The impact of business group diversification on emerging market multinationals: Evidence from Latin America

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ABSTRACT: This article explored whether the benefits of business group diversification on the scope-performance relationship varies depending on the level of development of the network of subsidiaries and the region of operation of the focal firm. To test the hypothesis presented, a panel data with fix effects models was used on a sample of Latin American firms. The results suggested that business group diversification has the capacity to generate value in the internationalization process of their affiliates. However, the benefits of business group diversification are location bound within the region (America) but they are not related to the level of development of the targeted countries.

KEYWORDS: Internationalization, performance, business groups, institutional voids, regionalization.

Diversified business groups represent the most efficient organizational form to conduct transactions in the presence of large institutional voids because they reduce transaction costs by internalizing activities. (Khanna and Palepu, 1999; Khanna and Palepu, 2000b). However, emerging economies are characterized by a reduction of government intervention and by the improvement of governance mechanisms (Cuervo-Cazurra and Dau, 2009a; 2009b). The adoption of pro-market mechanisms aims to improve the functioning of emerging economies by reducing government participation, optimizing resource allocation, enhancing firm efficiency and minimizing both transaction and agency costs (Cuervo-Cazurra and Dau, 2009a; 2009b).

Under the adoption of market oriented institutions, the organizational costs of diversified business groups may be higher than their benefits, and hence, these business groups face pressures to refocus their operations (i.e. Chakrabarti, Vidal and Mitchell, 2011; Hoskisson, Johnson, Tihanyi and White, 2005). Nevertheless, given that the majority of business groups are old and large; they also face strong inertial processes that constrain their capability to adapt to these environmental changes (Baum and Shipilov, 2006; Hannan and Freeman, 1984).

Given these conflicting pressures, diversified business groups may pursue other alternatives to distribute their large overhead. While the opportunities to further diversify at home are fairly restrictive, diversified business groups can encourage their affiliates to internationalize. Previous research at the firm level suggests that the non-market resources possessed by diversified business groups may have a positive impact on the internationalization of...
their affiliates (i.e. Holburn, 2001; Holburn and Zelner; 2010). In this article we explore this alternative. Further, considering that even non location bound firm specific assets tend to be regionally bound (Rugman and Verbeke, 2004) and that the benefits of business group diversification are associated with the presence of institutional voids (i.e. Khanna and Palepu, 1997, 1999, 2000a, 2000b), we explore the impact of business group diversification on the relationship between scope of internationalization and firm performance of their affiliates and how this impact varies depending on whether their affiliates expand to more or less developed countries and on whether their affiliates are regionally or globally oriented.

We explore these relations in the context of Latin America. Latin America has been characterized not only by the large presence of family business groups (Guillen, 2000, Vassolo, De Castro and Gomez-Mejia, 2011) but also by the adoption of extensive structural reforms at almost the same time (Brenes, 2000; Brenes and Dominguez, 1997; Cuervo-Cazurra, 2007). The presence of emerging multinationals from the region will increase rapidly in the following years (i.e. WIR, 2010). For these reasons we believe that Latin America represents an ideal setting for our analysis.

This paper proceeds as follows: first, we review the literature related to emerging markets, internationalization and diversified business groups. Then, we develop a set of testable hypotheses. Next, we will present our methodology and results. Finally, we discuss the findings, contributions and limitations of our paper.

Literature review

Emerging Economies

Emerging economies are countries that “satisf(y) two criteria: a rapid pace of development and government policies favoring economic liberalization and the adoption of a free market system” (Hoskisson, Eden, Lau and Wright; 2000, p. 249). Accordingly, emerging economies are characterized by a reduction of government intervention and by the improvement of governance mechanisms (Cuervo-Cazurra and Dau, 2009a; 2009b; Williamson, 2004).

On one side, economic liberalization, or the reduction of government intervention in the economy, favors efficiency in emerging economies. Firms have more freedom to take optimal decisions about resource allocation and have better access to high quality resources. Further, economic liberalization has a positive impact on the level of domestic competition by lowering tariffs and barriers to new industry entrants forcing efficiency gains among existing participants (Cuervo-Cazurra, 2007; Cuervo-Cazurra and Dau, 2009a; Diaz-Hermelo and Vassolo, 2010; Thomas and D’Aveni, 2010).

On the other side, the improvement of governance mechanisms favors the reduction of transaction costs. Better governance mechanisms involve changing existing regulations, a better implementation of the rules created, and a favorable evolution of the monitoring and enforcement procedures available for conflict resolution (Cuervo-Cazurra and Dau, 2009a). Also, improvements in governance constrain the discretion of public officials and hence, limit the room for government agents to demand bribes from market participants (Shleifer and Vishny; 1997).

Despite these claimed benefits, Peng, Lee and Wang (2005) argued that the adoption of market reforms by emerging economies is uncertain in the short run and that these countries can be considered as half reformed economies. In fact, Peng (2003) argued that emerging economies are in the middle of an “institutional transition” (Peng, 2003, p. 275) that may involve long periods of time and uncertainty.

North (1990) argued that while some formal rules may change relatively rapidly; informal rules are difficult to modify and tend to remain stable over time. Nevertheless, even the adoption of formal market reforms may also require long periods of time. For instance, Peng (2003) proposed that the adoption of formal market reforms requires emerging economies to develop relevant institutions. Emerging economies lack both enough rules to govern market transactions and credible mechanisms to enforce the rules that do exist. Hence, these countries need to build a new institutional setting at significant cost (Peng, 2003) facing time compression diseconomies (Dierickx and Cool, 1989). Further, Hoskisson et al. (2000) argued that the development of legal infrastructure in emerging economies has been difficult to achieve. The lack of development of the legal infrastructure affects not only the ability to enforce contracts (Estrin and Wright, 1999) but also increases the predominance of corruption (Nelson, Tilley and Walker, 1998).

In summary, while most emerging economies are implementing structural reforms (Peng, Lee and Wang, 2005), firms in those environments still face large institutional voids and uncertainty about the possible evolution of these institutional changes (Peng, 2003).

Internationalization, Scope and Firm performance

To reconcile previous inconsistent empirical results between internationalization and performance, Contractor,
Kundu and Hsu (2003) proposed a general s-curve theory of international expansion. While this theory is gaining consensus (Glaum and Oesterle, 2007), a recent stream of research suggests that attempts to developed a general theory of internationalization are inadequate (i.e. Hennart, 2007; 2011; Verbeke, Li, Goerzen; 2009).

For instance, in their meta-analysis, Bausch and Krist (2007) argued that international business researchers should avoid looking for general theories of the M-P relationship. Instead, they suggest the introduction of fine grained moderators to better understand the nature of the relationship. Given the predominance of diversified business groups in emerging markets (Khanna and Palepu, 1997; 1999), their different mechanisms to generate value and the pressures that they face to distribute their large overhead given the recent institutional changes (Hoskisson et al., 2004; Hoskisson et al., 2005), we believe that the introduction business group diversification can add to our understanding of the M-P relationship in emerging markets.

Further, Vermeulen and Barkema (2002) mentioned that the size and scope of internationalization represent different dimensions of multinationality. While the size of international operations may positively affect firm performance (Vermeulen and Barkema 2002), the impact of the scope of operations tends to be negative. Vermeulen and Barkema (2002) argued that to have operations in multiple countries in a short period of time exceeds the absorptive capacity of the focal MNE and hence, negatively impacts firm performance. Given that emerging market firms can be considered latecomers in the international market place (Bonaglia, Goldstein, Mathews, 2007), they need to internationalize rapidly (Mathews, 2006) in terms of entry mode decisions and location choices (Luo and Tung, 2007), reinforcing this negative effect. Moreover, to have operations in multiple markets increases the complexity of operations not only because firms need to understand how to manage their facilities in different institutional environments (Kostova and Zaheer 1999; Vermeulen and Barkema, 2002) but also because they need to adjust accordingly their operations and “dominant logic” (Prahalad and Bettis, 1986) within the firm. A higher level of complexity represents higher costs for MNCs (Goerzen and Beamish, 2003; Verbeke, Li and Goerzen, 2009), affects their capacity to establish and maintain legitimacy (Kostova and Zaheer, 1999) and increases their uncertainty by operating in different markets (Tihanyi, Griffith and Russell, 2005).

Finally, Rugman and Verbeke (2004) proposed that the lack of consistent results in previous literature may be explained by considering the host locations in which the focal firm internationalized. They argued that multinationals possessed a set of non-location bound firm specific assets (FSA) that can be transferred to different locations at relatively low cost (Rugman, Verbeke and Nguyen, 2011). However, to be exploited abroad, even these FSAs must be complemented by host-country location-bound investments (Rugman and Verbeke, 2005; 2007; 2008b). The capacity to exploit these non-location bound FSA abroad is dictated by the level of the required complementary investments and by the risks assumed by the focal MNE in those particular locations (Rugman and Verbeke, 2008b).

Given the process of institutional convergence within regions, Rugman and Verbeke (2007) argued that intra-regional distance is decreasing and inter regional distance is increasing. Hence, when the focal MNE internationalizes outside its home-region, the liabilities of foreignness are greater; the required complementary investments escalate
and the risks assumed increase dramatically (Rugman and Verbeke, 2004; 2008a; 2008b). However, while Rugman and Verbeke (2004; 2008a; 2008b) relate these non-location bound FSA with upstream or downstream activities of the value chain, Johansson and Valhne (2009) stress the importance of being part of relevant networks in host countries. In this sense, political capabilities, or the ability to identify relevant stakeholders ex ante (Holburn and Zelner, 2010), may represent an important firm specific asset to minimize the "liabilities of outsidership" (Johansson and Valhne, 2009, p. 1411) or the negative effect of being an outsider on the relevant networks of the host markets in which the focal firm participates.

**Business group diversification**

According to Yiu et al. (2007), diversified business groups are characterized by the predominance of social ties to link affiliated firms, by a closely coordinated action among these firms (Chung, 2001), and by the presence of a core entity that provides administrative and financial control over the resources possessed (Yiu et al., 2007), and are responsible for managerial coordination among the business affiliated firms (Khanna and Rivkin, 2001; Yiu et al., 2007). Given its position in the diversified business group, the core entity fill what would otherwise be a "structural hole" (Burt, 1992, p. 2) in the organization, it does not only have access to better information and high quality control over the resources available in the network but also has a larger influence on other member firms (Yiu et al., 2007). Hence, the core entity acts as an intermediary among different units, providing access to certain resources (i.e. non-market resources, information, contacts) in case of need.

One of the most common arguments used to explain the existence and potential value generation of diversified business groups in particular institutional environments is the presence of institutional voids and high transaction costs (i.e. Carney et al., 2011; Khanna and Palepu, 1997; 1999; 2000a; 2000b). In this type of environment, diversified business groups create market substitute mechanisms to minimize the existing transaction costs (Hoskisson et al., 2004; Hoskisson et al., 2005) and represent the most efficient organizational form to conduct transactions (Khanna and Palepu; 1997; 1999). Moreover, in countries with prevailing government intervention or where corruption is widespread, diversified business groups may act as rent seekers because they can use preferential access to key officials to secure favorable conditions in multiple businesses (Khanna and Palepu, 2000a). In fact, Chakrabarti et al. (2011) argued that diversified business groups obtain profits because of their preferred access to non-market benefits. Hence, in the presence of institutional voids, business group diversification has the capacity to generate value for their affiliates by using their non-market resources available in the core entity.

Nevertheless, the benefits associated with the internalization of transactions within the diversified business group must be compared with the organizational costs related to the maintenance of those market-substitute mechanisms used extensively by the core entity (Hoskisson et al., 2004; Hoskisson et al., 2005). According to Hoskisson et al. (2004), the adoption of pro-market reforms by emerging countries made the market substitute mechanisms of these groups unnecessary.

An alternative perspective to explain diversified business groups is given by the sociological perspective. According to Granovetter (1994; 2005), the existence of this organizational form is not only explained by economic factors. In fact, within business groups, affiliated firms possess a sense of group identity that favors loyalty and reciprocity (Granovetter, 1994). Guillen (2002; 2003) suggest that this sense of loyalty encourages information sharing and organizational learning and discourages potential disputes. Hence, internal transaction costs are minimized (Khanna and Palepu, 2000).

Carney et al. (2011) argued that both economic and sociological arguments are more relevant for domestic markets than for international settings. On one side, the market substitutes mechanisms used to solve the institutional voids and the contacts with relevant actors may be more valuable at home than abroad (Meyer, 2006; Tan and Meyer, 2010). On the other side, as the social ties are predominant in the home market, the impact of those abroad should be limited and therefore, business group affiliated firms may have a domestic orientation (Carney et al., 2011). For instance, Hundley and Jacobson (1998) found that given the preferential treatment that business group affiliated firms received from other members of the group, they tend to be more domestically oriented.

Nevertheless, recent research suggests that non-market resources also have value outside the home markets (i.e. Cuervo-Cazurra; 2008; Cuervo-Cazurra and Genc, 2008; 2011; Henisz, 2003; Holburn, 2001; Holburn and Zelner, 2010; Garcia-Canal and Guillen, 2008). For instance, Cuervo-Cazurra and Genc (2008) found that since emerging market firms have developed non-market resources and capabilities at home and have learned how to operate in difficult institutional environments, they have a competitive edge over developed country multinationals when they participate in less developed economies. Further, Holburn and Zelner (2010) argued that emerging market firms develop these non-market capabilities by organizational learning.
processes and imprinting effects that occur mainly in their home country. While this research does not directly target diversified business groups, the benefits claimed are closely related to the non-market resources possessed by these organizational forms in their core entity.

Moreover, in the presence of uncertainty, diversified business groups may profit from their group identity, their sense of trust and their emphasis on organizational learning and information sharing. Johansson and Valhne (2009) argued that internationalization represents an uncertain process. In uncertain situations, firms tend to imitate the behavior of other organizations in their organizational fields (DiMaggio and Powell; 1983). Guillon (2002; 2003) used these arguments to suggest that not only firms may learn from the previous experience of other business group affiliated firms but also they can imitate previous strategies of other members in particular host markets to minimize risks and be perceived as a legitimate actor within the group.

Hypothesis development

The overall moderating effect of business group diversification

According to Vermeulen and Barkema (2002), the impact of the scope of international operations on firm performance tends to be negative, especially in the short run. To have presence in multiple countries increases the complexity of operations (Kostova and Zaheer, 1999) and limits the ability of MNEs to manage their internal operations. On one side, the absorptive capacity of the MNE is negatively affected due to the bounded rationality nature of their managers and time compression diseconomies (Dierickx and Cool, 1989) to absorb such new conditions (Vermeulen and Barkema, 2002). On the other side, MNEs need to adapt their dominant mindset and their internal processes to new external environments with imperfect information. As a consequence, we expect a negative impact of the scope of operations on firm performance.

However, business group diversification has several mechanisms to positively impact the internationalization of their affiliates. Considering sociological mechanisms, business group affiliated firms share a strong identity and sense of loyalty (Granovetter, 2005) that favors information sharing, learning and imitation, especially under conditions of uncertainty (Guillon, 2002). Since internationalization represents an uncertain process (Johansson and Valhne, 2009), diversified business groups through their core entity can channel previous international experiences of other affiliated firms to the focal MNE, reducing the uncertainty of foreign operations and enhancing the capacity to gain and maintain legitimacy abroad.

Considering the institutional voids mechanisms, diversified business groups might use their non-market resources developed at home to positively impact the internationalization of their affiliates. For instance, other emerging market economies are in the middle of institutional transitions (Peng, 2003) that escalates the uncertainty and complexity of operations (Peng, 2003; Peng, Lee and Wang, 2005). In this type of setting, diversified business groups may use their political capabilities developed at home to identify government officials in these host countries and obtain favorable treatment (Holburn and Zelner, 2010). Further, in developed countries, diversified business groups can use this capability to minimize the “liabilities of outsidership” (Johansson and Valhne, 2009) faced and increase profit from their international expansion. Finally, diversified business groups can use their internal market substitute mechanisms in capital, labor and product markets to minimize transaction costs and be profitable in foreign countries. Taking these arguments together, we expect a positive moderating effect of business group diversification on the relationship between the scope of international operations and firm performance. Hence:

H1: There is a positive moderating effect of business group diversification on the relationship between scope of operations and firm performance.

The moderating effect of business group diversification in less developed institutional environments.

The presence of institutional voids and high transaction costs is one of the most common arguments to explain the existence and the capacity to generate value of diversified business groups (i.e. Carney et al., 2011; Khanna and Palepu, 1997; 1999; 2000a; 2000b). In countries that are characterized by the presence of institutional voids, diversified business groups can use not only their market substitute mechanisms but also their political capabilities to reduce the complexity associated with the international expansion of their affiliates. This favors their internationalization process.

Emerging or least developed economies possess weak institutional environments. In these countries, business group affiliated firms may get access to scarce resources due to their access to market substitute mechanisms. For instance, they can access financial resources or managerial talent not easily available in those settings. Further, given
the underdeveloped legal infrastructure and the erratic enforcement of the laws enacted (Hoskisson et al., 2000; Vassolo et al., 2011) international investors may be reluctant to invest. However, due to their previous experience with international investors at home and their higher ability to compete in difficult institutional environments (Cuervo-Cazurra and Genc, 2008), diversified business groups may attract qualified foreign investors (Khanna and Palepu, 1997) to pursue international opportunities especially in other emerging or least developed countries. In that sense, business group affiliated firms may gain access to technological resources not easily available in those settings and foreign partners may perceive fewer risks assumed due to their favorable previous experience with the focal group.

Further, Holburn (2001) argued that companies with political capabilities may find it attractive to internationalize into countries characterized by high political hazards to exploit such abilities. For instance, Garcia-Canal and Guillen (2008) suggest that firms might prefer to enter countries where authorities possess discretionary power to secure better conditions at entry. Finally, Holburn and Zelner (2010) argued that not all firms respond equally to political hazards. The responses to these hazards depend on the political capabilities possessed by MNCs. Given their access to political capabilities, business group affiliated firms are more willing to enter politically hazardous countries to leverage such capabilities and minimize the associated uncertainty and complexity of operations. Taking these arguments together, we expect:

**H2: The impact of BG diversification on the relationship between scope of operations and firm performance is more positive for business group affiliated firms that internationalize mostly to other emerging or least developed markets.**

The moderating effect of business group diversification within the home region

Despite the fact that Rugman and Verbeke (2004; 2005; 2007; 2008a; 2008b) focused on market resources to explain non-location bound FSA and their capacity to be deployable abroad, non-market resources available in the core entity of the diversified business group also represent a source of competitive advantage that is susceptible to being exploited internationally (i.e. Cuervo-Cazurra and Genc, 2008; 2011). According to Rugman and Verbeke (2004), the transferability of non-location bound FSA is severely constrained when the focal MNE ventures beyond its home region. MNEs that venture above and beyond their home region must severely invest in complementary location bound assets. Further, their lack of understanding of the rules to compete in those host regions affects the efficiency of those investments and hence, increases the risks assumed. For instance, Tihanyi, Griffith and Russell (2005) argued that the lack of understanding of institutional norms increases the operational challenges faced by the MNE.

When business group affiliated firms internationalize within their home region, they can use their previous experience at home to leverage their market substitute mechanisms available in the core entity. According to Vassolo, De Castro and Gomez-Mejia (2011), Latin America can be considered a relatively homogeneous region with a common dominant religion, legal structure and language. Even the difference between Portuguese and Spanish does not prevent communication flows among Latin countries (Vassolo et al., 2011). Within the region, the market substitute mechanisms available within the diversified business groups can be deployed abroad without the need of considerable investment on location bound FSA. For instance, most Latin American countries can be considered as environments with relatively weak investor protection (La Porta et al, 1997). In this type of environment, firms will have problems obtaining external funding (La Porta et al, 1997). Latin American MNCs affiliated with diversified business groups that internationalize to other countries within the region may capitalize on their internal capital markets and fund projects abroad. Further, business group affiliated firms may use their internal markets for managerial talent to start new ventures within the region. Vassolo, De Castro and Gomez-Mejia (2011) mentioned that the formal sector represents more than 50% of all employees in Latin America. Managers selected and trained in the home country and transferred to other countries within the region are more flexible to negotiate with third parties using non- contractual mechanisms (De Soto, 2000).

Moreover, business group affiliated firms that internationalize within the region may rely on the political capabilities available at the core entity. According to Vassolo et al. (2011), the institutional environment in Latin America is highly volatile because of poor regulation, lack of enforcement, high corruption and a discretionary capacity of governments to change regulations. Under these conditions, the political capabilities of diversified business groups may secure favorable treatment. Despite most of these capabilities being location bound (Henisz, 2003; Meyer, 2006; Tan and Meyer, 2010), firms develop meta-level capabilities that can be exploited in foreign markets (Henisz, 2003). To focus on the home region increases the capacity to understand the institutional environment and to detect who the relevant actors are. Further, it helps minimize the liabilities of outsidership, as explained by Johansson and
Valhne (2009). As a consequence, the efficiency of the location bound firm specific advantages is enhanced.

Finally, Guillen (2002; 2003) argued that firms may learn from the experience of other firms, especially under conditions of uncertainty. Given that not only the strong group identity within business groups favors information sharing and organizational learning, but also that internationalization entails high levels of uncertainty (Guillen, 2002), business group affiliated firms may profit from the previous international experience of other affiliated firms in the same or similar types of countries. Members of a group may share information about not only the existing potential for new entrants but also suitable strategies to pursue in these markets (Guillen, 2002; 2003). By providing this type of information, business group diversification increases the capacity to understand appropriate responses in foreign countries within the region, minimize the complexities of internationalization and increase the capacity of their affiliates to gain legitimacy abroad. Therefore:

**H3:** The impact of BG diversification on the relationship between scope of operations and firm performance is more positive for affiliated firms that internationalize within the region.

**Methods**

**Sample**

Following Aulakh, Kotabe and Teegen (2000), we selected three major countries within Latin America as the focus of our study: Chile, Brazil and Mexico. To select our sample, we used two sources: the 2008 ranking of the 500 largest companies in Latin America provided by America Economia magazine and firms that are publicly traded in the NYSE.

The final sample consists of 363 firm-year observations from 56 firms giving an average of 6.5 years of data per company. As a consequence, we are dealing with an unbalanced dataset. The fixed effect model described below helps address this problem.

**Variables**

**Dependent variable.** We used return on assets (ROA) as a proxy of performance. ROA is one of the most commonly employed measures in the international business and strategy literatures (Daniels and Bracker, 1989; Gomes and Ramaswamy, 1999; Haar, 1989; Kim, Hoskisson and Wan, 2004). We obtained the required financial information to calculate ROA from annual reports or SEC files.

**Independent variables:** The main independent variable is scope of international operations. Following Vermeulen and Barkema (2003), to capture scope of international operations we use the number of countries in which the focal firm has operating activities. We obtained the required information from annual reports or SEC files.

To estimate the moderating effects, we needed to calculate the level of business group diversification. To capture business group diversification, we identified the business groups’ affiliated firms. To identify business groups in each country, we used the ranking of “the 100 maiores grupos” (the 100 biggest groups) published in 2009 by Exame Magazine (containing information of 2008), the report “principales grupos empresariales chilenos” (main Chilean Business Groups) published by Universidad del Desarrollo in 2008 and the ranking of “the 100 empresarios mas importantes del 2008” (The 100 most important businessmen of 2008) published by Expansion Magazine. This ranking provided the name of the major companies associated with each businessman in Mexico. Next, we obtained the annual reports of the major firms and identified the subsidiaries related to these companies.

To capture group diversification, we followed the approach of Khanna and Palepu (2000a, 2000b) by considering the number of industries in which the business group affiliates participate. To determine the number of industries, we identified the industries in which each member of a particular group is involved (whether included or not in our sample) using the 2 digit SIC codes obtained from Compustat, Mergent or the company profiles provided by Lexis Nexis Business Data Group. When necessary, missing SIC codes were added by matching company product descriptions with the applicable SIC code. The resulting variable was mean centered to minimize problems of multicollinearity (Aiken and West, 1991). Our measure of business group diversification (BG diversification) is the count of industries in which the group participates. This is a time invariant variable captured in 2008.

To determine whether the focal MNE was internationalizing within the region, we considered region as the Americas (North, Central and South America). If the focal company has at least one subsidiary outside the Americas, we considered this company as a non-regional multinational. Hence, the resulting measure is a dummy variable (1=regional, 0=non-regional). We considered North America as part of the region because of the following reasons: First, the United States has a strong influence on most Latin American countries (Vassolo et al., 2011). Second, given the immigration process, there is a large community of Hispanics in North America. For instance, Gomez-Mejia, Balkin and Cardy (2012) mentioned that the country
with the second largest number of Spanish speakers is the United States. Further, Hispanics are the largest minority in the United States (USA Today, 2003). Finally, there are strong economic links between United States and most of Latin American countries. For instance, the United States has signed free trade agreements with Colombia, Chile, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama and Peru (OUSTR). Further, Mexico and Chile are part of the NAFTA agreement and the United States and Brazil are consolidating their relation in recent years (STATE). In most of these processes, the participating countries need to adopt the rules of the World Trade Organization WTO (OUSTR), and as a result, the regulatory distance within the region is decreased.

To determine whether the network of subsidiaries of a focal MNE participates in a more or less developed institutional environment, we use the Economic Freedom of the World (EFW) index from the Fraser institute. The EFW index measures the extent to which the government protects not only the right of its individuals to conduct free and voluntary transactions but also associated property from the aggression of others (Gwartney, Lawson and Hall, 2011). To classify each network as more developed or less developed, we first calculate the distance in the EFW index between the home country and all the host countries in which the focal MNE has subsidiaries. Second, we calculate the sum of those differences in each year. If the resulting sum was higher than zero, we classified the international network as more developed. Otherwise, we classified the international network as less institutionally developed. Hence, the resulting measure is a dummy variable (1=more developed, 0=less developed).

Control variables. Following previous research, we control for company size (total assets) and company age (number of years from inception). To minimize problems of multicollinearity, we mean centered degree of internationalization and company age. All time invariant effects are controlled by this statistical model.

Model Specification

To test the hypotheses developed in this paper, we used panel data. With panel data, pooled OLS regression is not appropriate (Baum, 2006). To deal with these problems, we used panel data models. To decide whether we would use random or fixed effects, we conducted the Hausman Test that examined the hypothesis that the error term of the random effects model is not correlated with the regressors (Baum, 2006; Wooldridge, 2002). Our results rejected this hypothesis, favoring the use of fixed effects models.

Given that two of our hypotheses involved three way interactions, we divided our sample into regional and non-regional firms and into more-developed and less-developed networks of subsidiaries. We need to assess whether there are significant differences between these groups in each of these cases.

Results

Table 1 presents the descriptive statistics and the correlation matrix for the variables of interest. To check for potential problems associated with multicollinearity, we analyze Variance Inflation Factors (VIF). The mean VIF reported was 1.03 and all scores are less than 2, considerably lower than the standard cut off point of 10 (Hair, Anderson, Tatham, and Black, 1998). As reported by the non-transformed variables, not only do the Latin American multinationals included in the sample tend to be fairly old (48 years old) and large (6,635 US$M), but also they are at early stages of the internationalization process. (The average scope of operations is three countries.)

Table 2 presents the results of the fixed effects models used to test the hypothesized relations. It is important to notice that panel data models report three R-squares, of which interpretation varies depending on the type of model used. The relevant R-square for fixed effects models is the R-square within (StataCorp, 2005).

Our first hypothesis predicted a positive moderating effect of business group diversification on the relationship between scope of international operation and firm

### Table 1. Descriptive statistics and Correlations

<table>
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<th></th>
<th>OBS</th>
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<th>S.D.</th>
<th>MIN</th>
<th>MAX</th>
<th>VIF</th>
<th>ROA</th>
<th>SIZE</th>
<th>AGE</th>
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<tr>
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<td>6635</td>
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<td>105</td>
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<td>1</td>
<td>126</td>
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<td>-0.0096</td>
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<td>1</td>
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<tr>
<td>Business group diversification</td>
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<td>-5.45</td>
<td>19.55</td>
<td>1.04</td>
<td>0.1192</td>
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<td>0.172</td>
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<tr>
<td>Scope of internationalization</td>
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<td>1.23</td>
<td>-8.63</td>
<td>11.38</td>
<td>1.01</td>
<td>0.0254</td>
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Source: The author. MEAN VIF 1.03
performance. We test this hypothesis in model 2 in table 2. We found a marginally positive moderating effect of business group diversification on the M-P relationship (p<0.10). Hence, we considered that our first hypothesis is partially supported.

Our second hypothesis argued in favor of a more positive effect of business group diversification on the relationship between scope and firm performance for firms that internationalize to other emerging economies or to least developed economies. We test this hypothesis in models 3, 4 and 5. In model 3, we assess the moderating effect of business group diversification for MNEs that internationalize into more developed countries. In models 4 and 5, we evaluate the impact of business group diversification on firms that internationalize into similar or less developed economies. The difference between models 4 and 5 is that in model 4 we include companies that are domestic while in model 5, we only focused the analysis on MNEs. Unfortunately, our empirical evidence does not support this hypothesis. None of the interacting terms (in models 3, 4 and 5) reach significant levels. Hence, this hypothesis was not supported.

Our last hypothesis predicts a more positive effect of business group diversification on the relationship between scope and performance for firms that internationalize within the region. We test this hypothesis in models 5, 6 and 7. Osegowitsch and Sammartino (2008) mentioned that Rugman and Verbeke's classification does not discriminate between purely domestic companies and home region companies. As such, we really cannot assess the capacity of non-location specific assets to be deployable within the home region and it is possible that the concept of regionalization is biased in favor of regionalization because of domestic firms. For such reason, we have developed two models that try to capture the effect of business group diversification within the region. In model 5, we assess its impact on the region including domestic firms. In model 6, we evaluate the impact of business group diversification only in multinationals that internationalize within the region. In model 7, we evaluate the impact on firms that internationalize outside the region. While in model 6 we found a marginally positive effect of business group diversification on the scope performance relationship (p<0.10), in model 7, this effect is stronger (p<0.05) providing strong empirical evidence in favor of the regional-bound nature of the firm specific advantages possessed in the core entity. Hence we consider that our third hypothesis was supported.

### Discussion

Considering that emerging markets are adopting pro-market reforms (Cuervo-Cazurra and Dau, 2009a; 2009b) and the need of diversified business groups to distribute their large overhead, we assess the capacity of business group diversification to generate value in the internationalization
of their affiliates. In particular, we explore the extent to which business group diversification moderates the relationship between international scope and firm performance. Our statistical evidence suggests that business group diversification effectively moderates such a relation.

Several mechanisms may account for our results. For instance, the previous experience in the same or similar markets of other business affiliated firms may help the focal firm to minimize the uncertainty in those foreign countries. Alternatively, the core entity of the diversified business group might use its non-market resources to benefit the internationalization process of their affiliates. Since it is in the core entity where the administrative and financial control of the resources available in the diversified business group resides, business groups might deploy such resources to their affiliates in the case of need. However, given the characteristics of the non-market resources possessed by diversified business groups, we believe that their importance varies depending upon the institutional context in which they are applied.

Given that the existence of institutional voids and high transactions costs is one of the most common explanations of the existence and capacity to generate value of diversified business groups, we expect that going to other institutional settings with similar problems may contribute with the leverage of the non-market resources available and hence, positively impact to the performance of their affiliates. Unfortunately, we failed to find statistical evidence for this hypothesis.

A potential explanation is related with our definition of developed or less developed economies. We use the EFW and the associated distances within the network of subsidiaries to calculate the cut-off point that helps us to define the level of development of the environment in which the focal MNE has operations. However, this is an arbitrary decision that may affect the content and construct validity of our measure. Another explanation may be related with the theoretical inconsistencies about the effect of distance on international business. For instance, on the one side, Berry, Guillen and Zhou (2010) stress the importance of concentrating on specific dimensions of distance that are related to our research question. Cuello-Cazurra and Genc (2011) argued that the advantage or disadvantage of emerging multinationals in comparison with developed country firms depends on the dimension of distance analyzed. On the other side, Rugman et al. (2011) argued that the effect of the different distance dimensions cannot be isolated and what matters is the compound distance across multiple dimensions. This lack of consistency on the impact of distance and the dimensions that need to be analyzed also may affect the lack of consistent results.

We do find statistical evidence in favor of the regionally bound nature of these non-market resources. While most of the traditional arguments associated with regionalization theory focused on market based resources (i.e. Rugman and Verbeke, 2004; 2007; 2008a; 2008b), our results suggest that the deployment of non-market resources abroad also decay across regions. Diversified business groups developed at home those non-market resources that help their affiliates to respond more efficiently in similar environments (Cuervo-Cazurra, 2008; Holbrun and Zelner, 2010). Given the similarities across the countries within the region (Rugman and Verbeke; 2004; 2008a; 2008b), diversified business groups may use their market substitute mechanisms to obtain scarce resources in these countries. Further, their understanding of the institutional environments may help business group affiliated firms not only to minimize the managerial and coordination challenges related to the internationalization process but also to increase their understanding of the rules to compete in different host countries within the region and therefore, enhance their legitimacy.

Sensitivity Analysis

Flores and Aguilera (2007) argued that a point of concern in the regionalization-globalization debate is partition of the world and the definition of region. In our study, we classified region as the Americas (North, Central and South America). However, while reasonable, such definition is somehow arbitrary. To address this problem, we explore three different classifications schemes and analyze how the moderating effect of business group diversification on the scope-performance relationship is impacted by those classifications.

We base our different classification schemes on the United Nations regional categories. In models 2 and 3 of table 3, we considered Central America and Caribbean UN regional categories as the home region for Mexican firms. For Brazilian and Chilean firms, we considered the UN category of South-America as the home region. In models 4 and 5 of table 3, we considered Central America, Caribbean and South-America UN regional categories to define the relevant home region for Brazilian, Chilean and Mexican firms. Finally, in models 6 and 7 of table 3, we considered as region the Americas and we included North-America (Canada and United States), Central America, Caribbean and South-America UN regional categories. All the analysies shown in table 3 are based on non-domestic firms. The analysis of regions including domestic firms (not reported here) presents similar results.
As we can observe, the definition of region decisively impacts our results. When we use our first definition of region (models 2 and 3), we do not find empirical evidence supporting our argument that business group diversification moderates the relationship between international scope and firm performance. In fact, we found a positive moderating effect on multinationals that operate outside of the defined region. These findings may suggest that the non-market resources possessed are not regionally bound and that affiliated firms are better off exploiting them globally.

However, to further understand whether there are geographical limits to deploying these FSAs abroad, we explore alternative definitions of region. In our second definition, we failed to find statistical results supporting the moderation of business group diversification in either regional or non-regional multinationals. While our results showed the hypothesized relations, we failed to reach significance. However, when we use our third definition of region (considering North-America, Central-America, Caribbean and South America), we found a positive moderating effect on regional firms but not on non-regional MNEs.

It seems that the non-market resources available within diversified business groups indeed have limits to be exploited. Further, their international leverage is constrained to the Americas. Beyond the Americas, diversified business groups and their non-market resources have little capacity to positively impact the internationalization of their affiliates. Rugman and Verbeke (2008a) argued that distance is important. However, distance matters the most between regions than within regions. Companies that internationalize across regions face liabilities of inter-regional foreignness (Rugman and Verbeke, 2007). In the case of business group diversification, the lack of understanding of institutional environments may limit the deployment of these non-market resources.

Flores and Aguilera (2007) mentioned that one of the critical points in the globalization versus regionalization discussion is the definition of region. We believe that our results support the regionalization scheme proposed by Rugman and Verbeke (2004; 2007; 2008a; 2008b). It is only when North America is included in the sample that the proposed moderating effects reach significance. These findings also signal the importance of North America for Latin American firms. Given the economic importance of this region, business group affiliated firms from the region not only may reach economies of scale and scope by entering these large markets but also they can leverage the non-market resources and previous experience of other affiliated firms to develop and implement efficient strategies.

### Table 3: The impact of business group diversification by regional classification scheme

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
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<tbody>
<tr>
<td>Constant</td>
<td>-0.3250121**</td>
<td>-0.3571942*</td>
<td>-0.352429**</td>
<td>-0.2163432+</td>
<td>-0.3915707**</td>
<td>-0.2700017**</td>
<td>-0.5248078**</td>
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<td></td>
<td>0.0629981</td>
<td>0.1545312</td>
<td>0.0668012</td>
<td>0.1220892</td>
<td>0.0750311</td>
<td>0.0846733</td>
<td>0.1165851</td>
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<tr>
<td>AGE</td>
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<td>0.0064349**</td>
<td>0.0091517**</td>
<td>0.0045851*</td>
<td>0.0102002**</td>
<td>0.0062216**</td>
<td>0.0013018**</td>
</tr>
<tr>
<td></td>
<td>0.001122</td>
<td>0.00232</td>
<td>0.00157</td>
<td>0.00195</td>
<td>0.00175</td>
<td>0.00164</td>
<td>0.00228</td>
</tr>
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<td>SIZE</td>
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<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
</tr>
<tr>
<td>Scope</td>
<td>-0.0040487+</td>
<td>-0.0015875</td>
<td>-0.0054446*</td>
<td>-0.0058246</td>
<td>-0.004521+</td>
<td>-0.0065967+</td>
<td>-0.0043504</td>
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<tr>
<td></td>
<td>0.0020547</td>
<td>0.0159123</td>
<td>0.0221474</td>
<td>0.0049813</td>
<td>0.0025408</td>
<td>0.0038598</td>
<td>0.003239</td>
</tr>
<tr>
<td>Scope*BG diversification</td>
<td>0.0006389*</td>
<td>-0.0019148</td>
<td>0.0008511*</td>
<td>0.000982</td>
<td>0.0006121</td>
<td>0.0010729*</td>
<td>0.0002853</td>
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<tr>
<td></td>
<td>0.0003866</td>
<td>0.0023841</td>
<td>0.0004198</td>
<td>0.0005797</td>
<td>0.0005373</td>
<td>0.0005191</td>
<td>0.000741</td>
</tr>
<tr>
<td>R-sq within</td>
<td>0.1222</td>
<td>0.0713</td>
<td>0.1787</td>
<td>0.0594</td>
<td>0.1933</td>
<td>0.1119</td>
<td>0.234</td>
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<tr>
<td>R-sq between</td>
<td>0.0453</td>
<td>0.0052</td>
<td>0.0507</td>
<td>0.004</td>
<td>0.017</td>
<td>0.053</td>
<td>0.0014</td>
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<tr>
<td>R-sq overall</td>
<td>0.0203</td>
<td>0.0009</td>
<td>0.0241</td>
<td>0.0002</td>
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</tr>
<tr>
<td>Number of observations</td>
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<td>236</td>
<td>160</td>
<td>203</td>
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<td>116</td>
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<tr>
<td>Number of firms</td>
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<td>43</td>
<td>30</td>
<td>38</td>
<td>46</td>
<td>23</td>
</tr>
</tbody>
</table>

*+p<0.10; *p<0.05; **p<0.01
Source: The author

### Limitations and directions for future research

Despite business groups are facing strong pressures to re-focus their operations, they have the alternative to distribute their large overhead and generate value for their affiliates by encouraging these affiliated firms to internationalize. In fact, our results suggest that diversified business groups positively moderate the relationship between international scope and firm performance. Nevertheless, this capacity is stronger when diversified business groups
have the chance of using their non-market resources in other countries within the Americas. Within the region, diversified business groups do not require extensive investment in complementary assets to exploit their non-market resources. Further, they have a better understanding of the different institutional environments which allows them to use their market substitute mechanisms, political capabilities and previous experience to minimize the uncertainty and complexity associated with the foreign operations of their affiliates.

However, our results should be interpreted with caution. First, we have limitations to define our measures. For instance, we defined that a company is regional if the focal firm had all their subsidiaries in the Americas. Nevertheless, to be classified as non-regional, it was necessary to have only one subsidiary in other region. The focal firm may have several units in the region (i.e. ten subsidiaries) and only one subsidiary outside the region and it will be classified as non-regional. Indeed, we did not discriminate between a firm that has a small percentage of operating units outside the home region and one that has a large percentage of subsidiaries outside the region. We considered both of them as non-regional. Future research may explore more refined measures of regionalization (or more exactly non-regionalization) and assess whether the impact of operating above and beyond the home region depends on the number of subsidiaries in these host regions, on the importance of those subsidiaries or on the location of the subsidiaries.

Further, to identify business groups we rely on different publications with different methodologies. Moreover, to capture diversification of these business groups we count the SIC codes of their affiliated firms following Khanna and Palepu (2000a; 2000b). While recognizing that a herfindhal measure may be more accurate to determine the extent of diversification of business groups, unavailability of data is a major constraint to building such index. Hence, our business group diversification measure may have problems with deficiency and contamination. Future research should account for these limitations.

Second, we relate the positive moderating effect of business group diversification with the possession of non-market resources and the potential of these non-market resources to be exploited abroad. Nevertheless, we did not measure these non-market resources. Future research may account for this limitation and identify specific non-market resources that can be used in the internationalization of their affiliates. Content analytic techniques may give some avenues in this area.

Third, we assess the impact of business group diversification on the internationalization of their affiliates. Carney et al. (2011) argued that the effects of business groups should be assessed at the business group level and not in their affiliates. A future avenue of research may explore the internationalization process at the group level. For instance, by assessing the degree of international operations at the group level we can have more direct evidence of their capacity to leverage their resources abroad.

Granovetter (2005) argued that the demise of diversified business groups is not necessary related to the improvement of market conditions and reduction of transaction costs. In fact, Khanna and Palepu (1999b) found that in Chile and India, diversified business groups responded to the adoption of pro-market reforms with efficiency improvements in their market-substitute mechanisms that allows them to increase their performance. In this paper, we found evidence that in presence of institutional changes, business group diversification has the capacity to positively impact the internationalization of their affiliates by increasing their performance prospects, especially when the focal affiliate internationalizes within the home region.

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