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Outward Foreign Direct Investment by Emerging Market Multinationals: The Directionality of Institutional Distance

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ABSTRACT

We investigate how emerging market multinationals (EMNEs) choose locations for foreign direct investment (FDI) and how they determine the scale of FDI in host countries where formal institutions are more developed or less than their home country. Integrating internalization theory with the directionality logic of institutional distance, we develop theoretical arguments of cost-effectiveness related to FDI location and FDI scale in two institutional directions: host countries with more developed institutions than the home country and those with less developed institutions. We hypothesize that an EMNE's likelihood of investing in the positive (negative) direction decreases (increases) with the increase in home–host institutional distance, but the investment scale increases (decreases) with increasing institutional distance. The FDI location choice varies among EMNEs with different levels of intangible assets, but the FDI scale does not. Our analyses of 3,297 EMNEs' outward FDI in 100 host countries between 2004 and 2019 provide supportive evidence. This study extends internalization theory using EMNE-specific evidence of directional distance between home- and host-country institutions.

Keywords:

emerging market multinationals, foreign direct investment, internalization theory, institutional distance, institutional direction

1. Introduction

Foreign direct investment (FDI) by emerging market multinationals (EMNEs) continues to drive the growth of these firms (Buckley et al., 2007), the economy of emerging markets (Luo et al., 2010), and the world economy (UNCTAD, 2020). Prior research has shown differences exist between FDI by EMNEs and their counterparts in advanced economies. Compared to advanced-economy multinationals that consistently, albeit not always, avoid high transaction costs associated with weak institutional environments (Li et al., 2018), EMNEs do not conduct FDI in the similar way. Some scholars have found that EMNEs react positively to institutional weakness in host countries (Cuervo-Cazurra & Genc, 2008; Holburn

& Zelner, 2010), but others have found that EMNEs prefer strong institutional environments because of the reduction in costs (Luo & Wang, 2012; Yamakawa et al., 2008). Such inconsistencies suggest that the international business (IB) field does not yet fully comprehend EMNEs' outward FDI across differing institutional environments. We address this concern by integrating *internalization theory* with the *directionality of institutional distance* to advance theoretical arguments on FDI by EMNEs.

The directionality of institutional distance suggests that the gap of institutional effectiveness between two countries has asymmetric impacts on firms (Shenkar, 2001; Zaheer et al., 2012). For example, despite the identical magnitude of the institutional distance between home and host countries, a Dutch firm investing in China is not faced with the same institutional hardship as a Chinese firm investing in the Netherlands (Shenkar, 2001). When a firm invests in a host country where institutions are more (less) developed than its home country, there is a positive (negative) institutional distance between the home and host countries. Therefore, the directionality logic of institutional distance suggests that a host country's institutional effectiveness for FDI is taken relative to the home-country institutions—a reference point defining both the magnitude and the direction of institutional distance (Zaheer et al., 2012). Thus, a well- (poorly-) developed institutional environment does not always result in a low (high) level of transaction costs depending on the home country. Home-country institutions are important because they shape a business ecosystem for EMNEs (Hobdari et al., 2017), determine their comparative (dis)advantages (Cuervo-Cazurra et al., 2018), and influence their strategies in host countries (Tang & Buckley, 2020). Thus, our first core argument is that the FDI decisions of EMNEs are dependent on their home-country institutions that define whether, and by how much, the home–host institutional gap is positive or negative.

Our second core argument concerns EMNEs' FDI across institutional environments, where transaction costs vary. Drawing on internalization theory (Buckley & Casson, 1976), we argue that EMNEs make a two-stage FDI decision (i.e., a location choice followed by an investment scale) according to transaction costs at each stage and their firm-specific assets. Internalization theory predicts that firms undertake FDI to minimize costs in systematically imperfect external markets and, therefore, firms choose a cost-effective location and internalize markets up to the point at which the costs of further internalization exceed the benefits (Buckley, 1988; Buckley & Casson, 1976). Moreover, internalization theory posits that the idiosyncratic nature of firm-specific advantages (mainly derived from intangible assets such as know-how, brands, and goodwill) gives rise to seeking positive outcomes in foreign countries (Buckley & Casson, 2003), suggesting that FDI decisions vary among EMNEs due to their different levels of intangible assets. Thus, the variability of FDI by EMNEs is rooted in different rationales behind internalization at the two stages of FDI (i.e., identifying relative cost-effectiveness in the first stage and ensuring that costs are lower than the benefits in the second), especially when EMNEs are heterogeneous concerning their possession of specific intangible assets.

We test our theoretical premise using outward FDI data collected in four major emerging markets (Brazil, Russia, India, and China). These source countries were selected for their relatively advanced economic development and fast-growing FDI outflows (UNCTAD, 2020), which provide sufficient observations of outward FDI. Specifically, we compiled a sample of 1,907,036 potential FDI-location choices and a subsample of 3,221 FDI scales determined by EMNEs in 100 host countries between 2004 and 2019. These research samples facilitated a two-stage analysis, in which the likelihood of choosing a location was examined in the first stage and the investment scale in the second. The effects of intangible assets on the

relationship between the directionality of institutional distance and the likelihood and scale of FDI were examined at both stages, respectively.

Our focus on the two-stage FDI decision in two institutional directions provides a new perspective for studying EMNE internationalization and IB research more broadly. First, we contribute to the internalization literature by amending the theory's core philosophy with a more nuanced understanding of cost-effective locations for EMNEs. Specifically, our study extends the theoretical arguments of internalization theory by explaining why EMNEs choose an FDI location with seemingly higher costs than another location and how EMNEs decide an FDI scale that can ensure costs to be lower than benefits. These inconsistent attitudes toward transaction costs in host countries reflect different meanings of cost-effectiveness for EMNEs at different FDI stages (i.e., a choice of FDI location first and then a decision on the FDI scale in the location). Our arguments, based on internalization theory, reconcile divergent views on EMNEs by "examine[ing] the [internalization] theory for linking points with such concepts [of EMNEs] … [and] building bridges that will bear the weight that they must carry" (Buckley, 1990, p. 662).

Second, we extend the cost-specific arguments on FDI by identifying EMNEs' intangible assets as a boundary condition of their FDI in different institutional environments. Internalization theory postulates that the interplay between firm-specific factors such as intangible assets and external factors such as host-country institutions is a necessary condition of internalization (Buckley & Casson, 1976). Previous studies have found evidence for intangible assets of EMNEs (e.g., Malik & Kotabe, 2009; Yiu et al., 2007), and such firm-specific assets differentiate EMNEs from their advanced-economy counterparts (Cavusgil, 2021). Building on these studies and our theoretical framework, we present empirical evidence that the institutional impacts on FDI location and scale decisions vary among EMNEs with different intangible asset levels. Therefore, our study contributes to the literature

with additional evidence for the heterogeneity of EMNEs, as we suggest that institution-related impacts can be mitigated by the careful planning of FDI governed by firm-specific assets.

Finally, we widen the literature on directional institutional distance with new evidence from EMNEs. Prior research has recognized the importance of directionality in institutional distance (Shenkar, 2001; Zaheer et al., 2012). However, previous empirical findings on the asymmetry of institutional distance in the context of advanced economy multinationals has shown a symmetric pattern, displaying a linear impact of institutional quality on firm internationalization (e.g., the negative distance impedes FDI and the positive distance facilitates it; Hernández & Nieto, 2015; Hernández et al., 2018). Our study provides evidence that the asymmetric effects of institutional distance on EMNEs vary between the two stages of an FDI decision. The directionality of institutional distance affects an EMNE's FDI locations and FDI scales in different ways. This perspective may help to answer many IB research questions pertaining to different levels of institutional development.

2. Theoretical background and hypotheses development

2.1. Internalization decisions by EMNEs in two institutional directions

The reason for FDI and the existence of firms are explained in internalization theory. Its essential assumption is that a firm's core objective is to maximize profit and minimize cost in systematically imperfect external markets (Buckley & Casson, 1976), and this assumption holds for EMNEs (Buckley et al., 2007; Buckley & Strange, 2015). According to internalization theory, "When markets in intermediate products are imperfect, there is an incentive to bypass them by creating internal markets" (Buckley & Casson, 1976, p. 33), and firms capitalize on firm-specific advantages in the internal market by internalizing foreign operations (Rugman, 1986). Therefore, internalization theory suggests firms choose a cost-effective location and internalize up to the point at which the costs of further internalization

exceed the benefits (Buckley, 1988; Buckley & Casson, 1976), implying a two-stage FDI decision. At the first stage—regarding *the likelihood of investment in a location*, firms decide whether choosing a foreign country is cost-effective. After choosing an FDI location, at the second stage—pertaining to *the scale of investment*—firms decide how much to invest in the chosen location to ensure costs to be lower than benefits.

Answers to the likelihood and scale questions are determined by the levels of transaction costs rooted in formal institutions (e.g., laws and regulations; Williamson, 2000) because the quality of formal institutions indicates the degree to which the existing institutions may effectively support economic activities and reduce transaction costs in a country (North, 1990). In this sense, the varying quality of institutions results in the variation of transaction costs among countries (Williamson, 1995). The difference of institutional quality between countries—i.e., *institutional distance*—suggests a gap of institutional effectiveness in supporting economic transactions (Beugelsdijk et al., 2018). Consequently, this gap determines the level of costs that affect FDI decisions.

Prior research has recognized the directionality of institutional distance, identifying positive and negative directions of institutional distance (Shenkar, 2001). Negative distance refers to the gap of institutional effectiveness between the home country and an institutionally less effective foreign country. Positive distance indicates the institutional distance to an institutionally more developed foreign country. Thus, this directionality view suggests asymmetric impacts of institutional distance on firm internationalization (Zaheer et al., 2012). For example, the positive distance may not imply increasing transaction costs because these host countries have more transparent regulations and better-enforced rules. The negative distance suggests increasing risks and uncertainty, thereby an increasing level of transaction costs with increasing distance (Globerman & Shapiro, 2003; Kraus et al., 2015). Previous studies have attempted to provide empirical evidence for such an asymmetry (Table 1). For

example, Hernández et al. (2018) found that Italian firms were more likely to invest in host countries with a large institutional distance in the positive direction but less likely in the negative direction. Such findings are consistent with the cost-effectiveness logic of internalization theory, indicating a positive effect of positive distance and a negative effect of negative distance.

****** Insert Table 1 about here ******

Nevertheless, the normative logic of cost-effectiveness can be challenged by EMNEs that invest proactively in both institutionally positive and institutionally negative directions (Kim & Aguilera, 2016; Li et al., 2018). In the positive direction, Luo and Wang (2012) found EMNEs to be more willing to invest at a larger scale in foreign countries that were institutionally more developed than the home country. In the negative direction, Cuervo-Cazurra and Genc (2008) found EMNEs to be more likely among large foreign investors in countries with weak institutions. Incorporating these findings suggests that EMNEs' outward FDI does not seem consistent with the cost-minimizing prediction and the conventional findings of directional distance. We investigate such inconsistencies by integrating the two directions (i.e., positive and negative institutional distance) with the two-stage FDI decision (i.e., an FDI location choice followed by an FDI scale decision) into a unified theoretical framework, as elaborated below.

2.2. The direction of institutional distance and outward FDI by EMNEs

Past studies mainly focused on FDI by advanced-economy multinationals in less developed institutional environments (Luo et al., 2019), showing that low institutional quality increases transaction costs due to ineffective market mechanisms for coordinating economic activities. Such ineffectiveness is derived from obscure and unstable institutions in host countries, as these institutions are difficult for advanced-economy multinationals to understand (Khanna & Palepu, 2000; Khanna et al., 2005).

However, less developed formal institutions may not be cost-ineffective for EMNEs. Empirical findings have shown that EMNEs possess unique capabilities developed in weak institutional environments at home (Holburn & Zelner, 2010), allowing for positive reactions to institutional weakness in host countries (Buckley et al., 2007). These firms are used to tackling discretionary institutional power and unstable formal institutions at home (Cuervo-Cazurra & Genc, 2008). Specifically, as emerging economies have experienced the stage of least developed institutions, many EMNEs have the experience of dealing with transaction costs in weak institutional environments (Stevens & Newenham-Kahindi, 2017). In this sense, EMNEs tend to reach cost-effectiveness in an institutionally less developed country, suggesting a low hurdle for EMNEs to overcome to invest (e.g., Transsion Holdings' investment in Africa; Marsh, 2018). Moreover, an internalization approach is necessary in weak institutional environments because it enables EMNEs to leverage their weak-institution related capabilities and helps them to overcome the extra costs and risks of doing business in weaker institutional environments than those in the home country (Verbeke & Greidanus, 2009). Especially when the negative distance is considerable, EMNEs may rely more on internal markets to internalize transactions and coordinate economic activities consciously and deliberately within identifiable boundaries.

In contrast, EMNEs may find it challenging to overcome institutional barriers and less necessary to create internal markets when moving in the positive direction. Specifically, in a foreign country where institutional frameworks are better developed than home-country institutions, EMNEs have to handle the liability of foreignness (Aulakh, 2007), which suggest barriers for EMNEs to overcome (e.g., differences in political systems) before undertaking direct investment. The larger the institutional distance between home and host countries, the higher the barriers because of the increasing gap between the two countries. Despite the increasing barriers, institutionally more developed countries exhibit a lower level of market

imperfections, which may neither require EMNEs to utilize an internalization approach such as FDI nor let them use their weak-institution related capabilities for cost-effectiveness (Rugman & Verbeke, 2001). Internalization theory suggests that the most effective strategy for international expansion, in the absence of market imperfections, is for firms to license their firm-specific assets (e.g., know-how and brands) to foreign firms (Buckley & Casson, 1976). This theory implies that firms do not need to undertake direct investment when market-based approaches are more efficient than internalized approaches. Integrating the discussion on barriers against FDI and the necessity for FDI, we put forward the following hypothesis:

> **H1**. *A positive (negative) home–host institutional distance has a negative (positive) impact on an EMNE's FDI location choice; such that an EMNE's likelihood of investing directly in an institutionally positive (negative) country decreases (increases) with the increase in institutional distance*.

After choosing a cost-effective location, firms move to the second stage of FDI—a decision on the scale of that investment. This decision concerns the point at which the costs of further internalization exceed the benefits (Buckley & Casson, 1976). Compared to domestic investment, FDI implies inherent difficulties in managing far-flung subsidiaries in foreign countries (Zaheer, 1995) and is often associated with additional costs (e.g., coordination, labor, start-up, and legal costs; Salomon & Martin, 2008). In a weak institutional environment where rules and regulations are unstable and hard to predict, these additional costs may offset benefits and result in losses (Zaheer & Mosakowski, 1997). When there is a large negative distance between host and home institutions, a large foreign investment is often related to greater costs because of the increase in risks and uncertainty (Berry, 2006). In particular, the mismatch between these two systems increases the deficits of institutional knowledge (Xu & Shenkar, 2002) and makes adaptation to host-country institutions more difficult (Cuervo-Cazurra & Genc, 2008). As a result, although the weak-institution related capabilities may

help EMNEs hurdle the institutional barrier against an FDI location choice, such capabilities may not effectively increase the benefits derived from a large amount of FDI. Thus, an institutionally negatively distant country shapes a point at which internalization costs may easily exceed the benefits, thereby decreasing the FDI scale by EMNEs.

In contrast, when EMNEs undertake FDI in an institutionally positively distant country, they find it easier to maintain a higher level of benefits than costs. Previous studies have found that effective and strong institutions support market mechanisms and facilitate the efficiency of economic transactions by establishing predictable rules and regulations (Gelbuda et al., 2008; Meyer & Peng, 2016). As formal institutions are easier to observe, interpret, and understand, firms may more easily operate in an environment where the "rules of the game" are well established (Hernández & Nieto, 2015), and benefit from institutional advantages in regulated environments (Chan et al., 2008). Thus, institutionally better-developed host countries may increase the benefits of undertaking a significant investment if firms can hurdle the barriers to FDI entry. Moreover, EMNEs attempt to close the gap between their global presence and the market reach of their advanced-economy counterparts (Mathews, 2006) and need to upgrade their capabilities via internationalization (Guillén & García-Canal, 2009). Therefore, after overcoming the investment barrier and entering an institutionally better-developed country, EMNEs will increase their exposure by investing a larger amount. This strategy helps EMNEs to understand sophisticated markets and develop cutting-edge capabilities, thereby allowing them to benefit more from the large positive distance between host and home institutions. In this sense, an institutionally positively distant country defines a point at which the benefits tend to exceed internalization costs and, consequently, increase the FDI scale by EMNEs. In line with extant research and theorizing from the internalization logic, we hypothesize:

H2. *After an EMNE chooses a host country, the positive (negative) institutional distance will have a positive (negative) impact on the EMNE's investment scale in the country; such that the scale will increase (decrease) with the increase of the positive (negative) institutional distance*.

2.3. The heterogeneity of firm-specific assets

Besides explaining how internalization enables firms to deal with market imperfections in intermediate markets, internalization theory also theorizes on firm-specific or *intangible assets*, arguing that "the strongest case of all concerns the markets for various types of knowledge" (Buckley & Casson, 1976, p. 39). As proprietary knowledge, intangible assets include patents, brands, goodwill, production knowledge, and technological know-how. These firm-specific assets can create advantages, generate rents, and facilitate expansion in a market (Denekamp, 1995; Hall, 1992). Firms rely on intangible assets in foreign countries to develop and exploit monopolistic advantages (Dunning, 1981). However, intangible assets are not always codifiable and, consequently, they are often difficult to transfer among alternative users (Williamson, 1995), suggesting firms contemplate how to transfer intangible assets efficiently to ensure benefits in external and internal markets (Buckley, 1988; Buckley & Casson, 1976). Prior research has shown that the efficiency and benefits of transferring intangible assets depend on how these assets are bundled with resources that are available in a foreign country (Delios & Beamish, 2001; Rugman & Verbeke, 2001) and how opportunities are available for firms to exploit these assets in the country (Rugman et al., 2011; Sirmon et al., 2008). Both types of availability are related to the country's institutional environment (Khanna & Palepu, 1997). Firms with a high level of intangible assets are more conscious of bundling resources and exploitation opportunities than those with a low level of intangible assets. Thus, the institutional impacts on a firm's FDI decisions may be altered by its level of intangible assets.

This alteration effect is essential for EMNEs' decisions on FDI location and FDI scale. Early research on EMNEs assumed that these firms lacked intangible assets (Lall, 1983). However, recent studies have found that EMNEs have developed firm-specific assets based on innovation (Fu et al., 2010), management skills (Yiu et al., 2007), and production and marketing knowledge (Malik & Kotabe, 2009). These intangible assets are in similar categories to those possessed by advanced-economy multinationals. However, EMNEs do not obtain these assets the same way as their advanced-economy counterparts. For example, in emerging markets, state governments have a tremendous impact on the development of innovation in EMNEs, and this impact is rooted in economic policies (Fu et al., 2010) and political power (Genin et al., 2020). Likewise, emerging-market governments have facilitated organizational learning and manufacturing capabilities of EMNEs (Malik & Kotabe, 2009), indicating a home-related backbone of EMNEs' intangible assets. Given the relatively weak institutions in emerging markets, intangible assets of EMNEs are weak-institution bound.

Therefore, in foreign countries that are institutionally less developed than the home country (i.e., in the negative institutional direction), EMNEs may easily find and access complementary resources to bundle with their intangible assets. Despite imperfections and failures in the institutionally less developed markets, the weak-institution derived capabilities of EMNEs allow them to identify opportunities for exploiting their weak-institution bound assets. Thus, when an EMNE has a high level of intangible assets, direct investment in a less developed institutional environment is more cost-effective, thereby indicating a stronger impact of negative institutional distance on its FDI location choice. In contrast, in foreign countries where institutions are more developed than the home country (i.e., in the positive direction), exploiting significant intangible assets may raise costs because of the difficulties in bundling the weak-institution bound assets with strongly developed institutions and identifying opportunities to exploit such assets in a strongly developed institutional

environment. When EMNEs cannot internalize the intermediate market for the services of their intangible assets to ensure a value increase, these firms are less likely to choose the country. Accordingly, we propose the following hypothesis:

> **H3a**. *An EMNE's level of intangible assets strengthens the negative (positive) impact of positive (negative) institutional distance on the EMNE's likelihood of investing directly in a host country.*

Likewise, after EMNEs choose an FDI location, the level of their intangible assets may alter the impact of directional institutional distance on their FDI scales in the country. The reason is that an FDI scale concerns the extent to which EMNEs can bundle their intangible assets with complementary resources and find opportunities to exploit these assets in foreign countries (Delios & Beamish, 2001; Sirmon et al., 2008). When home–host institutional distance increases in the positive direction, EMNEs may find it difficult to extract more benefits than costs in transferring a high level of intangible assets, because weak-institution bound intangible assets may hardly find complementary resources in an institutionally more developed country (Malik & Kotabe, 2009; Rugman & Verbeke, 2001).

Furthermore, in institutionally more developed host countries, stricter regulations and rules have limited tolerance for weak-institution rooted practices for exploiting intangible assets (Buckley, 2018). This limitation increases EMNEs' internal costs and decreases the benefits related to the transfer of intangible assets because of the difficulty in finding exploitation opportunities for weak-institution bound assets. In contrast, EMNEs possess weak-institution derived capabilities (Holburn & Zelner, 2010), which allow these firms to identify opportunities for exploiting weak-institution bound assets with low costs and high benefits. Therefore, we posit the following hypothesis:

> **H3b**. *After choosing a host country, an EMNE's level of intangible assets will weaken the positive (negative) impact of positive (negative) institutional distance on the EMNE's FDI scale*.

3. Methodology

3.1. Empirical context

We selected four major emerging markets—Brazil, Russia, India, and China—as FDI source countries. Because these four countries have relatively advanced economic development compared to other emerging economies, there are a sufficient number of outward FDI observations (UNCTAD, 2020). Moreover, these four emerging markets represent a good diversity of societal systems and cultural settings (Hoskisson et al., 2013; Zhu et al., 2022), thereby allowing for variation among institutional contexts of home countries.

3.2. Data and sample

We drew greenfield investment information from the FDI database maintained by the *Financial Times* and cross-border merger and acquisition (M&A) investment data from the SDC Platinum database maintained by Refinitiv. The *Financial Times* has provided comprehensive information about greenfield FDI projects such as capital investment, investment time, source and destination countries, and other relevant information since 2003. Refinitiv offers detailed information about capital size, target and acquirer countries, and year information about cross-border M&A deals. Both databases have been widely used in emerging-market research (e.g., greenfield FDI in Duanmu, 2014; cross-border M&A in Kim & Song, 2016; a combination of both in Tang, 2021). From the two sources, we extracted data for firms publicly listed on exchanges of the four emerging-market countries and focused on those with complete information for critical variables. This process resulted in a sample of 3,297 public firms to analyze FDI location choice and a subsample of 1,037 EMNEs that engaged in outward FDI. The subsample was for the FDI-scale analysis.

Then we developed a country-choice set of all countries in which any public firms could potentially invest in a given year. By keeping the availability of necessary data and after

excluding tax havens (e.g., the Cayman Islands and the Virgin Islands), 100 host countries were included in the country-choice set for the FDI location analysis. Among these host countries, EMNEs from the four source countries had invested in 97 host countries until 2019. To minimize the effect of potential endogeneity, we lagged all time-varying explanatory variables by one year. The analytic data set for the FDI location choice is an unbalanced panel of 3,297 firms from four home countries to 100 host countries between 2004 and 2019, including 1,907,036 observations. As the subsample of the location-choice sample, the analytic data set for FDI scales is an unbalanced panel of 1,037 EMNEs investing directly in 97 host countries from 2004 to 2019, including 3,221 observations.

The relatively small proportion of FDI-scale observations (i.e., 0.17% of potential choices) reflects the latecomer nature of focal firms in our research sample. Compared to their advanced-economy counterparts, EMNEs are still new to the global market, although FDI outflows from emerging markets have been growing quickly (UNCTAD, 2020). This small proportion does not raise econometric concerns because the relative rarity of events (i.e., a small ratio of observed choices to the total potential choices) is not a problem; however, an absolute rarity (i.e., a minimal number of observed choices) is problematic (Allison, 2012). Despite the statistical consideration, we conducted additional tests to rule out the relative rarity concern, as reported in the supplementary material.

3.3. Dependent variables

To test our hypotheses, we constructed two dependent variables: *FDI location choice* and *FDI scale*. The former is a dummy variable, with 1 indicating that a firm chooses a potential host country to invest in a given year, and 0 otherwise. This measure has been widely used in FDI location-choice studies (e.g., Flores & Aguilera, 2007). Following prior research on foreign investment scales (e.g., Duanmu, 2014), we measured the latter as the

total amount (one million dollars) that an EMNE invested in a host country via both greenfield and M&A in a given year.

3.4. Independent and moderating variables

Our independent variable is the home–host institutional distance with directions, a construct of three components: institutions, the distance, and directions. Regarding institutions, we compared two indexes (i.e., the World Governance Indicators, WGI; and the Economic Freedom Index, EFI), both of which have been widely used to examine a country's formal institutional quality (e.g., WGI in Cuervo-Cazurra & Genc, 2008; EFI in Trąpczyński & Banalieva, 2016). We chose WGI for two reasons. First, the WGI indicators comprise several hundred variables from 30 underlying data sources, including EFI (Kaufmann et al., 2010), which implies comprehensive coverage of formal institutions. Second, WGI is "more in line with the conceptual essence of North's formal institutions," but EFI has "a slight ideological bend" (Kostova et al., 2020, p. 490). Aligning with North's (1990) concept of formal institutions is crucial for this study because our theoretical arguments share the same assumption with North about economic transaction costs (Buckley & Casson, 1976). Thus, although our robustness tests found consistent results between WGI and EFI, we used WGI to test hypotheses by applying its six indicators to institutional distance computation. These indicators are voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann et al., 2010). We took these indicators as six dimensions of a country's formal institutions and calculated the Euclidean distance between home and host countries as follows:

$$EuclidenDist_{ij} = \sqrt{\sum_{m=1}^{n} (Z_{mi} - Z_{mj})^2}$$

where Z is the standardized value of institutional dimension m of country i or j, and is calculated as follows:

$$Z_m = \frac{x_m - \bar{x}_m}{\sigma_{x_m}}$$

where x_m is the value of institutional dimension m. $\bar{x}_m$ and σ_{x_m} are, respectively, the mean and the standard deviation of this institutional dimension. While Berry et al. (2010) argued that the Mahalanobis method has more advanced properties than the Euclidean method, we chose the latter because the former "has no added value when all the dimensions are very highly correlated with each other (Brereton & Lloyd, 2016)," and the six WGI indicators are highly correlated (Beugelsdijk et al., 2018, p. 1120). Moreover, past studies have used slightly different approaches to the directionality of institutional distance. For example, as shown in Table 1, Hernández and Nieto (2015) constructed directional institutional distance by explicitly including two variables—the absolute value of distance and a direction dummy—in regression models. Trąpczyński and Banalieva (2016) took positive and negative institutional differences (i.e., the profile score of a host country minus that of the home country) as two independent variables and included both variables in a single regression. We adopted the former approach to explicate the effect of directions. A host country is defined as institutionally more developed than a home country if the host country's average percentile rank of the six WGI indicators is higher than that of the home country. As such, our independent variable was on a combination of *institutional distance*—measured by the Euclidean method with six WGI indicators and *direction dummy*—1 indicating that a host country is institutionally more developed than an EMNE's home country (i.e., institutionally positive), and 0 suggesting less developed (i.e., institutionally negative).

In our hypotheses, we proposed the moderating effect of *intangible assets*. Early IB research took R&D and advertising as proxies of intangible assets (e.g., the percentage of scientists and engineers, and marketing and advertising personnel, in a firm's total employment; Denekamp, 1995). However, more recent studies take identifiable assets—i.e., those "without physical substance, but allocated a monetary value" in a firm's accounting

reports—to be intangible assets (e.g., Contractor et al., 2016, p. 955). We followed the more recent research by using the intangible-asset information reported in accounting reports to measure this variable as the ratio of intangible assets to total assets. Asset data were extracted from Refinitiv's Company Fundamentals database that covers generic data items of public firms worldwide.

3.5. Control variables

Both the EMNE's FDI location choice and its investment scale in the location are not determined only by institutional distance and intangible assets but they also are affected by other firm- and country-specific factors. We took a number of control variables into consideration. At the firm level, we controlled for an EMNE's *state-owned* status (Tang, 2019), *firm age* and *size* (Boeh & Beamish, 2012), *international experience* (Tang & Gudergan, 2018), *return on assets* (Kwok & Reeb, 2000), *earnings before interest and taxes* (Altman et al., 1979), *R&D intensity*, and *advertising intensity* (Delios & Henisz, 2000). At the country-level, we controlled for *home–host cultural distance* (Hofstede et al., 2010; Kogut & Singh, 1988), *home–host political relationship* (Duanmu, 2014), *home–host trade dependence*, *host-country GDP per capita growth*, *host-country GDP*, *host-country natural resources,* and *host-country strategic assets* (Buckley et al., 2007). Lastly, we included fixed effects of *year*, *industry*, and *home countries* in the regression models. Details about these control variables are available in the supplementary material.

3.6. Estimation

We conducted panel estimation to test our hypotheses, which suggest a two-stage framework including a decision on FDI locations at the first stage and FDI scales at the second. Given the binary nature of the first-stage dependent variable (i.e., FDI location choice), we estimated a set of population-average probit models to test hypotheses 1 and 3a. In a two-stage research setting, the probit model is better than alternative approaches (e.g.,

conditional logit model) because we need to compute an inverse Mills ratio for inclusion in the second-stage analyses to correct for any potential sample selection bias (i.e., a Heckman test; Heckman, 1979). Specifically, when the choice set of FDI locations (i.e., potential FDI destinations) becomes large, probit models may rarely generate much bias to logit models (Coupé, 2005; Katz, 2001). A population-average estimator (rather than a random-effects estimator) was chosen to relax the restriction on a fully specified distribution of the population, although the empirical differences between the two estimators are subtle (Greene, 2008).

In the second-stage analyses, the dependent variable of hypotheses 2 and 3b is the FDI scale (i.e., investment amount). In the IB literature, the investment amount has often been log-transformed to address its skewed distribution for estimating a linear model (e.g., ordinary least squares in Duanmu, 2014). However, the log-transforming step not only transforms the investment amount but also assumes that the variance of the log of the investment amount is equal to its mean. This assumption is difficult to justify and makes the interpretation of estimation results unduly tricky. Thus, recent econometric research has recommended adopting a Poisson model with robust variance instead of log-transforming the dependent variable if the variable is non-negative and its distribution is skewed (Wooldridge, 2010, Chapter 18). Therefore, we tested hypotheses 2 and 3b with a set of Poisson models. According to Hausman (1978), we adopted a random-effects estimator for the Poisson models. In the second-stage models, we corrected potential sample-induced endogeneity by including inverse Mills ratios (as introduced above) and excluding two variables (i.e., firm size and trade dependence) that are more likely to affect FDI location choices in the first stage than determine FDI scales in the second (Sartori, 2003).

4. Results

Table 2 presents the descriptive statistics and correlation matrixes of main variables used in the first-stage and second-stage analyses, respectively. Because we observed several high correlations between explanatory variables, we tested for multicollinearity by calculating variance inflation factors (VIFs). In Panel A, the mean VIF is 1.47, and the maximum VIF is 2.89 for the first-stage analysis; and in Panel B, the mean VIF is 1.73, and the maximum VIF is 3.99 for the second-stage analysis. These VIF values are substantially below 10—the rule-of-thumb cutoff (Ryan, 2008), suggesting that multicollinearity may not be a concern in the following analyses.

****** Insert Table 2 about here ******

Table 3 shows the results of regressions. Models 1 to 4 report the regression results at the first stage (i.e., FDI location), and Models 5 to 8 present results at the second stage (i.e., FDI scale). All the models included the control variables. Main effects and interaction terms were added sequentially. For the first-stage analyses, Model 1 is the baseline model with the control variables only, and Model 2 adds the main effects of *institutional distance* and *direction dummy*. Model 3 tests hypothesis 1, and Model 4 examines hypothesis 3a. For the second-stage analyses, Model 5 includes only the control variables, and Model 6 takes the two main effects into account. Models 7 and 8 examine hypotheses 2 and 3b, respectively. Wald chi-squared statistics of these models are statistically significant, showing that the explanatory variables explained a significant portion of variations of the dependent variables. The explanatory power of the second-stage models is also demonstrated by log-pseudolikelihood. The statistical significance of the explanatory variables supports the hypotheses. There is a reduction of statistical significance levels from the first-stage models to the second-stage ones, but it does not affect our hypotheses testing because of the independence of analyses at the two stages.

****** Insert Table 3 about here ******

Hypothesis 1 implies that EMNEs are less (more) likely to invest in an institutionally positively (negatively) distant country. The coefficient of the term representing the interaction of *institutional distance* and *direction dummy* is negative and statistically significant ($\beta = -0.208$, $p < 0.001$ in Models 3 and 4). We decomposed the interaction term with marginal effects and plotted the relationship in Figure 1a, showing a decreasing (increasing) FDI probability in the positive (negative) direction when institutional distance increases. Specifically, when institutional distance changes from 1 to 12, the likelihood for EMNEs to invest in an institutionally positively distant country decreases from about 0.2% to zero (the solid curve), as compared to an increase from about 0.1% to 0.48% in the negative direction (the dashed curve). Therefore, hypothesis 1 is strongly supported.

****** Insert Figure 1 about here ******

Hypothesis 2 predicts that an EMNE's FDI scale, if the firm invests, is large (small) in a foreign country with a large and institutionally positive (negative) distance to the home country. The coefficient of the interaction term between *institutional distance* and *direction dummy* is positive and statistically significant ($\beta = 0.915$, $p < 0.05$ in Model 7 and also confirmed in Model 8), indicating that for a one-unit increase in the positive institutional distance, the investment scale is expected to increase by 2.497 (i.e., $e^{0.915}$) if the other explanatory variables are held constant in the model. We plotted the interaction effects in Figure 1b and found a significantly increasing (slightly decreasing) FDI-scale curve in the positive (negative) direction of institutional distance. These findings deliver marginal support for hypothesis 2.

Hypothesis 3a posits that EMNEs with a high level of intangible assets will be more reluctant to invest directly in an institutionally positively distant country. The triple interaction term of *institutional distance*, *direction dummy*, and *intangible assets* is negative

and statistically significant ($\beta = -0.002$, $p < 0.05$ in Model 4). Figure 1c depicts this result with two plots, showing steeper curves when the level of intangible assets is high (the right panel) than when it is low (the left panel). Thus, hypothesis 3a is supported.

Hypothesis 3b posits that EMNEs with a high level of intangible assets may invest at a decreasing scale in institutionally positively distant countries. The triple interaction term of *institutional distance*, *direction dummy*, and *intangible assets* is negative but not significant ($p > 0.10$ in Model 8), suggesting a lack of support for this hypothesis. In Figure 1d, we plotted this moderating effect and found that curves of both directions go up with the increasing institutional distance when the level of intangible assets is high (the right panel).

We conducted two sets of robustness tests to check whether (1) the relatively small number of events (i.e., FDI locations chosen by EMNEs) and (2) alternative measures of key variables may bias our results. As shown in the supplementary material, both sets of results are largely consistent with those reported in Table 3.

5. Discussion and implications

5.1. Theoretical implications

There has been debate over the difference between FDI by EMNEs in host countries that are institutionally more and less developed than the home country (Cuervo-Cazurra & Genc, 2008; Yamakawa et al., 2008). This debate has raised concerns about the validity of classic IB theory (Hernandez & Guillén, 2018) and called for the reconciliation of EMNE studies (Cavusgil, 2021; Luo & Zhang, 2016). By integrating internalization theory with the directionality logic of institutional distance, our analyses clarify the cost-effective logic of internalization theory in the context of EMNEs' outward FDI, demonstrating that EMNEs are more likely to conduct FDI in institutionally negatively distant host countries but, after hurdling the barrier of an institutionally positive distant country and investing there, tend to increase investment scales in institutionally positively distant countries. In addition, the

impact of directional institutional distance on the FDI location choice is stronger for EMNEs with a high level of intangible assets, but the impact on an FDI scale is not. Our study advances internalization theory and the directionality of institutional distance, thereby making three primary contributions.

First, we stipulate the cost-effective logic of internalization theory by clarifying EMNEs' decisions at different FDI stages. Prior research has shown that many traditional multinationals tend to invest in institutionally more developed host countries where the firms can reduce transaction costs (Nielsen et al., 2017), but EMNEs are found to expand aggressively into institutionally least developed foreign countries (Li et al., 2018). While early studies have attributed this inconsistency to pervasive risk preference of EMNEs (Buckley et al., 2007) and their weak-institution related capabilities (Cuervo-Cazurra & Genc, 2008), this reasoning does not explicitly explain why EMNEs invest proactively in both institutionally strong and institutionally weak host countries (Kim & Aguilera, 2016; Li et al., 2018). This little-studied question indicates a surprising research gap because, although EMNEs may look different from other multinationals due to differences among home-country institutions, their behavior is likely in line with the economic theory of the firm (Buckley & Casson, 1976; Williamson, 1975).

Our research offers theoretical support for this proposition by clarifying two internalization rationales behind the two stages of FDI by EMNEs. While these firms choose an FDI location for its cost-effectiveness in comparison with others, they decide FDI scales by comparing costs with benefits in the location. In this sense, if an EMNE can hurdle institutional barriers against FDI with minimum costs in a foreign country, it may choose the country for FDI. After making the choice, however, the EMNE needs to decide an FDI scale at which the costs of FDI are not higher than the benefits. Our study shows that an institutionally less developed foreign country may still be cost-effective for EMNEs to

internalize the external markets. However, a large scale of investment may be hard for them to ensure costs to be lower than benefits. In this sense, the seeming cost preference and actual cost avoidance of EMNEs may be observed at different stages of FDI. Our findings, therefore, contribute to the literature by reconciling the inconsistent findings of FDI by EMNEs.

Second, our study extends the research on directional institutional distance with new findings of EMNE internationalization. The IB literature has recognized the asymmetric effect of institutional distance for two decades (Shenkar, 2001; Zaheer et al., 2012), but the extant literature has lacked strong evidence for an essential difference between the asymmetry of institutional distance and the quality of host-country institutions. Hernández et al. (2018), for example, found that negative institutional distance may reduce the likelihood of FDI, and positive institutional distance may increase it. Putting both directions together suggests that the worse (better) the institutional quality in a host country, the lower (higher) the likelihood of investing. These findings are similar to those in earlier studies that argued the linear relationship between host-country institutional quality and FDI (e.g., the negative relationship between political risk and FDI; Kobrin, 1979).

By examining the directionality of institutional distance in an EMNE context, we found that the effect of institutional distance varies between two FDI stages and between two directions. Specifically, when choosing a location among host countries with better developed institutions than home countries (i.e., FDI in the positive institutional direction), EMNEs may not prefer a considerable distance (i.e., the solid declining line in Figure 1a). However, when choosing a location among host countries with less developed institutions (i.e., FDI in the negative institutional direction), EMNEs may tend to choose a foreign country far from their home country (i.e., the dashed climbing line in Figure 1a). In this sense, a large distance may result in a high or low FDI likelihood depending on the specific institutional direction. After a foreign country is chosen in the positive direction, EMNEs tend to increase the investment

scale in an institutionally distant country (i.e., the solid climbing line in Figure 1b). Nevertheless, if a foreign country is chosen in the negative direction, the investment scale slightly decreases with the increase of the institutional distance (i.e., the dashed declining line in Figure 1b). Integrating these findings demonstrates the asymmetric effect of institutional distance in different directions and in different FDI decisions, thereby offering solid and nuanced evidence to the directionality logic of institutional distance.

Finally, our paper contributes to existing research on intangible assets. Internalization theory posits that the interaction between firm-specific assets and institutional factors stimulates internalization (Buckley & Casson, 1976). Early studies have recognized the importance of intangible assets (e.g., Delios & Henisz, 2000; Sirmon et al., 2008). However, few inquiries have been made into how intangible assets interplay with host-country institutions in the two institutional directions. Thus, our study contributes to the internalization literature by clarifying its cost-effective logic and the broader reach of IB research by investigating how intangible assets interact with various institutional contexts to affect FDI. Specifically, although prior research has shown that intangible assets facilitate firms' growth in foreign countries (Rugman et al., 2011; Rugman & Verbeke, 2001), most findings are based on the symmetry of institutional effects. Our study examines the interaction between intangible assets and institutional distance in different directions, demonstrating how intangible assets may affect the asymmetric effects of institutional distance on EMNEs' FDI. Therefore, our paper complements existing studies on intangible assets (e.g., Contractor et al., 2016; Delios & Beamish, 2001) by presenting refined and parsimonious evidence.

5.2. Managerial implications

Our findings on intangible assets call managers' attention to the exploitation of the services of such assets across national borders. Firms may generate value from intangible assets only if they can maintain the efficiency of and positive returns from their exploitation

(Contractor et al., 2016). For practitioners, our findings suggest that intangible assets of EMNEs may not facilitate their investment in institutionally more developed foreign countries because the difficulty in finding complementary resources and exploitation opportunities may make these foreign countries less cost-effective for EMNEs to invest directly. In this sense, managers of EMNEs are advised to plan their FDI carefully according to their particular firm-specific assets.

5.3. Limitations and directions for future research

A focus on publicly listed EMNEs from four major emerging markets allowed us to collect sufficient FDI data with reasonable variance in home countries. However, the cost is the exclusion of privately held firms in the four emerging markets and those in many newly (and relatively smaller) emerging markets (e.g., Peru, Philippines, Romania) because of the limited FDI information in established databases. Multinationals from these newly emerging markets might undertake FDI differently and provide potentially fresh insights into EMNE internationalization (e.g., Al-Kwifi et al., 2019). Given the diversity of emerging markets and the heterogeneity among EMNEs (Cavusgil, 2021; Hoskisson et al., 2013), future research can design and collect primary data to understand outward FDI by firms from emerging markets at different stages of economic and institutional development.

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Table 1
Empirical research on the directionality of institutional distance

Author(s)	Sample	Concept of the direction	Operationalization of the direction	Main findings
Brock et al. (2008)	68 combinations of home and host countries	Asymmetrical cultural distance	Positive and negative differences between culture-dimension scores of home and host countries	When the specific culture-dimension score of the home country is higher (lower) than that of the host country, the probability of having an expatriate in the subsidiary is declining (increasing)
Chikhouni et al. (2017)	Acquisitions within 25 countries	The direction of internationalization	Multiplying psychic distance with a combination of directions (e.g., from emerging- to developed- countries)	The distance-ownership relationship is moderated by the direction
Drogendijk and Holm (2012)	MNEs of 28 countries and their subsidiaries in six countries	Cultural positions	Larger or smaller scores than the median value of sample countries	Low- and high- cultural distance alter the headquarters-subsidiary relationships
Hernández et al. (2018)	Italian firms	Asymmetric institutional distance	Multiplying absolute distance with a direction indicator (1=a host country is better than the home, 0=worse)	Firms are more likely to choose locations where the positive institutional distance is greater; and less likely to choose those with greater negative distance.
Hernández and Nieto (2015)	European small-and-medium-sized enterprises	Higher and lower levels of regulatory development	Multiplying absolute distance with a direction indicator (1=a host country is better than the home, 0=worse)	Negative distance results in a lower level of resource commitment in a foreign country, and positive distance leads to a higher level
Konara and Shirodkar (2018)	Foreign subsidiaries of 66 home countries in 70 host countries	Institutional ladder	Positive and negative differences between institutional profile scores of home and host countries	Positive distance has positive impacts on subsidiary performance in comparison with negative distance
Trąpczyński and Banalieva (2016)	Polish firms	Positive and negative institutional difference	Positive and negative differences between institutional profile scores of home and host countries	The more negative institutional difference increases the foreign affiliate performance of infant multinationals, and the more positive institutional difference decreases the performance
Yu et al. (2013)	Global auto-makers in 27 countries	Relative cultural distance	One minus the ratio of the smaller home-host cultural distance of one dyad member to the larger home-host cultural distance of the other	Relative cultural distance strengthens the relationship between the global competitive intensity and alliances between global rivals

Table 2.
Descriptive statistics and correlation matrixes.
(A) Stage 1: FDI location choice [a]

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 FDI location choice	1																		
2 Institutional distance	0.018	1																	
3 Direction dummy	-0.015	-0.476	1																
4 Intangible assets	-0.002	0.005	-0.004	1															
5 State owned	0.028	-0.009	0.010	-0.010	1														
6 Firm age	-0.002	-0.092	0.109	-0.061	0.033	1													
7 Firm size	0.044	0.006	-0.010	0.029	0.141	0.088	1												
8 International experience	0.122	0.009	-0.008	0.006	0.013	0.010	0.037	1											
9 Return on assets	0.008	0.004	-0.005	-0.073	0.005	-0.083	0.007	0.008	1										
10 Earnings before interest & taxes	0.149	-0.008	0.007	-0.015	0.232	0.058	0.274	0.060	0.080	1									
11 R&D intensity	-0.013	0.023	-0.024	0.130	-0.028	-0.185	-0.149	-0.004	0.002	-0.053	1								
12 Advertising intensity	-0.006	-0.014	0.017	0.061	-0.005	0.092	0.018	0.000	0.081	-0.008	0.024	1							
13 Home-host cultural distance	-0.006	0.542	-0.330	0.025	-0.020	-0.228	0.018	-0.002	-0.001	-0.027	0.067	-0.033	1						
14 Home-host political relationship	-0.031	-0.569	0.491	-0.008	-0.002	-0.079	-0.007	-0.021	0.010	0.001	-0.001	-0.012	-0.439	1					
15 Home-host trade dependence	0.068	0.175	-0.141	-0.003	0.001	0.005	0.000	0.039	0.002	0.006	-0.005	0.000	0.069	-0.334	1				
16 Host GDP per capita growth	-0.001	-0.177	0.044	-0.003	-0.001	0.024	0.006	-0.001	-0.002	0.006	0.000	0.007	-0.172	0.083	-0.008	1			
17 Host-country GDP	0.045	0.312	-0.276	0.002	0.002	0.003	0.002	0.029	-0.004	0.005	0.002	-0.001	0.236	-0.345	0.560	-0.161	1		
18 Host-country natural resources	-0.005	-0.194	0.170	-0.006	-0.002	-0.009	-0.003	-0.003	0.004	0.000	-0.003	-0.001	-0.002	0.212	-0.055	-0.131	0.055	1	
19 Host-country strategic assets	0.052	0.171	-0.215	-0.003	0.000	0.000	0.000	0.033	0.003	0.005	-0.004	0.000	0.093	-0.253	0.694	-0.035	0.721	0.007	1
Mean	0.002	5.523	0.315	7.464	0.006	2.967	0.617	0.001	5.174	1.161	3.138	1.179	2.548	0.760	0.009	2.074	12.005	22.283	0.791
SD	0.041	2.666	0.465	10.174	0.079	0.534	1.352	0.050	9.040	7.113	5.087	3.142	1.317	0.134	0.020	3.243	1.674	26.502	1.163
VIF	-	1.95	1.51	1.03	1.06	1.19	1.12	1.01	1.03	1.14	1.07	1.02	1.65	2.00	2.12	1.09	2.43	1.14	2.89

[a] Correlation coefficients with absolute values greater than 0.003 are statistically significant at $p<0.0001$. N=1,907,036.

Table 2.
(*continued*)
(B) Stage 2: FDI scale [b]

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 FDI scale	1																
2 Institutional distance	-0.003	1															
3 Direction dummy	0.017	-0.581	1														
4 Intangible assets	-0.015	-0.033	0.027	1													
5 State owned	0.050	-0.012	0.011	-0.100	1												
6 Firm age	0.000	-0.153	0.094	0.018	0.022	1											
7 International experience	0.038	0.032	-0.009	0.060	0.058	0.066	1										
8 Return on assets	0.045	-0.013	0.004	-0.003	-0.078	-0.007	0.064	1									
9 Earnings before interest & taxes	0.038	0.018	-0.002	-0.146	0.491	-0.034	0.067	-0.036	1								
10 R&D intensity	-0.029	0.103	-0.074	0.119	-0.049	-0.034	-0.020	0.040	-0.091	1							
11 Advertising intensity	-0.021	-0.096	0.096	0.119	-0.061	0.046	-0.016	0.026	-0.083	0.031	1						
12 Home-host cultural distance	0.028	0.611	-0.332	-0.033	0.016	-0.200	0.019	-0.035	0.060	0.136	-0.079	1					
13 Home-host political relationship	0.007	-0.493	0.430	-0.091	0.097	-0.017	-0.108	-0.075	0.104	-0.111	0.054	-0.500	1				
14 Host GDP per capita growth	0.038	-0.241	0.295	-0.037	-0.009	-0.053	-0.022	-0.016	0.009	-0.055	0.023	-0.193	0.215	1			
15 Host-country GDP	0.002	0.379	-0.338	0.084	-0.087	0.060	0.105	0.055	-0.083	0.114	-0.041	0.377	-0.723	-0.179	1		
16 Host-country natural resources	0.074	-0.216	0.181	-0.017	0.077	-0.009	-0.014	-0.035	0.065	-0.051	0.048	-0.069	0.266	-0.056	-0.235	1	
17 Host-country strategic assets	0.019	0.234	-0.199	0.083	-0.082	0.049	0.123	0.050	-0.072	0.077	-0.021	0.253	-0.659	-0.013	0.814	-0.155	1
Mean	88.41	6.702	0.152	6.886	0.060	2.936	0.149	6.972	26.918	1.592	0.758	2.364	0.660	2.024	13.836	19.348	2.249
SD	531.43	2.729	0.359	10.680	0.237	0.802	0.598	8.406	87.448	3.989	2.250	1.354	0.198	3.338	1.830	20.886	1.843
VIF	-	2.25	1.68	1.07	1.34	1.10	1.04	1.03	1.37	1.05	1.03	1.94	2.93	1.21	3.99	1.16	3.50

[b] Correlation coefficients with absolute values greater than 0.07 are statistically significant at $p<0.0001$. N=3,221

Table 3.
Regression results.

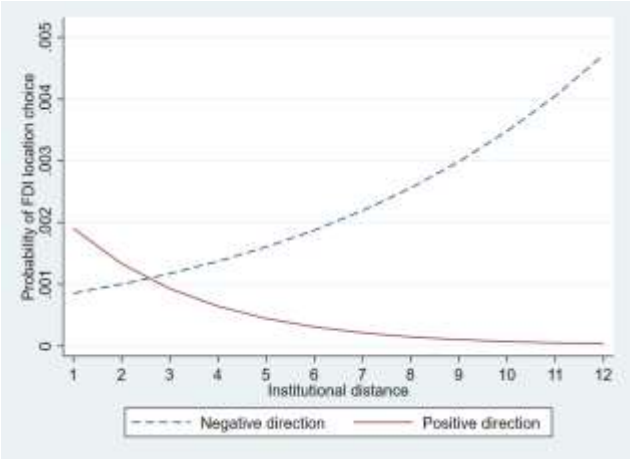
	Stage 1: FDI location choice [a]			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Institutional distance (ID)		0.048***	0.066***	0.066***
		(0.004)	(0.004)	(0.004)
Direction dummy (DD)		-0.095***	-0.525***	-0.524***
		(0.027)	(0.045)	(0.045)
H1: ID × DD			-0.208***	-0.208***
			(0.015)	(0.015)
H3a: ID × DD × IA				-0.002*
				(0.001)
ID × IA				0.000
				(0.000)
IA × DD				-0.004
				(0.003)
Intangible assets (IA)	-0.001	-0.001	-0.001	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
State owned	0.139**	0.135**	0.137**	0.137**
	(0.047)	(0.047)	(0.048)	(0.048)
Firm age	-0.203***	-0.202***	-0.201***	-0.201***
	(0.016)	(0.016)	(0.016)	(0.016)
Firm size	0.165***	0.166***	0.167***	0.167***
	(0.007)	(0.007)	(0.007)	(0.007)
International experience	0.426***	0.435***	0.437***	0.437***
	(0.033)	(0.033)	(0.032)	(0.032)
Return on assets	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Earnings before interest & taxes	0.006***	0.006***	0.006***	0.006***
	(0.000)	(0.000)	(0.000)	(0.000)
R&D intensity	-0.008**	-0.008**	-0.008**	-0.008**
	(0.003)	(0.003)	(0.003)	(0.003)
Advertising intensity	-0.023***	-0.023***	-0.023***	-0.023***
	(0.004)	(0.004)	(0.004)	(0.004)
Home-host cultural distance	-0.095***	-0.129***	-0.138***	-0.138***
	(0.009)	(0.010)	(0.010)	(0.010)
Home-host political relationship	-0.430***	-0.073	0.048	0.046
	(0.079)	(0.090)	(0.092)	(0.092)
Home-host trade dependence	2.589***	3.353***	3.698***	3.700***
	(0.355)	(0.346)	(0.340)	(0.340)
Host GDP per capita growth	-0.008**	-0.003	-0.002	-0.002
	(0.002)	(0.003)	(0.003)	(0.003)
Host-country GDP	0.185***	0.168***	0.171***	0.171***
	(0.009)	(0.009)	(0.009)	(0.009)
Host-country natural resources	-0.000	0.001**	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Host-country strategic assets	-0.009	-0.007	-0.012	-0.012
	(0.009)	(0.009)	(0.009)	(0.009)
Constant	-3.104***	-3.427***	-3.294***	-3.296***
	(0.199)	(0.204)	(0.207)	(0.207)
Wald chi2	8,456.65	8,187.85	7,929.26	7,936.09

[a] *** p<0.001, ** p<0.01, * p<0.05. Year, industry, and home-country dummies are included. Robust standard errors in parentheses. N=1,907,036

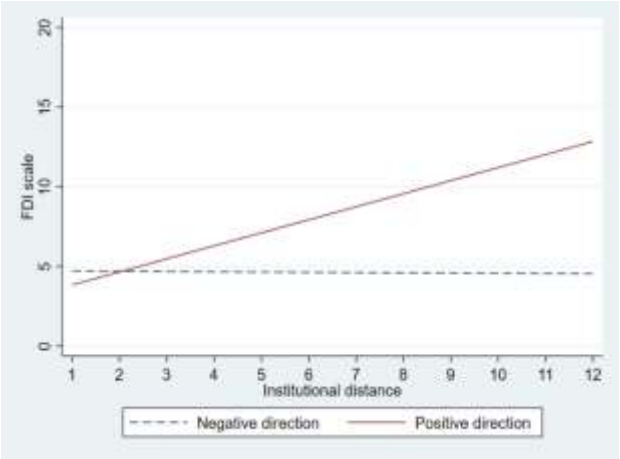
Table 3.
(continued)

	Stage 2: FDI scale [b]			
	Model 5	**Model 6**	**Model 7**	**Model 8**
Institutional distance (ID)		0.187	0.026	-0.019
		(0.191)	(0.185)	(0.190)
Direction dummy (DD)		-0.222	3.744	4.165
		(0.734)	(2.043)	(2.137)
H2: ID × DD			0.915*	0.992*
			(0.422)	(0.448)
H3b: ID × DD × IA				-0.028
				(0.027)
ID × IA				0.018
				(0.013)
IA × DD				-0.024
				(0.071)
Intangible assets (IA)	-0.039***	-0.037**	-0.034**	-0.042*
	(0.012)	(0.012)	(0.011)	(0.020)
State owned	-0.088	-0.070	-0.083	-0.032
	(0.537)	(0.540)	(0.534)	(0.517)
Firm age	0.509	0.508	0.682	0.593
	(0.602)	(0.606)	(0.631)	(0.639)
International experience	0.265	0.244	0.265	0.277
	(0.292)	(0.302)	(0.297)	(0.288)
Return on assets	0.084**	0.084**	0.085***	0.092***
	(0.026)	(0.026)	(0.026)	(0.026)
Earnings before interest & taxes	-0.001	-0.001	-0.001	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)
R&D intensity	-0.004	0.000	-0.002	-0.021
	(0.057)	(0.059)	(0.059)	(0.058)
Advertising intensity	-0.026	-0.023	-0.029	-0.023
	(0.082)	(0.083)	(0.083)	(0.089)
Home-host cultural distance	0.650*	0.535	0.532	0.629*
	(0.328)	(0.386)	(0.339)	(0.309)
Home-host political relationship	3.483	3.912	4.117*	4.971*
	(2.021)	(2.046)	(2.020)	(2.097)
Host GDP per capita growth	0.099*	0.101*	0.096*	0.100*
	(0.039)	(0.040)	(0.040)	(0.042)
Host-country GDP	-0.041	-0.084	0.146	0.102
	(0.455)	(0.464)	(0.469)	(0.446)
Host-country natural resources	0.007	0.009	0.019	0.019
	(0.009)	(0.009)	(0.009)	(0.009)
Host-country strategic assets	0.260	0.233	0.210	0.357
	(0.431)	(0.434)	(0.431)	(0.380)
Inverse Mills ratio	0.996	0.912	0.984	1.070
	(0.866)	(0.879)	(0.854)	(0.830)
Constant	-4.310	-4.539	-7.853	-7.723
	(6.658)	(6.917)	(7.031)	(6.807)
Log-Pseudolikelihood	-62,439.09	-62,429.71	-61,927.85	-61,241.77
Wald chi2	3,010.99	3,118.89	3,267.43	11,730.09

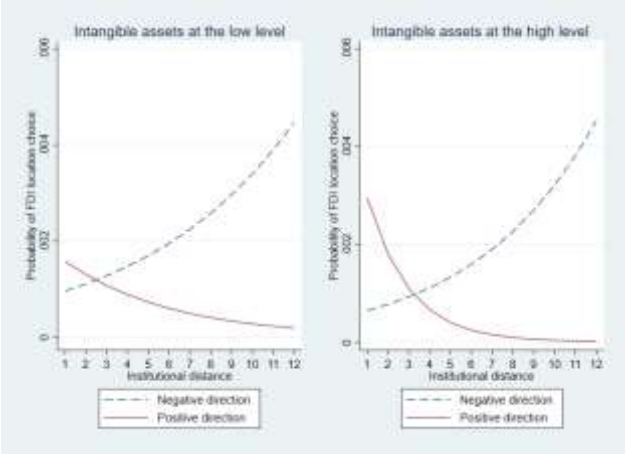
[b] *** p<0.001, ** p<0.01, * p<0.05. Year, industry, and home-country dummies are included. Robust standard errors in parentheses. N=3,221.



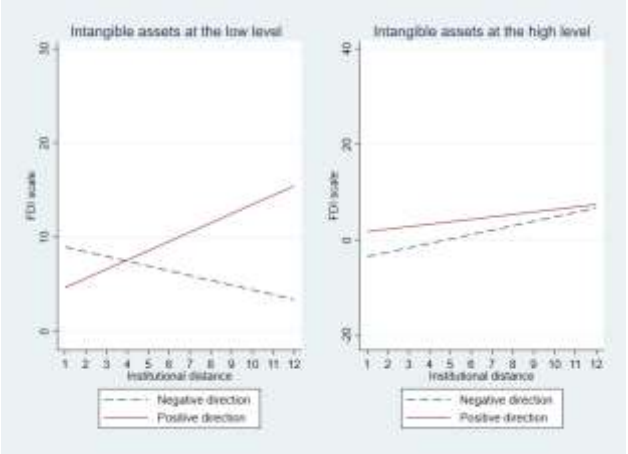
(a) FDI probabilities in two directions



(b) FDI scales in two directions



(c) FDI probabilities at levels of intangible assets



(d) FDI scales at levels of intangible assets

Fig. 1. Interaction plots

Supplementary material for:

Outward Foreign Direct Investment by Emerging Market Multinationals: The Directionality of Institutional Distance

Appendix A. Control variables

Both an emerging market multinational's (EMNE) foreign direct investment (FDI) location choice and its investment scale in the location are not determined only by institutional distance and intangible assets. However, they also are affected by other firm- and country-specific factors. Thus, we took a number of control variables into consideration and collected firm-specific data in the Company Fundamentals database of Refinitiv and country-specific data in databases maintained, respectively, by the World Bank (WB), the International Monetary Fund (IMF), and the United Nations (UN), as elaborated below.

Previous studies have shown that state ownership could affect outward FDI by EMNEs (e.g., Tang, 2019). However, the specific effect is debatable, showing positive or negative impacts on EMNE internationalization (Cuervo-Cazurra & Li, 2020). To take this effect into consideration, we controlled for *state-owned* status. It is a dummy variable, with 1 indicating that a firm is owned or controlled by the home-country government or governmental body if the government (or the governmental body) has more than 50% of votes or has a golden share in the firm, which gives the government veto power, and 0 otherwise. This control variable identifies whether publicly listed state-owned enterprises may make FDI decisions differently from private firms (Estrin et al., 2016).

Some studies have found that a large firm with a long history could have more experience and resources to invest overseas directly (Boeh & Beamish, 2012; Xie, 2017), but other scholars have argued that firms with a long history might hesitate to take the risk in a new environment (Levinthal & March, 1993). Thus, we controlled for *firm age* and *firm size*

by measuring the former as the (log-transformed) difference between a firm's incorporation year and the investment year and the latter as a firm's (log) number of employees. Both measures have appeared widely in the IB literature (e.g., Boeh & Beamish, 2012). In addition to firm age, which indicates a firm's general experience, *international experience* has an essential effect on firm internationalization (Lu et al., 2014; Tang & Gudergan, 2018), and this effect is especially salient for EMNEs (Li, 1994; Lu et al., 2014). Following prior research (e.g., Lu et al., 2014), we controlled this effect by measuring the (log) number of FDI activities in the previous year.

Many empirical studies have found that a firm's financial status affects its availability to fund investment (e.g., Deephouse, 1999), and IB research has revealed a strong connection between the availability of finance and FDI, showing that a firm's *return on assets* may facilitate its tax shields after investing in a foreign country (Kwok & Reeb, 2000). In addition, it may affect the firm's location choice among foreign countries (e.g., Qian & Delios, 2008). Therefore, we measured this control variable as the ratio between net income and total assets. In addition to this ratio variable, we also controlled the absolute size of a firm's financial slack by including *earnings before interest and taxes*. This represents a firm's normalized pretax profit without the effect of unusual or extraordinary income, expense, and interest expense. Prior research has found that this factor may affect a firm's financing approach to FDI (e.g., project finance or corporate finance; Sawant, 2010) and that it has crucial implications for EMNEs (Altman et al., 1979).

Both *R&D intensity* and *advertising intensity* are also likely to affect a firm's FDI (Delios & Henisz, 2000). Past studies have shown that R&D could determine a firm's production of knowledge and, consequently, affect the firm's commitments in some investments (Teece, 1986). Also, advertising input helps firms transfer marketing knowledge across borders to develop ownership advantages and, therefore, this may affect FDI (Dunning

& Lundan, 2008). We controlled for both effects and measured the former as the ratio of R&D expenditure to revenue and the latter as the advertising expenditure-to-revenue ratio (Delios & Henisz, 2000).

A set of additional variables was included to control for country-specific effects. While our independent variable took account of the home–host distance in formal institutions, the IB literature has shown the importance of informal institutional distance as well as political and economic connections between home and host countries. Thus, we followed early studies on EMNEs' outward FDI (e.g., Quer et al., 2012) by measuring *home–host cultural distance* as the Kogut–Singh measure based on the Hofstede framework (Hofstede et al., 2010; Kogut & Singh, 1988). Moreover, the *home–host political relationship* has been found to affect both the FDI location choice (Li et al., 2017) and the FDI scale (Duanmu, 2014) of Chinese firms. This relationship may also affect FDI by firms from other emerging markets. We considered this effect and measured it as the UN Agreement Score (Voeten, 2013). This score is based on the ratio of the number of votes in which both home and host countries have agreed to an agenda in the UN General Assembly and the total number of votes that both countries cast (Duanmu, 2014; Li et al., 2017). Besides political relationships, the economic connection is also likely to affect FDI. Prior FDI research has shown the impact of trade dependence on outward FDI by EMNEs (Buckley et al., 2007). Following this lead, we controlled for *home–host trade dependence*. It is measured as the ratio between a host country's exports and imports to a home country and the host country's total international trade volume. Trade information was extracted from the Fiscal Monitor database maintained by the IMF.

Host-country conditions may motivate some FDI activities (Dunning & Lundan, 2008). We followed prior FDI research (e.g., Buckley et al., 2007) by controlling for four host-country factors: GDP growth, GDP size, natural resources, and strategic assets. Specifically, we measured *host-country GDP per capita growth* as the annual percentage growth rate of

GDP per capita based on constant local currency in a host country, and *host-country GDP* as the sum of GDP's gross value (log of one million dollars) added by all resident producers in the host country, plus any product taxes and minus any subsidies not included in the value of the products. We included *host-country natural resources* by calculating the proportion of ores, metal, and fuel exports in total exports and controlled for *host-country strategic assets* as the (log) number of patent applications per 1,000 people in a host country in a given year. The host-country information was collected from the World Development Indicators database of the WB.

Lastly, we included fixed effects of *year*, *industry*, and *home countries* in the regression models. We opted to control for home-country fixed effects in preference to host countries because of the nature of our independent variable (i.e., the country dyad) and our controls for host-country effects over a fixed period. We did not include firm fixed effects to better focus on the hypothesized firm-specific effect (i.e., intangible assets). In particular, a set of firm-specific effects were controlled for in the empirical tests. Including firm-fixed effects would not allow for empirical tests on these effects.

Appendix B. Robustness check

We conducted two sets of additional analyses to check whether the relatively small number of events (i.e., FDI locations chosen by EMNEs) may bias our results. First, we re-estimated the first-stage models with a penalized maximum likelihood logistic method (King & Zeng, 2001), which is designed for the rare events data of binary dependent variables. Second, we replicated the first-stage model with subsamples that contained an increasing proportion of events. We did so by constructing three subsamples, with the top 25, 50, and 75 FDI destinations chosen by EMNEs. Among potential location choices of the top 75 destinations (i.e., 1,443,645), 3,164 (i.e., 0.22%) were chosen for FDI by EMNEs. In the top

50 destinations, 2,890 (i.e., 0.29%) were chosen from 1,040,119 potential choices; in the top 25 destinations, 2,416 (i.e., 0.50%) out of 484,993 were chosen. Both sets of analytic results are consistent with those used for testing hypotheses. In Table A, Models 1 to 5 show these results.

****** Insert Table A about here ******

Furthermore, we checked whether the choice of specific operational measures could affect the empirical results by replicating the models with alternative measurements of key variables. Specifically, we replaced *institutional distance* with the Euclidean distance based on EFI indicators (Trąpczyński & Banalieva, 2016). These EFI indicators are property rights, government integrity, fiscal health, government spending, business freedom, labor freedom, trade freedom, trade freedom, investment freedom, and financial freedom (Miller et al., 2020). We replaced the *direction dummy* by defining the positive direction as a host country's lower bound of 90% confidence intervals of its average WGI percentile rank being higher than the upper bound of the 90% confidence intervals of the home country's average percentile rank. Moreover, we took the place of *intangible assets* with *R&D intensity* because R&D was used to proxy intangible assets in early studies (e.g., Delios & Henisz, 2000). Although the two measures have different theoretical implications (as elaborated in the variable section), their empirical outcomes may be comparable. Models 6 to 11 in Table A display the regression results with alternative variables, demonstrating roughly consistent findings with those reported in Table 3. Lastly, we note the potential heterogeneity in our FDI sample, which is a combination of two FDI modes (i.e., greenfield and M&A). As shown by Models 12 and 14 in Table A, we measured FDI variables (i.e., location choice and investment scale) using greenfield FDI data only; in Models 13 and 15, the FDI variables are measured with M&A FDI data only. Both sets of results are largely consistent with those shown in Table 3.

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Table A.
Robustness tests [a]

	Stage 1: FDI location choice				Stage 2: FDI Scale
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Institutional distance (ID)	0.205***	0.063***	0.066***	0.065***	-0.001
	(0.011)	(0.006)	(0.005)	(0.005)	(0.194)
Direction dummy (DD)	-1.167***	-0.348***	-0.459***	-0.456***	2.902
	(0.115)	(0.099)	(0.057)	(0.047)	(1.869)
H1 & H2: ID × DD	-0.554***	-0.130***	-0.188***	-0.192***	0.894†
	(0.040)	(0.032)	(0.018)	(0.015)	(0.488)
H3a&b: ID × DD × IA	-0.007†	-0.004*	-0.003*	-0.003**	-0.028
	(0.004)	(0.002)	(0.001)	(0.001)	(0.027)
ID × IA	-0.000	0.000	0.000	0.000	0.018
	(0.001)	(0.000)	(0.000)	(0.000)	(0.013)
IA × DD	-0.013	-0.012*	-0.005	-0.006	0.009
	(0.011)	(0.006)	(0.004)	(0.003)	(0.050)
Intangible assets (IA)	-0.001	-0.001	-0.002	-0.002	-0.064*
	(0.003)	(0.001)	(0.001)	(0.001)	(0.028)
State owned	0.178	0.053	0.092	0.133**	-0.048
	(0.099)	(0.063)	(0.051)	(0.050)	(0.514)
Firm age	-0.521***	-0.212***	-0.207***	-0.204***	0.602
	(0.031)	(0.020)	(0.017)	(0.017)	(0.636)
Firm size	0.453***	0.179***	0.174***	0.170***	
	(0.012)	(0.009)	(0.007)	(0.007)	
International experience	1.089***	0.293***	0.319***	0.418***	0.282
	(0.045)	(0.040)	(0.036)	(0.033)	(0.279)
Return on assets	0.018***	0.000	-0.001	-0.001	0.094***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.027)
Earnings before interest & taxes	0.015***	0.006***	0.006***	0.006***	-0.001
	(0.001)	(0.000)	(0.000)	(0.000)	(0.003)
R&D intensity	-0.092***	-0.006	-0.006*	-0.007*	-0.022
	(0.007)	(0.003)	(0.003)	(0.003)	(0.058)
Advertising intensity	-0.059***	-0.028***	-0.026***	-0.023***	-0.026
	(0.008)	(0.005)	(0.004)	(0.004)	(0.090)
Home-host cultural distance	-0.717***	-0.132***	-0.156***	-0.143***	0.621
	(0.021)	(0.014)	(0.011)	(0.010)	(0.356)
Home-host political relationship	-1.751***	-0.226*	-0.188*	-0.102	4.966*
	(0.178)	(0.107)	(0.094)	(0.092)	(2.085)
Home-host trade dependence	9.908***	3.521***	3.732***	3.743***	
	(0.683)	(0.327)	(0.324)	(0.323)	
Host GDP per capita growth	0.014	-0.017**	-0.008*	-0.007*	0.099*
	(0.008)	(0.006)	(0.004)	(0.004)	(0.042)
Host-country GDP	0.447***	0.112***	0.154***	0.149***	0.120
	(0.020)	(0.019)	(0.011)	(0.010)	(0.481)
Host-country natural resources	0.006***	0.004***	0.003***	0.002***	0.018
	(0.001)	(0.001)	(0.000)	(0.000)	(0.010)
Host-country strategic assets	-0.074***	-0.011	-0.020*	-0.012	0.349
	(0.022)	(0.011)	(0.009)	(0.009)	(0.385)
Inverse Mills ratio					1.130
					(0.835)
Constant	-8.491***	-2.057***	-2.817***	-2.849***	-8.020
	(0.324)	(0.344)	(0.237)	(0.219)	(7.220)
N	1,907,036	484,933	1,040,119	1,443,645	3,164
Likelihood [b]	-18,248.50				-60,717.82
Wald chi2	10,598.69	4,400.30	6,411.33	7,390.31	12,428.12

[a] *** p<0.001, ** p<0.01, * p<0.05, †<0.10. Year, industry, and home-country dummies are included. Robust standard errors in parentheses. Model 1 addresses the rare events with the penalized maximum likelihood logistic approach (King & Zeng, 2001). Models 2 to 4 are respectively based observations in the top 25, 50, and 75 FDI destinations. Model 5 is the second-stage model of Model 4.

[b] For model 1, it is penalized log-likelihood; for model 5, it is log-pseudolikelihood.

Table A
(*continued*) [c]

	Stage 1: FDI location choice			Stage 2: FDI scale		
	Model 6	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**
Institutional distance (ID)	0.113***	0.069***	0.069***	-0.520	-0.056	0.123
	(0.008)	(0.006)	(0.004)	(0.342)	(0.204)	(0.199)
Direction dummy (DD)	-0.252***	-0.220***	-0.611***	1.642	3.697**	3.541
	(0.037)	(0.034)	(0.052)	(1.198)	(1.233)	(2.511)
H1 & H2: ID × DD	-0.178***	-0.110***	-0.234***	0.734†	0.977*	0.931†
	(0.022)	(0.012)	(0.017)	(0.434)	(0.352)	(0.520)
H3a&b: ID × DD × IA	-0.003†	-0.002**	-0.013**	-0.068*	-0.024	-0.198
	(0.002)	(0.001)	(0.005)	(0.033)	(0.030)	(0.185)
ID × IA	0.001*	0.000	0.003***	0.043**	0.021	-0.010
	(0.001)	(0.000)	(0.001)	(0.015)	(0.017)	(0.026)
IA × DD	0.000	-0.005	-0.041**	-0.059	0.001	-1.094
	(0.003)	(0.003)	(0.013)	(0.064)	(0.067)	(0.629)
Intangible assets (IA)	-0.003*	-0.001	-0.012***	-0.051**	-0.049	0.009
	(0.001)	(0.001)	(0.003)	(0.019)	(0.025)	(0.067)
State owned	0.136**	0.135**	0.138**	-0.193	0.070	-0.049
	(0.047)	(0.048)	(0.045)	(0.505)	(0.523)	(0.538)
Firm age	-0.201***	-0.203***	-0.200***	0.442	0.582	0.850
	(0.016)	(0.016)	(0.014)	(0.579)	(0.649)	(0.679)
Firm size	0.166***	0.167***	0.168***			
	(0.007)	(0.007)	(0.005)			
International experience	0.419***	0.443***	0.442***	0.222	0.287	0.311
	(0.033)	(0.032)	(0.024)	(0.287)	(0.282)	(0.305)
Return on assets	-0.001	-0.001	-0.001	0.095**	0.092	0.103***
	(0.001)	(0.001)	(0.001)	(0.029)	(0.027)	(0.026)
Earnings before interest & taxes	0.006***	0.006***	0.006***	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.003)	(0.003)	(0.003)
R&D intensity	-0.008**	-0.008**		-0.015	-0.023	
	(0.003)	(0.003)		(0.049)	(0.060)	
Advertising intensity	-0.023***	-0.023***	-0.023***	-0.033	-0.017	-0.036
	(0.004)	(0.004)	(0.003)	(0.092)	(0.087)	(0.095)
Home-host cultural distance	-0.129***	-0.145***	-0.139***	0.492	0.642	0.652
	(0.009)	(0.010)	(0.008)	(0.251)	(0.368)	(0.432)
Home-host political relationship	0.029	-0.031	0.052	4.014	5.157*	4.280*
	(0.092)	(0.092)	(0.075)	(2.138)	(2.061)	(1.990)
Home-host trade dependence	3.252***	3.599***	3.704***			
	(0.356)	(0.353)	(0.261)			
Host GDP per capita growth	-0.003	-0.004	-0.003	0.094**	0.096*	0.123**
	(0.003)	(0.003)	(0.003)	(0.035)	(0.041)	(0.041)
Host-country GDP	0.165***	0.170***	0.171***	0.331	0.075	0.157
	(0.009)	(0.009)	(0.008)	(0.534)	(0.453)	(0.509)
Host-country natural resources	0.001**	0.001**	0.001***	0.014	0.019*	0.023*
	(0.000)	(0.000)	(0.000)	(0.008)	(0.009)	(0.010)
Host-country strategic assets	0.004	-0.010	-0.012	0.251	0.388	-0.063
	(0.009)	(0.009)	(0.008)	(0.416)	(0.369)	(0.464)
Inverse Mills ratio				1.019	1.075	1.167
				(0.844)	(0.808)	(0.873)
Constant	-3.222***	-3.240***	-3.342***	-8.564	-7.280	-7.957
	(0.204)	(0.204)	(0.193)	(7.769)	(7.025)	(7.381)
Log-Pseudolikelihood				-60,516.69	-60,977.37	-63,049.86
Wald chi2	8,279.84	8,118.65	10,978.74	4,050.32	5,197.11	3,005.89

[c] *** p<0.001, ** p<0.01, * p<0.05, †<0.10. Year, industry, and home-country dummies are included. Robust standard errors in parentheses. $N_{stage\text{-}1}$=1,907,036. $N_{stage\text{-}2}$=3,221. In models 6 and 9, *institutional distance* is measured as the Euclidean distance with EFI indicators. In models 7 and 10, *direction dummy* is 1, if a host country's lower bound of 90% confidence intervals of its average WGI percentile rank is higher than the upper bound of 90% confidence intervals of the home country's average percentile rank, and 0, otherwise. In models 8 and 11, *intangible assets* is replaced by *R&D intensity*. Models 6, 7, and 8 are at the first stage, models 9, 10, and 11 are the second-stage models.

Table A
(*continued*) [d]

	Stage 1: FDI location choice		Stage 2: FDI scale	
	Model 12	**Model 13**	**Model 14**	**Model 15**
Institutional distance (ID)	0.055***	0.079***	-0.049	-0.934*
	(0.005)	(0.006)	(0.090)	(0.454)
Direction dummy (DD)	-0.429***	-0.658***	1.929	48.309
	(0.051)	(0.076)	(1.005)	(27.154)
H1 & H2: ID × DD	-0.175***	-0.249***	0.528*	10.985*
	(0.016)	(0.024)	(0.213)	(4.981)
H3a&b: ID × DD × IA	-0.004**	-0.000	0.018	0.404
	(0.001)	(0.001)	(0.028)	(0.245)
ID × IA	0.000	0.000	0.020	0.039
	(0.000)	(0.000)	(0.011)	(0.022)
IA × DD	-0.004	-0.001	0.104	2.318
	(0.004)	(0.004)	(0.114)	(1.295)
Intangible assets (IA)	-0.003*	0.000	0.044	0.052
	(0.001)	(0.001)	(0.025)	(0.036)
State owned	0.192***	-0.063	0.319	-0.875
	(0.053)	(0.090)	(0.271)	(0.711)
Firm age	-0.158***	-0.214***	0.045	2.274
	(0.022)	(0.020)	(0.254)	(1.298)
Firm size	0.223***	0.072***		
	(0.009)	(0.008)		
International experience	0.439***	0.580***	-0.001	-1.580
	(0.041)	(0.046)	(0.129)	(0.939)
Return on assets	-0.003**	0.002	0.036*	0.140
	(0.001)	(0.001)	(0.016)	(0.099)
Earnings before interest & taxes	0.006***	0.005***	0.000	-0.073***
	(0.000)	(0.000)	(0.001)	(0.021)
R&D intensity	-0.009*	-0.005	-0.017	0.727*
	(0.004)	(0.003)	(0.031)	(0.283)
Advertising intensity	-0.024***	-0.020***	-0.048	-0.281
	(0.004)	(0.006)	(0.058)	(0.292)
Home-host cultural distance	-0.107***	-0.157***	0.108	1.032
	(0.012)	(0.014)	(0.132)	(1.511)
Home-host political relationship	0.530***	-0.455***	-1.761	15.988**
	(0.121)	(0.119)	(1.717)	(5.518)
Home-host trade dependence	3.797***	3.374***		
	(0.453)	(0.425)		
Host GDP per capita growth	0.008	-0.014**	0.038	0.211
	(0.004)	(0.005)	(0.023)	(0.125)
Host-country GDP	0.186***	0.132***	-0.918***	2.416*
	(0.012)	(0.012)	(0.264)	(0.981)
Host-country natural resources	0.001	0.002***	0.004	0.037
	(0.000)	(0.001)	(0.006)	(0.061)
Host-country strategic assets	-0.030*	0.006	0.548***	-1.803
	(0.012)	(0.012)	(0.153)	(1.417)
Inverse Mills ratio			0.060	-3.375
			(0.381)	(2.227)
Constant	-4.630***	-2.150***	15.630***	-37.047**
	(0.234)	(0.245)	(4.724)	(14.031)
N	1,881,735	1,904,349	1,890	1,360
Log-Pseudolikelihood			-14,297.27	-18,100.38
Wald chi2	5,711.62	4,323.82	5,247.79	5,439.43

[d] *** p<0.001, ** p<0.01, * p<0.05, †<0.10. Year, industry, and home-country dummies are included. Robust standard errors in parentheses. In Models 12 and 14, FDI variables are measured by greenfield data. In Models 13 and 15, FDI variables are measured with M&A data.