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Speed of institutional change and subsidiary performance: The moderating impact of home and host country learning

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Abstract

Research summary: This research examines the role played by home and host country learning in the relationship between the speed of institutional change and subsidiary performance. We posit a negative relationship between the speed of institutional change in the host country and subsidiary performance. We also argue that this relationship is contingent on the institutional learning that parent multinationals (MNEs) have previously attained in other countries. By integrating the dynamic institution-based view and the organizational learning literature, our analysis highlights the key role that abilities and skills developed by MNEs to face rapid institutional changes have on the host countries in which they operate. We test our theoretical model using a sample of 342 subsidiaries from 68 MNEs operating in emerging and developed economies during 2001–2017.

Managerial summary: MNEs regularly face institutional changes in both home and host countries. However, institutions evolve at different speeds. According to previous studies, the performance of subsidiaries is threatened when institutional changes happen quickly. MNEs need to develop the ability to help their

subsidiaries face changes immediately and with no loss of performance. Our research shows that MNEs can learn from prior rapid institutional changes in the home and host countries and transfer this knowledge to their subsidiaries so that they can be more equipped to deal with it in the future.

1 | INTRODUCTION

The effect of pro-market institutions on firm performance has been widely studied in the academic literature (Chari & Banalieva, 2015; Cuervo-Cazurra & Dau, 2009; Cuervo-Cazurra, Gaur, & Singh, 2019; Dau, 2013). Nevertheless, recent studies focus not only on the level of pro-market institutions but also on the speed of their change as key determinants of firm decisions and performance (Banalieva, Cuervo-Cazurra, & Sarathy, 2018; Banalieva, Eddleston, & Zellweger, 2015). The underlying argument is that the influence of the velocity of institutional change on firms' strategies and performance depends on firms' capabilities to rapidly adapt to changes (Kim, Kim, & Hoskisson, 2010; Putzhammer, Slangen, Puck, & Lindner, 2020). Within this context, the dynamic institution-based view emerges as a research stream that emphasizes the dynamic nature of these institutions (Banalieva et al., 2015; Kim et al., 2010; Xu & Meyer, 2013).

What are the factors that influence the capabilities of firms to rapidly respond to sudden changes in pro-market institutions? Recent studies have delved into this key research question by demonstrating that certain firms have been able to develop higher flexibility and adaptation skills, such as non-family firms (Banalieva et al., 2015) and efficient firms (Banalieva et al., 2018). Although these skills depend on firms' strategy and characteristics, can firms learn to rapidly adapt to rapid institutional changes? According to organizational learning theory, firms benefit from previous experience since it helps them to more rapidly detect opportunities and respond to challenges (e.g., Figueiredo & Cohen, 2019; Nerkar & Roberts, 2004). In the international business (IB) context, multinational enterprises (MNEs) gain experience in the home and host countries in which they operate, thus developing skills and competencies that help them to gain competitive advantages in their international activities (Hsu & Pereira, 2008). Previous organizational learning studies have adopted a static perspective of the institutional environment, simply by focusing on the existence of similarities between home and host countries' institutional conditions (e.g., Chang, 1995; Delios & Beamish, 2001; Johanson & Vahlne, 1977). By integrating organizational learning theory and the dynamic institution-based view, we aim to demonstrate that MNEs can learn to better manage the consequences of rapid changes in institutional conditions when they have experienced fast institutional changes in the home and host countries. This experience becomes a strategic resource that confers MNEs' subsidiaries with higher flexibility and adaptation capabilities that result in institutional competitive advantages (Martin, 2014). To have a complete

vision of how institutional dynamism affects subsidiaries' performance, it is necessary to take into account the institutional learning that MNEs have experienced in other contexts because it influences the adaptation capabilities of firms.

Accordingly, the objective of this study is to analyze the moderating effect of the experience in dealing with fast institutional changes in the home and host countries of MNEs on the relationship between the speed of institutional change and subsidiary performance. We would expect a negative relationship between the speed of changes in pro-market institutions and subsidiary performance; however, not all firms adapt to these changes in the same way (Banalieva et al., 2015). Our reasoning behind this expectation is that subsidiaries of MNEs that have previously experienced fast institutional changes in their home and host markets can exploit this institutional learning to better adapt to subsequent rapid institutional changes. MNEs should be aware of this moderating effect to decide to enter markets experiencing fast pro-market reforms, where they can be in an advantageous position, as well as to introduce internal policies that favor the storage and the transfer of knowledge between subsidiaries. We test our hypotheses on the worldwide mobile telecommunications industry. This industry is especially appropriate for our analysis because it has experienced important internationalization during the past decades. Furthermore, our sample includes MNEs that are competing globally, with a presence in the five continents, including both emerging and advanced economies that have experienced institutional changes at different velocities.

The contribution of this study is twofold. First, to the best of our knowledge, this article is the first attempt to integrate organizational learning and dynamic institution-based view literatures in analyzing subsidiary performance. We respond to the call to more deeply examine the relationship between institutional changes and firm performance by considering learning from host and home countries (Cuervo-Cazurra, Gaur, & Singh, 2019). We incorporate the organizational learning literature on the dynamic institution-based view by moving the focus from the institutional differences between the home and host countries (as a key obstacle to transfer experience from one country to another) to the experiential learning of fast institutional changes (as a key resource to build adaptation capabilities that diminish the negative impact of rapid institutional changes). We differentiate between the learning that comes from the home country and host countries since the extant literature has considered them to be two different sources of experience that condition the internationalization process and outcomes (Zhou & Guillén, 2015). Second, we provide additional empirical support for the dynamic institution-based view of the strategy in a wider sample of countries. Our study aims to provide new evidence about the relationship between the speed of institutional change and firm performance in the context of MNEs' activity. In this vein, we analyze the impact that the speed of institutional change in the host country where MNEs develop their activity has on subsidiary performance. However, while prior studies have mainly focused on emerging economies (Banalieva et al., 2018) or subnational regions (Banalieva et al., 2015), we use a sample that includes 342 subsidiaries from 68 MNEs located in 34 developed and 108 emerging economies for a long-time window (2001–2017).

2 | LITERATURE REVIEW

2.1 | The dynamic institution-based view of strategy

The institution-based view of strategy argues that the institutional environment where companies compete, the "rules of the game" (North, 1990), influences firms' choices by restricting or

facilitating their activity (Peng, Sun, Pinkham, & Chen, 2009; Peng, Wang, & Jiang, 2008). Institutions provide stability for economic exchanges by reducing uncertainty (North, 1990). Previous research has studied how the institutions in a country constitute a crucial factor that influences both the strategic decisions of firms and their performance (Ang, Benischke, & Doh, 2015; Cuervo-Cazurra, Mudambi, & Pedersen, 2019; Dikova & Brouthers, 2016; Hernández, Nieto, & Boellis, 2018; Wan & Hoskisson, 2003). Among these institutions, scholars have devoted special attention to *pro-market institutions*, that is, "rules and regulations that facilitate market transactions and limit the role of the government in the economy" (Cuervo-Cazurra, Gaur, & Singh, 2019, p. 598), such as the existence of efficient financial intermediaries, judicial systems, and property right protection.

The rules of the game change over time (Peng, 2003). Countries usually implement institutional changes with the aim of liberalizing the market. These changes are usually known as pro-market reforms (Cuervo-Cazurra & Dau, 2009; Hoskisson, Eden, Lau, & Wright, 2000; Newman, 2000; Park, Li, & Tse, 2006; Peng, 2003).[1] According to Dau (2012), pro-market reforms lead to national governance improvements and economic liberalization. First, governments try to reduce market imperfections through improvements in laws and regulations, public goods, and infrastructures. For instance, governments increase labor flexibility by reducing restrictions on termination of employment (Botero, Djankov, Porta, Lopez-de-Silanes, & Shleifer, 2004), encourage innovation by improving property rights protection (Chen & Puttitanun, 2005), and reduce uncertainty by facilitating the process of enforcing contracts in courts (North, 1991). Second, economic liberalization minimizes the government intervention in economic activities, with the government becoming a facilitator instead of an active participant. For this reason, pro-market reforms usually bring price liberalization and a reduction of industry and trade barriers in a country, which favors competition, innovation, and the entry of foreign investors (Dau, 2012).

Despite the above arguments, previous empirical studies show inconclusive evidence about the effect that pro-market reforms have on firm performance (Banalieva et al., 2018; Cuervo-Cazurra, Mudambi, & Pedersen, 2019). Some studies that focus on emerging environments report that pro-market reforms lead to better performance (Cuervo-Cazurra & Dau, 2009; Park et al., 2006), while others fail to find such positive effects (Lee, Peng, & Lee, 2008; Salim, 2003). More recent studies report a U-shaped relationship between institutional reforms and firm performance (Chari & Banalieva, 2015). Given the absence of consensus, some studies have tried to provide a more complete explanation by incorporating a dynamic approach to the concept of institutional change. Previous research had considered institutional change as a static event only focusing on the analysis of the scope of the institutional change. However, pro-market reforms take time and are not developed in one step (Banalieva et al., 2015). These reforms can be carried out gradually over a long period of time or they can be rapidly developed (Chen, Cui, Li, & Rolfe, 2017). The *dynamic* institution-based view of strategy arises to focus on the effect that the speed of institutional changes has on firm choices and performance (Banalieva et al., 2015).

According to this perspective, an institutional change implies a multi-stage process in which each stage derives from different institutional environments and institutional logics (Greenwood, Suddaby, & Hinings, 2002; Hoffman, 1999; Peng, 2003) and the transition from one stage to the next can vary in its velocity. Governments can employ the fast introduction of reforms to show a potential position (Huang, 2013; Walsh, 2007) and, with the aim of increasing efficiency in the market, to show the commitment of the government to market liberalization, and to try to reduce transaction costs (Banalieva et al., 2018). Nevertheless, other governments,

which have already undergone a period of intensive pro-market reforms, can implement these reforms more slowly due to pressures from stakeholders, or because of a change of government mandate (Rajan & Zingales, 2003). From the dynamic institution-based view, the institutional change is not as important as the speed at which this change takes place (Banalieva et al., 2015), which can influence firm performance by creating an unstable environment. As posited by Banalieva et al. (2015), the notion of speed refers both to the change in the level of development of market-supporting institutions (distance traveled) and to the time needed to develop this change (time duration). In this way, this construct complements the static view of the change used in prior studies, which focus only on the final result of the pro-market reforms, and adopts a dynamic perspective that also takes into consideration how quickly the result has been achieved.

2.2 | Home and host country learning and institutional advantages

Firms are heterogeneous in their ability to interact with the institutional environment (Chen et al., 2017), and they do not respond in the same way to institutional changes (Oliver, 1991). Some firms have resources that lead to a better adaptation (Chari & Banalieva, 2015; Kim et al., 2010; Xu & Meyer, 2013), thus conferring them with an institutional competitive advantage. According to Martin (2014, p. 59), a firm has an *institutional competitive advantage* when it "is implementing a strategy, featuring distinctive resources and activities enabled by its interactions with the institutional environment, which generates economic value in excess of its competitors."

When institutional changes take place, firms will be forced to de-institutionalize norms, beliefs, and practices previously legitimized to adapt to the new rules of the game. They need to improve resources, capabilities, productivity, and efficiency in the allocation of resources to survive as a consequence of these reforms (Oliver, 1992). The literature has shown that firms generate new resources and capabilities through learning and experience curves.

Experience is a prime source of learning in organizations (Huber, 1991). The organizational learning literature has noted that firms learn by interpreting relevant knowledge derived from their experience within a specific domain (Levitt & March, 1988). The experiential learning that companies gain facing environmental changes allows them to better react and adapt to similar changes in the future (Cohen & Levinthal, 1990). As a rapid institutional change represents a challenge to subsidiaries that need to quickly adapt to the new rules, those subsidiaries that belong to a parent company that have previously experienced rapid institutional changes will benefit from this learning. In the context of IB, previous studies have focused on two types of contexts that provide experience to MNEs and that will shape their decisions and outcomes, namely the home country and the host countries (Zhou & Guillén, 2015).

First, a vital learning source for MNEs is the country in which the firm is based (Cuervo-Cazurra, 2011; Cuervo-Cazurra, 2016). The influence of the home country on MNEs' decisions is one of the key topics that the IB literature has analyzed in recent years (Banalieva et al., 2018; Cuervo-Cazurra, 2011; Lee & Weng, 2013; Ramamurti, 2012). The home country determines the MNEs' structure and strategy with persisting effects over time (Kimberly, 1979; Schein, 1983), influencing MNEs' decisions when expanding abroad (Cuervo-Cazurra, 2006; Holburn & Zelner, 2010; Perkins, 2014). Cuervo-Cazurra, Luo, Ramamurti, and Ang (2018) references home country institutional learning as the experience gained in the home country in dealing with the peculiarities of that country's institutions. Our assumption is that MNEs that have previous experience in dealing with rapid institutional changes in their home markets will

have learned to quickly adapt to rapid pro-market reforms in their host markets and gain an institutional advantage.

Second, MNEs also obtain learning from the experiences they have had in internationalized host markets (Hsu & Pereira, 2008). Experiential learning studies in the IB literature posit that learning-curve effects appear as firms increase their international expansion experience (Barkema, Bell, & Pennings, 1996). As MNEs grow and experience changing institutional conditions in their host markets, they learn to adapt to subsequent changing environments, even if they have not experienced these fast institutional changes in their home countries. According to Zhou and Guillén (2015, p. 908), "as MNEs gain experience over time, their strategies and structures will be increasingly influenced by the characteristics of other countries in which they operate in addition to the home country".

3 | HYPOTHESES

3.1 | Speed of pro-market institutions change and subsidiary performance in the host country

As the institutional framework in which firms are immersed is complex and constantly changing (Peng, 2003), the ability of firms to deal with its drastic alterations becomes a determinant of firm competitive advantage (D'Aveni, 1994). This ability is dependent on the speed of pro-market reforms (Banalieva et al., 2015). Gradual institutional change in the host country allows firms to adjust with minimum stress (Godoy & Stiglitz, 2007; Murrell, 1992), but when changes happen quickly, uncertainty increases, and making decisions becomes a complex task (Chari & Banalieva, 2015).

In this vein, scholars have noted that the value of firms tends to decrease as pro-market institutions rapidly evolve toward a market economy because of the adaptation costs to the new context (Banalieva et al., 2015). The government eliminates its role in establishing production and sales goals, and the subsidiaries must quickly learn to implement production objectives, establish prices that maximize profits, and seek new customers (Hurt, Hurt-Warski, & Roux-Dufort, 2000). This new competitive landscape usually is characterized by a sudden increase in the level of competition from new local and foreign entrants, a subsequent drastic drop in prices, and the implementation of innovations that can even make obsolete subsidiaries' technologies and products. First, rapid reforms in market-supporting institutions quickly eliminate transactional barriers in the economy, which suddenly opens up more market space for other firms that enhances growing market opportunities for local and foreign participants, leading to even greater competition (Chen et al., 2017; Havrylyshyn, 2007). This drastic increase in the level of competition in the market makes it difficult to predict the demand evolution and to allocate the necessary resources to satisfy it (Illner, 1998; Xu & Meyer, 2013).

Second, as competition increases, established subsidiaries must face ambitious customer expectations and compete with sophisticated products from new competitors (Chari & David, 2012). Customers will compare product characteristics, and they will demand a greater supply and wait for new and better products derived from rivals' innovations that can even shorten the life cycles of existing subsidiary products (Illner, 1998). To respond to customer expectations and attract customers, subsidiaries should invest in improving the characteristics of their products, search for new suppliers, and even drop prices to be more competitive, which will have a negative impact on profitability.

Moreover, MNEs' subsidiaries may even be in a disadvantageous position in comparison to local competitors in case of rapid institutional changes, as foreign entrants often lack the non-market resources (e.g., informal ties with local authorities, suppliers, customers, and policy makers) that act as a key source of information (Cuervo-Cazurra & Genc, 2011; Henisz & Zelner, 2012; Zaheer, 1995) and can serve to anticipate the consequences of rapid institutional changes. Therefore, as a result of rapid pro-market reforms, the competition from local competitors can also threaten the performance and even survival of subsidiaries.

Subsequently, the uncertainty and volatility associated with rapid pro-market institutions make it difficult for subsidiaries to accurately predict the key parameters of their strategic decision-making process to counteract the new environment (Park et al., 2006; Xu & Meyer, 2013). This deficiency of adaptation will require that subsidiaries invest resources to develop new capabilities and skills, sometimes through trial and error (Hoskisson et al., 2000; Ireland, Tihanyi, & Webb, 2008), which will negatively affect subsidiary performance. From here, our first hypothesis is derived:

> **Hypothesis 1. (H1)**. *A high speed of institutional change in the host country negatively affects subsidiary performance.*

3.2 | MNEs and institutional learning in the home country

In the context of strategy and IB, the importance of knowledge for MNEs, as well as their ability to create and share it, has been widely recognized (Gaur, Ma, & Ge, 2019). Previous literature has observed that MNEs possess superior knowledge that confers them competitive advantages that can be exploited abroad (Kogut & Zander, 1993) and that can help foreign subsidiaries to face unfamiliar environments (Buckley & Casson, 1976; Caves, 1971). As previously mentioned, an important source of learning for MNEs is the home country (Cuervo-Cazurra, 2011; Cuervo-Cazurra et al., 2018) because they have developed the capabilities and skills to face the particularities of these environments.

Some MNEs are based in countries that have been subject to institutional changes. Specifically, recent studies have shown that certain MNEs (e.g., multinationals from emerging economies) possess specific capabilities that allow them to better adapt to turbulent environments (De Beule, Elia, & Piscitello, 2014; Guillén & García-Canal, 2009). The main reason is that they have obtained valuable institutional learning in their home countries that can be used in the internationalization process. As a consequence of their exposure to unstable institutional environments in their country of origin, some MNEs develop adaptive management skills that allow them to react with greater flexibility abroad (Cuervo-Cazurra & Ramamurti, 2017). For instance, Del Sol and Kogan (2007) demonstrate that the knowledge acquired during the 1990s in the electricity and pension industries due to the economic liberalization in Chile was transferrable to other industries and also to other Latin American countries undergoing pro-market reforms 10 years later. Thus, being based in a country that has experienced drastic pro-market reforms does not necessarily mean a source of a disadvantage, but rather an advantage as it provides MNEs with adaptive capabilities to confront threats and exploit the opportunities that arise from rapid institutional changes in other host countries.

In this vein, when the institutional changes that MNEs face in their home countries take place in a short time period, they have to deploy greater adaptive capabilities to be competitive and survive. As a consequence of the learning developed at home, these MNEs can better

identify the intentions of governments in host markets when they try to improve market-supporting institutions and will react quicker than other less experienced firms (Henisz & Delios, 2000). As a result, MNEs based in countries that have experienced a quick institutional change can develop better strategies in the host country.

Consequently, we expect that the subsidiaries that are controlled by these MNEs with origins in countries undergoing a high speed of institutional change can benefit from the MNEs learning when rapid institutional changes take place in the host market. These subsidiaries will have the capacity to react to institutional changes faster, so they will not suffer the high costs associated with the adaptation process. This confers them an institutional advantage since the negative effect of rapid institutional changes on their performance is expected to weaken. Therefore, we propose that:

> **Hypothesis 2. (H2)**. *MNEs' past home country learning in response to rapid institutional changes positively moderates the negative relationship between the speed of institutional change in the host country and subsidiary performance.*

3.3 | MNEs and institutional learning in other host countries

As discussed, previous research has shown that experience is a key element that may allow firms to obtain competitive advantages. Subsidiaries can benefit from resources and capabilities that parent MNEs have generated in their home countries (Johanson & Vahlne, 1977; Shaver, Mitchell, & Yeung, 1997; Tallman & Yip, 2001), but can also benefit from capabilities that other subsidiaries have developed in host countries in which the MNEs operate (Perkins, 2014; Zhou & Guillén, 2015).

Internationalization can be seen as a process of learning and knowledge development (Johanson & Wiedersheim-Paul, 1975). Previous literature has also shown that MNEs can gain institutional learning by interacting with different environments through their subsidiaries (Perkins, 2014; Powell & Rhee, 2016). Some authors such as Perkins (2014) have identified that firms can generate institutional capabilities that allow them to obtain better results in other units. As companies grow and face changing institutional environments, they learn to adapt to such situations (Kraatz, 1998; Siggelkow & Levinthal, 2003). When subsidiaries operate under rapid institutional changes, they face sudden increases in new competitors, variations in consumer preferences (McMillan & Woodruff, 2002), adaptation costs associated with new regulations (Chari & Banalieva, 2015), and political instability. As a result, they need to develop skills and abilities to survive in this situation; adapting to changing environments will generate learning, which may become a source of institutional competitive advantage (Martin, 2014) when another subsidiary undergoes rapid institutional changes (Perkins, 2014) and other sub-units can take advantage of it.

Given that one of the key advantages for MNEs is their ability to obtain knowledge by learning in different environments and redistribute that knowledge in subsequent operations (Mu, Gnyawali, & Hatfield, 2007; Powell & Rhee, 2016), as MNEs acquire greater institutional learning, the greater the transfer of knowledge to their subsidiaries (Mu et al., 2007; Zhou & Guillén, 2015). When rapid changes in market-supporting institutions in a host country take place, attributes such as efficiency, flexibility, and rapid adaptation will be crucial for subsidiaries (McMillan & Woodruff, 2002). Therefore, the more learning in response to rapid institutional changes an MNE has accumulated in other host countries, the greater the institutional competitive advantage generated, and the greater the adaptation and flexibility tools, skills, and capabilities that can be used by other subsidiaries when faced with a similar situation of institutional change. Therefore, we propose that:

Hypothesis 3. (H3). *MNEs' past host countries learning in response to rapid institutional changes positively moderates the negative relationship between the speed of institutional change in the host country and subsidiary performance.*

4 | SAMPLE, VARIABLES, AND METHODS

4.1 | The mobile telecommunications industry

The empirical analysis is carried out in the mobile telecommunications industry. Our data come from the GSMA Intelligence Database (GSMA Intelligence, 2018). GSMA Intelligence is a source of mobile operator data, analysis, and forecasts. With more than 26 million individual data points (updated daily), the service provides coverage of the performance of more than 1,400 operators and 1,200 mobile virtual network operators across more than 4,400 networks, 80 groups, and 237 countries and territories worldwide (GSMA Intelligence, 2018). With data retrieved from this data set, we have built a panel of 3,963 observations that correspond to the yearly performance obtained by 342 subsidiaries[2] (our unit of analysis) in 142 host countries from 2001 to 2017. These subsidiaries belong to 68 MNEs from 44 home countries.[3] The data set also provides information about several variables regarding the subsidiary, such as age and size, to complement the analysis.

This industry is especially suitable for our research for several reasons. First, the mobile telecommunications industry has recently undergone an exponential internationalization process, during which time MNEs have become the key players in the industry. Moreover, these MNEs carry out their activity over five continents, which favors our research purposes because it introduces high institutional variability across host countries where subsidiaries compete.

Second, it is true that internationalization in the industry started with FDI by MNEs from advanced economies (e.g., Deutsche Telekom from Germany, Orange from France, Telefónica from Spain, and Vodafone from the United Kingdom); however, during the last 20 years, MNEs from emerging economies have gained leading positions in the industry (e.g., América Móvil from Mexico, Bharti Airtel from India, and Zain from Kuwait). As a consequence, the 68 MNEs included in our sample come from 44 home countries—51% from countries with emerging economies and 49% from countries with advanced economies. This distribution of home countries is adequate for testing to what extent the experience under rapid institutional changes in the home country of the MNEs could be a source of institutional learning to counteract the speed of pro-market institutions on the performance of the subsidiary.

Finally, as mentioned previously, mobile telecommunications is an industry that has undergone a wide internationalization process, where MNEs can be found in most of the countries. This geographic diversity makes this sector suitable for analyzing prior learning in different host institutional settings that have undergone rapid changes and that can give subsidiaries an institutional competitive advantage to better adapt to pro-market institutions.

4.2 | Dependent variable

Following previous studies in the mobile telecommunications industry (Domínguez, Garrido, & Orcos, 2016; Jakopin & Klein, 2012; Sung, 2014), we use the EBITDA margin as a measure of *subsidiary performance*.[4] The EBITDA margin retrieved from GSMA intelligence data set is a ratio where the numerator is the total EBITDA obtained by the subsidiary (total operating profit

in the period before interest, tax, depreciation, and amortization) and the denominator is the total revenue.

4.3 | Independent variables

4.3.1 | Speed of institutional change in the host country (host institutional change speed)

To approach our main independent variable, we follow the measure proposed by Banalieva et al. (2015), which has been lately used for similar purposes (Chen et al., 2017) and departs from the scope of pro-market institutions in a base year. The speed of institutional change captures the difference between the scope of pro-market institutions from the base year to the current year (distance traveled) and the number of years elapsed to achieve the reform (time duration). Accordingly, as our sample covers the period 2001–2017, we first calculated the scope of pro-market institutions for each country and year from 2000 (the base year) to 2017. We use the Economic Freedom Index (EFI), developed by the Heritage Foundation, and which has been widely used in previous studies (Fuentelsaz, Garrido, & Maicas, 2015a; Meyer, Estrin, Bhaumik, & Peng, 2009). The EFI documents the positive relationship between economic freedom and a variety of positive social and economic goals. The index measures economic freedom based on 12 factors, that are grouped into four categories or broad pillars of economic freedom such as rule of law, government size, regulatory efficiency, and open markets. Each of the 12 items is measured on a scale from 0 to 100 (total freedom). Following Meyer et al. (2009), we have calculated the mean value of the five categories that most closely reflect the efficiency of the markets and that have previously served to operationalize market-supporting institutions: *business freedom*, *trade freedom*, *property rights*, *investment freedom*, and *financial freedom* (Meyer et al., 2009). In this way, we measure the extent to which institutions in a market support economic exchanges by ensuring capital and information flows, the protection of property rights, and the entry of new participants into a market (Fuentelsaz et al., 2015a).

Second, we followed the measure proposed by Banalieva et al. (2015) as:

$$Speed\ of\ institutional\ change_{i,t} = \frac{Actual\ Speed\ of\ Institutional\ Change_{i,t}}{Fastest\ Speed\ of\ Institutional\ Change_i}$$

The *Actual Speed of Institutional Change* in a host country i is defined as the difference between the scope of market-supporting institutions in the year t ($t = 2001$–2017) and the scope of market-supporting institutions in the base year (2000)[5] (distance traveled) divided by the number of years elapsed from 2000 (time duration).[6] Thus, when comparing two countries, the country with faster institutional changes will be the one that, for a similar period of time, has carried out more pro-market reforms (higher numerator), or the one that, for a similar institutional change, has needed less time (lower denominator). However, it is necessary to consider that, in some countries, the subsequent speed of institutional change may be slower not because reforms are developing gradually, but because the chance to improve pro-market institutions is small, as the scope of pro-market institutions in the base year was already high. Accordingly, the measure of Banalieva et al. (2015) considers that the actual speed of institutional change is relative to its *Fastest Speed of Institutional Change_i*, which captures the maximum institutional change that can take place in a country i from the base year (Heybey & Murrell, 1999). In our case, the fastest speed of institutional change is

calculated as the difference between 100 (the maximum scope of the Economic Freedom Index) and the scope of institutions for each country in 2000.

Accordingly, a higher value of the variable *Speed of institutional change* indicates a faster velocity of institutional change (Banalieva et al., 2015; Chen et al., 2017). With this measure, we consider that pro-market reforms will be faster if more institutional changes are achieved in less time, which abandons the static concept of institutional change by incorporating the importance of the time needed to achieve that change. Furthermore, given that we understand that there are countries that are in different institutional starting points in the base year, our variable takes into account the maximum level of change that could take place from that period.

4.3.2 | Home country learning

Because the objective of this study is to analyze how the prior institutional learning developed by MNEs can help subsidiaries to face the speed of host institutional change and because previous studies show the influence of time on learning (Zhou & Guillén, 2015), we calculate an accumulated experience variable. To do so, we carry out a cumulative sum of the number of periods in which the MNEs have undergone rapid institutional change conditions in the home country. We consider that the home country is under a rapid institutional change in a period t if its speed of change during that period is above the mean + 1 *SD* of all the countries included in the sample. Taking this into account, for each period of time t, we calculate our variable as follows:

$$Home\ country\ learning_t = \sum_{t=2001}^{t} Periods\ under\ rapid\ changes_t$$

where $t = 2001$–2017. The more periods the parent MNE has been under rapid institutional change, the greater this prior learning will be.

4.3.3 | Host countries learning

Similar to the previous measure, to calculate this prior learning we have generated a variable of accumulated experience that considers the importance of time on learning (Zhou & Guillén, 2015). To calculate our variable, we carry out a cumulative sum of the number of host countries and periods under rapid institutional change conditions in which the MNEs were present. First, for each period t, we calculate the number of countries that have undergone rapid institutional change where the MNE have a subsidiary (Number of countries under rapid changes). We consider that a host country is under a rapid institutional change in a period t if its speed of change during that period is above the mean + 1 SD of all the countries included in the sample. Subsequently, we calculate a cumulative sum over time of all the countries in which it has a presence for each moment of time. That is, for each MNE j in period t, the variable is calculated as follows:

$$Host\ countries\ learning_{j,t} = \sum_{t=2001}^{t} Number\ of\ countries\ under\ rapid\ changes_t$$

where $t = 2001–2017$. This variable will take on a greater value the more host countries and the longer an MNE has undergone rapid institutional change through other subsidiaries.

4.4 | Control variables

First, we control for subsidiary-level influences on performance. Older firms may be more profitable, as they are more established in the market and can obtain first-mover advantages (Lieberman & Montgomery, 1988). Thus, similarly to previous studies, we control for *subsidiary age* through the number of years since foundation (Banalieva et al., 2018). Moreover, *subsidiary size* generally has a positive effect on performance because large firms can have more favorable access to capital and more efficient resources and can enjoy higher efficiency due to scale economies (Park et al., 2006). We measure subsidiary size by the number of millions of connections of each operator.[7]

Second, we control the effect of MNE-level variables because parent resources and capabilities can affect the subsidiary performance. Given that the size of the firm is related to resource endowments (Audia & Greve, 2006), we measure the *MNE size* with the natural logarithm of the worldwide number of connections of the MNE (calculated as the sum of the number of connections of MNEs′ subsidiaries of total connections) (Fuentelsaz, Garrido, & Maicas, 2020). Also, older MNEs may have access to more resources, as they are more established in the market, so we control for *MNE age* with the number of years since foundation (Banalieva et al., 2018). We also control for the accumulated number of countries other than the home country where the parent company is present to proxy the *MNE experience*. Finally, because the control that the MNEs have over the subsidiary can influence the knowledge transfer between the parent company and the subsidiary, we also control for the level of ownership that the MNE held over the subsidiary (*MNE ownership level*).

Third, we include home and host country-level control variables. Similar to previous studies (Banalieva et al., 2015; Banalieva et al., 2018), we control for the *scope of host institutions*. This variable is calculated as the average of the five dimensions of the Economic Freedom Index for country i in period t. When a host country has stronger market-supporting institutions, we can expect a higher level of competition and lower performance. We also include the *scope of home institutions* where we calculate it similarly to the previous measure but focusing on the home economies. Moreover, because the institutional changes happen at different institutional levels, we include a variable to control for the *institutional starting point*. A dummy variable is incorporated that takes a value of 1 if the host country of the subsidiary was in a situation of moderate economic freedom in our base year and 0 otherwise.[8] Because a larger market may give more opportunities to subsidiaries, we control by *country size* (in millions of habitants) and country *GDP* (in thousands of millions of euros). Moreover, when a technological change happens, industry leaders may see their first-mover advantages weakened and new market segments may emerge with new opportunities to generate profits. So we control for the existence of a *technological change* in the market through a dummy variable that takes a value of 1 since the period that the 3G technology appeared in the market, and 0 in the previous years. Also, we include the *host market concentration* because we expect that more competitive markets show a lower performance (Gómez & Maícas, 2011). We employ the HHI previously mentioned, provided by the GSMA database. Similarly, we control for *home market concentration*. Moreover, given that the increase in demand can induce the entry of new competitors in the market, affecting the performance of the subsidiary, we control for *demand*

growth (Park et al., 2006). Finally, the model includes *region* and *year dummies* to control for regional and time-specific influences, respectively.

Because the effects of independent variables on performance may not necessarily materialize immediately, we consider a 1-year lag between EBITDA margin and the independent and control variables (Kim et al., 2010; Lu & Beamish, 2004; Wan & Hoskisson, 2003).

4.5 | Descriptive analysis

As the study focuses on the speed of institutional change in the host country, we find it important to determine to what extent pro-market institutions have taken place in our sample. For this reason, Table 1 show the evolution of pro-market institutions in the host countries included in our sample, while Tables 2 and 3 show the descriptive statistics and correlations for all the variables included in our analysis.

Table 1 presents the average value of the five dimensions of the Economic Freedom Index in 2000 and 2017 for the whole sample as well as the value by the host countries included in the sample. We can observe that, on average, market-supporting institutions have been improved during this 18-year period. In addition, the table shows the same comparison by focusing on emerging and advanced economies. We establish this distinction because previous studies have mainly focused on emerging economies to analyze the effect of pro-market institutions and the speed of the institutional change on firm performance (Banalieva et al., 2015; Banalieva et al., 2018; Chari & Banalieva, 2015; Cuervo-Cazurra & Dau, 2009). However, as we can observe in the table, market-supporting institutions have increased by almost five points for emerging and advanced economies. Although the advanced economies present stronger market-supporting institutions (as a consequence of earlier pro-market reforms), they are also subject to institutional changes of similar magnitude during the period of analysis. Therefore, we believe that it is convenient to include these countries in the sample to provide more complete evidence of the influence of the speed of institutional change on subsidiary performance.

If we observe the detailed comparison of values by the host country, we find that 35 of the 142 countries in the sample show weaker market-supporting institutions in 2017 than in 2000, which indicates that 75% of countries show an increase in the level of market-supporting institutions. With regard to the countries that have weakened their market-supporting institutions, this decrease is slight, with only a few exceptions (i.e., Argentina, Bolivia, and Venezuela), where the deterioration is pronounced because of the turbulent political conditions in recent years.

Table 2 illustrates the mean value and its *SD*, as well as the minimum and maximum values of all the variables. It can be observed that, on average, the performance of the subsidiaries included in the sample is 0.21, with a *SD* of 0.38, which reflects high variability. It can also be observed that the average host institutional change speed is positive and reaches a value of 0.004. However, the speed of change that countries undergo also reveals a high level of variability, as indicated by the *SD* of 0.04, as well as the maximum (0.37) and minimum (−0.34) values. Regarding the moderating variables, the home country learning, on average, shows a mean value of 1.27 with a *SD* of 2.75. This presents the wide difference between its maximum (13) and minimum (0) values. Regarding host country learning, with a mean value of 11.6 and a *SD* of 14.81, the maximum value of the variable is 51, which indicates that MNEs have accumulated a high level of prior experience in other host countries. When we analyze correlations between the different variables (Table 3), there is a positive and significant correlation between

TABLE 1 Evolution of market-supporting institutions in host countries (2000–2017)

Country	2000	2017		Country	2000	2017		Country	2000	2017	
Advanced host countries											
Australia	79.8	85.4	◄	Hong Kong	92.0	91.7	▶	Norway	72.2	79.8	◄
Austria	76.6	82.0	◄	Ireland	78.6	82.6	◄	Portugal	67.6	75.3	◄
Belgium	75.6	81.5	◄	Israel	75.6	75.0	▶	Singapore	86.6	89.4	◄
Canada	74.5	83.7	◄	Italy	71.6	73.3	◄	Slovakia	58.2	73.2	◄
Cyprus	69.9	72.6	▶	Japan	71.2	76.9	◄	Slovenia	62.7	72.5	◄
Czech Republic	77.4	76.9	◄	Latvia	68.2	74.9	◄	Spain	71.6	76.0	◄
Denmark	78.6	87.5	◄	Lithuania	64.2	75.8	◄	Sweden	72.6	86.3	◄
Estonia	80.0	83.3	◄	Luxembourg	78.8	83.3	◄	Switzerland	80.2	85.7	◄
Finland	71.6	86.6	◄	Macao	70[a]	73.0	◄	United Kingdom	82.6	88.1	◄
France	63.6	77.0	◄	Malta	64.2	72.4	◄	United States of America	78.7	80.6	◄
Germany	71.6	81.3	◄	Netherlands	79.6	84.9	◄				
Greece	63.6	61.8	▶	New Zealand	86.7	87.1	◄	Total advanced countries	75.9	80.7	◄
Emerging host countries											
Albania	51.6	72.2	◄	Guinea-Bissau	23.9	41.1	◄	Pakistan	49.6	52.0	◄
Algeria	51.9	45.7	▶	Guyana	51.2	52.3	◄	Panama	69.8	71.7	◄
Angola	31.0	44.3	◄	Haiti	34.4	40.5	◄	Papua New Guinea	45.6	47.6	◄
Argentina	71.4	51.3	▶	Honduras	53.6	61.1	◄	Paraguay	62.5	62.4	▶
Armenia	60.4	72.8	◄	Hungary	71.3	71.2	▶	Peru	65.6	70.0	◄
Bahamas	65.0	54.9	▶	India	36.9	52.2	◄	Philippines	57.9	61.6	◄
Bahrain	68.5	74.3	◄	Indonesia	54.2	54.6	◄	Poland	67.0	72.1	◄
Bangladesh	36.4	46.4	◄	Iran	27.3	32.3	◄	Qatar	52.0	68.2	◄
Belarus	40.5	48.6	◄	Jamaica	65.4	68.4	◄	Romania	55.8	68.4	◄
Benin	55.8	57.3	◄	Jordan	68.1	67.2	▶	Russian Federation	47.5	51.5	◄

TABLE 1 (Continued)

Country	2000	2017		Country	2000	2017		Country	2000	2017	
Bolivia	64.0	41.1	▶	Kazakhstan	42.4	59.8	◀	Rwanda	27.0	58.7	◀
Bosnia and Herzegovina	35.8	60.0	◀	Kenya	57.6	53.5	▶	Sao Tome and Principe	41[a]	53.9	◀
Botswana	64.2	69.1	◀	Korea, North	14.0	7.5	▶	Saudi Arabia	51.8	60.8	◀
Brazil	54.2	57.1	◀	Kuwait	66.6	62.1	▶	Senegal	54.0	53.6	◀
Bulgaria	55.0	69.2	◀	Kyrgyzstan	50.0	62.0	◀	Serbia	52.8[a]	62.2	◀
Burkina Faso	52.0	52.8	◀	Laos	27.2	46.2	◀	Seychelles	44.8[a]	57.4	◀
Cabo Verde	50.0	62.3	◀	Lesotho	49.2	54.8	◀	Sierra Leone	38.7	47.3	▶
Cambodia	50.6	52.5	◀	Liberia	33.8[a]	43.4	◀	South Africa	63.2	59.4	▶
Cameroon	42.6	45.2	◀	Macedonia	53.6[a]	70.9	◀	Sri Lanka	58.2	54.1	▶
Chad	42.0	42.6	◀	Madagascar	44.4	52.2	◀	Syria	28.0	29.8[a]	◀
Chile	73.1	76.4	◀	Malawi	53.4	51.4	▶	Tajikistan	44.0	48.0	◀
Colombia	64.8	74.5	◀	Malaysia	60.8	73.5	◀	Tanzania	48.5	53.0	▶
Congo	34.0	39.8	◀	Maldives	43.4[a]	47.7	◀	Thailand	66.6	62.8	◀
Congo, Democratic Republic	26.8	43.0	◀	Mali	61.0	51.2	▶	Timor-Leste	38[a]	44.8	▶
Cote d'Ivoire	43.8	60.4	◀	Mauritania	36.0	47.8	◀	Trinidad and Tobago	77.4	62.2	▶
Croatia	50.4	69.2	◀	Mexico	53.6	67.8	◀	Tunisia	55.6	51.8	▶
Dominican Republic	48.6	60.2	▶	Montenegro	39.7[a]	67.9	◀	Turkey	71.0	68.0	◀
Ecuador	58.4	47.8	◀	Morocco	60.2	69.3	◀	Turkmenistan	30.0	30.5	◀
Egypt	48.0	53.5	▶	Mozambique	46.6	52.2	◀	Uganda	49.0	52.0	◀
El Salvador	78.0	65.8	◀	Myanmar	39.8	37.5	▶	Ukraine	47.0	48.9	◀
Fiji	56.0	60.6	▶	Namibia	68.2	62.0	▶	United Arab Emirates	66.4	68.3	◀
Gabon	52.0	48.7	◀	Nepal	42.6	42.0	▶	Uruguay	70.5	68.1	▶
Georgia	46.8	74.2	◀	Nicaragua	52.2	57.2	◀	Uzbekistan	32.0	37.9	◀
Ghana	53.2	61.3	◀	Niger	38.6	46.9	◀	Venezuela	57.1	23.4	▶

(Continues)

TABLE 1 (Continued)

Country	2000	2017		Country	2000	2017		Country	2000	2017	
Guatemala	59.4	61.1	◄	Nigeria	46.0	45.3	▼	Yemen	41.2	48.3[a]	▼
Guinea	51.2	44.5	▼	Oman	52.2	67.9	◄	Zambia	62.8	59.9	◄
								Total emerging countries	50.9	55.1	◄
								Total	56.4	61.5	◄

Note: ◄ We use this symbol when market-supporting institutions have increased their value at the end of the period, and we use ▼ when they have decreased.

[a]In these cases, the value that appears in the table does not correspond to the years 2000 or 2017. This value corresponds with the first or last year for which we have the corresponding data for that country. In countries for which we do not have information for the year 2000, this first data of market-supporting institutions has been taken as the base data for the calculations of the measure of speed of institutional change.

TABLE 2 Descriptive statistics ($N = 3,963$)

Variable	Mean	SD	Min	Max
Subsidiary performance	0.21	0.38	−9.9	1.03
Host institutional change speed$_{t-1}$	0.004	0.04	−0.34	0.37
Home country learning$_{t-1}$	1.27	2.75	0	13
Host countries learning$_{t-1}$	11.6	14.81	0	51
Subsidiary size$_{t-1}$	9.2	18.6	0	256
Subsidiary age$_{t-1}$	9.1	4.60	0	27
MNE ownership level$_{t-1}$	0.81	0.25	0.1	1
MNE size $_{t-1}$	321.3	369.1	0.23	1,683
MNE age $_{t-1}$	20.6	12.1	1	86
MNE experience $_{t-1}$	12.01	8.75	1	36
Institutional starting point$_{t-1}$	0.51	0.49	0	1
Scope of host institutions$_{t-1}$	61.3	15.9	1	92.1
Scope of home institutions$_{t-1}$	70.3	14.2	39.3	92.1
Host market concentration$_{t-1}$	3,919	1,370	1,324	10,000
Home market concentration$_{t-1}$	3,451	1,156	1,332	10,000
GDP$_{t-1}$	563	1,635	0.20	18,624
Technological change$_{t-1}$	0.74	0.44	0	1
Demand growth$_{t-1}$	0.22	0.94	−0.28	53.1
Country size$_{t-1}$	16.6	1.60	11.4	21

the subsidiary performance of the current year and the lagged performance, as well as a negative and significant correlation between the host institutional change speed and subsidiary performance. The home and host countries learning present a positive correlation with subsidiary performance. Regarding the control variables, only the country size has a relatively high correlation (over 0.5) with subsidiary size. It seems reasonable that in countries with a larger population there is scope for firms with higher size. A variance inflation factor (VIF) analysis has been carried out to verify possible multicollinearity problems among our variables. The value obtained, a mean VIF near to 3 and lower than 10, suggests that multicollinearity problems are not important here (Neter, Wasserman, & Kutner, 1990).

4.6 | Methods

Our dependent variable, *subsidiary performance*, may present inertia over time because current values may be conditioned by the performance of prior periods (as shown in Table 3). For this reason, we use dynamic panel data analysis to control for potential endogeneity by including a lag of the dependent variable, *subsidiary performance$_{t-1}$*. In this context, prior research has shown that ordinary least squares gives an estimation of coefficients that is biased (Li, Ding, Hu, & Wan, 2021). Similarly to other studies that have analyzed performance (Fuentelsaz, Garrido, & Maicas, 2015b; Uotila, Maula, Keil, & Zahra, 2009), we use the system generalized

TABLE 3 Correlations ($N = 3,963$)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Subsidiary performance	1.00																			
2 Subsidiary performance $_{t-1}$	0.35*	1.00																		
3 Host institutional change speed $_{t-1}$	−0.05*	0.001	1.00																	
4 Home country learning $_{t-1}$	0.02	0.02	0.17*	1.00																
5 Host countries learning $_{t-1}$	0.03*	0.01	0.14*	0.42*	1.00															
6 Subsidiary size $_{t-1}$	0.12*	0.04*	−0.02	0.01	0.10*	1.00														
7 Subsidiary age $_{t-1}$	0.16*	0.09*	0.003	0.18*	0.23*	0.27*	1.00													
8 MNE ownership level $_{t-1}$	0.01	0.02	0.08*	0.17*	0.04*	−0.04*	0.15*	1.00												
9 MNE size $_{t-1}$	0.09*	0.03	−0.01	0.10*	0.49*	0.33*	0.42*	0.04*	1.00											
10 MNE age $_{t-1}$	−0.03	0.01	0.06*	0.14*	0.30*	0.11*	0.37*	0.01	0.34*	1.00										
11 MNE experience $_{t-1}$	−0.01	0.02	−0.05*	−0.08*	0.47*	0.03*	0.10*	0.03*	0.48*	0.24*	1.00									
12 Institutional starting point $_{t-1}$	0.02	0.03*	0.004	0.22*	0.22*	−0.10*	0.01	0.17*	−0.10*	0.00	0.00	1.00								
13 Scope of host institutions $_{t-1}$	−0.03*	0.02	0.40*	0.34*	0.34*	−0.09*	0.04*	0.19*	−0.06*	0.13*	−0.02	0.52*	1.00							
14 Scope of home institutions $_{t-1}$	−0.03*	0.01	0.16*	0.43*	0.46*	−0.02	0.02	0.05*	−0.03*	0.23*	0.14*	0.41*	0.53*	1.00						
15 Host market concentration $_{t-1}$	0.04*	0.01	−0.06*	−0.13*	−0.19*	−0.30*	−0.22*	−0.13*	−0.24*	−0.20*	−0.00	−0.16*	−0.27*	−0.15*	1.00					
16 Home market concentration $_{t-1}$	0.06*	0.01	−0.09*	−0.09*	−0.24*	−0.08*	−0.17*	−0.06*	−0.24*	−0.20*	−0.06*	−0.08*	−0.12*	−0.24*	0.27*	1.00				
17 GDP $_{t-1}$	0.001	−0.00	0.14*	0.11*	0.18*	0.39*	0.04*	0.03*	0.15*	0.08*	−0.01	0.19*	0.24*	0.15*	−0.27*	−0.12*	1.00			
18 Technological change $_{t-1}$	0.03*	0.00	0.12*	0.20*	0.24*	0.20*	0.57*	0.11*	0.33*	0.33*	0.03*	0.09*	0.19*	0.11*	−0.28*	−0.17*	0.10*	1.00		
19 Demand growth $_{t-1}$	0.005	−0.02	−0.06*	−0.07*	−0.09*	−0.06*	−0.19*	−0.06*	−0.09*	−0.11*	−0.03*	−0.12*	−0.19*	−0.10*	0.17*	0.08*	−0.04*	−0.17*	1.00	
20 Country size $_{t-1}$	−0.02	−0.05*	−0.13*	−0.08*	0.08*	0.48*	−0.01	−0.11*	0.33*	0.05*	0.05*	−0.16*	−0.21*	−0.07*	−0.42*	−0.07*	0.40*	0.01	0.04*	1.00

*p-value < .1.

method of moments (GMM) in two steps as our estimation approach (Arellano & Bover, 1995; Blundell & Bond, 1998). The system GMM estimator produces dynamic estimates that consider lagged realizations of the dependent variable, providing consistent results in the presence of different endogeneity problems (Greene, 2008). Using this method, we controlled for the three major sources of endogeneity, namely, (a) unobserved heterogeneity, (b) simultaneity, and (c) dynamic endogeneity (Ullah, Akhtar, & Zaefarian, 2018).

5 | RESULTS

Table 4 shows the results of the system GMM estimations. Before discussing them, we address possible failed specifications of the models that are verified through several tests, presented at the bottom of Table 5. First, the Hansen statistic of excessive identification restrictions is used to prove the absence of correlation between the instruments and the error term. The result of the test is statistically nonsignificant, with levels of significance between 0.10 and 0.25 (Roodman, 2009), and, therefore, there is no overidentification (the instruments are valid). Second, we use the statistics developed by Arellano and Bond (1991) to prove that the errors are uncorrelated. Using the Arellano–Bond family of estimators requires that the model's error terms be not second-order correlated (as evidenced by the lack of significance for the AR[2] test). Third, the Wald Chi tests are presented to measure the joint significance of the variables in the models. All of the Wald tests support the joint importance of the coefficients.

As can be seen in Table 4, the results of our system GMM estimations in two steps are provided in Models 1–5. Model 1 considers the influence of the control variables in subsidiary performance. Model 2 introduces the effect that *host institutional change speed* has on the dependent variable to test H1. Model 3 introduces the variable *home country learning* and the interaction effect with *host institutional change speed* that corresponds to H2. Model 4 incorporates the direct effect of *host countries learning* in subsidiary performance and the interaction with the *host institutional change speed* that corresponds to H3. Finally, Model 5 introduces both interaction effects. The F-tests are presented at the bottom of the table and show that Model 5 is the model that best fits our data; thus, we employ it to comment on our results.

Models 1–5 show that the effect of control variables on *subsidiary performance* remains stable. The performance of the previous year (*subsidiary performance$_{t-1}$*) presents a positive and significant effect. *Host market concentration* and *technological change* also have a positive and significant effect, showing that in less competitive markets and in markets where technological changes take place, the opportunities to obtain higher results increase. Contrarily, the *scope of host institutions* presents a negative and significant effect. Other variables such as *home market concentration*, *GDP*, *subsidiary size*, and *demand growth* show nonsignificant relationships.

H1 states that the *host institutional change speed* negatively influences the *subsidiary performance*. Our results in Model 5, which are in line with the results obtained in the rest of the models, suggest that the higher the speed of change of market-supporting institutions in the host country, the lower the performance obtained by subsidiaries ($\beta = -.534$; $p = .018$). This supports H1, showing that subsidiaries tend to obtain lower performance when institutional changes take place in short periods of time.

Our theoretical model has argued that not all subsidiaries adapt to institutional changes in the same way. In H2, we postulate that subsidiaries controlled by MNEs with an origin in economies that have experienced high-speed institutional changes are better prepared to adapt to fast pro-market reforms and, therefore, their performance is not affected so negatively by the host

TABLE 4 Determinants of subsidiary performance

	Model 1	Model 2	Model 3	Model 4	Model 5
Subsidiary performance$_{t-1}$	0.415***(0.124)	0.458***(0.109)	0.420***(0.122)	0.418***(0.126)	0.422***(0.123)
Host institutional change speed$_{t-1}$		−0.431**(0.178)	−0.384(0.216)	−0.467**(0.214)	−0.534**(0.225)
Home country learning$_{t-1}$			−0.003(0.004)	−0.004(0.004)	−0.004(0.004)
Host institutional change speed$_{t-1}$ × Home country learning$_{t-1}$			0.243*(0.105)		0.198*(0.110)
Host countries learning$_{t-1}$				0.0004(0.001)	0.001(0.001)
Host institutional change speed$_{t-1}$ × Host countries learning$_{t-1}$				0.049***(0.016)	0.042**(0.017)
Subsidiary size$_{t-1}$	−0.001(0.001)	−0.002*(0.001)	−0.001(0.001)	−0.001(0.001)	−0.001(0.001)
Subsidiary age$_{t-1}$	0.010(0.007)	0.007(0.007)	0.009(0.007)	0.009(0.007)	0.009(0.007)
MNE ownership level$_{t-1}$	−0.059(0.037)	−0.055(0.038)	−0.062(0.039)	−0.056(0.039)	−0.057(0.040)
MNE size$_{t-1}$	0.009(0.010)	0.001(0.012)	0.010(0.010)	0.006(0.011)	0.007(0.011)
MNE age$_{t-1}$	−0.002**(0.001)	−0.002***(0.001)	−0.002**(0.001)	−0.002**(0.001)	−0.002**(0.001)
MNE experience$_{t-1}$	−0.001(0.001)	−0.001(0.001)	−0.001(0.001)	−0.001(0.001)	−0.001(0.001)
Institutional starting point$_{t-1}$	0.035(0.022)	0.016(0.026)	0.024(0.022)	0.030(0.024)	0.031(0.023)
Scope of host institutions$_{t-1}$	−0.004***(0.001)	−0.004***(0.001)	−0.004***(0.001)	−0.005***(0.001)	−0.005***(0.001)
Scope of home institutions$_{t-1}$	−0.0001(0.001)	−0.0001(0.001)	−0.0001(0.001)	−0.0003(0.001)	−0.0003(0.001)
Host market concentration$_{t-1}$	0.0001*(0.000)	0.0001*(0.000)	0.0001*(0.000)	0.0001*(0.000)	0.0001*(0.000)
Home market concentration$_{t-1}$	0.002(0.014)	−0.010(0.015)	0.003(0.014)	0.001(0.014)	0.003(0.014)
GDP$_{t-1}$	0.005(0.003)	0.005(0.003)	0.005*(0.003)	0.004(0.003)	0.004(0.003)
Technological change$_{t-1}$	0.355***(0.113)	0.440***(0.137)	0.358***(0.108)	0.353***(0.104)	0.356***(0.100)
Demand growth$_{t-1}$	0.006(0.012)	0.010(0.012)	0.006(0.012)	0.006(0.012)	0.006(0.012)
Country size$_{t-1}$	0.009(0.011)	0.023*(0.014)	0.009(0.012)	0.009(0.011)	0.008(0.011)
Dummy years	Included***	Included***	Included***	Included***	Included***
Dummy region	Included***	Included***	Included***	Included***	Included***

TABLE 4 (Continued)

	Model 1	Model 2	Model 3	Model 4	Model 5
_cons	−0.423**(0.199)	−0.530***(0.202)	−0.440***(0.201)	−0.320 (0.222)	−0.323 (0.221)
N	3,963	3,963	3,963	3,963	3,963
F-test versus Model 1		5.89**	7.10*	10.29**	12.12**
F-test versus Model 2			6.78**	9.65***	11.95**
F-test versus Model 3					7.53**
F-test versus Model 4					3.86*
Wald Chi	690.19	693.09	713.87	694.18	716.98
AR (2)	0.75	0.74	0.76	0.75	0.75
Hansen test	9.80	9.13	9.74	10.08	9.94

Note: Standard errors in parentheses *p < .1, **p < .05, ***p < .01.

TABLE 5 Determinants of subsidiary performance to different control levels

Ownership control 25%

	Model 1	Model 2	Model 3	Model 4	Model 5
Subsidiary performance$_{t-1}$	0.408***(0.119)	0.401***(0.110)	0.413***(0.118)	0.410***(0.123)	0.414***(0.120)
Host institutional change speed$_{t-1}$		−0.293*(0.176)	−0.420*(0.226)	−0.484**(0.224)	−0.565**(0.237)
Home country learning$_{t-1}$			−0.003 (0.004)	−0.003 (0.004)	−0.003 (0.004)
Host institutional change speed$_{t-1}$ × Home country learning$_{t-1}$			0.258**(0.106)		0.219**(0.110)
Host countries learning$_{t-1}$				0.0001 (0.001)	0.0003 (0.001)
Host institutional change speed$_{t-1}$ × Host countries learning$_{t-1}$				0.049***(0.017)	0.041**(0.017)
Control variables	Included	Included	Included	Included	Included
_cons	−0.379* (0.203)	−0.471**(0.202)	−0.399*(0.204)	−0.319 (0.230)	−0.318 (0.229)
N	3,823	3,823	3,823	3,823	3,823
F-test versus Model 1		2.78*	7.95**	9.36**	11.97**
F-test versus Model 2			7.56**	8.66**	11.80**
F-test versus Model 3					5.11*
F-test versus Model 4					6.29**
Wald Chi	648.38	642.19	683.02	649.78	680.87
AR (2)	0.78	0.74	0.78	0.77	0.77
Hansen test	9.67	7.57	9.51	9.87	9.75

Ownership control 50%

	Model 1	Model 2	Model 3	Model 4	Model 5
Subsidiary performance$_{t-1}$	0.406***(0.104)	0.417***(0.092)	0.406***(0.090)	0.402***(0.104)	0.407***(0.099)
Host institutional change speed$_{t-1}$		−0.448***(0.227)	−0.602**(0.243)	−0.478**(0.265)	−0.600**(0.278)
Home country learning$_{t-1}$			−0.006 (0.005)	−0.004 (0.004)	−0.004 (0.004)
Host institutional change speed$_{t-1}$ × Home country learning$_{t-1}$			0.331***(0.114)		0.259**(0.108)
Host countries learning$_{t-1}$				0.0003 (0.001)	0.0005 (0.001)

TABLE 5 (Continued)

Ownership control 50%

	Model 1	Model 2	Model 3	Model 4	Model 5
Host institutional change speed$_{t-1}$ × Host countries learning$_{t-1}$				0.055***(0.023)	0.047*(0.024)
Control variables	Included	Included	Included	Included	Included
_cons	−0.369*(0.220)	−0.535***(0.229)	−0.543**(0.242)	−0.300 (0.228)	−0.306 (0.230)
N	3,391	3,391	3,391	3,391	3,391
F-test versus Model 1		3.90**	11.73***	8.03**	12.40**
F-test versus Model 2			9.95***	7.09**	12.27**
F-test versus Model 3					5.21*
F-test versus Model 4					6.76**
Wald Chi	677.45	677.32	676.40	691.56	728.57
AR (2)	0.88	0.68	0.74	0.89	0.91
Hansen test	8.25	7.43	7.72	7.83	7.66

Note: Standard errors in parentheses. *$p < .1$, ** $p < .05$, *** $p < .01$.
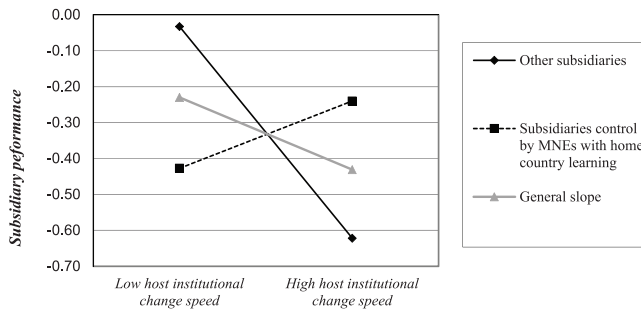
FIGURE 1 Moderating effect that the MNE's learning from home country has in the relationship between the subsidiary's performance and the speed of institutional change in host countries
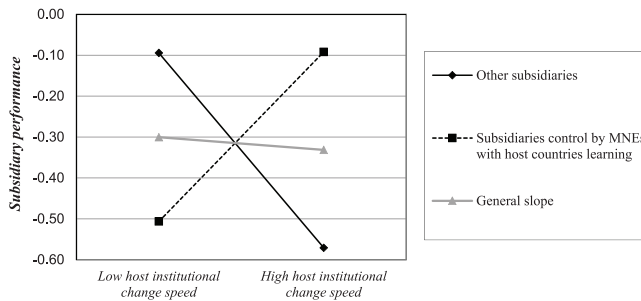
FIGURE 2 Moderating effect that the MNEs' learning from prior host countries has in the relationship between the subsidiary's performance and the speed of institutional change in host countries

institutional change speed. As can be observed in Model 5 (similar to Model 3 which only included the first moderation effect), there is a positive and significant effect for the interaction between *the host institutional change speed* and the *home country learning* of MNEs ($\beta = .198$; $p = .071$). So, we find support for H2. As expected, subsidiaries controlled by MNEs from economies previously undergoing rapid institutional changes can adapt better to fast institutional changes because of the institutional learning that they receive from their MNEs. As can be seen in Figure 1, the overall negative trend is relaxed for those subsidiaries that are controlled by MNEs that present a high level of learning from their home country (1 *SD* above the mean). We can see that, compared to the subsidiaries of MNEs from home countries that have experienced slow institutional changes (which experience a high deterioration, from −0.03 to −0.62), those controlled by MNEs originating from rapid institutional changes perform better (their performance is positively affected from −0.43 to −0.24).

The results from Model 5 also support H3. We now test the interaction between the *host institutional change speed* and the *host countries learning*, and we find a positive and significant relationship ($\beta = .042$; $p = .012$) between the two variables. This result confirms that subsidiaries controlled by MNEs with prior cumulative learning in other host environments undergoing fast institutional changes enjoy institutional advantages compared to other subsidiaries. A graphical illustration of this result is provided in Figure 2. As the figure reveals, although the overall trend is negative, subsidiaries controlled by MNEs with learning in prior host countries benefit more from rapid institutional changes compared to the remaining subsidiaries. Subsidiaries whose parent firms do not have cumulative experience in rapid institutional changes in

other host countries (1 *SD* below the average) will show a higher deterioration in their performance when the institutional changes happen over a short period of time.

5.1 | Robustness analysis

To verify the consistency of our results, we have conducted the additional analysis. Given that the level of control MNEs hold over subsidiaries may influence the knowledge transfer between subsidiaries and the parent company, we have replicated our main analysis taking different levels of ownership. As Table 5 reflects,[9] when the control level that MNEs have over the subsidiaries is 25%, our results remain stable, in line with the results previously obtained with a 10% ownership level (main analysis). H1, H2, and H3 are verified. Similarly, even if we are more restrictive and consider that the knowledge transfer only happens when the control is over 50%, our results also remain stable and our hypotheses are supported. Consequently, we have corroborated that, although the knowledge transfer may increase the greater the control held by the MNEs, the institutional competitive advantages generated by learning in the home country and in other host countries benefit the subsidiaries regardless of the level of control that the MNEs have over them, giving consistency to our results.

6 | DISCUSSION AND CONCLUSIONS

This research advances in the incipient study of institutional dynamism. Specifically, it analyzes the influence of the speed of change of pro-market institutions in the performance of the subsidiary and the moderating effect of institutional advantages that subsidiaries can exploit as a consequence of the home country and host country learning. Drawing on the dynamic institution-based view, we argue that, when institutional changes take place in a short period of time, the level of competition suddenly increases, as well as the need to generate new capabilities to cope with the new institutional landscape. The quick increase in competition usually goes hand in hand with the introduction of new products and technologies, and a possible decrease in the market share of the established subsidiary, with the subsequent deterioration in its performance. Moreover, the reorganization and new allocation of resources that are needed to generate the required skills to adapt to the new competitive landscape will damage performance. Our results confirm that subsidiaries obtain worse performance the higher the speed of change in pro-market institutions.

Nevertheless, subsidiaries may have developed institutional advantages that allow them to better adapt to the new competitive landscape because of learning undergone by MNEs in other environments. Our results determine that not all subsidiaries adapt to changes that take place in short periods of time equally. Subsidiaries can benefit from the institutional learning that the parent MNEs have obtained in their home countries, in addition to in other host countries in which they were present. By integrating the dynamic institution-based view and the organization learning literatures, our study demonstrates that subsidiaries controlled by MNEs that have experienced fast institutional changes in their home and other host countries will be more capable of coping with fast institutional changes in the host country. Consequently, the negative effect of fast pro-market institutional changes on performance is weakened as a consequence of institutional learning, which may generate a competitive advantage for these subsidiaries (Martin, 2014). It is crucial to point out that experience in the home country is not the only

source of such advantages: subsidiaries controlled by MNEs that have accumulated experience in other countries undergoing rapid institutional changes can benefit from and better adapt to the competitive pressures and the new regulations that duly arise from fast pro-market reforms in the host country. The negative effect of fast institutional changes on subsidiary performance is weakened because of this prior learning. Subsequently, although high-speed institutional change usually reduces value creation, some firms better counteract this threat thanks to the skills and capabilities built up by their parent MNEs in their home and host countries. Subsidiaries will react more accurately to sudden changes in the "rules of the game" that pro-market reforms imply, such as increases in the number of competitors, changes in consumer preferences, reduction of government interventionism, or improvement of property right protection, among others.

From a theoretical point of view, the main contribution of this research is the integration of organizational learning and the institutional dynamism literatures on the study of the subsidiary performance. We respond to the call to more deeply examine the relationship between institutional changes and firm performance by considering learning from host and home countries (Cuervo-Cazurra, Gaur, & Singh, 2019). We incorporate the organizational learning literature on the dynamic institution-based view by moving the focus from the institutional differences between the home and host countries (as a key obstacle to transfer experience from one country to another) to the experiential learning of fast institutional changes, which constitutes a key resource to build adaptation capabilities that diminish the negative impact of rapid institutional changes. We differentiate between the learning that comes from the home and host countries, since prior literature has considered them to be two different sources of experience that condition the internationalization process and outcomes (Zhou & Guillén, 2015). The home and host country learning generate institutional advantages to MNEs that can be transferred and, therefore, enjoyed by subsidiaries in host countries that face subsequent rapid institutional changes.

Our study has important implications from a public and a managerial point of view. Governments, regardless of their current scope of pro-market institutions, must consider the negative influence that rapid changes in pro-market institutions have in the performance of subsidiaries. A slower change in the institutions will allow for better adaptation and building capabilities by subsidiaries and, therefore, their performance would not be harmed. As a consequence, the institutional environment for foreign investors will be more attractive. From a managerial perspective, we should distinguish between managers of domestic firms confronting rapid institutional changes in their home countries and managers of subsidiaries and MNEs seeking growth into new markets. For the former, they are forced to quickly develop the necessary competencies to remain competitive and stay in the market. This is not an easy task and often may involve attracting foreign partners with experience facing rapid institutional changes in their home and host countries. Regarding the latter, managers of MNEs that have experienced previous rapid changes in other countries may be in an advantageous position when it comes to accessing new markets that are experiencing quick institutional changes. And, therefore, these target markets will be especially attractive for them. For instance, in its first internationalization stages, Telia Group learned from experiencing rapid institutional changes in the late 1990s and early 2000s in its home country, Sweden, as well as in other host countries, such as Finland, Denmark, and Estonia. This institutional learning allowed it to successfully enter later in Latvia and Lithuania, countries that were experiencing a similar pace of change. As the company has been conscious from its origins of the importance of dealing with rapid institutional changes, it considers that one of its key activities is "continuously exploring options to mitigate increased costs and loss of revenues due to regulatory changes" (Telia Annual and

Sustainability Report 2018, Telia Group, 2019). Moreover, managers of subsidiaries who have experience in dealing with rapid institutional changes become key actors within MNEs because they can store knowledge and transfer it to their global operations. They have learned to cope with a rapid increase in competition, demand, and innovation; their knowledge should, therefore, be disseminated across the MNEs' subsidiaries. To motivate managers and improve their ability to transfer knowledge about how to deal with rapid pro-market reforms, MNEs should invest in training courses, improve internal communication channels, and provide performance-based compensation, among other policies (Minbaeva, Pedersen, Björkman, Fey, & Park, 2003).

Our study is not without limitations that open new research avenues. First, it is true that our empirical setting (the mobile telecommunications industry) has previously been used in prior studies on institutions and organizational learning (e.g., Perkins, 2014). This industry has been subject to deregulation and liberalization while pro-market institutions have taken place, which may influence our results. Accordingly, it would be of interest to complement our research analyzing other unregulated industries. Second, we have considered MNE experience to be derived from home and host country learning. However, this may not be the only source of experience that can benefit subsidiaries when rapid institutional change takes place. For example, it is possible that previous subsidiaries' experience in the case of being previously controlled by other MNEs can also benefit them, thus, further studies would be welcome regarding this issue. Finally, the effective knowledge transfer from the parent company to subsidiaries can depend on the mechanism that has been used in their international expansion (e.g., greenfield or acquisition). For this reason, it would be interesting to analyze to what extent the institutional advantage of subsidiaries to counteract rapid institutional changes can depend on the entry mode that their multinationals have selected.

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ENDNOTES

[1] In this article, we indistinguishably use "institutional changes" and "pro-market reforms" to refer to variations in the level of development of market-supporting institutions that lead to national governance improvements and economic liberalization.

[2] Our database includes all subsidiaries from the data set with available data that have been controlled by MNEs with at least 10% ownership in each period. The International Monetary Fund (IMF) and the Organization for

Economic Cooperation and Development have considered the existence of FDI when MNEs own at least 10% of the subsidiary's equity.

[3] See Tables A1 and 1 for a detailed list of the home (Table A1) and host countries (Table 1) included in the sample, respectively.

[4] We limit the extreme values to reduce the effect of possible outliers (Barnett & Lewis, 1994). Only four observations are lost in this step.

[5] There are countries included in the sample for which the Economic Freedom Index does not report data until 2004 or 2009, so we have taken those years as the base years for these exceptions. In the rest of the cases, 2000 is the base year.

[6] For example, to calculate the *Actual Speed of Institutional Change* in Austria in 2007, we take the scope of market-supporting institutions during 2007, which reports a value of 79.66. We subtract from this value the scope of market-supporting institutions for the base year, in our case the year 2000, which takes a value of 76.6. Finally, we divide this difference (3.06) between the years that have elapsed since the base year and the year that is being calculated (7). Therefore, the actual speed of institutional change in 2007 is 0.437.

[7] Connections refer to the number of SIM cards (or phone numbers, where SIM cards are not used), excluding cellular M2M, that have been registered on the mobile network at the end of the period (GSMA Intelligence, 2018).

[8] According to the Heritage Foundation, a country is free, mostly free or moderately free if its Economic Freedom Index is above 60. On the contrary, a country is repressed or mostly unfree if the index for this country is below 60.

[9] All the models included in the table have incorporated the same control variables as the main analysis. Furthermore, all the criteria and tests that are necessary for the correct specifications of GMM system are fulfilled and have been incorporated.

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APPENDIX

TABLE A1 Home countries included in the empirical analysis

Home countries (44)			
Advanced		**Emerging**	
Australia	Japan	Argentina	Malaysia
Austria	Luxemburg	Bahrein	Mexico
Belgium	Netherlands	Brazil	Morocco
Czech Republic	Norway	Chile	Qatar
Denmark	Portugal	Croatia	Russian Federation
Finland	Singapore	Egypt	Saudi Arabia
France	Slovenia	Fiji	Senegal
Germany	Spain	Hungary	Serbia
Greece	Sweden	India	South Africa
Hong Kong	USA	Jamaica	Turkey
Italy	United Kingdom	Kuwait	United Arab Emirates