THE MODERATING EFFECT OF ENTRY MODE AND MNE NETWORKS ON THE RELATIONSHIP BETWEEN REFORMS AND PERFORMANCE

ABSTRACT

This empirical paper studies how MNEs may learn through their choice of mode of entry and international subsidiary network configuration as means to increase their responsiveness to pro-market reforms in their home market. The paper proposes that modes of entry and network configurations that facilitate knowledge acquisition provide firms from developing countries with an advantage when responding to such institutional changes. The analyses use data for the largest Latin American companies from 1989-2008. The findings provide evidence for a positive moderating effect of joint ventures, acquisitions, subsidiary network control, and subsidiary network centralization on the relationship between reforms and profitability.

Keywords: international learning, knowledge, entry mode, multinational network, pro-market reforms, performance, institutions

INTRODUCTION

The global strategy literature has increasingly focused on the effect of pro-market reforms and other related institutional processes on the performance of companies from developing countries (e.g., Appiah-Adu, 1999; Chari & Banalieva, 2014; del Sol & Kogan, 2007; Kedia et al., 2006; Kumaraswamy et al., 2012). These reforms are defined as institutional processes and changes implemented by governments seeking to improve the operation of their local markets and consequently of domestic firms (Edwards, 1995; Lora, 1997, 2001; Rodrik, 1996, 2006; Williamson, 1990, 2004). Prior work has focused on how reforms affect different aspects of business performance, such as profitability, international diversification, innovation, entrepreneurship, business group affiliation (e.g., Amann & Nixson, 1999; Appiah-Adu, 1999; del Sol & Kogan, 2007; Katrak, 2002). However, arguments in the literature have been mixed on whether reforms and globalization are actually of benefit to local firms (e.g., Amann & Nixson, 1999, Das, 2004; Guillen, 2001; Katrak, 2002; Mander & Goldsmith, 1996; Stiglitz, 2003). This suggests that other factors, such as the strategic choices that firms make, may help better explain whether firms are actually able to "activate" such potential benefits (e.g., Kumaraswamy et al., 2012).

On the other hand, the literature has examined the relationship between international learning, international diversification, and mode of entry (e.g., Barkema & Vermeulen, 1998), and how these in turn impact subsidiary performance (e.g., Zahra, Ireland, & Hitt, 2000). However, less attention has been devoted to how the knowledge that firms acquire through their choice of international modes of entry and subsidiary network configuration may affect their responsiveness to institutional changes in their home market of operation.

The current paper fills this gap in the literature by studying the moderating effects of an MNE's (multinational enterprise) mode of entry and subsidiary network structure on the relationship between reforms and profitability of firms from countries characterized by marked institutional voids (Khanna & Palepu, 1997). Building on the notion that firms may acquire

valuable knowledge through their internationalization efforts that provide a competitive edge when responding to reforms and other institutional changes in their home market (e.g., Dau, 2013), the paper suggests that modes of entry and network configurations that facilitate access to international knowledge provide a greater boost in this respect. In particular, the arguments suggest that firms that internationalize via joint ventures and strategic alliances (in place of wholly-owned subsidiaries) and via acquisitions (in place of greenfield ventures), are able to acquire business and institutional knowledge more quickly from international markets, giving them an edge when responding to institutional changes at home. Similarly, the greater the ownership and control that a firm has of its subsidiary network, the easier it becomes to transfer knowledge acquired abroad to its headquarters, which in turn facilitates its responsiveness to institutional changes. The paper tests and finds support for these arguments using a panel of the largest companies in Latin America from 1989-2008.

This paper contributes to the growing literature on institutions and firms (e.g., Hoskisson et al., 2013; Meyer et al., 2009; Peng et al., 2008; Peng & Heath, 1996) by bringing new moderators into the discussion of whether reforms are favorable for firms and under which circumstances. The choice of mode of entry (e.g., Madhok & Keyhani, 2012; Merchant & Schendel, 2000; Vermeulen & Barkema, 2001) and subsidiary network configuration (e.g., Elango & Pattnaik, 2007; Gupta & Govindarajan, 2000; Martin & Salmon, 2003) are key strategic decisions that MNEs make in their international efforts, so understanding how they can interact with institutional changes can be a critical aspect for firms. Similarly, the paper contributes to the international business and strategy literature on learning (e.g., Barkema et al., 1996; Barkema & Vermeulen, 1998; Johanson & Vahlne, 1977, 1990; Zahra et al., 2000) by developing the mechanisms whereby different modes of entry and network configurations can facilitate knowledge acquisition and transfer. The paper also contributes to the literature on emerging market firms (e.g., Aulakh & Kotabe, 2008; Contractor et al., 2007; Yamakawa et al., 2008) by studying how such companies may align their internationalization strategy with external

institutional processes in their home market to enhance their performance in the face of institutional voids. These findings provide meaningful implications for managers and policy-makers by helping to clarify the circumstances whereby reforms support the performance of local firms.

The remainder of the paper is organized as follows. The next section provides the theoretical development, leading up to the hypotheses. This is followed by a description of the methodology and results. The final section provides a discussion and general conclusion for the paper.

THEORETICAL BACKGROUND AND DEVELOPMENT

Pro-Market Reforms: Learning Domestically

Recent work has found evidence for the argument that pro-market reforms positively impact the profitability of developing-country companies, because such reforms expose firms to enhanced institutional and business knowledge (Cuervo-Cazurra & Dau, 2009; Dau, 2013). This section provides a brief review of some of the key ideas of that work, as they provide the basis on which the arguments of this paper are developed. The coupled effect between market experiential knowledge and improved profitability occurs because pro-market reforms improve the functioning of the market and expand opportunities so firms are driven to increase their competitiveness, which in turn increases competition. Hence firm profitability is enhanced when the firm gains market experiential knowledge, as it allows it to not only cope with but also thrive under new market conditions.

Market functioning is greatly improved with pro-market reforms when there are parallel efforts of reducing unnecessary regulations while reinforcing market oversight mechanisms (Frye & Shleifer, 1997; IMF, 2004; Khanna & Palepu, 2000; Lora, 1997, 2001; Lora and Olivera, 2005). Deregulation frees the market to the forces of supply and demand. Instead of an artificial or subsidized price level by the state, a regulated market sets the price for goods and services.

Price liberalization increases the opportunities available to firms, which allows them to augment their profitability. Market liberalization decreases bureaucracy and red tape that often make it difficult for a firm to develop new entrepreneurial undertakings and to be efficient in their operation. Once these reforms are in place, firms are able to expand both domestically and internationally and therefore increase their profitability (c.f., IMF, 2004). Opportunities for firm international expansion through exports and multinationality can also be enhanced through liberalization of policies for trade and foreign direct investment.

Based on the literature on positive knowledge spillovers between firms (Blomstrom & Kokko, 1998; Meyer & Sinani, 2009; Spencer, 2008), previous research has indicated that as competition intensifies after reforms, local firms benefit from the resulting knowledge spillovers. Pro-market reforms not only have a positive impact and increase competition for domestic firms, but also increase the presence and opportunities for foreign firms, which in turn increases the amount of competition in the market. In order to compete with foreign entrants, domestic firms will have to enhance their efficiency and increase their market knowledge. Therefore, even though increased opportunities that are created by reforms give the firms a path to increase their competitiveness, the increase in competition, both domestically and internationally, forces them to do so. The increase in competition forces domestic companies to study the manufacturing processes, marketing strategies, and product designs of their rivals and hence acquire from their competitors experiential business knowledge (Elango & Pattnaik, 2013; Eriksson *et al.*, 1997, 2000a, 2000b; Eriksson, 2011). This knowledge increase can be obtained by observation of the practices of rivals, activities such as reverse engineering, and knowledge carried by personnel movements between firms.

As firms increase their business knowledge base they become more capable of increasing their domestic profitability but also venturing out to increase their presence abroad. As firms operate in a more competitive market, with an increased number of foreign and domestic players in their industry, they are exposed to the knowledge base of their rivals. Learning new strategies

and practices, as well as the ensuing increase in market experiential knowledge and competitiveness, facilitate international expansion. Having been exposed to foreign strategy, marketing, manufacturing capabilities, they are better prepared to operate competitively and effectively at international levels in foreign markets as well. Hence, a firm's domestic pro-market reforms can positively impact its profitability in foreign markets.

Reforms affect the three main types of knowledge (institutional, business, and internationalization) that are relevant for international firms. Reforms allow firms to acquire institutional knowledge through the regulatory changes and processes that accompany the reforms. Likewise, through the enhancement in market operations and increase in competition that results from reforms, firms are able to and forced to acquire business knowledge. Finally, through trade and investment liberalization, firms have the choice to internationalize and acquire internationalization knowledge.

In sum, drawing from previous work, the baseline argument for this project is that profitability is increased as a result of reforms in the local market because the implementation of reforms improves market functioning, intensifies competition, and allows/forces firms to learn how to become increasingly competitive in that environment. Figure 1 provides the conceptual framework for the relationships hypothesized in this paper.

*** Insert Figure 1 about here ***

Entry Mode and Ownership Structure: Joint Ventures and Strategic Alliances vs. Wholly Owned Subsidiaries

External knowledge transfer refers to the quality of a firm's communication with other organizations and economic actors in a given market (c.f., Gupta & Govindarajan, 2000; Martin & Salmon, 2003). Although the external environment and the firm's strategic choices determine its exposure to potential sources of market knowledge, whether or not the firm is able to internalize it depends on its absorptive capacity (Cohen & Levinthal, 1990; Chang et al., 2012;

Zahra & George, 2002). A key element of absorptive capacity is the firm's ability to transfer knowledge from the external environment to its internal environment (Caloghirou, Kastelli, & Tsakanikas, 2004). Firms may be able to maximize the potential for knowledge spillovers by increasing the quality and quantity of their interactions with competitors, partners, governments, NPOs, and other relevant organizations.

One important means of increasing the firm's external knowledge transfer is through its choice of entry mode. In particular, this article focuses on the choice whether to enter a given market through joint ventures or strategic alliances with local firms (joint ventures) or through wholly owned subsidiaries (Kogut, 1988; Merchant & Schendel, 2000). Such alliances provide an advantage in that they increase the interaction between the MNE and a local firm. Through ongoing communication between the partners, the MNE is able to more readily absorb the experiential business knowledge of the local firm. This knowledge may in turn be transferable and useful for the firm across its network of subsidiaries (Gupta & Govindarajan, 2000; Martin & Salmon, 2003). As such MNEs are able to acquire business knowledge from their alliance partners (Ohmae, 1989; Simonin, 1999; Spencer, 2003; Khanna et al., 1998; Kale, Singh, & Perlmutter, 2000).

This paper argues that the beneficial effects of reforms on profitability are greatest for firms that expand internationally through joint ventures, vis-à-vis those that do so through wholly owned subsidiaries. This is because entry modes that serve as a richer and more rapid source of business knowledge acquisition provide the firm with a means of responding more effectively and efficiently to pro-market reforms at home. By learning about the strategies pursued by firms in other markets, including new product designs, manufacturing methods, and marketing strategies, etc., firms are able to more readily respond to reforms at home to increase their competitiveness. These arguments are the basis for the following hypothesis:

Hypothesis 1: The percentage of a firm's foreign subsidiaries that are joint ventures and strategic alliances (rather than wholly owned) positively moderates the effect of pro-market reforms on profitability.

Entry Mode: Mergers and Acquisitions vs. Greenfield Investments

Another means of increasing the firm's external knowledge procurement and transfer is through its choice of entering foreign markets through mergers and acquisitions (M&As) or through greenfield investments (c.f., Brouthers & Brouthers, 2000; Haspeslagh & Jamison, 1991; Vermeulen & Barkema, 2001). This represents one of the key entry mode decisions that firms make when entering foreign markets (Anderson & Gatignon, 1986; Hill et al., 1990; Madhoc, 1997; Madhok & Keyhani, 2012; Sun et al., 2012). Similarly to joint ventures, M&As may also provide a source of enhanced external knowledge transfer. MNEs that expand internationally through M&As often absorb a large percentage of the upper and lower management employees of the acquired firm. These employees are typically already well versed in the business and institutional practices that are relevant in a given market (c.f, Jackson, 2002). As such, through M&As, firms are able to acquire not only a firm's plant and equipment, but also often its accumulated market experiential knowledge. This knowledge may in turn be transferred across the MNEs network of subsidiaries and to its parent firm (c.f., Gupta & Govindarajan, 2000; Martin & Salmon, 2003).

Greenfield investments provide the lowest benefit in terms of increasing external knowledge transferability. Greenfield investments do not provide a source of increased interaction with partners, as joint ventures do, and do not serve as a means of absorbing the accumulated knowledge of the employees of a firm, as M&As do. As such, although greenfield investments also expose firms to potential sources of market experiential knowledge, they do not facilitate external knowledge transfer to the same extent. This may help explain the increased prominence of M&As from developing-country MNEs entering advanced economies (United

Nations, 2012), as it affords them a means of more quickly and readily attain market knowledge from the host country. These arguments are the basis for the following hypothesis:

Hypothesis 2: The percentages of a firm's foreign subsidiaries that are established through mergers and acquisitions (rather than through greenfield investments) positively moderate the effect of pro-market reforms on profitability.

Control of MNE Network: Internal Knowledge Dissemination

Furthermore, even if the firm is exposed to useful sources of experiential knowledge and it has the absorptive capacity to internalize them (Cohen & Levinthal, 1990; Chang et al., 2012; Zahra & George, 2002), it must also have the capacity to transfer this knowledge within and across its units to be able to fully exploit it (Gupta & Govindarajan, 2000; Martin & Salmon, 2003). Internal knowledge transfer refers to the quality of the internal communication and knowledge transfer mechanisms within the firm.

Knowledge transfer may occur within units (i.e., communication between departments or employees of a given subsidiary or the parent firm) or across units (i.e., communication among subsidiaries or between subsidiaries and their parent firm). Effective knowledge transfer *within* a given unit is necessary for knowledge that is absorbed or generated to also be diffused throughout that unit. This type of knowledge transfer is important for knowledge to be transmitted to the employees and departments that require such knowledge within that unit. As the data does not capture this type of knowledge, it is not included it in the analyses.

On the other hand, effective knowledge transfer *across* units is essential for knowledge that is absorbed or generated in a given unit to be diffused throughout its network of units (Gupta & Govindarajan, 2000; Martin & Salmon, 2003). Through practices such as internal employee transfers and active communication among units, firms are able to more easily transfer experiential knowledge from the parent firm to its subsidiaries, from subsidiaries to the parent firm, and among subsidiaries.

One way in which firms are able to enhance communication across business units is through the parent's control of its MNE network. Firms that have a high ownership percentage of their subsidiaries tend to also have greater control over their operations. This in turn typically necessitates greater communication and knowledge transfer between the parent and its subsidiaries.

This leads to the argument that the positive impact of reforms on profitability is enhanced by a firm's control of its MNE network, because such control allows a greater amount of knowledge obtained internationally, to be transferred to the firm's parent company and other subsidiaries. This knowledge in turn allows the firm to better respond to reforms and thus enhances its profitability, by having a competitive advantage in terms of its experiential knowledge. These arguments are summarized in the following hypothesis:

Hypothesis 3: The firm's average percentage ownership of its foreign subsidiaries positively moderates the effect of pro-market reforms on profitability.

Network Concentration: Knowledge Integrity and Knowledge Leaks

Likewise, MNEs that have a tight knit network of business units tend to be able to have more extensive communication and transfer of knowledge across units. This refers to the network concentration of the MNE. Parent firms have subsidiaries, which often have subsidiaries of their own, and so on. The richness of the communication transmission channels between the parent firm and its subsidiaries and across subsidiaries is an essential element in determining an MNEs knowledge flows and its capacity for knowledge transfer (Gupta & Govindarajan, 2000; Martin & Salmon, 2003). The greater the distance (or number) of ties that separate the parent firm from its subsidiaries and subsidiaries from each other, the more difficult knowledge transfer and dissemination tends to be. This idea is similar to that illustrated by the game *Telephone*, where one individual whispers a message to another, who in turn whispers it to a third person, and so on until the last person hears the message. At the end, the last person says out loud the message he or

she heard and then the first person will state the message the game started with. Quite often, this message will be dramatically different, and the greater the number of people the message goes through, the higher the likelihood that part or all of the initial information will be lost in the communication process. Similarly in interactions between business units, there are always knowledge spill-outs or leaks as knowledge is absorbed by the firm, as it is transferred within a unit, and as it is transferred to other units. Because of this, MNEs with the smallest average number of ties separating their units will be able to make use of a greater amount of experiential knowledge throughout their network of business units.

Hypothesis 4: The firm's average concentration of its network of subsidiaries positively moderates the effect of pro-market reforms on profitability.

METHODS

Data Sources and Research Sample

With the aim of building on prior work and providing consistency across studies, a similar methodology is used to that of recent relevant articles on the topic of reforms and firms. The arguments are tested using a sample of Latin American companies from 1989-2008. This is an important region to study as it has received relatively limited attention in the literature, compared to other developing regions and countries (Elahee & Vaidya, 2001; Hoskisson et al., 2000; Wright et al., 2005), such as China (e.g., Peng, 2012) and India (e.g., Lahiri, 2011; Lahiri et al., 2012). Moreover, the region provides a natural laboratory to test the arguments because of the variability in reform implementation across its countries (Kuczynski, 2003; Kuczynski & Williamson, 2003; Skidmore & Smith, 2005) and the recent growth of emerging MNEs from the region (e.g., Casanova, 2009; Ciravegna et al., 2009, 2011, 2012; Lopez et al., 2009; Perez-Batres et al., 2010).

The primary sources of data used are as follows. Data for pro-market reforms come from the IMF measure developed by Sahay and Goyal (2006) and extended to cover the full period of

analysis following the guidelines of that article. Data for the internationalization variables were the result of a meticulous data collection effort, which entailed gathering data on the entry mode and network characteristics of each firm for each year. The data collected for the key measures of the current study (joint ventures, acquisitions, ownership percent, and network concentration) are novel and have not been used in prior work. The primary source for this data was the Corporate Affiliations database (LexisNexis, 2010), which is one of the most comprehensive and reliable sources on company information available for countries across the globe. Missing data was complemented with information from Mergent Online (2010), each firm's official website, and other sources. Financial data on each company comes from the AmericaEconomia magazine, which provides a ranking of the largest 500 companies in Latin America for each year. This is one of the most comprehensive databases available for firms from the region because it covers not only publicly-listed companies, but also unlisted companies, which represent a significant percentage of total firms in much of the developed world. AmericaEconomia includes the largest domestic and foreign companies in each country. Foreign companies are removed from this analysis, as the purpose is to study how the reforms impact local firms.

Variables and Measures

A summary of the variables, measures, and data sources of the paper is provided in Table 1. The variables used – as well as their names, measures, and descriptions – are generally consistent with those used in prior related work in the literature with the aim of facilitating comparability for the reader.

First, the dependent variable is firm profitability, measured with return on sales. Second, the independent variable for the direct effect relationship of the study is pro-market reforms, updated from the IMF measure as discussed above (Sahay & Goyal, 2006). Third, in order to capture the entry mode of the company, measures were calculated for the number of international joint ventures/strategic alliances, wholly owned subsidiaries, M&As, and greenfield investments

for each firm. Based on this information, measures were created for the entry mode. These are the percentage of subsidiaries that were established through joint ventures or strategic alliances and the percentage that were acquired through M&As. Fourth, the control that an MNE has of its network of foreign subsidiaries is captured using the ownership percent. This measures the average of the percentage of ownership that the firm has of each of its foreign subsidiaries. For example, if a parent firm holds 30% of a foreign subsidiary and 100% of another, and these are its only two foreign subsidiaries in a given year, then its ownership percent of its network of subsidiaries would be 65% for that year. Fifth, to capture network concentration – which is a concept from the network analysis literature – the direct subsidiaries of each firm, the subsidiaries of each of these, and so on were identified, thus creating a "family tree" for each firm. From this information, the "degrees of separation" or distance between each foreign subsidiary and its ultimate parent firm were captured. That is, if a parent firm has one direct subsidiary, which in turn has two subsidiaries, then the direct subsidiary would have one degree of separation, while the indirect subsidiaries would have two. Presumably, the greater the distance of ties between a parent firm and a given foreign subsidiary, the more difficult knowledge transfer can occur between them. As such, the average distance of ties for each firm in a given year was calculated as a proxy for the control that an MNE has of its network of foreign subsidiaries and the ease of knowledge transfer within the network.

The analyses also include a number of control variables, which include the age and sales of the firm, whether the firm is a business group affiliate, whether it is publicly traded, whether it was privatized, whether it is a state firm, its industry and country, the year of analysis, and country level measures of GDP per capita, openness, and GDP growth.

*** Insert Table 1 about here ***

Method of Analysis

The arguments are tested using a cross-sectional time series generalized least squares methodology with correction for heteroskedasticity and panel-specific autocorrelation, which is appropriate for panel data such as the one analyzed in this paper. To facilitate interpretability and further reduce potential issues with colinearity, the continuous independent variables are standardized (i.e., mean of zero and standard deviation of 1) (Frazier et al., 2004; Hofmann & Gavin, 1998). Also, the data is lagged by one year to better determine possible causation over time. In order to ascertain whether random or fixed effects should be used, a Hausman Test was performed. The results suggest that a random effect specification is appropriate (see Frazier et al., 2004).

The five primary models used to test the arguments of the papers are as follows. Model 1 tests the direct effect of reforms on profitability. As it has been tested in prior work, it is provided solely as the baseline model on which the others are built. Models 2-5 test Hypotheses 1-4, respectively. More specifically, they test the moderating effect of joint ventures, acquisitions, ownership percent, and network concentration, respectively. Please note that models for the effect of only the control variables, as well as models for the effect of each of the moderating variables without their respective interaction terms, were run and their results are consistent with those presented. They are not included for the sake of brevity. For more detailed information, the Appendix at the end of the manuscript presents each of the model specifications tested in the paper. Models 2-5 provide support for their respective hypothesis if their respective interaction term (β_3) is positive at statistically significant levels.

RESULTS

Table 2 provides descriptive statistics and correlations for the variables of the study. The correlations suggest that collinearity is not a concern in this case. Moreover, in order to further test for potential collinearity, an analysis of variance inflation factors was performed. The

resulting values from these analyses are significantly below the typically used cutoff of 10 (Kutner et al., 2004), providing further evidence that collinearity is not an important issue.

*** Insert Table 2 about here ***

The results of the models, which are presented in Table 3, provide support for the hypotheses. Model 1 provides a test of the direct effect of reforms on profitability. This model has been tested in prior work but is included here as the baseline model on which the moderating relationships are developed. The results for the reforms variable across models is positive and significant, indicating a positive direct effect of this variable on firm profitability. Model 2 provides support for Hypothesis 1, as it suggests that the moderating effect of joint ventures is higher than that of wholly owned subsidiaries. Model 3 provides support for Hypothesis 2, as it indicates that the moderating effect of M&As is higher than that of greenfield investments. Model 4 provides support for Hypothesis 3, suggesting that firms that maintain a tighter control of their multinational network of subsidiaries benefit to a greater extent from reforms. In Model 4, the coefficient for the interaction between reforms and ownership percent is significant and positive, which suggests that firms that own a greater percentage of their foreign subsidiaries (on average) benefit to a greater extent from having these subsidiaries. Finally, in Model 5, the coefficient for the interaction between network concentration and reforms is positive and significant. This provides evidence for Hypothesis 4 and the notion that having a tighter-knit international network of subsidiaries increases the benefits from having these subsidiaries.

*** Insert Table 3 about here ***

DISCUSSION AND CONCLUSION

In sum, this article studies the moderating effects of international entry mode and subsidiary network configuration on the relationship between reforms and profitability in a firm's home country. Using a learning perspective (e.g., Barkema et al., 1996; Cohen & Levinthal, 1989), the paper suggests that the effect of reforms on profitability is greater for firms that (1)

expand internationally via joint ventures and strategic alliances, as it allows them to more readily obtain market knowledge from their constant interactions with their strategic partners; (2) internationalize via acquisitions, because it forces them to absorb business and institutional knowledge from the acquired operations; (3) have a tighter control of their network of international subsidiaries, as this tends to enhance the communication and knowledge transfer between the parent firm and its subsidiaries; and (4) have greater network concentration, as it simplifies communication across units. The analyses of a sample of Latin American firms provides support for these assertions.

This paper contributes to the global strategy literature on the effects of institutional processes on firm-level factors (e.g., Hoskisson et al., 2013; Meyer et al., 2009). It does so by analyzing how the mode of entry and the configuration of the network of subsidiaries can provide indirect ways to better cope with institutional reforms in the firm's home market. Furthermore, it contributes to the literature on international learning (e.g., Barkema & Vermeulen, 1998; Zahra et al., 2000) by describing the mechanisms whereby firms may enhance their knowledge acquisition through their choice of mode of entry and their knowledge transfer through their choice of subsidiary network configuration, and how this can provide an advantage when responding to institutional changes at home. More generally, it contributes to the growing literature on emerging market firms (e.g., Luo & Tung, 2007; Wright et al., 2005; Yiu et al., 2007) as it studies how these companies can align their international strategic decisions with institutional changes occurring in their local markets.

The manuscript also provides several meaningful implications for practice. For managers, it provides a better understanding of how different strategic decisions can provide a source of learning that facilitates their institutional responsiveness and performance. For governments, the findings suggest possible reasons why reforms may have dissimilar effects on their local firms. It serves as a reminder for governments that part of the success of such reforms may be in educating local firms in terms of how different strategies can interact with reform implementation. That is,

reforms themselves may be insufficient on their own to enhance the performance of local firms without a careful strategic alignment on the part of the companies. As the goal of reforms for governments is to enhance the functioning of local markets and firms (IMF, 2004), trying to better understand such interactions can be key to achieving this aim.

This project has limitations inherent in the data, which are similar to those in prior related work. First, although the analyses use a sizeable panel of countries and firms, they only comprise Latin American firms, making it difficult to ascertain whether the findings apply to other regions of the world. Second, the paper uses a 'black box' approach in that it develops arguments using a logic based on learning, but the learning itself is not measured. Future work may address this through a survey approach, but this may lead to a trade-off in having more depth but less breadth in the number of companies and countries studied. Third, the data capture the largest companies in the region, so they do not include smaller companies. These large companies encompass the majority of the economy of the region, but it would be interesting to analyze whether the findings hold for smaller firms as well.

The paper also encourages the development of future work on the topic. Future work may analyze different moderating variables of the relationship between reforms and firm performance. This paper analyzes the moderating effect of key international strategies, but there are many other domestic and international strategic decisions that could be studied. In addition, future work may extend this line of research by analyzing the relationships in question in different parts of the world and using a sample of smaller firms. These are but a few ideas, as this important topic continues to be studied and our understanding increases over time.

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FIGURE 1
Conceptual Model of the Impact of Reforms, Mode of Entry, and International Subsidiary Network Characteristics on Profitability

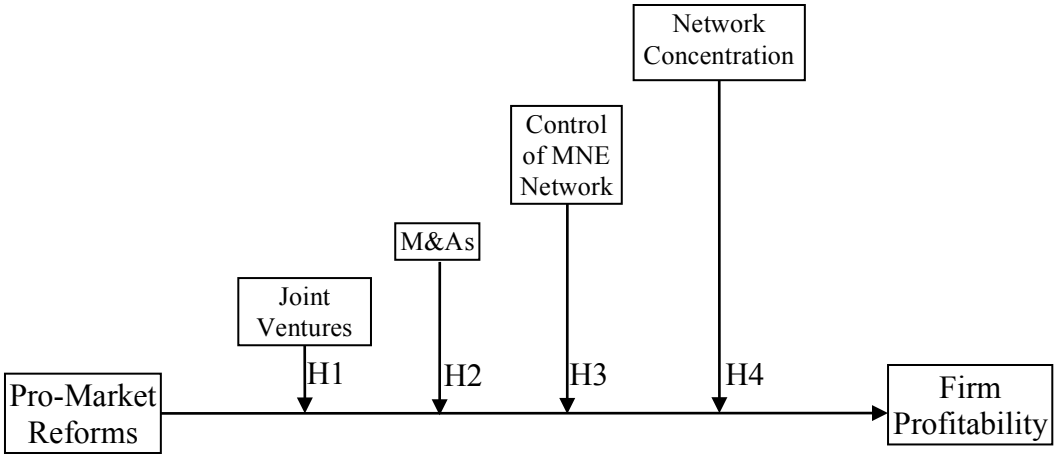

TABLE 1
Variables, Measures, and Data Sources

Variable	Measure	Value	Source
Pro-market reforms	Indicator of the level of pro-market reforms undertaken in the firm's home market	0 to 100	Obtained from Sahay & Goyal (2006)
Joint ventures (% of total)	Number of joint ventures as a % of total foreign subsidiaries	0 to 100	Computed using data from LexisNexis (2010), Mergent Online (2010), and other sources
Acquisitions (% of total)	Number of M&As as a % of total foreign subsidiaries	0 to 100	
Age of firm	Years since the company was first established	Positive	
Ownership percent (average)	Percent of ownership that a firm has of its subsidiaries, on average	0 to 100	
Network concentration	Average distance of ties between a parent firm and its network of subsidiaries	Positive	
Profitability	Return on sales, or earnings before taxes, interest and depreciation divided by revenue	Continuous	Computed using data from AmericaEconomía (various years)
Business group affiliate	Indicator for whether the firm is an affiliate of a Latin-American business group	0 or 1	
Publicly traded	Indicator for whether the firm has shares listed in a stock exchange	0 or 1	
Privatized firm	Indicator for whether the firm was privatized	0 or 1	
State firm	Indicator for whether the firm is state-owned.	0 or 1	
Sales (i.e., firm size)	Total sales in millions of US$	Positive	
Industry	Indicator of the industry of the firm at the 2-digit NAICS level (17 industries)	0 or 1	
Year	Indicator of the year of analysis (20 years, 1989-2008)	Continuous	
Country	Indicator of the country of origin of the firm (15 countries)	0 or 1	
GDP per capita	Gross domestic product in thousands of US$ divided by total population	Positive	Computed using data from World Development Indicators, World Bank (2010)
Openness	Exports and imports of goods and services divided by gross domestic product multiplied by 100	Positive	
GDP growth	Difference in gross domestic product for the year and the previous year divided by gross domestic product in the previous year	Continuous	

TABLE 2
Correlations and Descriptive Statistics

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Profitability	4.61	19.43														
2. Pro-market reforms	0.00	1.00	0.16													
3. Joint Ventures (% of total)	0.00	1.00	-0.04	0.02												
4. M&As (% of total)	0.00	1.00	0.09	0.14	0.27											
5. Ownership percent (average)	0.00	1.00	0.05	0.19	0.23	0.62										
6. Network concentration	0.00	1.00	0.03	0.17	0.42	0.59	0.91									
7. Age of firm	0.00	1.00	*0.02*	0.14	-0.07	*0.01*	0.12	0.12								
8. Business group	0.24	0.43	0.04	0.09	*0.01*	0.25	0.23	0.23	0.11							
9. Publicly traded	0.30	0.46	0.05	0.06	*0.02*	0.07	0.06	0.04	-0.04	0.17						
10. Privatized firm	0.02	0.14	*0.02*	*-0.01*	*-0.01*	0.06	*-0.01*	*-0.01*	-0.05	*0.00*	0.10					
11. State firm	0.12	0.32	-0.10	-0.12	0.11	-0.24	-0.24	-0.15	-0.11	-0.16	-0.14	-0.07				
12. Sales	0.00	1.00	0.03	0.05	0.04	0.06	0.05	0.07	-0.03	0.08	0.03	0.04	0.20			
13. GDP per capita	0.00	1.00	0.07	0.42	0.07	0.25	0.24	0.25	0.08	0.15	0.02	-0.02	-0.18	0.16		
14. Openness	0.00	1.00	0.15	0.46	0.06	0.19	0.15	0.16	0.17	0.14	0.02	-0.04	-0.05	0.11	0.56	
15. GDP growth	0.00	1.00	0.13	0.10	*0.00*	*0.01*	0.04	0.03	0.04	0.01	0.02	*0.00*	-0.03	0.05	0.16	0.18

n=3887. Correlations that are not in italics are significant at alpha=0.05 (two-tailed).
All of the continuous predictors are standardized (i.e., mean of 0 and standard deviation of 1).
Summary statistics for each of the industry, country and year controls are not included for the sake of parsimony.

TABLE 3
Results of the GLS Analyses for the Moderating Impact of Mode of Entry and Network Characteristics on Profitability

Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
Intercept	-0.50		(0.95)	-2.45	*	(1.01)	-0.91		(1.06)	-2.99	***	(1.04)	-3.50	***	(1.04)
Business group	0.34		(0.22)	0.84	***	(0.24)	-0.38		(0.26)	0.30		(0.24)	0.31		(0.25)
Publicly traded	0.20		(0.20)	0.21		(0.23)	0.04		(0.23)	0.25		(0.21)	0.21		(0.21)
Privatized firm	-0.09		(0.95)	-0.26		(0.95)	-0.61		(0.95)	-0.47		(0.94)	-0.44		(0.94)
State firm	-5.14	***	(0.61)	-4.46	***	(0.65)	-5.61	***	(0.64)	-4.61	***	(0.63)	-4.44	***	(0.63)
Sales	-0.15		(0.13)	-0.12		(0.14)	-0.14		(0.13)	-0.15		(0.14)	-0.13		(0.15)
Age of firm	-0.31	**	(0.10)	-0.29	*	(0.12)	-0.22	†	(0.13)	-0.18		(0.11)	-0.13		(0.12)
GDP per capita	-3.02	***	(0.37)	-3.38	***	(0.41)	-3.71	***	(0.42)	-3.54	***	(0.43)	-3.66	***	(0.43)
Openness	2.14	***	(0.33)	1.68	***	(0.36)	1.50	***	(0.36)	1.55	***	(0.36)	1.41	***	(0.36)
GDP growth	0.75	***	(0.10)	0.70	***	(0.10)	0.66	***	(0.11)	0.66	***	(0.11)	0.68	***	(0.11)
Country control	Included			Included			Included			Included			Included		
Industry control	Included			Included			Included			Included			Included		
Year control	Included			Included			Included			Included			Included		
Pro-market reforms	1.22	***	(0.22)	1.10	***	(0.23)	1.25	***	(0.22)	1.14	***	(0.23)	1.20	***	(0.23)
Joint Ventures (% of total)				-0.73	***	(0.09)									
Reforms * Joint Ventures (%)				0.75	***	(0.11)									
M&As (% of total)							0.74	***	(0.11)						
Reforms * M&As (%)							0.40	***	(0.12)						
Ownership percent (average)										-0.42	***	(0.12)			
Reforms * Ownership percent										0.26	*	(0.12)			
Network concentration													-0.58	***	(0.13)
Reforms * Network concentration													0.53	***	(0.12)
Wald χ^2	3399.4	***		5342.0	***		11654.3	***		220562.1	***		18971.4	***	
Observations (n)	3887			3887			3887			3887			3887		
Groups (firms)	405			405			405			405			405		

Random-effects generalized least squares analyses with correction for panel-specific autocorrelation and heteroskedasticity.
Indicators for each country, industry, and year are included in the models but their coefficients are not reported for the sake of brevity.
Prior work has tested Model 1 (see Cuervo-Cazurra & Dau, 2009a; Dau, 2013). It is included here for informational purposes as the baseline model.
Incremental models including only the control variables and each moderating variable without interaction effects were also run but are not presented for the sake of page length. Their results are consistent with the models reported.
Standard errors appear in parentheses. Significance levels (2-tailed): †p<0.10, *p<0.05, **p<0.01, ***p<0.001.

APPENDIX
Models Tested

Model 1: $\text{Profitability}_{ijkt} = \beta_0 + \beta_1 * \text{Reforms}_{kt-1} + \beta_2 * \text{Business Group}_{ijkt-1} + \beta_3 * \text{Publicly-Traded Firm}_{ijkt-1} + \beta_4 * \text{Privatized Firm}_{ijkt-1} + \beta_5 * \text{State Firm}_{ijkt-1} + \beta_6 * \text{Firm Sales}_{ijkt-1} + \beta_7 * \text{Age of Firm}_{ijkt-1} + \beta_8 * \text{GDP Per Capita}_{kt-1} + \beta_9 * \text{Openness}_{kt-1} + \beta_{10} * \text{GDP Growth}_{kt-1} + \beta_j * \text{Country}_{kt-1} + \beta_k * \text{Industry}_{jt-1} + \beta_l * \text{Year}_{t-1} + \varepsilon$

Model 2: $\text{Profitability}_{ijkt} = \beta_0 + \beta_1 * \text{Reforms}_{kt-1} + \beta_2 * \text{Joint Ventures}_{ijkt-1} + \beta_3 * \text{Reforms} * \text{Joint Ventures}_{ijkt-1} + \beta_4 * \text{Business Group}_{ijkt-1} + \beta_5 * \text{Publicly-Traded Firm}_{ijkt-1} + \beta_6 * \text{Privatized Firm}_{ijkt-1} + \beta_7 * \text{State Firm}_{ijkt-1} + \beta_8 * \text{Firm Sales}_{ijkt-1} + \beta_9 * \text{Age of Firm}_{ijkt-1} + \beta_{10} * \text{GDP Per Capita}_{kt-1} + \beta_{11} * \text{Openness}_{kt-1} + \beta_{12} * \text{GDP Growth}_{kt-1} + \beta_j * \text{Country}_{kt-1} + \beta_k * \text{Industry}_{jt-1} + \beta_l * \text{Year}_{t-1} + \varepsilon$

Model 3: $\text{Profitability}_{ijkt} = \beta_0 + \beta_1 * \text{Reforms}_{kt-1} + \beta_2 * \text{M\&As}_{ijkt-1} + \beta_3 * \text{Reforms} * \text{M\&As}_{ijkt-1} + \beta_4 * \text{Business Group}_{ijkt-1} + \beta_5 * \text{Publicly-Traded Firm}_{ijkt-1} + \beta_6 * \text{Privatized Firm}_{ijkt-1} + \beta_7 * \text{State Firm}_{ijkt-1} + \beta_8 * \text{Firm Sales}_{ijkt-1} + \beta_9 * \text{Age of Firm}_{ijkt-1} + \beta_{10} * \text{GDP Per Capita}_{kt-1} + \beta_{11} * \text{Openness}_{kt-1} + \beta_{12} * \text{GDP Growth}_{kt-1} + \beta_j * \text{Country}_{kt-1} + \beta_k * \text{Industry}_{jt-1} + \beta_l * \text{Year}_{t-1} + \varepsilon$

Model 4: $\text{Profitability}_{ijkt} = \beta_0 + \beta_1 * \text{Reforms}_{kt-1} + \beta_2 * \text{Ownership Percent}_{ijkt-1} + \beta_3 * \text{Reforms} * \text{Ownership Percent}_{ijkt-1} + \beta_4 * \text{Business Group}_{ijkt-1} + \beta_5 * \text{Publicly-Traded Firm}_{ijkt-1} + \beta_6 * \text{Privatized Firm}_{ijkt-1} + \beta_7 * \text{State Firm}_{ijkt-1} + \beta_8 * \text{Firm Sales}_{ijkt-1} + \beta_9 * \text{Age of Firm}_{ijkt-1} + \beta_{10} * \text{GDP Per Capita}_{kt-1} + \beta_{11} * \text{Openness}_{kt-1} + \beta_{12} * \text{GDP Growth}_{kt-1} + \beta_j * \text{Country}_{kt-1} + \beta_k * \text{Industry}_{jt-1} + \beta_l * \text{Year}_{t-1} + \varepsilon$

Model 5: $\text{Profitability}_{ijkt} = \beta_0 + \beta_1 * \text{Reforms}_{kt-1} + \beta_2 * \text{Network Concentration}_{ijkt-1} + \beta_3 * \text{Reforms} * \text{Network Concentration}_{ijkt-1} + \beta_4 * \text{Business Group}_{ijkt-1} + \beta_5 * \text{Publicly-Traded Firm}_{ijkt-1} + \beta_6 * \text{Privatized Firm}_{ijkt-1} + \beta_7 * \text{State Firm}_{ijkt-1} + \beta_8 * \text{Firm Sales}_{ijkt-1} + \beta_9 * \text{Age of Firm}_{ijkt-1} + \beta_{10} * \text{GDP Per Capita}_{kt-1} + \beta_{11} * \text{Openness}_{kt-1} + \beta_{12} * \text{GDP Growth}_{kt-1} + \beta_j * \text{Country}_{kt-1} + \beta_k * \text{Industry}_{jt-1} + \beta_l * \text{Year}_{t-1} + \varepsilon$