WHEN DOES HIGH INSTITUTIONAL QUALITY EXPLAIN THE PRESENCE OF MNEs IN A FOREIGN COUNTRY? EXPERIENTIAL AND VICARIOUS LEARNING AS BOUNDARY CONDITIONS

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Abstract

Institutional economics theory predicts that multinational enterprises (MNEs) operate in foreign countries with high institutional quality, which is known as the institutional profile effect. Nevertheless, the predictions of this theory seem to diverge from the international presence of certain MNEs, raising questions about the broader applicability of the institutional profile effect. We posit that the phenomenon of learning by MNEs offers an explanation for the occasional ineffectiveness of the institutional profile effect in specific contexts. Thus, we seek to answer the following research question: *What types of learning reduce the probability of MNEs operating in countries with high institutional quality?* To address this question, we investigate the role of experiential and vicarious learning as boundary conditions for the institutional profile effect, and compare their respective effects. Through our empirical analysis of a sample comprising 60 telecommunications MNEs, 39 home countries, and 145 host countries, we find that both experiential and vicarious learning have a negative moderating effect on the institutional profile effect. Furthermore, our findings indicate the existence of a cumulative effect resulting from the combination of different types of learning.

INTRODUCTION

Numerous studies have examined the impact of formal institutions on the foreign location decisions of multinational enterprises (MNEs) (for recent reviews, see Donnelly and Manolova, 2020; Nielsen et al., 2017). The theoretical underpinnings of this research come primarily from the field of economics (Bailey, 2018; Donnelly and Manolova, 2020) and are commonly referred to as institutional economics (Cuervo-Cazurra et al., 2019).[1]

Institutional economics posits that high quality institutions play a crucial role in reducing transaction costs and promoting market efficiency (Djankov et al., 2002; Khanna and Palepu, 2010). Consequently, this theory predicts that MNEs, in order to minimise transaction costs, will choose to operate in host countries with higher institutional quality (Bevan et al., 2004; Daude and Stein, 2007; Sara and Newhouse, 1995). In line with previous research, we define *the institutional profile effect* as the positive impact of host country institutional quality on the probability of MNEs' presence in that particular country (Van Hoorn and Maseland, 2016).

While many studies have provided support for the institutional profile effect (Bevan et al., 2004), prior research on the impact of formal institutions has presented inconsistencies (Xu et al., 2021). In particular, several studies have observed an increasing presence of MNEs in foreign countries characterized by low quality institutions (Sethi et al., 2002; Williamson et al., 2013). The growing evidence challenging the institutional profile effect and the resulting uncertainties about the ability of institutional economics to fully predict the international presence of MNEs serve as the driving force behind our exploration of its boundary conditions (Busse et al., 2017).

We argue that institutional economics does not fully explain the international presence decisions of multinational enterprises (MNEs) because it neglects the aspect of organisational learning (Lumineau et al., 2011). Our objective is to refine the predictions of institutional

economics by exploring and comparing distinct types of organisational learning as boundary conditions for the institutional profile effect. Specifically, our research question is: *What types of learning reduce the probability of MNEs operating in countries with high institutional quality?*

We argue that MNEs can acquire the necessary knowledge to navigate and mitigate the increased transaction costs associated with countries characterized by low quality institutions. This learning process fundamentally challenges the theoretical underpinnings of institutional economics (Williamson, 1985). According to this theory, MNEs have limited knowledge when making decisions (Williamson, 1985, 1998). As a result, they tend to avoid operating in countries where formal institutions do not provide adequate and reliable information, because of the significant costs involved in interpreting and understanding how to conduct business in such contexts. Nevertheless, it is important to consider that some MNEs may have the ability to successfully conduct transactions in countries characterised by low institutional quality. This observation may help to explain the inconsistencies observed in previous studies regarding the institutional profile effect.

Our research aims to investigate how organisational learning modifies the underlying rationale of institutional economics, thereby serving as a boundary condition for the institutional profile effect. To fully explore the potential of organisational learning as a theoretical complement to institutional economics, we examine and compare different types of learning (Lumineau et al., 2011). This is important because MNEs may benefit from none, one or more types of institutional learning, and their effects may be complementary or substitutive. However, previous studies on institutions and international expansion have not analysed and compared the impact of different types of learning on the institutional profile effect.

We build on organisational learning research and distinguish between experiential and vicarious learning (Argote and Miron-Spektor, 2011; Levitt and March, 1988). In terms of experiential learning, we recognize that MNEs can enhance their understanding of institutions from two main sources: their home country and the foreign countries to which they have expanded subsequently (Zhou and Guillén, 2015). Regarding the home country, we propose that MNEs confronted with low-quality institutions in their home country have acquired valuable insights on how to operate in such institutional environments (Cuervo-Cazurra and Genc, 2008). This accumulated knowledge reduces the costs associated with interpreting and searching for information when these MNEs expand into another country with low-quality institutions. As a result, we contend that this source of experiential learning weakens the institutional profile effect. Within the logic of experiential learning, MNEs can also improve their institutional knowledge in other countries where they have expanded (Zhou and Guillén, 2015). MNEs that have entered foreign countries with low institutional quality possess a different knowledge base than those that have only operated in high-quality institutional contexts. We argue that the former face lower transaction costs when deciding to enter a new country with low institutional quality, which also weakens the institutional profile effect.

Second, we delve into the concept of vicarious learning to investigate whether MNEs can leverage the experience of other firms to improve their institutional knowledge (Guillén, 2002; Jiang et al., 2014; Surdu et al., 2021). Specifically, MNEs are more likely to acquire relevant knowledge by observing the behaviour of other firms with similar characteristics (Terlaak and Gong, 2008). For instance, firms that have encountered similar institutional conditions to those faced by the MNE can serve as primary sources from which valuable knowledge can be inferred through vicarious learning (Jiang et al., 2014). Consequently, the competitors that the MNE faces in at least one country may offer insights into how to operate in a new country. We propose that a higher concentration of the MNE's competitors in a host country, characterised by low

institutional quality, facilitates the acquisition of knowledge on how to cope with the increased transaction costs in such an institutional environment, thereby weakening the institutional profile effect.

We test our hypotheses in the mobile telecommunications industry, focusing on the period from 2000 to 2016. Our sample includes 100,340 observations across 60 telecom MNEs, 39 home countries, and 145 host countries. Following a comprehensive analysis of our mixed logistic regression, we have confirmed that both experiential and vicarious learning contribute to reducing the probability of MNEs operating in countries with high institutional quality. Furthermore, we conducted an additional analysis to compare the impact of these different types of learning. Our findings reveal that the influence of each learning type on the institutional profile effect is statistically similar. However, we observed differences in the institutional profile effect between MNEs that only benefit from one type of learning and those that benefit from multiple types. This outcome suggests a cumulative effect resulting from the combination of various types of institutional learning.

Our study contributes to the existing knowledge on the influence of formal institutions on the international presence of MNEs in three important ways. First, we improve the theoretical understanding of the institutional profile effect by identifying and defining its boundary conditions. In alignment with recent calls for research on the influence of institutions on firms' decisions (Aguilera and Grøgaard, 2019; Cuervo-Cazurra et al., 2019; Kostova et al., 2020), we contribute to consolidating theoretical arguments in this research area. Boundary conditions are at the heart of many theories in management (Bamberger, 2008; Busse et al., 2017; Makadok et al., 2018) and are particularly relevant in strategic management research, as its advancement relies on the development and refinement of theories that help predict organisational behaviour and firm performance (Rumelt et al., 1991). Through validating that experiential and vicarious

learning refine the theoretical foundations of institutional economics, our findings make a valuable contribution to the advancement of this field of research.

Second, our research delves into distinct types of organisational learning and compares their impact on the institutional profile effect. While previous studies have examined the role of organisational learning in understanding the influence of institutions, they have typically focused on either experiential learning (Perkins, 2014; Zhou and Guillén, 2015) or, to a lesser extent, vicarious learning (Jiang et al., 2014; Jiménez and de La Fuente, 2016). To the best of our knowledge, our study is the first to investigate and compare the effects of experiential and vicarious learning as boundary conditions for the institutional profile effect.

Third, our study contributes to prior research on institutions by using a large and diverse sample of home and host countries. The inclusion of such diversity is essential for effectively disentangling the institutional profile effect (which pertains to host country institutions) from the institutional distance effect (which reflects the differences or similarities between home and host country institutions). Unfortunately, previous institutional research has often relied on a limited range of home and host countries, which may inadvertently lead to the conflation of these effects (van Hoorn and Maseland, 2016). Through the incorporation of a varied sample of home and host countries, our study enriches our understanding of the complex relationship between institutions and the international presence of MNEs.

THEORETICAL FRAMEWORK

Institutional Economics Theory: The Institutional Profile Effect

Institutional economics conceptualises institutions as 'the rules of the game' that both guide and constrain the actions of economic agents (North, 1990). Institutions can be formal (e.g., rules, laws, and norms) or informal (e.g., culture and norms of behaviour) (North, 1990). In this

research, we focus on the impact of formal institutions on MNEs' decisions about their international presence.

The pro-market view of institutions is currently dominant in institutional economics. This view argues that the role of governments in developing formal institutions should be limited to providing an institutional framework that helps firms to transact more efficiently (for a review, see Cuervo-Cazurra et al., 2019). Specifically, institutional economics understands that institutions that provide low transaction costs are better because they contribute to market efficiency (North, 1990, 1992). Thus, the theoretical underpinning of the pro-market view of institutions is developed on the basis of transaction costs (North, 1990, 1992; Williamson, 1985, 1991). Transaction costs 'include all the costs associated with conducting a purchase, sale or other enterprise-related transaction' (Khanna and Palepu, 2010: 17), such as the cost of searching for information, the cost of negotiating with economic agents, the cost of enforcing contracts and protecting intellectual property rights, the cost of monitoring, or the cost of capital (Chan and Du, 2022; North, 1990). In addition to economic costs, transaction costs can also be related to time, such as the time it takes to build a warehouse or establish a greenfield site in a new country (Khanna and Palepu, 2010).

Institutional economics theory is based on the premise that firms possess limited knowledge of how to operate in a specific country and thus require high-quality institutions to facilitate more efficient transactions and diminish associated costs within that country. There are several reasons for this. First, high-quality institutions provide better information, which is key to reducing the transaction costs associated with searching for information and negotiating in the country (Williamson, 1998). Second, the better and more credible information that comes from high-quality institutions, makes it easier for MNEs to find suppliers of resources or other economic agents that are critical to their business activities (Meyer, 2001), which also reduces

transaction costs. Finally, high-quality institutions also provide strictly enforced intellectual property rights, which is also an important factor in reducing transaction costs in the country (Sara and Newhouse, 1995) because external enforcement and monitoring are more reliable (Bailey, 2018; Khoury and Peng, 2011). Conversely, low quality institutions hinder the smooth functioning of the country and thus increase transaction costs (Khanna and Palepu, 2010).

Since there are significant differences in the quality of formal institutions across countries (Ellimäki et al., forthcoming), there are also non-trivial differences in the level of their transaction costs (McCann et al., 2002). The quality of host country institutions is therefore an important determinant of MNEs' decisions about their international presence (Globerman and Shapiro, 2003). According to institutional economics, MNEs aim to minimise transaction costs when making decisions about foreign operations. As a result, they are more likely to establish a presence in countries where formal institutions are of higher quality. This positive correlation between the institutional quality of a host country and the probability of operating there is the baseline hypothesis of our model. Consistent with prior research, we refer to this as *the institutional profile effect* (Van Hoorn and Maseland, 2016).

The Importance of Organisational Learning in Institutional Economics

Institutional economics distinguishes between the rules of the game (i.e., institutions) and the players in the game (i.e., firms). This theory traditionally views firms as passive agents and assumes a homogeneous institutional profile effect across all firms. However, there is a growing recognition that the relationship between the quality of formal institutions in a host country and the probability of operating in that country is not necessarily one-to-one (Mudambi and Navarra, 2002). International presence decisions are certainly affected by the institutional quality of the host country (i.e., at the country level), but they are made at the firm level (Mudambi and Navarra, 2002). Therefore, we need to consider firm heterogeneity to better

understand the boundaries of institutional economics in predicting MNEs' international presence decisions. This is necessary because previous studies have already claimed that the institutional profile effect does not fit the current expansion pattern of several MNEs (Sethi et al., 2002; Williamson et al., 2013).

To improve our understanding of the institutional profile effect and its boundary conditions, our research integrates principles from institutional economics with insights from organisational learning. Institutional economics theory posits that firms possess limited knowledge when making decisions about their foreign operations and tend to prefer countries with higher institutional quality to mitigate transaction costs. However, this theory does not address how firms may be impacted differently by the assumption of limited knowledge (Lumineau et al., 2011), which could influence their inclination to operate in countries with higher institutional quality. We propose that the inclusion of organisational learning perspectives can provide valuable insights for refining the theoretical foundations of institutional economics.

The literature on organisational learning has identified two primary forms of learning: experiential and vicarious (Argote and Miron-Spektor, 2011; Levitt and March, 1988; Posen and Chen, 2013). Experiential learning pertains to knowledge gained directly by the firm through its own experience (Argote, 1999). Conversely, vicarious learning refers to the indirect acquisition of knowledge by observing the behaviour of other firms (Bandura, 1977). We start from this dichotomy in organisational learning research to present our set of hypotheses.

HYPOTHESES

Experiential Learning as a Boundary Condition of the Institutional Profile Effect

We first focus on explaining how institutional learning at home can modify the institutional profile effect. Our starting point here is that home countries with low institutional quality serve as institutional learning grounds because these environments encourage MNEs to increase their institutional learning efforts (Adomako et al., 2019). MNEs established in these countries have to operate within an institutional framework that lacks the necessary information and contract enforcement. As a result, these MNEs often take on the basic functions typically provided by formal institutions themselves (Khanna and Palepu, 2010). They develop capabilities in negotiation, information management, and informal network development to compensate for the institutional deficiencies. As a result, their institutional knowledge differs significantly from that of MNEs that do not have this experience in their home countries.

According to institutional economics, there is a higher probability that MNEs will establish a presence in a foreign country with higher institutional quality. However, the transaction cost logic underlying the institutional profile effect does not apply to MNEs from countries with low-quality institutions for several reasons. First, in countries with low institutional quality, a larger proportion of transactions are relational and take place in the informal market (Hitt et al., 2005). As a result, MNEs located in these countries possess knowledge and expertise in managing transaction costs through informal market mechanisms, such as using external partners (Tang and Buckley, 2020). Additionally, these MNEs are better equipped to select appropriate partners because it is unlikely that contractual disputes will be efficiently resolved through the courts of their home country (Cuervo-Cazurra et al., 2018). As a result, transaction costs associated with partner selection are significantly reduced for these MNEs. Second, MNEs from low institutional quality countries are accustomed to operating in environments

that may lack sufficient and clear norms (Cuervo-Cazurra and Genc, 2008). As a result, they have developed strategies to mitigate transaction costs associated with limited information availability. They have the knowledge and techniques to navigate through situations where information is scarce, enabling them to effectively reduce transaction costs associated with information asymmetry.

In contrast, MNEs located in countries with high quality institutions rely on a set of formal mechanisms in their home countries to minimise transaction costs (Khanna and Palepu, 2010). These MNEs are accustomed to operating within an institutional framework that enforces contracts and ensures the availability of clear and sufficient information (Mingo et al., 2018). As a result, they may lack the experience and knowledge necessary to operate in countries with institutional deficiencies, leading to higher transaction costs in such contexts. For instance, in the absence of knowledge on how to navigate informal markets, these MNEs would face significant information search and monitoring costs (Chan and Du, 2022; Khanna and Palepu, 2010). The transaction cost logic underlying the institutional profile effect is largely applicable to these MNEs, as their limited institutional knowledge hinders their ability to conduct efficient transactions in countries with low quality institutions. Based on these considerations, we propose the following hypothesis:

> **Hypothesis 1a:** *Low institutional quality in the home country of the MNE negatively moderates the positive effect of host country institutional quality on the probability of the MNE operating in that host country.*

The above hypothesis has taken into account the primary source of experiential knowledge: the home country. However, it is important to acknowledge that institutional knowledge is not static and solely determined by the environment in which the MNE was initially established. Institutional knowledge is subject to development and change over time (Johanson and Valhne,

1977). In industries such as mobile telecommunications, we can observe MNEs such as Vodafone, Orange, and Telenor that originate from countries with high institutional quality, but operating in countries with low institutional quality. It would be unreasonable to assume that these MNEs do not possess the knowledge to mitigate transaction costs arising from inefficient market institutions simply because they come from a country with high institutional quality. In fact, previous studies that have examined the impact of home institutions on international expansion have recognized the lack of a dynamic perspective on knowledge as a limitation. These studies acknowledge that experience gained abroad can also be an important source of institutional knowledge (Cuervo-Cazurra and Genc, 2008).

In this hypothesis, we acknowledge that MNEs can improve their institutional knowledge through international expansion (Johanson and Vahlne, 1977, 2009). We argue that foreign countries with low quality institutions serve as optimal grounds for acquiring institutional knowledge (Adomako et al., 2019; Hitt et al., 2005). Operating in these foreign countries compels MNEs to develop specific resources and capabilities to compensate for the shortcomings of formal transaction mechanisms. As a result, MNEs acquire the knowledge necessary to reduce the high transaction costs associated with low institutional quality environments. The transaction cost rationale underlying the institutional profile effect becomes less applicable to these MNEs. In other words, prior experience in foreign countries with low institutional quality reduces dependence of MNEs on the quality of host country institutions to conduct efficient transactions abroad. Consequently, this reduced dependency diminishes their probability of operating in countries with higher institutional quality. Based on this reasoning, we propose our second hypothesis as follows:

Hypothesis 1b: The MNE´s experience abroad in low institutional quality countries negatively moderates the positive effect of host country institutional quality on the probability of the MNE operating in that host country.

Vicarious Learning as a Boundary Condition of the Institutional Profile Effect

MNEs can also enhance their institutional knowledge through vicarious learning (Guillén, 2002; Levitt and March, 1988), which involves extracting relevant information by observing the actions and decisions of other firms (Levitt and March, 1988). This type of institutional knowledge complements the one discussed above. Even if the MNE lacks direct experience in dealing with low-quality institutions, it can still use vicarious learning to gain insights into how to conduct transactions in such environments (Lumineau et al., 2011). This allows the MNE to better navigate and mitigate the high transaction costs typically associated with low-quality institutional contexts.

One of the most common forms of vicarious learning involves observing the expansion behaviour of other firms (Baum et al., 2000; Guillén, 2002; Greve, 2000). However, MNEs do not extract relevant information for their international operations decisions by observing the expansion movements of any random firm (Baum et al., 2000; Jiang et al., 2014). Differences in firm characteristics or different levels of interaction between firms may explain why a MNE can gain more knowledge by observing the actions and decisions of some firms than others (Ahuja, 2000; Cohen and Levinthal, 1990).

We argue that a MNE is more likely to acquire relevant knowledge by observing the international presence decisions of firms that it faces in other countries. This is because prior interactions with these firms facilitate information exchange in subsequent common markets. Moreover, the MNE tends to acquire more knowledge by observing the behaviour of firms with

which it shares certain similarities (Xie and Li, 2016), such as a similar institutional background stemming from operating in the same countries.

Our premise is particularly valuable in countries where information is unavailable or inadequate (Jiang et al., 2014; Turschke et al., 2014), which is often the case in countries with low quality institutions. The decisions of competitors to operate in a host country with low-quality institutions provide the MNE with valuable information that can help it understand how to conduct business in that specific institutional environment, even without direct experience. In particular, the MNE can gain insights into effective practices for conducting efficient transactions by observing how its competitors behave in that country (Jiang et al., 2014). For instance, the MNE can learn from its competitors' decisions regarding the selection of local suppliers or other key economic actors, effectively reducing the costs associated with partner selection and monitoring. Moreover, by observing how rivals behave in the low institutional quality country and how they behave in the other shared markets, the MNE can obtain relevant information that significantly reduces the transaction costs resulting from the scarcity of information due to institutional deficiencies in the foreign country. Overall, this suggests that the MNE can use the institutional knowledge of its competitors to mitigate the transaction costs associated with low-quality institutions (Peprah et al., 2022; Yuan and Pangankar, 2010). Therefore, vicarious learning substantially alters the transaction cost rationale underlying the institutional profile effect.

To the extent that a greater concentration of competitors in a host country increases the potential for benefiting from vicarious learning (Jiang et al., 2014), the MNE will be more likely to operate in a host country with low-quality institutions if a larger number of its competitors have already established their presence there. Building upon this premise, we propose our final hypothesis as follows:

***Hypothesis 2:** Greater agglomeration of the MNE's competitors in a host country with low institutional quality negatively moderates the positive effect of host country institutional quality on the probability of the MNE operating in that host country.*

SAMPLE, VARIABLES, AND METHODOLOGY

Sample

We tested the hypotheses of this study in the mobile telecommunications industry from 2000 to 2016. Our primary data source was GSMA Intelligence. This source provides quarterly information on nearly every mobile operator in the world since 2000, as well as economic and demographic information for more than 200 markets worldwide. We also gathered relevant information from other sources such as the Heritage Foundation and the World Bank.

The mobile telecommunications industry is an appropriate context for our empirical analysis for two main reasons. First, mobile firms must obtain a national licence[2] or acquire a mobile operator to operate within a country. This requirement enabled us to determine the specific timeframe when telecom firms had established their presence in a host country during the observation period. Second, the telecommunications industry is a clear example of a global industry in which firms from different parts of the world have expanded abroad (Curwen and Whalley, 2006; Domínguez et al., 2021). As a result, we have a diverse sample of home and host countries in terms of institutional profiles and a great diversity of MNEs in terms of their institutional knowledge. For example, our sample includes observations on the international expansion of Vodafone. This MNE was founded in the United Kingdom, a country with high institutional quality, and was present in about 30 foreign countries from 2000 to 2016. During this period, we observed Vodafone operating in other countries with high institutional quality (e.g., Qatar or Australia) as well as in countries with much lower institutional quality (e.g., India or Ghana).

Our dataset included all possible combinations of firms and potential host countries from 2000 to 2016. We chose 2000 as the starting year because it is the first year for which GSMA Intelligence provides data on telecom firms. To construct the choice set, we followed previous studies that have examined MNEs' decisions in an international context and included all firms that operated in at least one foreign country by 2016 (Guler and Guillén, 2010; Lu et al., 2014). We considered a country as a potential destination if, at the end of our time frame, at least one telecom firm was operating within it (Albino-Pimentel et al., 2018; Gimeno et al., 2005; Holburn and Zelner, 2010; Li et al., 2018). Since the event under study was presence in a foreign country, we removed the home country from the choice set of each MNE. This resulted in a sample of 60 MNEs, 39 home countries and 145 host countries.

Dependent variable

We measured the presence of the MNE in a host country by using a dummy variable, *presence$_{ijt}$*, which took the value 1 if the MNE (*i*) was present in the host country *j* in year *t*, and 0 otherwise (Albino-Pimentel et al., 2018; Jiang et al., 2020). We considered the MNE to be present in a given country if it owned at least 10 percent of a mobile operator in that country. The International Monetary Fund uses this threshold to define foreign direct investment; therefore, it has been widely used in studies on international expansion (e.g., García-Canal and Guillén, 2008; Maggioni et al., 2019).

Independent variables

Institutional quality in the host country. Our measures of institutional quality should be consistent with the pro-market view of institutional economics, as this is the theoretical anchor of this study. Similar to previous studies, we understood pro-market institutions as those that support market efficiency and facilitate relationships among economic agents (Cuervo-Cazurra et al., 2019; Meyer et al., 2009; North, 1990). Accordingly, we measured *institutional quality$_{jt}$*

$_1$ by using the average score of the five items of the Heritage Foundation's Index of Economic Freedom (IEF) that are most closely related to market efficiency. These items are property rights, business freedom, trade freedom, investment freedom, and financial freedom (Meyer et al., 2009).[3] The average IEF score of these items was a year (t) and country (j) based measure that could range from 0 to 100, with a higher score indicating a higher quality of the host country's institutional profile.[4]

Low institutional quality at home. We used a dummy variable to measure *low institutional quality at home$_i$* (de Beule et al., 2014). This variable took the value 1 if the institutional quality in the home country of the focal MNE (i) was low, and 0 otherwise. We considered institutional quality to be low if the average IEF score in the home country during the observation period was below the mean.

Experience in foreign countries with low institutional quality. Following previous studies, we employed two alternative measures to capture the MNE's experience (Blake and Moschieri, 2017). First, *foreign experience with low institutional quality$_{it-1}$ (dummy)* was measured by a dummy variable that took the value 1 if the MNE (i) was present in at least one foreign country with low institutional quality one year prior to the observation year (t-1), and 0 otherwise (Coeurderoy and Murray, 2008; Dikova, 2009; Trapczynksli and Bonalieva, 2016). Second, we used *foreign experience with low institutional quality$_{it-1}$ (continuous)* to measure the magnitude of the MNE's experience. In this case, we added the number of foreign countries with low institutional quality where the focal MNE (i) was present one year before the observation year (t-1) (Carlsson et al., 2005; Dow and Larimo, 2011; Trapczynksli and Bonalieva, 2016). Again, we considered institutional quality to be low if the average IEF score of the foreign country was below the mean.

Agglomeration of competitors. This is a continuous measure that adds up the number of competitors of the focal MNE (i) in a host country with low institutional quality (j), one year before the observation year ($t-1$). To construct the variable *agglomeration of competitors$_{ijt-1}$*, we followed a three-step process. First, we identified the competitors by examining the countries in which the MNE was present at the end of each year and identifying firms that were simultaneously active in these countries at that time. For the purposes of this variable, these firms were identified as the competitors of the MNE. Second, we identified the low institutional quality countries in which these competitors were present in each year. Consistent with previous measures, we considered a country to have low institutional quality if its average IEF score was below the mean. Finally, we added up the number of competitors of the MNE (i) in each potential host country with low institutional quality (j) one year prior to the observation year ($t-1$). A potential host country was defined as a country in which the MNE did not yet operate.

Control variables

MNEs' decisions about their international presence are subject to a variety of country, industry and firm-level characteristics. Thus, we included several control variables to isolate the moderating effect of experiential and vicarious learning on the institutional profile effect.

Regarding country-level characteristics, we included the variable *GDP per capita$_{jt-1}$* to account for the wealth of each host country (Hernández and Nieto, 2015; Jiang et al., 2014; Punt et al., 2021). We obtained this variable from the World Bank. We also accounted for *potential income$_{jt-1}$* to better capture the economic attractiveness of the host countries (Gimeno et al., 2005). Specifically, we examined the average price that was charged by mobile operators in each host country (j) one year before the observation year ($t-1$). Like previous studies conducted in this industry, average prices were estimated by utilizing the average revenue per user (Abolfathi et al., 2022). We obtained this measure from GSMA Intelligence. We also included

the variable *population density$_{jt-1}$* to account for the number of potential customers relative to the size of the host country (*j*). We collected information on this variable from GSMA Intelligence, which measures it as the total population of the country at the end of the year divided by the land area of that country in square kilometers (GSMA Intelligence, 2019). Following previous studies, we included the variable *political constraints$_{jt-1}$* to control for the level of host country policy risk (Blake and Moschieri, 2017; Henisz and Delios, 2004; Holburn and Zelner, 2010). We obtained this variable from the POLCON V database (Henisz, 2002). We also accounted for the presence (or absence) of cultural ties between the home and the host countries by including the variable of *cultural ties$_{jk}$*. A shared colonial past leads to a commonality of cultural attributes, such as language and religion across countries (Cuervo-Cazurra and Genc, 2008), and is thus a proxy for cultural similarity. Therefore, we used a binary variable that took the value 1 when the home (*k*) and the host (*j*) countries had a colonial–coloniser relationship (or vice versa), and 0 otherwise (Albino-Pimentel et al., 2018). We also included the variable *geographic distance$_{jk}$* to control for the effect of physical distance (Albino-Pimentel et al., 2018). Specifically, we used a dummy variable that took the value 1 if the home (*k*) and the host (*j*) countries were in different geographic regions in accordance with the United Nations classification, and 0 otherwise.

For industry-specific characteristics, we followed previous studies in the mobile telecommunications industry and included the variable *market penetration$_{jt-1}$* to capture the penetration rate of mobile services in the host country (Gimeno et al., 2005). We obtained this variable from GSMA Intelligence, which measures it as the total number of mobile users in the country divided by the total population. We included the *Herfindahl index$_{jt-1}$* to control for the degree of concentration in the host country (*j*). Additionally, we incorporated the variable *market size$_{jt-1}$* in our analysis to account for the magnitude of telecommunications services in the host country (*j*). This variable was included as a control, as larger countries typically exhibit

greater appeal to foreign firms (Nachum et al., 2008). We obtained this variable from GSMA Intelligence, which measures it as the total number of people in the country who have subscribed to mobile services at the end of the year (GSMA Intelligence, 2019).

Finally, we added some firm-level variables. First, we recognized that larger firms tend to have more resources to expand abroad (Jung, 2010) and thus can more easily mitigate the negative effects of unfamiliarity with the institutional profile of a foreign country (Nachum et al., 2008). We measure *firm size*$_{it-1}$ by considering the number of subscribers of each mobile operator (Domínguez et al., 2021; Garrido et al., forthcoming). Specifically, GSMA Intelligence measures the number of subscribers by considering the total number of mobile connections registered on the mobile operator's network. Second, we included *firm performance*$_{it-1}$ because better performing firms can more easily enter new countries (Zhou and Guillén, 2015). We quantified this variable using the EBITDA margin variable sourced from GSMA Intelligence. Third, we included *firm global footprint*$_{it-1}$ to account for the MNE's experience in the internationalization process (Eriksson et al., 1997; Johanson and Vahlne, 1977; Waqar and Ma, forthcoming). We measured this variable by adding the total number of countries in which the focal MNE (*i*) was present one year prior to the observation year (*t-1*). Finally, we included the variable *firm age*$_{it-1}$ to account for the possibility that an older MNE may be able to be present in more foreign countries than younger MNEs (Johanson and Vahlne, 1977). Nevertheless, the presence of organisational inertia may decrease the likelihood of older firms expanding internationally (Guillén, 2002). We quantified this variable by adding the number of years from the date of founding of the MNE (*i*) to one year prior to the observation year (*t-1*). As explained in the description of each variable, we included all predictor variables lagged by one year to avoid problems of simultaneity or reverse causality (Geogallis et al., 2022).

Descriptive Statistics

Tables 1 and 2 show the descriptive statistics and correlations. As shown in Table 2, some correlations yielded values that could be considered high. However, they were within the expected range. For example, one would expect the correlation between the variables *firm global footprint$_{it-1}$* and *foreign experience with low institutional quality$_{it-1}$* to be high because MNEs with a greater international presence are more likely to have expanded into foreign countries with low institutional quality. We performed a variance inflation factor (VIF) analysis to identify multicollinearity problems among the variables included in this study. The VIF values obtained in all the estimated models were below the suggested threshold of 10 (Neter et al., 1989). Thus, we ruled out the presence of multicollinearity problems in our analysis.[5]

Insert Tables 1 and 2 here

Methodology

Our analysis focuses on MNEs' decisions about their international presence. These decisions can be influenced by variables operating at multiple levels, including country-level and firm-level factors. Multilevel analysis is suitable for dealing with hierarchical data structures such as ours (Hernández et al., 2018). In our study, two options were possible: either the MNE was present in the potential host country during the observation period or it was not. We used a mixed logistic model to capture these alternatives in a hierarchical data structure. This model is a generalised version of the conditional logit model that has been used in recent studies on international expansion (see, for recent examples, Albino-Pimentel et al., 2018; Hernández et al., 2018; Jiang et al., 2020). An important characteristic of mixed logistic models is that the coefficients do not represent marginal effects and therefore cannot be used to infer the true

relationship between variables (Wiersema and Bowen, 2009). Additional analyses, such as graphical representations, are required to properly interpret the results reported in these models (Hoetker, 2007). Therefore, we estimated coefficient regressions and calculated and depicted marginal effects to properly interpret our results.

RESULTS

Main results

Table 3 presents the coefficients estimated by mixed logistic regressions across different model specifications. Model 1, our baseline model, includes *institutional quality$_{jt-1}$* and control variables. Model 2 includes *low institutional quality at home$_i$*, testing Hypothesis 1a. Hypothesis 1b is tested in models 3a and 3b. Model 3a includes *foreign experience with low institutional quality$_{it-1}$ (dummy)*, while model 3b adds *foreign experience with low institutional quality$_{it-1}$ (continuous)*. Model 4 includes *agglomeration of competitors$_{ijt-1}$* to test Hypothesis 2. Finally, models 5a and 5b, our full models, include the three boundary conditions. The difference between these two models lies in the measure used to test the effect of foreign experience. Model 5a incorporates the dummy variable to test the effect of foreign experience, while model 5b examines the effect of the continuous variable. As can be seen at the bottom of Table 3, models 5a and 5b are preferable to other specifications and thus warrant our focus.

Insert Table 3 here

Model 5a (Table 3) shows that the coefficient of *institutional quality$_{jt-1}$* is positive and statistically significant ($\beta = 0.026$; $p = 0.000$). To better interpret this result, we calculated the marginal effect of *institutional quality$_{jt-1}$* at the mean of all variables included in model 5a. We found that the marginal effect of this variable was positive and statistically significant (*dy/dx=*

0.023; $p = 0.000$). This result supports the institutional profile effect. In general, MNEs are more likely to be present in foreign countries with higher institutional quality.

The coefficient of *low institutional quality at home$_i$* in model 5a of Table 3 is positive and statistically significant ($\beta = 0.248$; $p = 0.000$). Conversely, the coefficient of the interaction of *low institutional quality at home$_i$* and *institutional quality$_{jt-1}$* is negative and statistically significant ($\beta = -0.063$; p=0.000). To accurately interpret interactions in logistic models, additional analyses are necessary. We first computed the marginal effect of *institutional quality$_{jt-1}$* for the two values of the moderator (Hoetker, 2007; Wiersema and Bowen, 2009), obtaining a positive value when home institutional quality is high (*dy/dx*= 0.052; $p = 0.000$) and a negative value when it is low (*dy/dx*= -0.012; $p = 0.000$).

We then plotted the moderating effect of the institutional knowledge acquired at home across the full range of *institutional quality$_{jt-1}$* values in Figure 1. This figure contains two lines: a solid line and a dashed line. The dashed line corresponds to MNEs from countries with high institutional quality, while the solid line represents MNEs originating from countries with low-institutional-quality. The non-overlapping confidence intervals indicate that the effect of the host country's institutional quality on the probability of being present in that country is significantly different for the two values of *low institutional quality at home$_i$*. The slopes of the lines indicate that MNEs that encounter high-quality institutions at home are more likely to operate in foreign countries with high-quality institutions (dashed line), while MNEs from countries with low institutional quality require institutions of a lower quality in the host country when deciding on their international presence (solid line). These results, similar to those in model 5b, support Hypothesis 1a.

Model 5a shows that the coefficient of *foreign experience with low institutional quality*$_{it-1}$ is positive (β = 1.070; p =0.000) and that the coefficient of the interaction with *institutional quality*$_{jt-1}$ is negative (β = -0.014; p = 0.007). Similarly, the coefficient of *foreign experience with low institutional quality*$_{it-1}$ in model 5b is positive (β = 0.018; p =0.000), and the coefficient of the interaction term is negative (β = -0.002; p = 0.000). To properly interpret these results, we computed the marginal effects of *institutional quality*$_{jt-1}$ at two representative values of the moderator (Hoetker, 2007; Wiersema and Bowen, 2009). We found that the marginal effect of *institutional quality*$_{it-1}$ decreases as the firm gains experience with low institutional quality abroad. In the case of the experience dummy variable, the average marginal effect of *institutional quality*$_{it-1}$ was 0.0356 for MNEs with no prior experience (p = 0.000), while it was 0.0188 for experienced MNEs (p = 0.000). Similarly, for a low value of the continuous measure of experience (i.e., one standard deviation below the mean), the average marginal effect of *institutional quality*$_{it-1}$ was 0.029 (p = 0.000), and for a high value of the moderator (i.e., one standard deviation above the mean), the value was 0.026 (p = 0.000). We also plotted the contingent effect of this moderator for the two alternative measures in Figure 2.

The left side of the figure illustrates the impact of the moderator when the dummy variable is used. In this scenario, the solid line represents MNEs without prior experience in managing low institutional quality abroad, while the dashed line represents MNEs with some experience. As shown in this side of the figure, the confidence intervals of the two lines do not overlap, except for very high values of *institutional quality*$_{it-1}$. Thus, the effect of the institutional profile is statistically different between inexperienced and experienced MNEs.[6] The figure also shows

that the probability of being present in a foreign country with low-quality institutions is higher for experienced firms. This finding supports the notion that prior experience in such environments acts as a buffer against the institutional profile effect. Hence, we found support for Hypothesis 1b when employing the dummy variable to measure this moderator.

The right-hand side of Figure 2 shows the contingent effect of *foreign experience with low institutional quality$_{it-1}$ (continuous)*. Here, the lines represent the effect of the institutional profile for two representative values of the moderator: one standard deviation below and above the mean (Aiken and West, 1991). Specifically, the solid line refers to MNEs with little experience in foreign countries with low institutional quality (i.e., one standard deviation below the mean) and the dashed line refers to MNEs with a high level of such experience (i.e., one standard deviation above the mean). The confidence intervals of the solid and dashed lines overlap for medium to high levels of *institutional quality$_{it-1}$*. This implies that MNEs with low and high levels of experience in managing low-quality institutions abroad have a similar probability of operating in foreign countries with high-quality institutions. However, we observe that MNEs with extensive experience in foreign countries characterised by low institutional quality exhibit a higher likelihood of establishing a presence in host countries with low institutional quality. As a result, our argument in Hypothesis 1b is supported when using the continuous variable.

Regarding the contingent effect of vicarious experience, model 5a shows that the coefficient of *agglomeration of competitors$_{ijt-1}$* is positive ($\beta = 0.566$; $p = 0.000$) and that the coefficient of the interaction term between this variable and *institutional quality$_{jt-1}$* is negative and statistically significant ($\beta = -0.007$; $p = 0.000$). Similar results are obtained in model 5b. Again, we conducted additional analyses to properly interpret this moderating effect. First, we computed the marginal effects of *institutional quality$_{jt-1}$* for two representative values of the moderator:

one standard deviation below/above the mean (Aiken and West, 1991; Wiersema and Bowen, 2009). Our results show that the average marginal effect is lower the more competitors of the MNE operate in countries with low institutional quality. Specifically, the average marginal effect of *institutional quality$_{it-1}$* is 0.0006 when no competitor is present in such countries ($p = 0.000$) and 0.0004 when two competitors are present in host countries with low institutional quality ($p = 0.028$).

Insert Figure 3 here

Figure 3 depicts the institutional profile effect at the two representative values of this moderator. In this figure, the solid line represents a situation in which there are few competitors of the MNE in a host country with low institutional quality, and the dashed line refers to a situation in which there are many competitors. We observe that the confidence intervals of the two lines do not overlap. This confirms the importance of this moderator for a full understanding of the institutional profile effect. We also observe that the dashed line is above the solid line. Consistent with our expectations, the MNE is more likely to operate in a foreign country with low institutional quality if a larger number of its competitors are present there. Thus, we find support for Hypothesis 2.

Additional Analysis

Having concluded that the different types of learning serve as buffers against the institutional profile effect, we now focus on examining the distinctions between these different types of learning. To do this, we conducted an additional analysis. In this analysis, we created a set of dummy variables that distinguish five situations according to the types of institutional learning from which MNEs benefit. The first situation refers to MNEs that cannot benefit from any source of learning, either experiential or vicarious, about how to operate in countries with low-

quality institutions. This group was used as the control group in the empirical analysis and was identified by the variable *no knowledge $_{it-1}$*. This variable takes the value 1 for MNEs (i) that could not benefit from any type of learning in the year preceding the observation year (*t-1*). Otherwise, it takes the value 0.

The variable *home experience$_{it-1}$* was used to identify a second group of MNEs that only benefited from knowledge acquired at home. This variable takes the value 1 for MNEs (i) coming from a country with low institutional quality that did not benefit from the other types of learning in the year preceding the observation year (*t-1*).

We used the variable *foreign experience$_{it-1}$* to identify a third group of MNEs that only benefit from the knowledge acquired abroad. This variable takes the value 1 for MNEs (i) that came from a country with high institutional quality, did not benefit from vicarious learning, but operated in at least one foreign country with low institutional quality in the year preceding the observation year (*t-1*).

The fourth group refers to MNEs that did not benefit from any source of experiential learning but benefited from vicarious learning. Here, we used the variable *vicarious experience$_{it-1}$*, which takes the value 1 for MNEs (i) that did not operate in low institutional environments, either at home or abroad, but were able to benefit from the knowledge gained by the agglomeration of their competitors in these environments in the year preceding the observation year (*t-1*).

Finally, we created the variable *various types of experience$_{it-1}$* to account for a situation in which MNEs had access to different types of learning at the same time. Thus, the variable takes the value 1 for MNEs (i) that benefited from more than one type of learning in the year preceding the observation year (*t-1*).

The results of this additional analysis are presented in Table 4. We included the variable *institutional quality$_{jt-1}$*, the four dummy variables described above (excluding the control group), the interactions between these variables and *institutional quality$_{jt-1}$*, and the same control variables as in the main estimations.

Insert Table 4 here

In addition to presenting the estimated coefficients, we have incorporated two additional tables in order to account for the unique characteristics of the mixed-logistic models and facilitate the comparison of the effects associated with each type of learning. Table 5 shows the marginal effect of *institutional quality$_{jt-1}$* for the different groups of MNEs considered in this additional analysis. Table 6 presents the results of the tests that we conducted to compare the impact of each type of learning on the institutional profile effect. In order to better understand the results obtained in this additional analysis, we now comment on the main conclusions drawn for each type of learning. To do so, we will simultaneously use the information contained in Tables 4–6.

Insert Table 5 here

Insert Table 6 here

Table 4 shows that the coefficient of *institutional quality$_{jt-1}$* is positive and statistically significant ($\beta = 0.146$; $p = 0.000$). We calculated the marginal effect of *institutional quality$_{jt-1}$* at the mean of all the variables included in Table 4 and found that it is positive and statistically significant ($dx/dy = 0.023$; $p = 0.000$). This result supports the institutional profile effect.

Table 4 also shows that the coefficient of the interaction term between *institutional quality$_{jt-1}$* and *home experience$_{it-1}$* is negative and statistically significant (β = -0.178; p =0.013). In Table 5, we see that the average marginal effect of *institutional quality$_{jt-1}$* for MNEs that had no experience with low institutional profiles is 0.146 (p=0.000), while the value is negative but not statistically significant for MNEs that had only learned how to operate in low institutional profile countries at home (*dy/dx*= -0.031; *p* > 0.10). As shown in Table 6, we confirmed the statistically significant difference between MNEs lacking knowledge on operating in countries with low institutional profiles (i.e., the control group) and MNEs possessing prior experience with low-quality institutions in their home countries (contrast= -0.177; p=0.013).

Table 4 shows that the coefficient of the interaction term between *institutional quality$_{jt-1}$* and *foreign experience$_{it-1}$* is also negative and statistically significant (β = -0.085; p =0.000). As shown in Table 5, the average marginal effect of *institutional quality$_{jt-1}$* for MNEs that acquired knowledge on dealing with low-quality institutions abroad is 0.061 (*p*=0.000). Table 6 compares MNEs with foreign experience to inexperienced MNEs, revealing that the institutional profile effect is different for these two groups (contrast= -0.085, p=0.000). By comparing the average marginal effect of *institutional quality$_{jt-1}$* for these two groups, we observe an 0.085 reduction in the marginal effect for MNEs with foreign experience. However, we do not find a statistically significant difference in the institutional profile effect between MNEs with domestic experience and those with foreign experience (contrast= 0.092, p=0.185).

In Table 4, we also find a negative and statistically significant coefficient for the interaction term between *institutional quality$_{jt-1}$* and *vicarious experience$_{it-1}$* (β = -0.077; p =0.001). In this case, the marginal effect of *institutional quality$_{jt-1}$* for MNEs that only benefit from vicarious learning is 0.069 (*p*=0.000). Compared to MNEs without any type of learning, the average marginal effect is reduced by 0.077. Table 6 also shows that the institutional profile effect is

statistically different for MNEs without institutional learning and those that benefit from vicarious learning (contrast=-0.077; p=0.001). However, we do not find significant differences in the institutional profile effect between MNEs with home experience, foreign experience, and vicarious experience.

Finally, Table 4 shows that the coefficient of the interaction term between *institutional quality*$_{jt-1}$ and *various types of experience*$_{it-1}$ is negative and statistically significant (β = -0.163; p =0.000). As shown in Table 5, the average marginal effect of *institutional quality*$_{jt-1}$ for MNEs that have benefited from more than one type of institutional learning is -0.017 (p=0.000). When comparing the values for MNEs with no knowledge of low-quality institutions to those with multiple types of institutional learning, we observe a more substantial reduction in the marginal effect of *institutional quality*$_{jt-1}$. In fact, the average marginal effect no longer remains positive when MNEs possess various types of learning on how to deal with low-quality institutions. Table 6 presents interesting results when comparing the institutional profile effect across the five groups. We find that the institutional profile effect for MNEs that benefit from multiple types of learning significantly differs from the institutional profile effect for all other groups of MNEs, except for the group that only benefits from home country experience. These results suggest that home country experience is the source that has the greatest impact on the importance that MNEs attribute to the institutional quality of host countries when making decisions about their international presence. In fact, when comparing the effects between MNEs with some type of learning (i.e., groups 1, 2, 3, and 4) and those with none type (i.e., control group), the highest value is observed for home experience.

Robustness Checks

We checked the consistency of our results by applying several robustness tests. First, we used two alternative measures to test Hypothesis 1a (see Table 7).[7] On the one hand, we used the

median, rather than the mean, to distinguish between home countries with low and high institutional quality.[8] For this alternative measure, the variable *low institutional quality at home$_i$ (median)* takes the value 1 if the average IEF score during the observation period is below the median, and 0 otherwise. Models 1 and 2 in Table 7 report the estimation for this measure. On the other hand, we used a continuous measure to capture the institutional quality at home. Specifically, we applied the same logic as in the case of the host country's institutional profile and took the five IEF items that are most closely related to the pro-market view of institutions (Meyer et al., 2009). Thus, *low institutional quality at home$_{it-1}$ (continuous)* was measured as the annual average score of these five IEF items in the home country. Models 3 and 4 (Table 7) show the estimation results for this second alternative. These results demonstrate the stability of our findings regarding Hypothesis 1a, as they remain consistent with the results obtained using the primary measure (Table 3).[9]

Insert Table 7 here

Second, we employed an alternative measure to test Hypothesis 2 (Table 8). This alternative measure is grounded on the premise that MNEs are prone to acquiring valuable institutional knowledge from firms operating in their home countries (Tan and Meyer, 2011). This is primarily due to the fact that MNEs have been operating in their home countries for a longer period of time, thereby increasing the likelihood of observing competitor behaviour in these countries over an extended timeframe. Furthermore, MNEs tend to place particular attention to their home countries, which can lead to a higher absorption of information from firms operating within these countries. This facilitates information exchange and knowledge inference, increasing the likelihood of vicarious learning. To test Hypothesis 2, we included the variable *agglomeration of home competitors$_{ijt-1}$* in models 1 and 2 of Table 8. To calculate this variable, we first identified the firms that the MNE faced in its home country. For the purposes of this

variable, all firms that competed with the focal MNE in its home country were considered as competitors. We then examined the host countries into which these competitors operated one year prior to the observation year, and calculated the total number of home competitors of the focal MNE in each host country during that year. Thus, *agglomeration of home competitors$_{ijt-1}$* is the total number of home competitors of the MNE (*i*) present in a given host country (*j*) one year prior to the observation year (*t-1*). The results obtained using this alternative variable are similar to those reported in Section 5.1.

Insert Table 8 here

In models 3 and 4 of Table 8, we present two additional analyses aimed at assessing the robustness of Hypothesis 2. These models enable us to explore factors other than vicarious learning that could potentially explain the likelihood of MNEs to operate in a host country where other firms have already established their presence. Specifically, model 3 incorporates *agglomeration of firms$_{jt-1}$* as a new control variable in our model. This variable is measured as the total number of firms operating in the host country (*j*) one year prior to the observation year (*t-1*).

The reason behind incorporating this variable is to account for two alternative explanations to vicarious learning: mimetic entries and oligopolistic reactions (Gimeno et al., 2005; Haveman, 1993). Mimetic entry arises when firms attempt to mitigate the uncertainty linked to international expansion by imitating the international presence of other firms. As a result, prior decisions made by industry players may serve as models to emulate, with the expectation that a specific host country will gain greater legitimacy as more firms operate there (Haveman, 1993).

An oligopolistic reaction represents a prevalent bandwagon effect in oligopolistic industries, such as mobile telecommunications. Within this framework, firms may feel compelled to mimic the internationalization strategies of other industry players in order to safeguard their global competitive position from potential erosion (Ito and Rose, 2002). This rationale implies that an increased presence of industry players in a particular location increases the probability of the MNE operating within the same country.

If one of these two alternative explanations is behind the main results obtained for Hypothesis 2, then we should observe that *agglomeration of competitors$_{ijt-1}$* does not impact the institutional profile effect when *agglomeration of firms$_{jt-1}$* is included as a control variable. As shown in model 3 (Table 8), the coefficient of the interaction between *agglomeration of competitors$_{ijt-1}$* and *institutional quality$_{jt-1}$* is negative and statistically significant after controlling for the agglomeration of firms. We depicted the moderating effect of *agglomeration of competitors$_{ijt-1}$* in model 3 of Table 8 (not shown) and obtained a similar representation as in Figure 3. In model 3 of Table 8, we also found that the coefficient of *agglomeration of firms$_{jt-1}$* was negative and statistically significant, implying that MNEs were less likely to operate in host countries where more industry players were already operating. Taken together, these findings provide further robustness to the results reported in Section 5.1.

Model 4 in Table 8 accounts for the possibility that MNEs were more likely to follow the international expansion of their rivals in an attempt to benefit from the mutual tolerance derived from multimarket contact (Baum and Korn, 1996; Haveman and Nonemaker, 2000). Specifically, we added *firm average MMC$_{it-1}$* as a new control variable in this model. We measured this variable as the total number of multimarket contacts that the MNE (*i*) had one year prior to the observation year (*t-1*) divided by the total number of multimarket rivals of this MNE in that year. The effect of multimarket contact was positive, suggesting that MNEs seek

out their multimarket competitors. After controlling for this competitive factor, our findings regarding Hypothesis 2 remained consistent with the explanations provided in Section 5.1. This reinforces our reasoning about vicarious learning.

Finally, we considered the diversity of entry modes in our sample. Our theoretical reasoning focused primarily on the international presence of MNEs through greenfield investments. However, in some cases, telecom firms expand abroad by acquiring a mobile operator in a new country. In such a scenario, it is plausible that the acquired firm could transfer institutional knowledge to the acquiring firm, potentially influencing the institutional profile effect. Unfortunately, we did not have information on the specifics of knowledge transfer between firms to enrich our empirical analysis. Nonetheless, we were able to replicate the analyses presented in Table 3 for firms that expanded internationally through cross-border acquisitions. The results of this additional analysis are shown in Table 9. As can be seen, the estimation coefficients are quite similar to those reported in the main results section. The more relevant difference is that in model 5b of Table 9 the coefficient of the interaction between *institutional quality$_{jt-1}$* and *foreign experience with low institutional quality (continuous)$_{it-1}$* is not statistically significant, as it was in the main estimations (model 5b of Table 3). We plotted this effect (not reported) and found that there are no statistically significant differences in the institutional profile effect between MNEs with low and high levels of experience with low-quality institutions abroad. Apart from this variable, the graphical representation of the remaining effects presented in Table 9 yielded graphs similar to those depicted in Figures 1–3.

Insert Table 9 here

DISCUSSION AND CONCLUSIONS

Drawing on institutional economics, this study focuses on clarifying the impact of formal institutions on MNEs' decisions about their international presence by exploring the boundary conditions of the institutional profile effect. In particular, we have answered the following question: *What types of learning reduce the probability of MNEs operating in countries with high institutional quality?* In doing so, we help to reconcile, both theoretically and empirically, the discrepancies found in previous studies.

In general, we find that high-quality institutions in a host country increase the likelihood that MNEs will operate in that country. This finding supports the theoretical rationale of institutional economics and provides new evidence for the institutional profile effect. According to this theory, MNEs seek to reduce transaction costs abroad by operating in countries where institutions provide efficient market mechanisms (Williamson, 1998). Therefore, higher institutional quality is preferred when deciding on an international presence. Comparative institutional advantages therefore exist (Martin, 2014).

However, we find that the probability of operating in foreign countries with high institutional quality is lower for MNEs with knowledge, either experiential or vicarious, of how to operate in countries with low institutional quality. This finding suggests that the inconsistencies or contradictions regarding the impact of formal institutions on the international presence of MNEs can primarily be attributed to varying levels of institutional knowledge among MNEs. Contrary to the theoretical underpinnings of institutional economics, the level of transaction costs in a given country is not the same for all MNEs, but it is highly dependent on the MNE's institutional knowledge. As Aguilera and Grøgaard (2019) argue, it is necessary to go beyond the assumption that institutions influence MNEs' decisions homogeneously and to explore the interactions between institutions and firm-level factors much more deeply. We have explored

these interactions by analysing how different types of institutional learning (i.e., the firm-level factor) modify the institutional profile effect. Moreover, we have compared the three moderating effects.

Our results confirm that the institutional knowledge acquired in the home country is crucial for understanding how the MNE assesses the institutional profile of a particular country when deciding on its international presence (Ang et al., 2015; Cuervo-Cazurra and Genc, 2008). MNEs from low quality institutional environments acquire knowledge on how to deal with the high transaction costs associated with these environments. As a result, the transaction cost rationale of institutional economics does not apply to these MNEs. Because they know how to transact efficiently in markets with inefficient institutions, these MNEs do not need high-quality institutions to reduce transaction costs. The institutional profile effect is weakened for them. Indeed, the evidence from Figure 1 suggests that these MNEs can cope with higher (rather than lower) transaction costs in countries with high institutional quality.

This finding is consistent with institutional distance research; however, we advance previous studies on this topic in three main ways. First, most institutional distance research addresses issues other than decisions of MNEs about their international presence. Notably, Kostova et al. (2020: 478) found that of the relationships included in their meta-analysis, '50% were on performance, closely followed by entry mode (full or partial ownership) (39%)', and that studies of firms' decisions about international presence, such as their choice of location or mode of establishment, were rather limited. Second, these authors suggest that previous research on institutional distance may lack theoretical rigor, emphasizing the need to strengthen its theoretical foundations. Our study contributes to this by drawing on institutional economics and refining the theoretical argument on the impact of home country institutional knowledge on the institutional profile effect. Third, previous studies have argued for the need to disentangle the

institutional profile effect from the effect of institutional distance (Kostova et al., 2020; Van Hoorn and Maseland, 2016). Achieving this requires a diverse sample of both host and home countries (Van Hoorn and Maseland, 2016). In such a diverse sample, the effect of institutional distance appears less clear. Kostova et al.'s (2020) meta-analysis concludes that the relationship between institutional distance and foreign location choice is generally negative and statistically significant. However, this relationship is not statistically significant in studies that include many home and host countries. We contribute to the empirical consolidation of institutional distance research by demonstrating that, using a large sample of both home and host countries, MNEs from low-quality institutional environments are more likely to be present in countries with low-quality institutions.

To capture the full effect of experiential learning, we have also considered the knowledge acquired in the foreign countries where the MNE has expanded (Perkins, 2014; Zhou and Guillén, 2015). Our results suggest that this knowledge refines the theoretical rationale of institutional economics in relation to the institutional profile effect. MNEs operating in foreign countries with low-quality institutions encounter inefficient formal mechanisms and thus tend to develop institutional capabilities to substitute for these mechanisms themselves. As a result, these MNEs become less dependent on high-quality institutions for efficient transactions abroad. Therefore, competitive institutional advantages depend not only on where the MNE originated (Martins, 2014) but also on its international expansion pattern. Our research suggests that, in comparison to MNEs lacking knowledge of low-quality institutions, MNEs that have acquired knowledge both domestically and internationally demonstrate reduced concern regarding the quality of host country institutions when making decisions regarding their international presence. Contrary to the assumption of many studies on institutional distance, firms from high-quality institutional environments do not always lack knowledge about how to operate in countries with low-quality institutions. These firms can

learn about such institutions through international expansion. In fact, comparing the impact of the two experiential learning sources (i.e., home and abroad), we find no statistically significant differences. Thus, the moderating effect of knowledge acquired at home is similar to that of knowledge acquired abroad.

Finally, this research has recognized the importance of vicarious learning in decisions about international presence (Jiang et al., 2014). Consistent with previous studies (Lumineau et al., 2011), our results show that MNEs can use vicarious learning when they lack direct experience and information about low-quality institutions. Once again, in comparison to an MNE with no knowledge of low-quality institutions, MNEs that benefit from vicarious learning about such institutional environments exhibit reduced concern regarding the quality of host country institutions when making decisions about international operations. However, when we compare the moderating effect of vicarious learning with the two sources of experiential learning, we find that there are no statistically significant differences. This suggests that all types of learning have similar effects on the institutional profile effect. Thus, MNEs can compensate for the lack of experiential knowledge of low-quality institutions by learning from observing their competitors in these institutional environments.

To ensure the accuracy of our theoretical reasoning, we conducted additional analyses to address alternative explanations for the observed effect attributed to vicarious learning. These alternative explanations are particularly relevant in the context of this study, as highlighted by Gimeno et al. (2005). Specifically, we considered two alternative explanations: mimetic entry and oligopolistic reactions. The first refers to inter-organisational mimicry in decisions about where to operate abroad (DiMaggio and Powell, 1983; Henisz and Delios, 2001). This mimicry is intended to reduce uncertainty and legitimise the decision to operate in the host country. The second is the oligopolistic reaction, which leads firms to operate in the same countries as other

firms (especially domestic rivals) to avoid eroding their global competitive position (Hennart and Park, 1994; Knickerbocker, 1973).

Our study also contributes to a better understanding of the relationship between strategy and organisation. A crucial aspect of strategy is to determine the international markets in which a firm should compete to maximise value creation. The correct identification of these countries is not a simple matter and depends on a number of factors. Our work corroborates that formal institutions are a highly important factor in this dimension of the strategy. However, to truly grasp the influence of formal institutions on the selection of international markets, it is necessary to pay attention to the organisation itself. Specifically, we highlight the importance of organisational learning (both experiential and vicarious) and contribute to the understanding of how this learning affects the international expansion strategy of MNEs.

This paper has several implications for managers. As shown, low institutional quality (in isolation) is not something that firms should necessarily avoid when deciding where to operate abroad. While the institutional environment may facilitate business activity, managers should pay attention to the knowledge and capabilities of their firms and, based on this, anticipate the impact of institutions on their business. In this sense, our work also reinforces the idea that the internationalisation process offers many valuable learning opportunities, allowing firms to enrich their initial endowment of institutional knowledge. Updating this knowledge through internationalisation may be particularly relevant in the current globalized context, in which MNEs face foreign rivals from institutionally very different countries. However, this does not mean that firms with fewer resources to operate abroad can hardly increase their institutional

knowledge. In this case, observing the decisions of others may emerge as an optimal way for smaller firms to upgrade their knowledge endowment.

The present study has some limitations that may offer opportunities for future research. First, we have refined the theoretical rationale of institutional economics by exploring how organisational learning alters the institutional profile effect. However, other theories in management and political science may also explain why some MNEs operate in countries with low-quality institutions, such as local alliances (Li et al., 2012; Lojacono et al., 2017), obsolescent bargaining power (Moschieri et al., forthcoming), or risk management (Tang and Buckley, 2020). Future studies could use these alternative theories to complement our research and sharpen the theoretical reasoning underlying the institutional profile effect.

Second, our measure of institutional knowledge takes into account the knowledge of the MNE as a whole, but not the knowledge of individuals within the MNE. We cannot neglect the fact that MNEs are managed by people who possess some knowledge that can help their firms to operate abroad. Indeed, some studies have shown that the way in which individuals in the top management teams (TMTs) perceive institutions, and their experience in certain institutional contexts, explain the global strategy of their firms (Tuschke et al., 2014; Weber et al., 2020). This interesting point could be examined further, and the TMTs' institutional knowledge could be incorporated as a contingent factor in the institutional profile effect. In line with this idea, our sample includes observations that are associated with different modes of entry. Although a further analysis has confirmed the robustness of our results, we cannot overlook that acquisitions may involve some transfer of institutional knowledge between the acquiring firm and the acquired firm. Unfortunately, we did not have micro-level data to address this issue.

Future research could use a more fine-grained analysis that takes into account these institutional knowledge transfers in cross-border acquisitions.

Third, we cannot overlook the specificities of the mobile telecommunications industry. As García-Canal and Guillén (2008) have noted, regulated industries have certain characteristics that lead them to be more influenced by formal institutions. Future studies could apply the model proposed in this study to a sample of MNEs belonging to different sectors, which would increase the generalisability of our results.

Finally, we acknowledge that formal institutions and institutional knowledge influence many business decisions. This study lays the groundwork for future research that could apply our integrative framework of MNEs' institutional knowledge to other relevant decisions in the internationalisation process.

NOTES

[1] Institutional economics and institutional theory are different approaches to analysing the impact of institutions on firm behaviour. Institutional theory is a more general concept that encompasses several theoretical perspectives. It includes institutional economics (North, 1990; Williamson, 1985), the sociological approach (DiMaggio and Powell, 1983; Scott, 1995), the political approach (March and Olsen, 1983; Olson, 1965), and the psychological approach to institutions (Hofstede, 2001; Schwartz, 1992). Given that institutional economics is one of the streams that is most closely related to MNEs' international presence and is the most widely used to analyse this topic (Donnelly and Manolova, 2020), this paper uses it as a theoretical anchor.

[2] National authorities tend to grant licences to operate in their markets with national coverage. As a result, in this study, each market is a country.

[3] We used the average score of these five items of the IEF in all other measures related to institutional quality.

[4] Institutional economics views institutions as constraints on the behaviour of economic actors (North, 1990) and argues that governments should intervene only to ensure the efficiency of market mechanisms, leaving markets to operate more freely. Therefore, according to institutional economics, higher scores on the IEF lead to higher quality institutions.

[5] In the estimated models, we mean centred the main explanatory variables to reduce the multicollinearity caused by the interaction terms associated with moderating effects (Aiken and West, 1991).

[6] However, the confidence intervals of the two lines overlapped for very high values of *institutional quality$_{jt-1}$*. This suggests that when the institutional quality of the host country was very high, the probability of being present in that country was not significantly altered by the experience in low-institutional-quality environments that the MNE had acquired abroad.

[7] In the results presented in this section referring to the full model, the experience variable was measured through the continuous measure. Estimates using the dummy variable yielded the same results but were not included for reasons of space.

[8] We thank an anonymous reviewer for this suggestion.

[9] We have not included the graphical representation of the moderating impact for these alternative measures because of space considerations. In both cases, we observed an effect similar to that reported in Figure 1. These graphical representations are available from the authors upon request.

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Table 1. Descriptive statistics

Variables	Mean	Std. Dev.	Min	Max
$Presence_{ijt}$	0.04	0.21	0	1
$Institutional\ quality_{jt-1}$	58.01	15.76	17.96	92.14
$Low\text{-}institutional\ quality\ at\ home_i$	0.46	0.50	0	1
$Foreign\ experience\ with\ low\text{-}institutional\ quality_{it-1}$ (dummy)	0.77	0.42	0	1
$Foreign\ experience\ with\ low\text{-}institutional\ quality_{it-1}$ (continuous)	3.94	4.37	0	20
$Agglomeration\ of\ competitors_{ijt-1}$	0.29	0.62	0	8
$Market\ penetration_{jt-1}$	0.81	0.48	0.00	2.26
$Herfindahl\ index_{jt-1}$	4,447.16	1,765.81	901	10,000
$GDP\ per\ capita_{jt-1}$	11,883	17,058.09	107.22	113,727
$Market\ size_{jt-1}$	1,586.60	4,131.66	0.42	63,196.59
$Population\ density_{jt-1}$	1.89	6.23	0.02	79.09
$Political\ constraints_{jt-1}$	0.46	0.29	0	0.89
$Potential\ income_{jt-1}$	21.25	17.76	1.75	110.33
$Cultural\ ties_{jk}$	0.04	0.20	0	1
$Geographic\ distance_{jk}$	0.95	0.23	0	1
$Firm\ size_{it-1}$	78.68	105.89	0.14	655.75
$Firm\ global\ footprint_{it-1}$	8.66	8.10	1	44
$Firm\ performance_{it-1}$	0.31	0.14	-0.34	1.32
$Firm\ age_{it-1}$	57.90	34.73	0	171

Table 2. Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Presence$_{ijt}$ (1)	1																	
Institutional quality$_{jt-1}$ (2)	0.02*	1																
Low-institutional quality at home$_i$ (3)	-0.03*	0.01*	1															
Foreign experience with low-institutional quality$_{it-1}$ (continuous) (4)	0.16*	0.01*	0.19*	1														
Agglomeration of competitors$_{ijt-1}$ (5)	0.15*	0.16*	-0.00	0.01*	1													
Market penetration$_{jt-1}$ (6)	0.02*	0.49*	0.05*	0.14*	0.14*	1												
Herfindahl index$_{jt-1}$ (7)	-0.07*	-0.25*	-0.02*	-0.07*	-0.19*	-0.39*	1											
GDP per capita$_{jt-1}$ (8)	-0.00	0.67*	0.02*	0.02*	0.13*	0.48*	-0.18*	1										
Market size$_{jt-1}$ (9)	0.04*	0.03*	0.01*	0.03*	0.12*	0.10*	-0.29*	0.07*	1									
Population density$_{jt-1}$ (10)	-0.00	0.17*	0.00	0.01	-0.02*	0.12*	-0.07*	0.16*	0.01*	1								
Political constraints$_{jt-1}$ (11)	0.02*	0.58*	0.01*	0.01*	0.14*	0.31*	-0.27*	0.43*	0.19*	-0.03*	1							
Potential income$_{jt-1}$ (12)	-0.02*	0.52*	-0.01*	-0.04*	0.04*	0.29*	0.05*	0.70*	-0.02*	0.15*	0.27*	1						
Cultural ties$_{jk}$ (13)	0.18*	0.01*	-0.06*	0.03*	0.15*	-0.01*	-0.01*	0.00	0.01*	-0.01	-0.00	-0.01*	1					
Geographic distance$_{jk}$ (14)	-0.16*	-0.12*	-0.04*	0.00	-0.20*	-0.10*	0.05*	-0.11*	0.02*	-0.01	-0.08*	-0.10*	-0.08*	1				
Firm size$_{it-1}$ (15)	0.13*	0.01*	-0.07*	0.41*	0.03*	0.20*	-0.09*	0.03*	0.05*	0.00	0.02*	-0.06*	0.09*	0.00	1			
Firm global footprint$_{it-1}$ (16)	0.21*	0.00	-0.16*	0.71*	-0.01*	0.03*	-0.02*	0.01	0.01*	0.00	0.00	-0.01*	0.14*	0.01*	0.50*	1		
Firm performance$_{it-1}$ (17)	-0.00	-0.00	0.28*	0.14*	0.06*	-0.02*	0.01*	-0.00	-0.01	-0.00	-0.00	0.01*	0.00	-0.00	0.04*	-0.02*	1	
Firm age$_{it-1}$ (18)	0.03*	0.01*	0.21*	0.33*	0.10*	0.22*	-0.10*	0.04*	0.06*	0.01*	0.02*	-0.06*	-0.02*	-0.03*	0.09*	0.14*	0.03*	1

N=100,340; *p<0.05. Note: The correlation values for *foreign experience with low-institutional quality$_{it-1}$ (dummy)* were highly similar to those reported in this table for the continuous measure of experience.

Table 3. The moderating effect of institutional knowledge

Variables	Model 1	Model 2	Model 3a	Model 3b	Model 4	Model 5a	Model 5b
Institutional quality$_{jt-1}$ (IQ$_{jt-1}$)	0.002	0.002	0.012***	0.014***	0.021***	0.026***	0.026***
	(0.62)	(0.69)	(3.42)	(3.64)	(6.50)	(7.13)	(7.74)
Low institutional quality at home$_i$		0.197***				0.248***	0.287***
		(4.78)				(5.63)	(6.18)
IQ$_{jt-1}$*Low institutional quality at home$_i$		-0.057***				-0.063***	-0.062***
		(-22.30)				(-23.65)	(-23.34)
Foreign experience with low-institutional quality$_{it-1}$			0.051***	1.248***		1.070***	0.018***
			(9.81)	(13.81)		(11.54)	(2.92)
IQ$_{jt-1}$ *Foreign experience with low-institutional quality$_{it-1}$			-0.002***	-0.035***		-0.014***	-0.002***
			(-11.93)	(-7.14)		(-2.71)	(-8.90)
Agglomeration of competitors$_{ijt-1}$					0.559***	0.566***	0.566***
					(34.05)	(34.33)	(34.26)
IQ$_{jt-1}$ *Agglomeration of competitors$_{ijt-1}$					-0.007***	-0.007***	-0.006***
					(-5.34)	(-5.36)	(-4.79)
Market penetration$_{jt-1}$	-0.420***	-0.407***	-0.501***	-0.420***	-0.420***	-0.384***	-0.429***
	(-4.98)	(-4.78)	(-5.85)	(-4.96)	(-5.14)	(-4.66)	(-5.18)
Herfindahl index$_{jt-1}$	-0.0002***	-0.0002***	-0.0002***	-0.0002***	-0.0001***	-0.0001***	-0.0001***
	(-7.21)	(-7.53)	(-7.43)	(-7.19)	(-5.61)	(-5.74)	(-5.91)
GDP per capita$_{jt-1}$	-0.00001***	-0.00002***	-0.00001***	-0.00001***	-0.00001**	-0.00001***	-0.00001**
	(-4.25)	(-4.75)	(-3.37)	(-3.99)	(-2.06)	(-2.67)	(-2.25)
Market size$^a_{jt-1}$	0.179***	0.137***	0.137***	0.174***	-0.021	-0.056**	-0.072***
	(6.97)	(5.34)	(5.24)	(6.77)	(-0.88)	(-2.27)	(-2.85)
Population density$^a_{jt-1}$	0.005	0.018	0.008	0.008	0.011	0.023	0.023
	(0.14)	(0.45)	(0.21)	(0.20)	(0.33)	(0.70)	(0.70)
Political constraints$_{jt-1}$	0.077	0.071	0.079	0.085	0.069	0.076	0.068
	(0.65)	(0.60)	(0.67)	(0.72)	(0.60)	(0.67)	(0.59)
Potential income$_{jt-1}$	0.007**	0.006**	0.005**	0.006**	0.184***	0.144***	0.203***
	(2.45)	(2.34)	(1.98)	(2.18)	(11.72)	(8.77)	(12.66)
Cultural ties$_{jk-1}$	1.587***	1.671***	1.642***	1.577***	0.004*	0.004*	0.004*
	(33.05)	(33.94)	(33.21)	(32.83)	(1.93)	(1.83)	(1.70)
Geographic distance$_{jk-1}$	-1.984***	-1.869***	-1.978***	-1.985***	0.0577***	0.0565***	0.0543***
	(-41.59)	(-37.91)	(-41.60)	(-41.41)	(30.23)	(27.52)	(18.34)
Firm size$_{it-1}$	0.283***	0.287***	0.293***	0.229***	-0.118	-0.388***	-0.438***
	(19.01)	(18.98)	(19.26)	(14.91)	(-0.84)	(-2.70)	(-2.99)
Firm global footprint$_{it-1}$	0.064***	0.067***	0.048***	0.059***	-0.001	-0.001**	-0.002***
	(35.49)	(35.11)	(19.57)	(32.25)	(-1.61)	(-2.43)	(-3.69)
Firm performance$_{it-1}$	-0.072	-0.274*	-0.281**	-0.170	1.444***	1.516***	1.546***
	(-0.53)	(-1.95)	(-2.01)	(-1.27)	(29.25)	(29.91)	(29.89)
Firm age$_{it-1}$	0.0002	-0.00001	-0.002***	-0.0002	-1.822***	-1.678***	-1.679***
	(0.40)	(-0.02)	(-3.42)	(-0.30)	(-37.88)	(-33.37)	(-33.64)
Year dummies	Included	Included	Included	Included	Included	Included	Included
Constant (mean)	-3.525***	-3.386***	-3.007***	-3.518***	-2.488***	-2.516***	-2.291***
	(-14.36)	(-13.81)	(-12.04)	(-14.31)	(-10.57)	(-10.56)	(-9.51)
Constant (variance)	-0.532***	-0.528***	-0.504***	-0.538***	-0.773***	-0.773***	-0.764***
	(-6.99)	(-7.00)	(-6.68)	(-7.06)	(-9.79)	(-9.71)	(-9.48)
N	100,340	100,340	100,340	100,340	100,340	100,340	100,340
Log likelihood	-14,824.6	-14,530.0	-14,704.41	-14,684.9	-14,009.54	-13,578.06	-13,639.58
AIC	29,709.2	29,124.12	29,472.83	29,433.96	28,083.09	27,228.14	27,351.15
BIC	29,994.69	29,428.64	29,777.35	29,738.48	28,387.61	27,570.73	27,693.74

* p < 0.10, ** p < 0.05, *** p < 0.01; ^{a} These variables are log-transformed.

Table 4. Additional analysis of the moderating effect of the different types of learning

Variables	Model 1
Institutional quality$_{jt-1}$ (IQ$_{jt-1}$)	0.146***
	(8.76)
Home experience$_{it-1}$	9.261**
	(2.29)
Foreign experience$_{it-1}$	7.769***
	(5.84)
Vicarious experience$_{it-1}$	7.529***
	(4.62)
Various types of experience$_{it-1}$	12.95***
	(9.71)
IQ$_{jt-1}$*Home experience$_{it-1}$	-0.178**
	(-2.48)
IQ$_{jt-1}$*Foreign experience$_{it-1}$	-0.085***
	(-5.22)
IQ$_{jt-1}$* Vicarious experience$_{it-1}$	-0.077***
	(-3.39)
IQ$_{jt-1}$* Various types of experience$_{it-1}$	-0.163***
	(-9.89)
Market penetration$_{jt-1}$	-0.146
	(-1.64)
Herfindahl index$_{jt-1}$	-0.0002***
	(-6.88)
GDP per capita$_{jt-1}$	-0.00002***
	(-6.10)
Market size[a]$_{jt-1}$	0.126***
	(4.51)
Population density[a]$_{jt-1}$	0.027
	(0.70)
Political constraints$_{jt-1}$	0.086
	(0.72)
Potential income$_{jt-1}$	0.181***
	(11.03)
Cultural ties$_{jk-1}$	0.006**
	(2.18)
Geographic distance$_{jk-1}$	0.062***
	(32.09)
Firm size[a]$_{it-1}$	-0.033
	(-0.23)
Firm global footprint$_{it-1}$	-0.001
	(-1.18)
Firm performance$_{it-1}$	1.645***
	(33.03)
Firm age$_{it-1}$	-1.821***
	(-36.72)
Year dummies	Included
Constant (mean)	-14.94***
	(-10.94)
Constant (variance)	-0.588***
	(-7.51)
N	96,427
Log Likelihood	-13,828.09
AIC	27,732.19
BIC	28,092.3

* p < 0.10, ** p < 0.05, *** p < 0.01; [a] These variables are log-transformed.

Table 5. Average marginal effect of institutional quality for each group of firms

Group of firms	dy/dx	Std.error	p-value
Control group (no knowledge)	0.146	0.017	0.000
Group 1 (home experience)	-0.031	0.069	0.651
Group 2 (foreign experience)	0.061	0.005	0.000
Group 3 (vicarious experience)	0.069	0.016	0.000
Group 4 (various types of experience)	-0.017	0.004	0.000

Table 6. Comparative tests of the institutional profile effect for each group of firms

Group comparison	Contrast	Std.error	p-value
Group 1 vs. control group	-0.177	0.071	0.013
Group 2 vs. control group	-0.0.85	0.016	0.000
Group 3 vs. control group	-0.077	0.023	0.001
Group 4 vs. control group	-0.163	0.016	0.000
Group 2 vs. group 1	0.092	0.070	0.185
Group 3 vs. group 1	0.100	0.071	0.160
Group 4 vs. group 1	0.014	0.069	0.838
Group 3 vs. group 2	0.008	0.016	0.627
Group 4 vs. group 2	-0.078	0.004	0.000
Group 4 vs. group 3	-0.086	0.016	0.000

Table 7. Robustness tests of Hypothesis 1a

Variables	Model 1	Model 2	Model 3	Model 4
Institutional quality$_{jt-1}$ (IQ$_{jt-1}$)	0.001	0.025***	-0.001	0.021***
	(0.38)	(7.29)	(-0.34)	(6.08)
Low-institutional quality at home$_i$ (median)	0.114***	0.169***		
	(2.97)	(4.05)		
IQ$_{jt-1}$*Low-institutional quality at home$_i$ (median)	-0.058***	-0.063***		
	(-22.53)	(-23.48)		
Institutional quality at home$_{it-1}$			0.005***	0.005***
			(3.13)	(2.89)
IQ$_{jt-1}$*Institutional quality at home$_i$			0.002***	0.002***
			(26.18)	(26.29)
Foreign experience with low-institutional quality$_{it-1}$ (continuous)		0.031***		0.043***
		(5.38)		(7.05)
IQ$_{jt-1}$ *Foreign experience with low-institutional quality$_{it-1}$ (continuous)		-0.001***		-0.001***
		(-5.51)		(-2.92)
Agglomeration of competitors$_{ijt-1}$		0.563***		0.558***
		(34.13)		(33.72)
IQ$_{jt-1}$ *Agglomeration of competitors$_{ijt-1}$		-0.006***		-0.007***
		(-4.81)		(-5.21)
Market penetration$_{jt-1}$	-0.401***	-0.420***	-0.394***	-0.420***
	(-4.72)	(-5.07)	(-4.60)	(-5.03)
Herfindahl index$_{jt-1}$	-0.0002***	-0.0001***	-0.0002***	-0.0001***
	(-7.57)	(-5.93)	(-7.25)	(-5.65)
GDP per capita$_{jt-1}$	-0.00001***	-0.00001**	-0.00002***	-0.00001***
	(-4.69)	(-2.27)	(-6.61)	(-4.42)
Market size$^a_{jt-1}$	0.135***	-0.072***	0.181***	-0.034
	(5.25)	(-2.85)	(6.91)	(-1.37)
Population density$^a_{jt-1}$	0.0183	0.023	0.0185	0.023
	(0.46)	(0.70)	(0.45)	(0.72)
Political constraints$_{jt-1}$	0.068	0.061	0.0877	0.079
	(0.58)	(0.53)	(0.74)	(0.69)
Potential income$_{jt-1}$	0.006**	0.004	0.009***	0.007***
	(2.18)	(1.53)	(3.37)	(2.89)
Cultural ties$_{jk-1}$	1.671***	1.559***	1.559***	1.467***
	(33.89)	(30.11)	(31.57)	(28.03)
Geographic distance$_{jk-1}$	-1.872***	-1.690***	-1.905***	-1.731***
	(-37.95)	(-33.88)	(-38.03)	(-34.17)
Firm size$^a_{it-1}$	0.289***	0.202***	0.283***	0.199***
	(19.15)	(12.63)	(18.73)	(12.35)
Firm global footprint$_{it-1}$	0.065***	0.050***	0.064***	0.043***
	(35.50)	(18.07)	(33.72)	(14.45)
Firm performance$_{it-1}$	-0.224	-0.379**	0.041	-0.095
	(-1.57)	(-2.56)	(0.29)	(-0.64)
Firm age$_{it-1}$	0.0001	-0.002***	0.002***	-0.001
	(0.27)	(-3.87)	(3.30)	(-0.96)
Yearly dummies	Included	Included	Included	Included
Constant (mean)	-3.376***	-2.256***	-3.842***	-2.629***
	(-13.77)	(-9.38)	(-15.43)	(-10.91)
Constant (variance)	-0.528***	-0.765***	-0.499***	-0.762***
	(-7.00)	(-9.51)	(-6.63)	(-9.61)
N	100,340	100,340	100,340	100,340
Log-likelihood	-14,530.6	-13,639.69	-13,184.4	-13,564.23
AIC	29,125.3	27,351.38	28,936.97	27,200.46
BIC	29,429.8	27,693.97	29,241.5	27,543.04

* p < 0.10, ** p < 0.05, *** p < 0.01; ^{a} These variables are log-transformed.

Table 8. Robustness tests of Hypothesis 2

Variables	Model 1	Model 2	Model 3	Model 4
Institutional quality$_{jt-1}$ (IQ$_{jt-1}$)	0.003	0.011***	0.063***	0.0265***
	(0.90)	(3.21)	(11.58)	(7.47)
Low-institutional quality at home$_i$		0.051	0.327***	0.283***
		(1.13)	(6.46)	(5.83)
IQ$_{jt-1}$*Low-institutional quality at home$_i$		-0.052***	-0.058***	-0.062***
		(-19.79)	(-20.24)	(-22.78)
Foreign experience with low-institutional quality$_{it-1}$ (continuous)		0.045***	0.016**	0.024***
		(7.91)	(2.36)	(4.02)
IQ$_{jt-1}$ *Foreign experience with low-institutional quality$_{it-1}$ (continuous)		-0.002***	-0.0005*	-0.001***
		(-10.64)	(-1.94)	(-5.81)
Agglomeration of home competitors$_{ijt-1}$	0.440***	0.393***		
	(20.32)	(17.86)		
IQ$_{jt-1}$ *Agglomeration of home competitors$_{ijt-1}$	-0.007***	-0.006***		
	(-5.61)	(-4.47)		
Agglomeration of competitors$_{ijt-1}$			1.160***	0.542***
			(45.33)	(32.26)
IQ$_{jt-1}$ *Agglomeration of competitors$_{ijt-1}$			-0.023***	-0.006***
			(-14.22)	(-4.93)
Market penetration$_{jt-1}$	-0.392***	-0.450***	-0.746***	-0.474***
	(-4.75)	(-5.32)	(-6.58)	(-5.53)
Herfindahl index$_{jt-1}$	-0.0001***	-0.0002***	-0.0005***	-0.0001***
	(-6.95)	(-7.36)	(-18.12)	(-6.25)
GDP per capita$_{jt-1}$	-0.00001***	-0.00001***	-0.00003***	-0.00001***
	(-4.00)	(-3.77)	(-5.91)	(-2.64)
Market size$^a_{jt-1}$	0.129***	0.064**	0.635***	-0.066**
	(5.30)	(2.54)	(14.23)	(-2.52)
Population density$^a_{jt-1}$	0.010	0.024	0.003	0.029
	(0.30)	(0.66)	(0.02)	(0.82)
Political constraints$_{jt-1}$	0.041	0.043	0.659***	0.106
	(0.36)	(0.37)	(4.21)	(0.89)
Potential income$_{jt-1}$	0.004*	0.003	0.023***	0.004*
	(1.72)	(1.34)	(6.53)	(1.85)
Cultural ties$_{jk-1}$	1.414***	1.540***	1.363***	1.557***
	(28.76)	(29.80)	(23.16)	(29.58)
Geographic distance$_{jk-1}$	-1.819***	-1.744***	-1.514***	-1.702***
	(-37.37)	(-34.90)	(-26.63)	(-33.10)
Firm size$^a_{it-1}$	0.260***	0.273***	0.175***	0.198***
	(17.31)	(17.73)	(9.67)	(11.80)
Firm global footprint$_{it-1}$	0.070***	0.056***	0.049***	0.051***
	(37.72)	(19.50)	(14.81)	(15.91)
Firm performance$_{it-1}$	-0.277**	-0.479***	-0.535***	-0.330**
	(-2.02)	(-3.32)	(-3.31)	(-2.12)
Firm age$_{it-1}$	-0.0005	-0.002***	-0.002***	-0.002***
	(-0.97)	(-3.85)	(-3.36)	(-3.28)
Agglomeration of firms$_{ijt-1}$			-2.069***	
			(-59.22)	
Firm average MMC$_{it-1}$				0.0390**
				(2.10)
Yearly dummies	Included	Included	Included	Included
Constant (mean)	-3.294***	-2.796***	-5.450***	-2.277***
	(-13.91)	(-11.46)	(-14.10)	(-8.95)
Constant (variance)	-0.697***	-0.617***	0.711***	-0.692***
	(-8.61)	(-7.83)	(11.36)	(-8.71)
N	100,340	100,340	100,340	87,216
Log likelihood	-14,620.85	-14,280.1	-10,953.02	-12,990.76
AIC	29,305.72	28,632.2	21,980.04	26,055.53
BIC	29,610.24	28,974.7	22,332.14	26,402.44

* p < 0.10, ** p < 0.05, *** p < 0.01; ^{a} These variables are log-transformed.

Table 9. The moderating effect of institutional knowledge (without greenfield investments)

Variables	Model 1	Model 2	Model 3a	Model 3b	Model 4	Model 5a	Model 5b
Institutional quality$_{jt-1}$ (IQ$_{jt-1}$)	0.0005	0.0003	0.007*	0.008*	0.018***	0.020***	0.019***
	(0.13)	(0.08)	(1.87)	(1.92)	(4.54)	(4.83)	(4.23)
Low-institutional quality at home$_i$		0.162***				0.227***	0.205***
		(3.61)				(4.48)	(4.28)
IQ$_{jt-1}$*Low-institutional quality at home$_i$		-0.057***				-0.063***	-0.064***
		(-20.23)				(-21.37)	(-21.54)
Foreign experience with low-institutional quality$_{it-1}$			0.053***	1.246***		0.029***	1.064***
			(9.49)	(12.87)		(4.50)	(10.75)
IQ$_{jt-1}$ *Foreign experience with low-institutional quality$_{it-1}$			-0.002***	-0.024***		-0.0005**	-0.003
			(-7.75)	(-4.27)		(-2.04)	(-0.46)
Agglomeration of competitors$_{ijt-1}$					0.574***	0.577***	0.576***
					(32.27)	(32.23)	(32.27)
IQ$_{jt-1}$ *Agglomeration of competitors$_{ijt-1}$					-0.005***	-0.006***	-0.006***
					(-4.03)	(-4.35)	(-4.62)
Market penetration$_{jt-1}$	-0.503***	-0.489***	-0.578***	-0.495***	-0.495***	-0.498***	-0.452***
	(-5.32)	(-5.14)	(-6.06)	(-5.23)	(-5.26)	(-5.21)	(-4.75)
Herfindahl index$_{jt-1}$	-0.0001***	-0.0002***	-0.0002***	-0.0001***	-0.0001***	-0.0001***	-0.0001***
	(-6.09)	(-6.34)	(-6.23)	(-6.05)	(-4.91)	(-5.18)	(-5.06)
GDP per capita$_{jt-1}$	-0.00002***	-0.00002***	-0.00001***	-0.00001***	-0.00001**	-0.00001**	-0.00001**
	(-3.96)	(-4.15)	(-3.29)	(-3.76)	(-2.02)	(-2.07)	(-2.28)
Market size$^a_{jt-1}$	0.212***	0.162***	0.175***	0.208***	-0.011	-0.072**	-0.060*
	(7.05)	(5.35)	(5.73)	(6.94)	(-0.38)	(-2.30)	(-1.91)
Population density$^a_{jt-1}$	0.059	0.071	0.061	0.062	0.070	0.082*	0.084*
	(1.09)	(1.30)	(1.10)	(1.15)	(1.47)	(1.69)	(1.74)
Political constraints$_{jt-1}$	0.118	0.120	0.127	0.125	0.0967	0.0991	0.104
	(0.89)	(0.90)	(0.95)	(0.94)	(0.73)	(0.74)	(0.78)
Potential income$_{jt-1}$	0.008***	0.008***	0.007**	0.008***	0.006**	0.005**	0.005**
	(2.86)	(2.68)	(2.56)	(2.65)	(2.14)	(2.03)	(2.00)
Cultural ties$_{jk-1}$	1.595***	1.680***	1.661***	1.580***	1.443***	1.567***	1.514***
	(30.30)	(31.25)	(30.73)	(30.04)	(26.55)	(27.58)	(27.26)
Geographic distance$_{jk-1}$	-1.812***	-1.713***	-1.805***	-1.805***	-1.651***	-1.521***	-1.512***
	(-33.83)	(-31.01)	(-33.80)	(-33.54)	(-30.44)	(-27.03)	(-26.68)
Firm size$_{it-1}$	0.315***	0.321***	0.323***	0.259***	0.205***	0.224***	0.167***
	(18.99)	(19.04)	(19.05)	(15.17)	(11.67)	(12.45)	(9.13)
Firm global footprint$_{it-1}$	0.064***	0.067***	0.047***	0.058***	0.057***	0.051***	0.055***
	(32.38)	(32.07)	(17.40)	(29.41)	(27.36)	(15.90)	(24.92)
Firm performance$_{it-1}$	0.00399	-0.196	-0.246	-0.0997	-0.0415	-0.384**	-0.295*
	(0.03)	(-1.27)	(-1.61)	(-0.68)	(-0.27)	(-2.40)	(-1.87)
Firm age$_{it-1}$	0.0005	0.0002	-0.002***	0.0004	-0.001	-0.002***	-0.001**
	(0.83)	(0.39)	(-2.94)	(0.06)	(-1.15)	(-3.47)	(-2.02)
Yearly dummies	Included	Included	Included	Included	Included	Included	Included
Constant (mean)	-4.321***	-4.138***	-3.817***	-4.317***	-3.035***	-2.744***	-2.992***
	(-15.30)	(-14.62)	(-13.31)	(-15.28)	(-10.88)	(-9.63)	(-10.59)
Constant (variance)	-0.200**	-0.184**	-0.180**	-0.207***	-0.354***	-0.325***	-0.335***
	(-2.52)	(-2.32)	(-2.27)	(-2.59)	(-4.32)	(-3.95)	(-4.07)
N	99,197	99,197	99,197	99,197	99,197	99,197	99,197
Log likelihood	-12,848.70	-12,605.36	-12,773.78	-12,733.21	-12,120.89	-11,822.73	-11,756.90
AIC	25,757.42	25,274.72	25,611.56	25,530.43	24,305.79	23,717.46	23,585.8
BIC	26,042.56	25,578.88	25,915.72	25,834.58	24,609.94	24,059.63	23,927.97

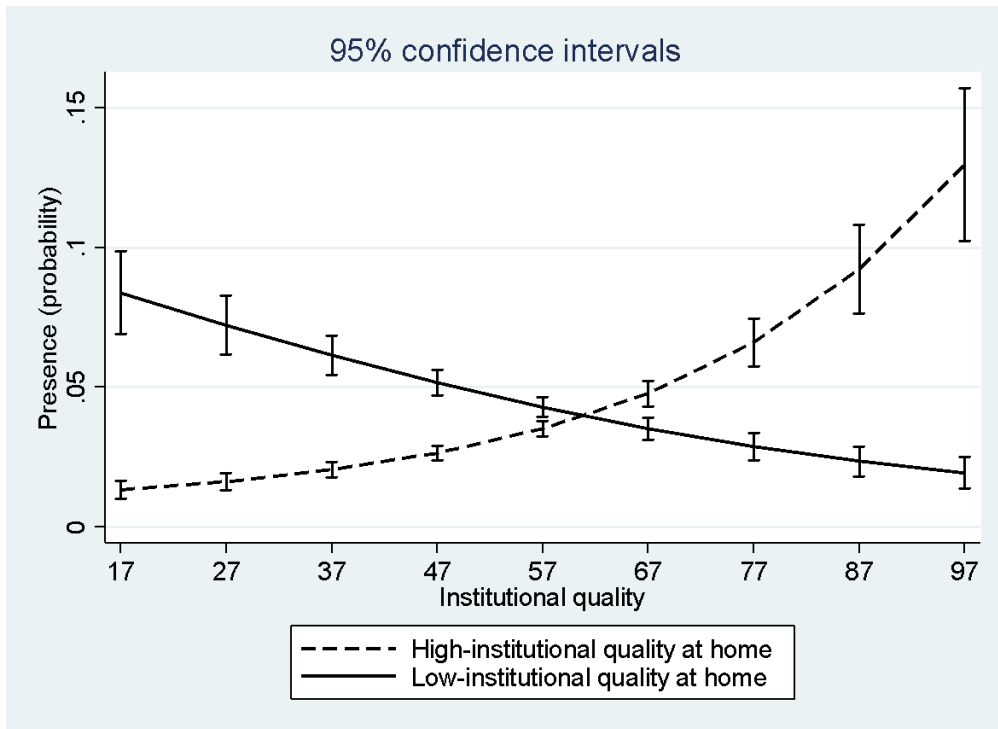* p < 0.10, ** p < 0.05, *** p < 0.01; ^{a} These variables are log-transformed.

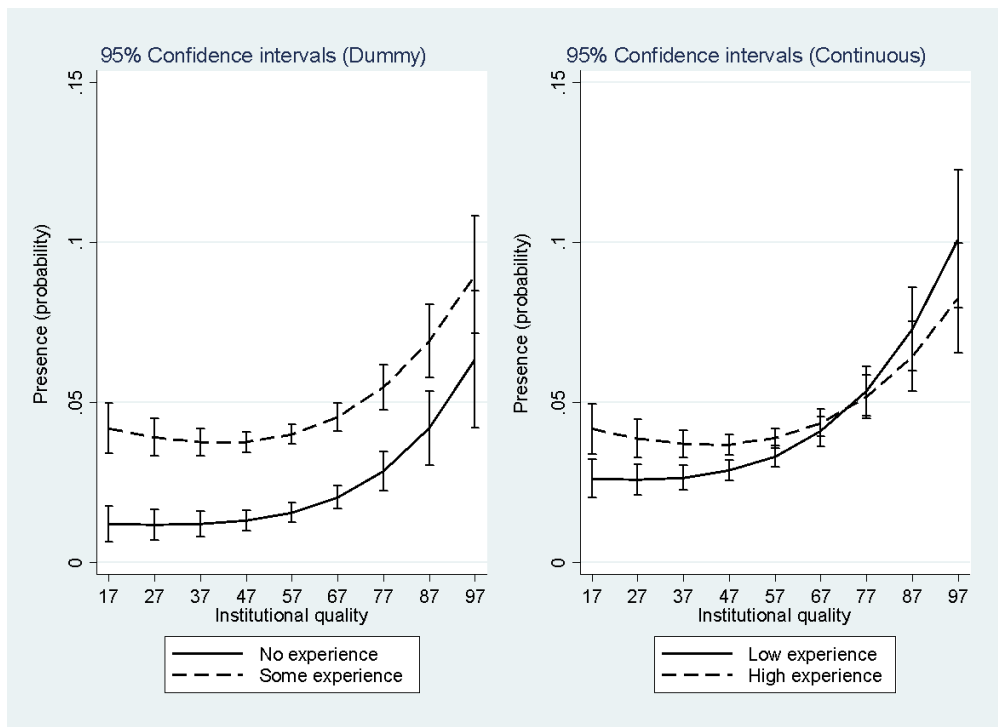**Figure 1**. **The moderating effect of institutional quality at home**

Figure 2. **The moderating effect of foreign experience with low-institutional quality**
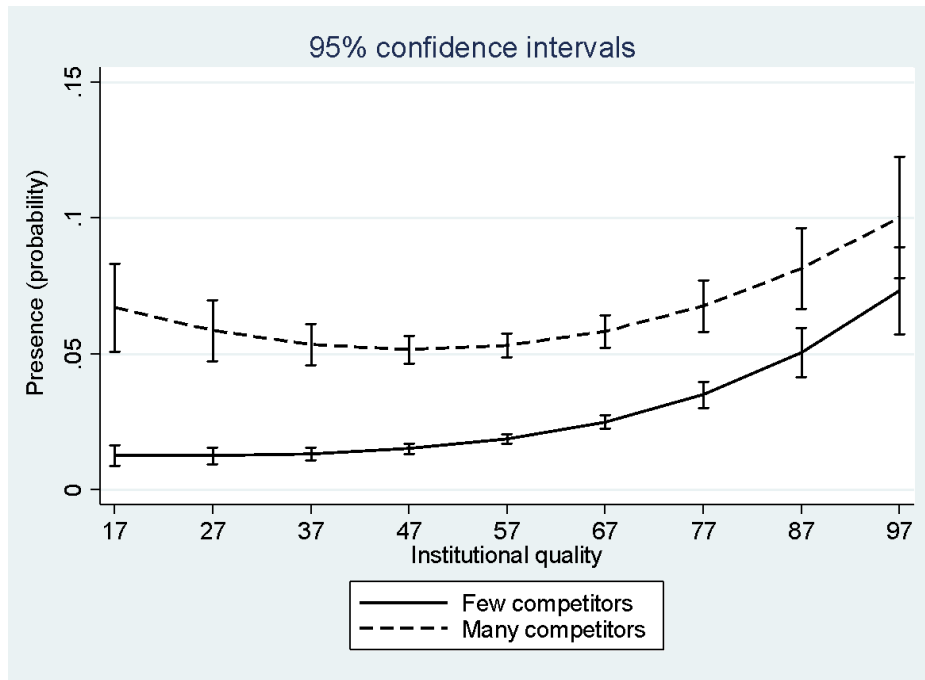
Figure 3. The moderating effect of agglomeration of competitors

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