issue affected national economies. In this area, authors such as Rose-Ackerman (1978), Husted (1994), and Shleifer and Vishny (1993) provided theoretical frameworks using public choice, transaction costs economics, and game theory, and ultimately contended harmful effects of corruption at national level. The IB field, however, has only recently paid attention to the issue of corruption and how it affects the MNE (Habib & Zurawicki, 2002). This apparent longstanding apathy disappeared once firms from developed countries began operating in emerging and transition economies (Rodriguez, et al., 2006) which usually present high levels of corruption (Transparency International, 2010).

Economic approaches to the study of FDI, including transaction cost analysis, generally focus on efficiency (Williamson, 1993). In that sense, corruption can be seen in a cost/benefit manner that will be deterred if at least one participant of the potential deal encounters costs exceeding the benefits (Rose-Ackerman, 2008). The fundamental premise of the TCT when analysing FDI activities is that the greater the degree of asset specificity, or ownership advantages, the greater the need to enter a foreign market with full ownership (Dikova & van Witteloostuijn, 2007). Such asset specificity (consisting of the crucial part of ownership ‘O’ advantages in Dunning’s OLI paradigm (Dunning, 1993) that MNEs enjoy whilst local incumbents do not, can be exploited abroad to offset their disadvantages. The costs related to operating abroad include economic costs caused by geographic distance and social costs caused by liability of foreignness, arising from the unfamiliarity, and relational and discriminatory hazards that foreign firms face in the host country (Eden & Miller, 2004; Zaheer, 1995).
Local firms, however, have an advantage over those without close-proximity access since they are most likely to reach corrupt deals with public officials and have more access to legislators (Anechiarico & Jacob, 1996). Conversely, foreign MNEs face greater uncertainty than domestic firms, both in terms of external uncertainty and internal uncertainty due to the difficulties of managing employees at a distance and from different cultures. In this sense, MNEs can also be affected by corrupt behaviours since these can result in increased costs for MNE operations and hence elevated transaction costs (Dahlström & Johnson, 2007). However, the effect that corruption has on MNEs located in highly corrupt countries investing in host countries with a similar corruption level have not yet been fully studied in current literature.

Another important factor in Dunning’s OLI paradigm is localisation ‘L’ advantages in the host country. MNEs locate foreign subsidiaries where operating costs can be minimised and where they can internalise activities in order to lower costs derived from risk and uncertainty (Wang, et al., 2012). Thus, in addition to costs created by business transactions, MNEs also face the higher administrative costs of managing the relationships between parties involved in doing business abroad (Anderson & Gatignon, 1986; Buckley & Casson, 1999); such cost being associated with liability of foreignness, where institutional distance and its three pillars between the home and host countries are the key driver (Eden & Miller, 2004).

Institutional distance, defined as the degree of difference or similarity between the regulatory, cognitive and normative institutions of two countries (Kostova, 1997), has been used to explain MNE behaviour in terms of organizational legitimacy in host countries (Kostova & Zaheer, 1999). Based on this premise, location decisions and mode of entry strategies have been analysed by taking into account the institutional distance between the home and host country (Xu & Shenkar, 2002). In other words, the larger the institutional distance between home and host countries, the more difficulty the MNE has building external legitimacy (Kostova & Zaheer, 1999). The costs involved in establishing and maintaining legitimacy places MNEs at a competitive disadvantage (Eden & Miller, 2004). However, the sign of such distance has been disregarded in such studies and therefore its effect remains unknown.

When choosing a foreign location for foreign activities, MNEs should take the host country institutional characteristics into account. These include the quality of institutions (Kostova, 1997) and the existence of corruption (Chen, et al., 2010). Thus, the institutional
environment of the home country is also believed to influence the decision of whether or not to invest in a highly corrupt foreign location (Habib & Zurawicki, 2002). The issue of corruption arises when bad policies and/or inefficient institutions are set in place and groups or individuals seek to circumvent them (Svensson, 2005). Therefore, corruption can be seen as an outcome that reflects a country’s legal, economic, cultural, and political institutions. Murphy, et al., (1993) argue that corrupt behaviour can be institutionalised and thus become a normal practice in certain locations. Corruption is an informal institutional constraint where bribery is socially acceptable. In order to achieve organisational legitimacy in the host country, the MNE must comply with the state’s pressures to pay bribes and is likely to do so unless the home country prohibits such practices by its MNEs and their subsidiaries (Cuervo-Cazurra, 2006).

Research by Ufere, et al., (2012) found bribe-generating behaviour by entrepreneurs in Nigeria, which is governed by a well-embedded set of social norms, rules, routine, and power relations may be influenced by the country’s institutional environment.

We will discuss this in the later section.

2.2 Empirical Studies of Corruption and its Effect on FDI

Empirical studies have not consistently found that high corruption in the host country deters FDI. While some authors have found that high levels of corruption have a deterrent effect on FDI (Mauro, 1995; Lambsdorff, 1998; Cuervo-Cazurra, 2006; Voyer & Beamish, 2004; Woo & Heo, 2009; Wei, 2000), others have not found a relationship between these variables (Wheeler & Mody, 1992; Henisz, 2000). Furthermore, other authors have actually found that corruption can be positive as it facilitates transactions in countries with too many regulations (Leff, 1964; Huntington, 1968; Egger & Winner, 2005).

One possible explanation for the inconsistency in these studies is that not all foreign investors are equal and therefore are not equally affected by corruption abroad (Cuervo-Cazurra, 2006). Another explanation is that foreign investors are not affected by the level of corruption of the host country but by the difference in the levels of corruption between the home and host countries (Habib & Zurawicki, 2002). Building on these arguments, this study argues that it is not only the distance between corruption levels what may deter FDI but also the direction of such distance. Thus, we propose that corruption distance has a negative effect on FDI when
the home country has lower levels of corruption than a highly corrupt host country. On the other hand, corruption distance may not have a negative effect on FDI when the home country has higher levels of corruption than a highly corrupt host location.

2.3 Corruption Distance and FDI

Even though it seems logical that foreign firms would design strategies to deal with corruption in the host country and that corruption might not affect all firms equally, this has not been easy to establish (Rodriguez, et al., 2006). Our aim in this section is to achieve a successful reduction by developing a simple terminology that allows for effective differentiation of corruption levels of a country. In doing so, we simplify this complex environment for corruption by adopting a fairly narrow definition of corruption and developing a concept of corruption distance to capture different directions of corruption between host and home countries. While corruption may be a feature of transactions between private and/or public parties (Habib & Zurawicki, 2002), it is usually identified (e.g. Cuervo-Cazurra (2006, p. 807) as merely the abuse of public power for private gain. Measures of national levels of corruption also reflect this narrow definition, capturing perceptions by business people and country experts, of the extent of corruption in the public sector (Transparency International, 2010).

According to Eden and Miller (2004), cultural distance and corruption distance are considered as two mixed forms of institutional distance: cultural distance can be decomposed into normative and cognitive institutional distance, and corruption distance can be decomposed into normative and regulatory institutional distance. There can be substantial variation across countries with respect to institutional distance between home and host countries. Both differences between home and host countries could have been a significant effect on an MNE when conducting operations abroad since it increases the transaction costs and risks associated with operating in an ‘unknown’ business environment (Brouthers & Brouthers, 2001). While analysing the effects of cultural distance on MNEs, most studies propose that as the cultural differences among a home and host country increase, the abilities of the MNE to operate in the host country decrease (Hennart & Larimo, 1998). These propositions are based on the argument that the greater the cultural distance between a home and host country, the more difficulties a foreign manager will have understanding the values and norms of the foreign market (Tihanyi, et al., 2005).
In their paper, Eden and Miller (2004) have focused on institutional distance in an absolute value sense, ignoring whether the home or host country has stronger institutions and how this might affect liability of foreignness and the MNE’s ownership strategy. We develop the conceptual framework of Eden and Miller (2004) and label the difference level of corruption as corruption distance and define it as differences of perceived corruption associated with corruption transactions between given nations or states. A situation favouring a host country (i.e. with lower corruption relative to home countries) is referred to as “positive” corruption distance, and vice versa.

An illustrative exercise is to consider the movement between two different corruption countries, shown in Figure 1. We use the upper half of Diagram to represent the new phenomenon of FDI flow between developing countries (South-South FDI) indicating FDI from countries with high levels of corruption (e.g. Mexico) to less corrupt host countries (e.g. Chile). These MNEs deal with corruption at home and may feel less pressured by legitimacy threats, as they have engaged in the lengthy and expensive process of developing knowledge of how to deal with corruption at home (Cuervo-Cazurra, 2006). They have also engaged corrupt officials at home and can make use of such experience. The lower part of Diagram 1, on the other hand, represents the situation envisaged in the extant IB literature on corruption and FDI, where home (usually developed) countries with relatively low levels of corruption are deterred from investing in more corrupt (and usually developing) host countries. Such MNEs are expected to experience difficulties in operating in a highly corrupt foreign environment since this condition increases uncertainty and cost of engaging in local corruption. These MNEs may also face higher legitimacy issues due to pressures originated at home to not engage in corruption abroad.
In this paper we argue that host country corruption has different effects on investors depending on their home country corruption level. This means that home countries with lower levels of corruption than a highly corrupt host country will be affected by corruption in the host country, while home countries with higher corruption levels than the host location will not. For MNEs headquartered in countries with lower levels of corruption than the host region, host country corruption represents more risk and uncertainty (and thus higher costs). We contend that the host country corruption may have a negative association with inward FDI. Therefore we put forward the following research hypothesis:
Hypothesis 1: Host country corruption will have a negative association with inward FDI.

However, the degree of risk and uncertainty associated with corruption varies by different firms. It is possible that foreign investors from highly corrupt countries use their knowledge of how to deal with corruption as a competitive advantage (Cuervo-Cazurra & Genc, 2008) against those without such knowledge. Studies analysing MNEs from developing countries have found that the experience of operating in less than ideal institutional conditions can be considered to be a firm-specific O-advantage (Buckley, et al., 2007). Furthermore, these O-advantages enable firms from developing countries to operate more efficiently in other developing countries (Cuervo-Cazurra & Genc, 2008). Therefore, drawing on their O-advantages, certain firms might prefer to invest in foreign locations that resemble their home environment. Building on this premise, corruption can be seen as influencing L-advantages as either a deterrent or encouragement to inward FDI.

Acquiring skills in managing corruption may help to develop a certain competitive advantage (Habib & Zurawicki, 2002), and thus, when they internationalise, they may not be deterred by host-country corruption, and they may take advantage of their knowledge of working with a corrupt government at home. They may also be attracted by host-country corruption for two reasons: first, they may face lower costs of dealing with host country corruption than firms from developed countries, and second, they may even deliberately select countries with high levels of corruption (but lower than their own) due to the similarities in conditions with their country of origin (Cuervo-Cazurra, 2006). Thus, experience of firms in their home markets equips them to deal with host country corruption.

Accordingly, we additionally propose:

Hypothesis 2a: As positive corruption distance exists between the home and host countries, FDI inflows to the host country is more likely to decrease.

Hypothesis 2b: As negative corruption distance exists between the home and host countries, FDI inflows to the host country is more likely to increase.

3. Methods

Corruption is rooted in Latin America and it has a deep effect on the region (Salvia, 2003). Thus, it is an ideal location to analyse when studying the ways in which corruption affects FDI to an entire region. To do so, home countries will be divided into countries with higher or lower corruption levels than the host countries. Also, in order to obtain a better picture of
corruption and its effects on FDI, the distance in the levels of corruption of host and home countries will be considered. To test our hypotheses, FDI inflows to 12 Latin American countries will be analysed from 2006 to 2009\(^1\): Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, and Peru. Although the number of host countries is limited, the result can provide a clear picture of how corruption distance affects inward FDI to Latin America.

We rank home countries as either more or less corrupt than host countries in order to evaluate the effect on corruption distance on FDI. By doing so, we can also observe how FDI is affected by a region that comprises only developing countries characterised by high levels of corruption, according to Transparency International (Transparency International, 2010). The effects of corruption can be studied according to whether or not foreign investors are used to dealing with corruption in their home countries. Also, we can test if the distance between corruption levels affects countries with high corruption levels as well as those with lower corruption levels at home.

3.1 Variables and Measurements

To test our hypotheses, FDI inflows to Latin America from 2006 to 2009 were used as the dependent variable. These flows were obtained from the Economic Commission for Latin America and the Caribbean (ECLAC) publication in 2010 (ECLAC, 2010). To measure corruption we use the Corruption Perception Index (CPI) from Transparency International, which has been widely used by scholars studying corruption and its effects (Judge, et al., 2011). The CPI rates countries from around the world from 0 (highly corrupt) to 10 (clean).

Although there is an ongoing debate regarding which institutions matter in relation to the attraction of FDI (Buckley, et al., 2007), there are various institutional and macro-economic variables that have been used in several studies, including both formal and informal aspects of the institutional environment of a host location. These variables are constructs of several measures and sources, and hence, provide a more comprehensive measurement than individual indicators. However, they present the disadvantage of being estimates and thus, could introduce measurement errors (Globerman & Shapiro, 2003). Such variables encompass both institutional and transaction cost variables and are integrated in our model to

\(^1\) These countries have been selected due to the availability of data in the years mentioned
observe their interaction with the corruption level of the host country. A concise description of these variables is presented next.

Firstly we begin with corruption distance when home countries are either more or less corrupt than the host countries. We use the distance between the host country and the home country according to the Corruption Perception Index from Transparency International. By analysing corruption distance, we control to a large extent for cultural distance, both can be treated as cultural distance (Demirbag, et al., 2007). Furthermore, this measurement is more appropriate for our research since we are using a fairly homogeneous host region in terms of national culture as our unit of analysis (Zhao, et al., 2004).

As control variables, we use the human development index published by the United Nations (2012) which is a construct made up of GDP per capita, education, and life expectancy at birth, as proposed by Globerman and Shapiro (2003). The rule of law index retrieved from the World Bank Dataset (2011) measures law enforcement, property rights, crime, etc. (Globerman & Shapiro, 2003). Bureaucracy level ranks countries by the ease with which businesses may be started (World Bank, 2011). The infrastructure index was taken from the percentage of internet users of the host country (World Bank, 2011). The educational attainment index was measured by the total number of college students enrolled in tertiary education (ECLAC, 2010). The economic freedom index was used to measures trade, fiscal, and monetary policy (Heritage Foundation, 2012). The inflation rate was measured as the annual percentage rate in the consumer price index from the International Monetary Fund (IMF, 2011).

The natural logarithm of the total GDP (World Bank, 2011) of the host country was used to measure purchasing power of the host country, as used by Globerman and Shapiro (2003) and Buckley et al. (2007). Finally, the unemployment rate of the host country was used to indicate the attractiveness of the country since investors are aware that employee loyalty will be high as chances of finding other employment are slim. The unemployment rate was taken from The (United Nations, 2011).

Table 1 presents a list of the variables, their measurements, and date sources.
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<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
<th>Source</th>
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<tr>
<td>Dependent Variable</td>
<td>Ln FDI Flows</td>
<td>ECLAC 2010</td>
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<td></td>
<td>Inward FDI Flows in the Country in US$, measured as natural logarithm</td>
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<tr>
<td>Independent Variables</td>
<td>Corruption</td>
<td>Transparency International 2011</td>
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<td>From 10 = highly corrupt to 0 = clean</td>
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<td>Corruption Distance 1</td>
<td>Transparency International 2011</td>
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<td>Value of the average corruption level between the home and host country</td>
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<td>for host countries with lower levels of corruption than home countries</td>
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<td></td>
<td>Corruption Distance 2</td>
<td>Transparency International 2011</td>
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<td></td>
<td>Value of the average corruption level between the home and host country</td>
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<td>for host countries with higher levels of corruption than home countries</td>
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<td></td>
<td>Human Development Index</td>
<td>United Nations Development Programme 2012</td>
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<td></td>
<td>Combination of three measurements, GDP per capita, education, and life</td>
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<td>expectancy. From 0 (not existent) to 100 (excellent)</td>
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<td>Control Variables</td>
<td>Rule of Law Index</td>
<td>World Bank Governance Datasets 2012</td>
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<td></td>
<td>Measures quality of contract enforcement, property rights, the police,</td>
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<td>and the courts, as well as the likelihood of crime and violence. From 0</td>
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<td>(not existent) to 100 (excellent)</td>
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<td>Bureaucracy</td>
<td>World Bank Governance Datasets 2012</td>
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<td>Rank of countries based on the average time to start a business</td>
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<td>Infrastructure Quality</td>
<td>World Bank Governance Datasets 2012</td>
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<td>Urban Development Index</td>
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<td>Based on the percentage of people using the internet</td>
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<td>Economic Freedom Index</td>
<td>Heritage Foundation 2012</td>
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<td>Includes fiscal, trade, and monetary policy. From 0 (not existent) to</td>
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<td>Educational Attainment</td>
<td>ECLAC 2010</td>
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<td></td>
<td>Total college-age students enrolled in tertiary education</td>
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<td>Host Country Inflation</td>
<td>IMF’s annual Balance of Payments 2012</td>
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<td>Annual percentage change in the consumer price index</td>
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<td>Natural logarithm of a country’s GDP</td>
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3.2 The Model

We employed random effects logistic regressions to control for the possible correlations between variables and since no individual effects (fixed) are present in the data. We also chose the model by performing a Hausman test for random effects with a chibar2 (01) = 1.000. In addition, the model allows for a comprehensive inclusion of all the variables to reduce omitted variable bias. It also has the advantage of being replicable with little or no changes to test different geographic areas to see if corruption affects the attraction of FDI differently in different locations.

Based on the above method the following model will be used:

\[
\begin{align*}
\text{LnFDI} &= \alpha_i + \beta_1 \text{CPI}_{it} + \beta_2 \text{CorrDummy}_{it} + \beta_3 \text{CorrDis1}_{it} + \beta_4 \text{CorrDis2}_{it} + \beta_5 \text{Human}_{it} \\
&\quad + \beta_6 \text{Law}_{it} + \beta_7 \text{Bureaucracy}_{it} + \beta_8 \text{EcFreedom}_{it} + \beta_9 \text{Education}_{it} + \beta_{10} \text{Inflation}_{it} \\
&\quad + \beta_{11} \text{Infrastructure}_{it} + \beta_{12} \text{GDP}_{it} + \beta_{13} \text{Unemployment}_{it} + \mu_i + \epsilon_{it}
\end{align*}
\]

In this model, \(i\) is the country subscript, \(t\) is the time subscript, \(\beta\)s are unknown parameters to be estimated, \(\alpha\) is the average natural logarithm of FDI for the entire region, \(\mu\) is the between-entity error, and \(\epsilon\) is the within-entity error. Even though some variables suggested somewhat high correlations with each other, a multicollinearity test did not suggest any serious problem. In order to test for multicollinearity, we ran a Durbin-Watson test for autocorrelation with a prob > chi2 = 0.000, which indicates no autocorrelation problems. Also, the variance inflation factors (VIFs) did not suggest multicollinearity between variables (mean VIF = 4.495).

4. Results

Table 2 shows how FDI and corruption correlate in the Latin American region. The results of the correlation matrix show a statistically significant negative relationship between FDI and the corruption level in the host countries at a \(p<0.10\). Corruption distance presents a strong negative correlation at the \(p<0.001\) level between corruption distance and FDI when the host countries have a lower corruption level than home countries. On the other hand, corruption distance shows a significant positive correlation at the \(p<0.10\) level with FDI when the host countries experience higher levels of corruption than the host countries.
The random effects regression results for the full sample are presented in Table. In this table three models are run. Model 1 analyses how corruption affects the total FDI flows to Latin America and excludes the corruption distance variables. This is made to understand how corruption affects FDI flows to Latin America. The result from Model 1 shows that the total amount of FDI received in Latin America is negatively affected by high levels of corruption of the host countries supporting Hypothesis 1 that argues that the total amount of FDI to Latin America is deterred by corruption. This result is statistically significant at a level of p<0.10.

Model 2 analyses how corruption distance affects home countries with lower corruption levels than the host countries. The result shows that corruption distance is negatively associated (p<0.10) with FDI flows when home countries have a lower level of corruption than host countries experiencing high levels of corruption, which supports Hypothesis 2b that says that negative corruption distance will have a negative association with FDI inflows.
Table 2: Pearson’s Correlation Matrix

<table>
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<tr>
<th></th>
<th>FDI</th>
<th>CPI</th>
<th>CorrDis1</th>
<th>CorrDis2</th>
<th>Human</th>
<th>Law</th>
<th>Bureaucracy</th>
<th>EcFreedom</th>
<th>Education</th>
<th>Inflation</th>
<th>Infrastructure</th>
<th>GDP</th>
<th>Unemployment</th>
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<td>FDI</td>
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<tr>
<td>CorrDis1</td>
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<td>-0.77***</td>
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</tr>
<tr>
<td>CorrDis2</td>
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<td>-0.45**</td>
<td>0.29*</td>
<td>1</td>
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<td>-0.47***</td>
<td>-0.35*</td>
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<tr>
<td>Law</td>
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<td>0.64***</td>
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<tr>
<td>Bureaucracy</td>
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<td>0.58***</td>
<td>0.46***</td>
<td>-0.07</td>
<td>-0.39**</td>
<td>-0.47**</td>
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<tr>
<td>EcFreedom</td>
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<td>Inflation</td>
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<td>0.06</td>
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<tr>
<td>Infrastructure</td>
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<td>0.73***</td>
<td>-0.38**</td>
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<td>-0.25</td>
<td>-0.22</td>
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<tr>
<td>GDP</td>
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<td>0.22</td>
<td>0.06</td>
<td>-0.26</td>
<td>0.57***</td>
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<td>-0.26*</td>
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<td>-0.02</td>
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<td>-0.05</td>
<td>0.25</td>
<td>-0.21</td>
<td>0.46**</td>
<td>0.40**</td>
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</tbody>
</table>

Significance levels: *, **, and *** denote significance of 10%, 5% and 1% respectively
Table 3: Results Random Effects Regression

<table>
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<tr>
<th>Dependent Variable: FDI</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
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<tbody>
<tr>
<td>CPI</td>
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<tr>
<td>CorrDis1</td>
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<td>-13.8663*</td>
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<td>CorrDis2</td>
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<tr>
<td>Human</td>
<td>122.8364*</td>
<td>183.0966*</td>
<td>185.2531*</td>
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<tr>
<td>Law</td>
<td>0.4614521**</td>
<td>1.61422***</td>
<td>1.86183***</td>
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<tr>
<td>Bureaucracy</td>
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<td>0.2697496</td>
<td>0.940995</td>
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<td>EcFreedom</td>
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<td>Education</td>
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<td>0.6078531</td>
<td>0.6981451</td>
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<td>Infrastructure</td>
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<tr>
<td>GDP</td>
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<td>4.799764</td>
<td>2.94363</td>
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<tr>
<td>Unemployment</td>
<td>-2.371313</td>
<td>-2.442756</td>
<td>-2.846843</td>
</tr>
</tbody>
</table>

Model Summary

| No. Observations | 48 | 48 | 48 |
| No. Host Countries | 12 | 12 | 12 |
| Wald Chi2         | 57.9 | 62.76 | 54.1 |
| Prob>chi2         | *** | *** | *** |

Significance levels: *, **, and *** denote significance of 10%, 5% and 1% respectively

5. Discussion

This paper argues that when investing abroad, foreign investors might be affected not only by corruption in the host country but also by ‘corruption distance.’ To study this issue, we proposed two hypotheses. Our first hypothesis stated that, in general, corruption would have a negative effect on FDI flows to Latin America. Our second hypothesis was divided in two parts: the first part proposed that positive corruption distance will have a positive association with FDI inflows, while the second part argued that Negative corruption distance will have a negative association with FDI inflows.

Our results support both hypothesis based on the premise that corruption distance would negatively affect investors located in countries with low levels of corruption when investing in countries with high levels of corruption. On the other hand, firms established in countries with high levels of corruption are not affected by high corruption levels in the host countries.
These statements are based in the low transaction costs that firms familiar with corruption at home face when investing in other countries with similar institutional environments.

Most studies in this subject conclude that corruption deters FDI (Judge, et al., 2011). However, our research indicates that corruption and corruption distance have a different effect depending on whether investors are based on countries with high or low corruption. Moreover, when the corruption distance between home countries with low levels of corruption and host countries with high corruption is higher, the levels of FDI are lower. However, when both home and host countries are considered corrupt, the corruption distance does not have a significant effect on FDI. This is because firms familiar with operating in highly corrupt countries have internalised the knowledge necessary for dealing with corruption and have used as a firm-specific O-advantage (Cuervo-Cazurra & Genc, 2008). On the other hand, those firms based in countries where corruption is not as prominent may face higher costs in order to learn how to cope with corruption in a foreign location.

This study also integrated institutional theory to the L section of the OLI paradigm to analyse how corruption affects FDI. A higher psychic distance may increase cost in the search, negotiation and enforcement of contracts abroad, and hence, these conditions may deter FDI to certain locations (Meyer, 2001). Therefore, companies prefer to invest in those environments that are similar to those at their home countries (Johanson & Vahlne, 1977), which may include the levels of corruption. Hence, we furthered the L part of the OLI paradigm by adding corruption distance between the home and host countries to the concept of psychic distance.

By analysing FDI flows based on their source country, either highly corrupt or less corrupt, important issues arise. Consistent with IB literature, this study confirms that corruption deters the attraction of FDI. However, this statement is valid if the home country has lower levels of corruption than a highly corrupt host country. This result suggests that firms based in countries with low corruption see corruption as a high and costly risk, and hence, avoid it abroad (Habib & Zurawicki, 2001). However, if the source of FDI is divided into countries with high or low levels of corruption, we can see that corruption has different effects on foreign investors.

Firms based in developed countries are generally not familiar with corruption in their home market and have signed the OECD anti-corruption in international business transactions
Therefore, they face greater pressures to obtain legitimacy from their home governments and from their headquarters than firms from highly corrupt countries (Rose-Ackerman, 1999). Glynn and Abzug (2002) argue that in order to gain legitimacy, firms adapt to the institutional context on which they operate. This means that firms based in less corrupt countries, where corruption is not tolerated, would avoid engaging in corrupt deals. On the other hand, MNEs based in highly corrupt countries are familiar with performing in countries with underdeveloped institutions (Dawar & Frost, 1999), and have not subscribed to such laws. Therefore, when facing similar conditions abroad, they already have the expertise to cope, they face little pressures from their stakeholders, and they do not have a legal impediment to engage in corrupt acts. These might be the reasons explaining why corruption does not appear to have a negative effect on FDI from highly corrupt countries to Latin America.

6. Conclusion

In this study we analysed how corruption distance affects FDI according to the source country, either more or less corrupt than the host country. We made this distinction in order to analyse whether or not firms from each set of countries react differently to corruption in the host country. We also included the concept of ‘corruption distance’ in order to evaluate how the difference in levels of corruption between host and home countries affected FDI. Our results suggest that corruption distance has a negative effect on FDI from when the home countries experience lower levels of corruption than the host countries. On the other hand, firms from highly corrupt countries were not affected by corruption distance when investing in the area.

Grounded on the transaction cost and institutional theories we argue that firms based in corrupt countries have internalised knowledge of how to deal with corruption. This O-specific advantage helps these firms to lower the costs associated with coping with corruption abroad. We also explain this phenomenon by arguing that firms based on highly corrupt countries choose to operate in locations that are psychically close to them, which include high levels of corruption. Thus, we furthered the L part of the OLI paradigm by including corruption distance between the home and host countries to the concept of psychic distance.
This paper contributes two main aspects to the IB field. Firstly, we place special emphasis on acquiring and internalising knowledge of how to deal with weak institutional environments abroad. IB literature argues that firms from countries with low levels of corruption (generally developed countries) have an upper hand due to their ownership-specific advantages; however, firms based in less developed countries (generally with high levels of corruption) have acquired advantages by learning to operate in challenging locations.

Secondly, we provide empirical evidence to complement studies suggesting that firms based on countries with high levels of corruption are not affected by this issue when investing abroad. By doing so, we were able to contribute to the study of how corruption affects FDI. Future studies should take into account not only the host country corruption levels, but also how well equipped the home country is to cope with this problem. Due to the availability of data, we only separated FDI to Latin America as either from more corrupt or less corrupt countries. Nevertheless, new studies should analyse how corruption and corruption distance affect FDI to the region at the industry level.

Finally, this study is also important for policy makers. Even though this research argues that corruption does not have a significant effect on the attraction of FDI when both the home and host countries are considered highly corrupt, it is necessary to point out that the majority of FDI to Latin America is carried out by MNEs based in countries with low levels of corruption. Therefore, authorities should work to improve the institutional environment of the host countries in order to attract more FDI to the region.

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