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# How much does country matter in emerging economies? Evidence from Latin America

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## Abstract

**Purpose** – The purpose of this paper is to examine the magnitude of country, industry and firm-specific effects for firms competing in emerging economies and also explore differences between high and low performers.

**Design/methodology/approach** – The authors use ANOVA methodologies on samples from firms competing in Latin America between 1990-2006.

**Findings** – It was found that the firm-specific effect is the most important one, and relatively equivalent in magnitude to the firm-specific effects found in developed countries. Country and industry effects are less important than the firm-specific effect. Contrary to previous studies that indicate that the country effect is relatively more important in emerging economies, the authors found that it is even less important than the industry effect, a result that has important implications for strategic management and international business theory. The source behind the strong firm-specific effects might stem from their resources and capabilities to manage and take advantage of the institutional and macroeconomic environments. Further analysis indicates that the firm-specific effect is relatively more important for firms showing high performance than for those firms showing low performance.

**Research limitations/implications** – Through these findings the authors feel that further research is needed so as to arm future managers with a more clear and comprehensive strategy when doing business in a Latin American country. The paper's findings are specific for large public corporations in Latin America.

**Practical implications** – The paper allows managers to think about sources of competitive advantages in emerging economies.

**Originality/value** – The paper shows that, despite weak institutional contexts and highly volatile macroeconomic environments, managers in the region should be able to obtain substantial differences in economic performances within the region. Activities needed for such differentiation might differ from those carried out in developed countries, with more emphasis on managing institutional voids and periods of economic and political cycles but the result should be the same.

**Keywords** Latin America, Emerging economies, Competitive strategy, Institutional advancement

**Paper type** Research paper

## Introduction

To what degree does a country matter is a central question for strategic management and international business studies. Recent studies using variance decomposition analysis indicate that industry and country effects on performances are held with a similar magnitude of importance; however, they are significantly less important than the firm-specific effects (Brito and Vasconcelos, 2006; Makino *et al.*, 2004; McGahan and Victer, 2010). We build on this nascent stream and explore the magnitude of these effects in a sample of emerging economies. If country matters significantly compared to the other effects, this has important consequences. First, firms' performance and

international growth potential would be considerably defined by its country of origin. Second, for firms expanding internationally, country selection would become a crucial decision. If a firm chose wrongly the country or countries in which to invest, it would be extremely difficult to reverse poor performance.

Since emerging economies represent half of the global gross domestic product (GDP) in terms of PPP and more than half of the global economic growth, understanding strategic circumstances for firms in these environments are extremely important. This study provides empirical evidence and analyzes the strategic consequences of the relative impact of firm-specific, industry, and country effects in emerging economies.

The competitive context in emerging economies differs in several aspects from that of developed countries (DCs). First, from the institutional perspective, differences exist in the laws and regulations surrounding the acquisition of property, the licensing of new businesses, factors needed for the domestic and international contracting for production, the weak protection of intellectual property, the informal economy, the presence of corruption, and the means and feasibility of exit, among others (Henisz, 2003). These differences lead to an increase in political and legal risk for companies in emerging economies (Henisz and Macher, 2004). Second, emerging economies have weak economic structures, heavily dependent on a few industries such as agricultural and mineral commodities. This aspect makes emerging economies strongly dependent on the cycles of these few products. The lack of diversification in their economies intensifies the impact of the ups and downs of these cycles. Finally, weak developed financial markets, which are significantly smaller in terms of GDP than those in developed economies, contribute to make business development more difficult in two ways:

(1) the lack of financial resources available to fuel business growth; and

(2) the lack of any type of emergency credit to survive economic crises.

Furthermore, many financial markets are overcrowded with government needs which exacerbate the scarcity of financial resources for the private sector.

Therefore, volatility, simple economic structures and weak institutions interact, or reinforce each other. All these factors combined contribute to create a pattern of evolution of the GDP that is substantially more volatile than that of DCs. While macroeconomic environments in DCs alternate periods of expansion with soft periods of recessions: emerging markets alternate periods of sharp growth accompanied by economic crisis with significant drops in the GDP (Calvo *et al.*, 2006; Calvo and Mendoza, 2000). The abrupt deviations in the evolution of the GDP affect industries and the firms evolution, eventually changing the relative impact of each component of the firms' performance.

The goal of this study is to explore the country effect on the financial performance of firms competing in emerging economies and, through this process, observe if these components differ substantially from those studied in developed economies. We seek to understand to what extent country specific attributes generates isomorphic pressures, decreasing the possibility of managerial intervention or, alternatively, to what extent these particular contexts facilitate managerial intervention and firms' differentiation. By doing so, we hope to advance knowledge in these fundamental questions for future strategic management and international business literature.

To explore this matter, we carry out a study of variance decomposition of financial returns in a sample of firms competing in Latin America during the period of 1990-2006. We have found Latin America to be interesting for this type of research, because even if it is the second most important emerging economy after the Asia-Pacific region, it has been under represented in previous research. And what is more, Latin American countries present a more heterogeneity in both institutional and macroeconomic conditions than Asian countries. Therefore, they may present some unique characteristics that might provide learning opportunities not present in other regions (World Economic Forum, Word Bank's Doing Business).

In the empirical analysis of our sample we have observed similar levels of country effects than those reported in developed economies but significantly lower than the levels reported from emerging economies (Makino *et al.*, 2004). This difference is intriguing and we suggest it could originate from sample differences. We also note that firm-specific effects largely dominate all other effects: even in regions where business environment volatility is extreme, firms' unique resources and capabilities seem to be the most important component of the firms' performance. In the analysis of components of variance (COV) conditioned by firms' performance levels, results indicate that the firm-specific effect is relatively more important for high performers than for low performers. Taken together, these results seem to indicate that high environmental volatility leads to less isomorphic pressures, leaving more room for unique managerial decisions. That is, in situations of extreme volatility, the concepts of country and industry seem to be less relevant, leaving the firm as the main fundamental unit of analysis in general and even more relevant for the top performers. In particular, companies may have developed specific capabilities to deal with these business external factors up to the point of making these capabilities so unique as to become a significant source of differentiation. In other words, some of the unique resources and capabilities behind the strong firm-specific effect might be resources and capabilities to manage and to take advantage of the institutional and macroeconomic environment.

This manuscript makes several contributions to the existing literature on this topic. First, it provides one of the first analyses of variance decomposition in a set of multiple emerging economies. This analysis sheds light on the long-lasting effects on the performance variability in emerging economies. Second, it provides the first examination of the magnitude of the different permanent effects (firm-specific, industry, and country) affecting superior and inferior performers in emerging economies. This procedure provides evidence to address the motives behind the successes and failures of firms. Third, it summarizes and puts into perspective recent research and findings in the study of COV. Finally, the paper provides methodological contributions around the dispute regarding the effect of excluding outliers when decomposing the variance of abnormal returns (Hawawini *et al.*, 2003, 2005; McNamara *et al.*, 2005).

The next two sections summarize the literature and set our research questions. The subsequent section describes the methodologies used to measure the COV and to select firms with different performances. The last two sections present the results, discuss them and conclude.

## Antecedents
The growing interest in understanding how much country matters is the natural evolution of the initial interest in assessing the relative importance of industry and

firm-specific effects on the overall firms' performance. According to Peng *et al.* (2008), the emergence of the institutional-based view, which revived the interest in country effects, originates in three factors:

(1) the upsurge of institutional theory/new institutionalism in the social sciences;

(2) recurring criticism of both the resource and industry-based views for neglecting the context of firms and industries as a relevant variable; and

(3) the increasing economic relevance of emerging economies.

Initial studies used the COV methodology to shed light on the dispute between the industrial organization view (Bain, 1959; Mason, 1939) and the resource-based view (Barney, 1991; Penrose, 1959; Wernerfelt, 1984). Empirical findings using alternative techniques indicate that the firm-specific effect is at least twice as large as the industry effect (McGahan and Porter, 1997; McGahan, 1999; Roquebert *et al.*, 1996; Rumelt, 1991). Table I summarizes the most relevant studies and the typical methodological approaches.

The robustness of these findings was confirmed by multiple studies that considered a variety of settings. They began by addressing sub-samples of the population in order to detect how the different effects changed when firms belonged to different business groups (Chang and Hong, 2002), or when they belonged to manufacturing sectors *vis-à-vis* service sectors (Hough, 2006), or to different types of owners (Szymanski *et al.*, 2006). Even with these specific classifications, the firm-specific effect largely dominated the other COV. Table II contains a detailed explanation of the major findings of different studies using sub-samples of the population within a single country.

Given the initial emphasis on the dispute between the industrial organization perspective and the resource-based view, the effect of the country on returns was overlooked. Most of these studies focused on the USA, covering different periods of analysis and different numbers of industries. This was an important limitation for the international business perspective which is interested in understanding the effect of different national environments on firms' performance. Makino *et al.* (2004), Brito and Vasconcelos (2006) and McGahan and Victer (2010), partially cope with this limitation, providing empirical evidence on the magnitude of different effects for a sample of multiple countries.

Brito and Vasconcelos (2006) analyzed the country effect using COMPUSTAT global database, covering 78 countries for the period 1997-2001. They found that in some industries, the country effect was more important than the industry effect (i.e. agriculture, construction, and wholesale and retail) while in other cases the industry effect was larger than the country effect (i.e. mining, manufacturing, transportation, insurance and finance, and services). The most important conclusion of Brito and Vasconcelos (2006) is that the firm-specific effect is the most important one, even though the magnitude of this effect varies significantly in each sector. In seven out of eight sectors analyzed the firm-specific effect was larger than country and industry effects; and only in the construction sector did the country effect show a higher effect on performance than the firm-specific effect. Another interesting finding relates to the considerable magnitude of the industry-country interaction effect. In five out of seven sectors it had an equal or even larger impact on performance than country or industry effects. Such results from the country-industry

| | | Effects (percentage of total variance) | | | | | | | Data and methodology | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | Year | Industry | Industry year | Corporate parent | Firm/subunit/ business unit | Model | Error | Obs. | Period | Industries | Method |
| Schmalensee (1985)[a] | | | 19.59 | | | | 19.59 | 80.41 | 1,775 | 1975 | 242 | OLS (ANOVA) |
| Rumelt (1991)[b] | A | | 8.32 | 7.84 | 0.8 | 46.4 | 63.33 | 36.87 | 6,932 | 1974-1977 | 242 | COV |
| | B | 0.03 | 17.9 | 9.8 | 14.8 | 33.9 | 76.5 | 23.5 | 10,866 | 1974-1977 | 242 | Nested ANOVA |
| Roquebert et al. (1996) | | 0.50 | 10.2 | 2.3 | 17.9 | 37.1 | 68 | 32 | 16,596 | 1985-1991 | | COV |
| McGahan (1999) | | 7.4 | 31.6 | | | 60.9 | 100 | | 31,601 | 1981-1994 | 648 | ANOVA |
| Brush and Bromiley (1997) | A | | 7.3 | | 8.9 | 66.6 | 82.8 | 17.3 | 535 | 1986-1995 | | |
| | B | | 13.5 | | 14.4 | 53.7 | 81.6 | 18.4 | 173 | | | 2SLS |
| Hawawini et al. (2003) | | 1 | 8.1 | 3.1 | | 35.8 | 48 | 52 | 5,620 | 1987-1996 | 55 | COV |
| Misangyi et al. (2006) | | 4.6 | 14.3 | | 13.9 | 31.3 | | | 10,633 | 1984-1999 | 76 | |
| Lai et al. (2006)[c] | | 0.6 | 3.9 | | 17.1 | 21.9 | 47.9 | 52.1 | 15,413 | 1998-2002 | 14 | COV |

**Notes:** [a]The percentage of variance attributed to market share (0.62) and to industry-market share (−0.62); [b]sample A follows criteria set in Schmalensee (1985), sample B includes small businesess on top of that; [c]the percentage of variance attributed to business model (4.4)

**Table I.**
Single country analysis

| | | Year | Industry | Industry-year | Corporate parent | Subunit/firm/business unit | Model | Error | Obs. | Period | Industries | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| McGahan and Porter (1997) | A[a] | 2.39 | 18.68 | | 4.33 | 31.71 | 51.6 | 48.4 | 58,132 | 1981-1994 | 628 | COV |
| | B | 0.3 | 9.4 | | 9.1 | 35.1 | 66.8 | 33.2 | 58,132 | | | Nested ANOVA |
| Chang and Hong (2002)[b,c,d] | Full sample | 0.7 | 7.7 | 3.7 | | | 47.3 | 52.7 | 14,575 | 1985-1996 | 166 | COV |
| | Top 30 business groups | 0.4 | 17.2 | 4.6 | | | 48.6 | 51.4 | 3,637 | | 123 | |
| | Smaller business groups | 1 | 5.9 | 4.2 | | | 47.2 | 52.8 | 10,938 | | 158 | |
| McGahan and Porter (2002) | Full sample | 0.8 | 9.6 | | 12 | 37.7 | 60.1 | 39.9 | 72,742 | 1981-1994 | 668 | Nested ANOVA |
| | Manufacturing only | 1.1 | 7.1 | | 12 | 35.2 | 55.4 | 44.6 | | | | |
| McNamara et al. (2005) | Full sample | 1 | 9.1 | 4 | | 43.8 | 58 | 42 | 19,926 | 1987-1996 | 84 | COV |
| | Excluding outliers | 1 | 11.2 | 4 | | 43.6 | 59.8 | 40.2 | 19,646 | | | |
| Hough (2006) | Non-manufacturing sectors | <1.0 | 5.3 | | 17.1 | 43.8 | 66.1 | 33.9 | 13,221 | 1995-1999 | 625 | Multilevel analysis |
| | Manufacturing sectors | <1.0 | 4.7 | | 29.6 | 30 | 64.3 | 35.7 | 6,184 | | | |
| Szymanski et al. (2006)[e,f] | Total | 3.1 | 2.7 | 15.3 | | 40.3 | 67.8 | 32.2 | 1,185 | 1996-2000 | | COV |
| | State owned | 11 | | 60 | | 25 | 97 | 3 | 340 | | | |
| | Privately owned | 2 | | 1.5 | | 39.9 | 66.2 | 33.8 | 465 | | | |
| | Foreign | 1.8 | | 4.8 | | 47.8 | 54.5 | 45.5 | 380 | | | |
| Short et al. (2007)[g] | Deductive strategic groups | | 19.23 | | | 65.82 | 100 | | 1,165 | 1991- | 12 | Hierarchical linear model |
| | Inductive strategic groups | | 14.68 | | | 78.97 | 100 | | 1,165 | | | |

**Notes:** [a]the percentage of the variance attributed to the covariance of corporate-industry effects was −5.51; [b]the percentage of the variance attributed to business-group effects was 5.7, 0.2 and 7.1 for each sub-sample, respectively; [c]the percentage of the variance attributed to group-period effects was 7.7, 3.5 and 8.2 for each sub-sample, respectively; [d]the percentage of the variance attributed to foreign-affiliate effects was 21.8, 22.8 and 20.9 for each sub-sample, respectively; [e]The percentage of the variance attributed to subsector effects was, 0, 6.8 and 2.1 for each sub-sample, respectively; [f]the percentage of the variance attributed to regional effects was 6.4, 1.0, 16.0 and −2.0 for each sub-sample, respectively; [g]the percentage of the variance attributed to strategic-group effects was 14.95 and 6.35 for each sub-sample, respectively

**Table II.**
Sub-sample analysis

interaction might indicate a strong industry-country-specific cluster effects (Brito and Vasconcelos, 2006).

Brito and Vasconcelos (2006) present at least three limitations. First, the period under analysis (five years) is insufficient to isolate economic cycles, something that might bias the different effects. This shortcoming has a greater impact on emerging economies, where the economic cycle evolves abruptly, affecting firm and industry performance relatively more than in developed economies. Second, it does not differentiate between developed and emerging economies. Therefore, it might hide the relative importance of the country effect. Third, it does not distinguish between superior and inferior performers. As McGahan and Porter (2003) indicated, it is possible for the different effects to present asymmetric magnitudes depending on the level of the firms' performance.

McGahan and Victer (2010) explore how a firm's home-country and major industry affiliation influence the profitability of a large number of firms around the world during the period 1993-2003. Once again, as in Brito and Vasconcelos (2006), this study provides important empirical evidence regarding the magnitude of the home-country effect. Comparing these results to those of Brito and Vasconcelos (2006), they found that the home-country effect is relatively less important than the industry effect, about a third of the effect is one of the primary industry affiliation of firms. In addition, similarly to Brito and Vasconcelos (2006), they also found that interactions between home-country-industry are more important on the magnitude than the direct effects of country and industry separately.

Makino *et al.* (2004) analyze the COV of Japanese multinational corporations (MNC) subsidiaries' performances in three different categories in host countries:

(1) less developed economies (LDC's);

(2) newly industrialized economies (NIE's); and

(3) DCs.

Unlike previous studies measuring performance as return on assets (ROA), they have measured performance by using the variable return on sales (ROS). They found that while industry and country effects were roughly the same for the entire sample, their relative importance varied when grouping the countries in sub-samples according to their degree of economic development. In particular, the country effect on subsidiaries' performances were relatively more important in LDC's than in NIE's and DC's. According to the authors' interpretation, market transactions, infrastructure, institutional rules, and enforcement mechanisms are more varied among LDC's, and hence, these external effects may play a more salient role explaining firms' performances in LDC's than in more developed economies. Even when considering that the country effect is significantly more important in LDC's, the firm-specific effect is still the most important in all types of economies. They conclude that "with respect to foreign affiliates' performance, internal influences matter more in advanced economies whereas external influences matter more in less advanced economies" (Makino *et al.*, 2004, pp. 1037-8). Interestingly, Makino *et al.* (2004) also included an industry-country effect in one of the models analyzed in their study. Just like with Brito and Vasconcelos (2006) and McGahan and Victer (2010), they found that the interaction industry-country effect was more important than the country and industry effects considered separately.

Despite the important contributions of Makino *et al.* (2004), their research still leaves space for further contributions. Specifically, they only analyzed Japanese subsidiaries in emerging economies, a sample that might introduce biases if we try to generalize the results to other types of firms, including MNCs from other origins and also local firms.

McGahan and Porter (2003) mentioned limitations in most of the previous studies on variance decompositions: they do not examine high and low performances separately. This is an important shortcoming, since it is reasonable to expect that industry and country effects may differ from firm to firm and it is also reasonable to expect these would be in turn related to high and low performances. Consequently, McGahan and Porter (2003) explored the emergence and sustainability of abnormal returns of US firms during the period 1981-1994 by splitting the sample in two: high and low performers, depending on their position with respect to the industry median. They tracked firm-specific, industry, and corporate effects along the trajectory of these abnormal returns. They found that the industry effect was nearly as important as the firm-specific effect in the early development of high performance and that, over time, the firm-specific effect became more and more important. In contrast, they found that low performance arose from the firm-specific effect rather than from participation in an unattractive industry. They conclude that, even though a distinctive firm-specific effect appears to be necessary for the emergence of superior profitability, sustained high profitability apparently follows from the decision to preserve industry attractiveness and corporate structure rather than to obtain a fully distinctive business-specific advantage without regard for the industry and corporate consequences. In summary, the relative importance of the industry effect on high performers provides indirect support for both, the industrial organization view and the resource-based view, at least for firms competing in the USA.

In summarizing, previous studies have provided relevant but incomplete assessments of the relative importance of country, industry and firm-specific effects on the performance of firms competing in emerging economies. This is a particularly important shortcoming in light of different studies which emphasize the effect of country characteristics on business strategy and presumably on performance. In a weak and volatile institutional context, the ability to manage country's institutional idiosyncrasies may prevail over other advantages, such as technology or marketing (Cuervo-Cazurra and Genc, 2008; Henisz, 2003; Vernon, 1971).

In fact, several authors have maintained that there is a different behavior in firms' performance between emerging and developed economies. Chacar and Vissa (2005) list several differences between developed and emerging economies that may have a despair impact on firms' performance in each type of economy: institutional environment, frequency of sudden changes, labor market rigidities and factor markets development.

One of the most studied disparities among countries' environments is the institutional setting and its effect upon the transaction costs along with the development of the factor markets themselves (Hoskisson *et al.*, 2000; Khanna and Palepu, 1997, 2000). Especially critical among the factor markets are the capital markets. Countries with poor investor protection in terms of legality both in legal rules and the law enforcement have smaller and narrower capital markets (La Porta *et al.*, 1997, 1998). Therefore, firms in countries with poor investor protection institutions face more severe financial constraints than those firms operating in countries with more developed investor protection rules.

Hoskisson *et al.* (2000) not only emphasize the institutional effect on factors' markets and transaction costs, they also underlined the strong need for firms to develop resources and capabilities to manage in underdeveloped institutional environments. In order to deal with increased transaction costs present in most emerging countries, large companies create conglomerates of firms usually controlled by very wealthy local families known as *chaebols* in Korea or *grupos* in Latin America (La Porta *et al.*, 1999; Morck *et al.*, 2005). Thanks to these group structures, firms in the group can transfer resources among themselves in order to avoid market frictions and creating competitive advantages over others (Khanna and Palepu, 2000; Khanna and Rivkin, 2001). Delios and Henisz (2000, 2003) reported that companies develop capabilities to deal with hostile contexts. According to Tybout (2000) industries in emerging economies are more concentrated while anti-competitive regulation enforcement is weaker; this makes it easier for certain firms to raise barriers and presumably enjoy better performance. Additionally, García-Canal and Guillén (2008) also observed that some firms found political discretionally policymaking attractive, since they could differentiate by negotiating favorable conditions with authorities.

As these studies demonstrate, while understanding the country effect is critical for firms' strategies, the overall country effect on performance is not yet clear nor to what extent the firms' capabilities (e.g. experience, institutional-based strategies, group formation, political ties and bargaining ability, etc.) play a part. Moreover, industry structures might also interact with country attributes (e.g. allowing higher levels of concentration in emerging economies than in developed ones). In light of the limited number of studies addressing country effects in emerging economies and based on multiple theoretical perspectives regarding potential strategic reactions to adverse contexts that might eventually mitigates their effect, we proceed to examine the country effect on emerging economies.

## Emerging economies and research questions

The study of country effects in emerging economies is crucial as they represent around half of the global business activities. Furthermore, the environmental conditions of these activities differ significantly from those of DCs. In developed economies, the two main sources of uncertainty are technology and market changes (McGrath and MacMillan, 2000). Uncertainty may also arise from changes in the regulatory environment, however, this should not be consider a significant source of disruption as the legal procedures are usually reasonably transparent and predictable. Conversely, in emerging economies, institutions are weaker and the macroeconomic environment is more volatile. The combination provides a significant source of exogenous shocks that may systematically alter the "rules of the business game".

North (1990) argues that emerging markets have institutional constrains which do not encourage productive activities. Therefore, firms' investments not only face technological and market uncertainty but also institutional and macroeconomic risks (Henisz and Zelner, 2001). Institutional changes may affect regulation, bankruptcy laws, reform of capital markets, globalization rules (trade, foreign capital, and foreign governance rules), and privatization (Thomas and D'Aveni, 2004). These shocks may also jeopardize the results of any superior strategy, eventually eroding the value of any previous organizational routines, capabilities or industrial positioning.

Macroeconomic cycles are extreme in emerging economies. Some economists have coined the terms *Sudden Stop* and *Phoenix Miracle* to characterize some of these

fluctuations in emerging economies (Calvo and Mendoza, 2000; Calvo *et al.*, 2006). Emerging economies, like all economies, face cycles. However, while in DCs these cycles are smooth[1] and can usually be anticipated, while in emerging economies these trends tend to be more intense, more frequent, and are usually followed by severe crises. In order to determine the significance of sudden stops, Calvo *et al.* (2006) analyzed 33 GDP contraction episodes in 31 emerging economies during the period 1980-2004. They found that one-third of these episodes corresponded to mild recessions while two-thirds qualified as genuine collapses. On average, these collapses caused a 10 percent decline in countries' GDP in a year and generally followed a *Sudden Stop* in foreign investment flows. Economic recovery took three years on average and was normally followed by a spectacular turn around leading to the term the *Phoenix Miracle*. Examples of these recurrent crises in several emerging economies are Mexico in, 1994, Thailand, Philippines, Indonesia, and South Korea in 1997, Russia in 1998, Brazil and Ecuador in 1999; and Argentina and Uruguay in 2001.

Emerging economies not only endure sharp changes in their GDP level but also in the relative prices of production factors. As Calvo *et al.* (2006) observed, *Phoenix Miracles* materialize with virtually no recovery in credit conditions and, therefore, a very weak improvement in investment. In addition, real wages decline sharply during the contraction phase and remain depressed as the economy bounces back to full recovery. This drastically alters the relative price of capital, *vis-à-vis*, than that of labor, with a substantial effect on the relative economic contribution of each resource on the firms' value chains, and eventually eroding any source of competitive advantage derived from resources specialization.

This continuous disruptive evolution in this context is intriguing from the strategic management and international business perspective. Is this volatile context so strong as to create distinctive pressures on any or all types of businesses? Is there a fraction on the firms' returns which could be determined by country characteristics? To what extent is it possible for firms to isolate from the context and achieve differentiation? In particular, the existence of successful firms in such a volatile context is intriguing. On the one hand, higher levels of institutional and macroeconomic volatility might generate a business environment dominance, with the unexpected nature of external shocks crowding out firm-specific activities. If this is the case, performance of firms competing in emerging economies might be more driven by the country effect than in the case of developed economies. To some extent, this is what Makino *et al.* (2004) found for subsidiaries of Japanese MNCs competing in emerging economies.

On the other hand, however, emerging economies allow implementing non-market strategies in a non-trivial way. The institutional weaknesses would allow certain companies to achieve isolation from environmental volatility. Therefore, we might observe an increase on the firm's-specific effect. Recent evidence on the impact of individual firms' action on the institutional environment seems to support this line of argumentation (Dieleman and Sachs, 2008). What effect would dominate (business environment volatility or non-market protection) is an empirical question of fundamental value for firms competing in emerging economies. Therefore, the first research question is:

*RQ1.* How much does country matter relative to the firm-specific and industry effects for firms competing in Latin America?

McGahan and Porter (2003) observed that the firm-specific and industry effects depended on the level of the firm's performance. It is then reasonable to expect the same for the country effect. In fact, the possibility of managing the institutional environment for the company's advantage is, by definition, an idiosyncratic phenomenon. Delios and Henisz (2000, 2003) demonstrated how firms can learn and develop hazard-mitigation capabilities from their experience in weak institutional environments and adapt their ownership strategies to deal with public and private expropriation in weak institutional environments. Additionally, firms are able to develop a long-term perspective on political uncertainties and hence, plan sequential entry strategies increasing the rate of FDI committed to uncertain environments. García-Canal and Guillén (2008) learned how some Spanish firms in regulated industries found it more attractive to expand into countries characterized by government discretionary policymaking since these firms had capacities to negotiate favorable conditions of entry. Firms invest abroad in order to exploit their unique resources, which may include dealing with regulators (Boddewyn and Brewer, 1994; Henisz, 2003; Bonardi, 2004; Henisz and Zelner, 2001). Khanna and Palepu (2000) and Khanna and Rivkin (2001) have also observed higher performance among affiliates of diversified business groups than among unaffiliated firms.

The analysis of the country effect *per se* does not provide enough information to illuminate the mechanisms behind performance but we need to explore this country effect, together with the other effects, contingent on the level of the firms' performance. Therefore, the second research question is:

*RQ2.* What is the relative importance of the different effects when considering superior and inferior performers among firms competing in Latin America?

We have found that a sample of emerging economies from Latin America would be particularly interesting for the following reasons. First, it is the most significant emerging economy region after Asia-Pacific. Its GDP is about the same size as China and three times that of India's. It has been a significant source of market growth and investment in the in the last ten years maintaining an average growth rate above 5 percent and incorporating 50 million people who are among the middle class status. Brazil and Mexico are among the most important destinations of MNCs' investment in the world and Sao Paulo's capital market is the second largest among emerging markets. However, this group has been neglected in terms of studies and publications in recent times.

Second, according to surveys of international agencies that examine institutional and macroeconomic business environments, such as World Economic Forum, World Bank's Doing Business, and IMD's World Competitiveness, Latin America presents more heterogeneity and more volatile institutional and economic conditions than Asia. For example, Asian and Latin American countries are ranked similar in terms of social institutions like education, health, and markets' efficiency. However, Latin American countries have better scores in terms of freedom and democracy while Asian countries perform better in terms of economic institutions, macroeconomic stability, infrastructure, easiness of opening a business, and labor market efficiency. Also, some of the social and economic institutional characteristics of Latin America are similar to those of Eastern Europe. Therefore, Latin America may present some unique characteristics that make conclusions from other regions not applicable to Latin America and at the same time it might also provide learning opportunities not present in other regions.

## Research methods
*Econometric analysis*
We follow a variance decomposition analysis to address the research questions (Tables I and II describe multiple studies using this technique). First, we examine the COV of returns of the entire sample to explore the magnitude of the different effects. Second, we generate sub-samples of firms with different levels of performance and apply a variance decomposition analysis to each sub-sample to address the *RQ2*. A major problem with this approach is that when generating the sub-samples we are imposing a restriction in only one dimension of the analysis: the firm-specific effect, biasing the overall results against the firm-specific effect. For that reason, we will not focus on the results *per se* but on the comparison between the superior and inferior performers.

*Variance decomposition analysis*
Variance decomposition analysis has been approached using a COV procedure (Makino *et al.*, 2004; McGahan and Porter, 1997; Rumelt, 1991) or an ANOVA procedure (McGahan, 1999; McGahan and Porter, 1997, 2002; Rumelt, 1991). The ANOVA procedure has certain advantages over the COV analysis. As McGahan and Porter (2005) explained, the COV analysis appeared at a time when important computational limitations existed, something which has been solved in recent years. The COV analysis relies on the assumption that random processes generate different effects, which is highly questionable under the new industrial organization perspective today (McGahan and Porter, 2002). In contrast, the ANOVA does not impose on the above assumption that the dispersion of firm-specific effects around an industry mean is unrelated to the industry mean. Therefore, we adopt the simultaneous ANOVA procedure. However, to keep comparability with some of the previous studies, we also present the COV values for the aggregate analysis.

For estimating the different effects, we use a standard procedure of dummy variables (McGahan and Porter, 1997, 2002; Rumelt, 1991). By following this research stream, instead of examining each of the coefficients on the dummy variables, we examine the percent of variance explained in the models (adjusted $R^2$). Therefore, the basic model for assessing firm, industry and country effects is the following:

$$r_{tiks} = \mu + \gamma_t + \alpha_k + \phi_s + \delta_{ks} + \beta_{iks} + \varepsilon_{tiks} \tag{1}$$

In the above formula, $r_{tiks}$ denotes the ROA of the $i$th "firm", in the $k$th "country", in the $s$th "industry", and in the "year" $t$. This model describes $r_{tiks}$ as a grand means $\mu$ (average profit over the entire period for all firms), with the firm-specific effect $\beta_{iks}$, the interaction between country and industry effects $\delta_{ks}$, "the country effect" $\alpha_k$, "the industry effect" $\phi_s$, "the period effect" $\gamma_t$ and "the error term" $\varepsilon_{ikst}$. The inclusion of the country-industry interaction effect follows from recent findings that report the presence of an important industry cluster effect in different countries (Brito and Vasconcelos, 2006; Makino *et al.*, 2004; McGahan and Victer, 2010).

The usual assumption is that the $\varepsilon_{ikst}$ are random disturbances, drawn independently form a distribution with mean zero and constant but unknown variance $\sigma_\varepsilon^2$. The model has the additional assumption that all other effects, like the error term, are realizations of random processes with zero means and constant, but unknown, variances. In addition, the model assumes that all the co-variances equal zero[2].

In previous studies, the year effect captures the general impact of macroeconomic fluctuations in business activity. In our estimation, this impact is partially captured by the country effect. However, there is still a possibility that some part of the macroeconomic fluctuations belong not only to a country but to the region under analysis. In order to capture this systemic macroeconomic effect, we keep the year effect in the estimation.

We estimate equation (1) using a cross-classified nested model. The model is cross-classified because it simultaneously estimates the year, country, and industry effect. It is a nested model since the interaction effect country-industry is nested in each of the main effects, the firm-specific effect is nested in the interaction country-industry and the annual observations are nested at the firm level.

*Sub-sampling procedures*
The first analysis of variance decomposition includes the full sample. However, in order to address the *RQ2*, we generate sub-samples of superior (high) and inferior (low) performances. Following McGahan and Porter (2003), we split the sample in two groups using the median (not the mean), this enables us to obtain two equal samples in a number of firms: the best and worst halves of the firms. In this way, we ensure the presence of the same amount of companies in each sub-sample reducing a possible unequal range in terms of firms (McNamara *et al.*, 2005). We further explore the existence of different industries, countries and firm-specific effects between top and bottom performers by analyzing two other sub-samples: the top 33 percent of superior performers and the bottom 33 percent of inferior performers, and the top 10 percent and bottom 10 percent of firms in terms of performance.

The process of generating sub-samples may artificially reduce a wide range of variations in terms of the firms and, hence, artificially bias the results in favor of industry and country effects (McNamara *et al.*, 2005). In particular, when sub-samples are generated depending on performance level, the process artificially decreases the variance of the firm-specific effect compared to other effects. Therefore, we avoid addressing the absolute magnitude of the different effects within the sub-samples with those obtained in the full sample. Instead, we explore the relative differences in the magnitude of each effect comparing them between the corresponding top and bottom sub-samples at different levels of performance: half, one-third and 10 percent. That is, we explore potential heterogeneity in the magnitude of firm-specific effect using sub-samples of firms showing superior and inferior performance, with the same number of firms in each group. We analyze potential asymmetries in the magnitude of the industry effect in a similar fashion.

*Data and sample*
The research questions are related to performance, therefore, the first empirical definition refers to the performance measure. Most studies analyzing COV use accounting information from public firms. We followed the same approach, selecting ROA as the measure of performance. This is the ratio of net profit after interest and taxes on assets for each firm during a particular year. McGahan and Victer (2010) use this measure but warn that a dependent variable based on accounting reports might bias the results, particularly when accounting rules across industries may vary from country to country.

The sample includes companies listed on the seven largest stock markets in Latin American countries: Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela. Latin America has the advantage of having remained fairly unexplored within the strategic management and international business literature, which creates the opportunity to bring evidence from a completely new source than any other previous research.

The time frame, which has been chosen, is from 1990 to 2006. It was not possible to obtain a large enough number of observations for the years preceding 1990. The privatization wave initiated at the beginning of the 1990s increased the number of public firms, greatly incrementing the listed companies in capital markets in most countries. The industrial classification we follow belongs to Economatica, which is similar to the North America Industrial Classification System (NAICS). That is, we depart from previous papers that mainly relied on Standard Industrial Classification (SIC) as their main classification scheme. The NAICS, however, is more recent and accurate (McGahan and Victer, 2010). Economatica's level of aggregation is equivalent to a three- and four-digit SIC code, and varies depending on the industry.

The original dataset had 13,144 observations in 21 economic sectors or industries. However, one sector was eliminated for lack of adequate specification (the sector was labeled "Others" in Economatica). After these adjustments, the sample size diminished to 12,265 observations form 1,075 firms in 20 sectors. Table III reports the number of observation for each industry in each country, together with the mean ROA and the mean Std of ROA for each industry in the region.

| | | Number of firms | | | | | | | | ROA | |
| | Sector or industry | Arg. | Bra. | Chi. | Col. | Mex. | Per. | Ven. | Total | Mean | Std |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Agriculture and fishing | 5 | 4 | 21 | 3 | 4 | 11 | 0 | 48 | 0.01 | 0.10 |
| 2 | Food and beverages | 7 | 34 | 16 | 3 | 23 | 19 | 2 | 104 | 0.03 | 0.10 |
| 3 | Retail trade | 2 | 20 | 17 | 3 | 34 | 2 | 0 | 78 | 0.04 | 0.10 |
| 4 | Construction | 3 | 18 | 2 | 0 | 11 | 3 | 0 | 37 | 0.01 | 0.10 |
| 5 | Electrical and electronic | 1 | 17 | 2 | 0 | 2 | 3 | 0 | 25 | 0.00 | 0.12 |
| 6 | Electric energy | 7 | 43 | 23 | 1 | 0 | 8 | 2 | 84 | 0.04 | 0.09 |
| 7 | Finance and insurance | 9 | 52 | 19 | 17 | 16 | 18 | 16 | 147 | 0.02 | 0.07 |
| 8 | Investment funds | 0 | 0 | 37 | 1 | 0 | 5 | 0 | 43 | 0.10 | 0.14 |
| 9 | Real state | 0 | 2 | 21 | 0 | 0 | 0 | 2 | 25 | 0.01 | 0.12 |
| 10 | Industrial machinery | 1 | 10 | 0 | 0 | 4 | 5 | 0 | 20 | 0.01 | 0.12 |
| 11 | Nonmetallic minerals | 4 | 8 | 6 | 2 | 8 | 6 | 3 | 37 | 0.06 | 0.08 |
| 12 | Mining | 0 | 5 | 8 | 2 | 4 | 18 | 1 | 38 | 0.05 | 0.15 |
| 13 | Paper and cellulose | 3 | 12 | 2 | 1 | 3 | 0 | 1 | 22 | 0.01 | 0.09 |
| 14 | Petroleum and gas | 13 | 9 | 2 | 2 | 2 | 1 | 1 | 30 | 0.04 | 0.10 |
| 15 | Chemical | 6 | 37 | 9 | 0 | 8 | 8 | 2 | 70 | 0.02 | 0.10 |
| 16 | Iron, steel and metallurgic | 5 | 47 | 7 | 2 | 9 | 7 | 2 | 79 | 0.00 | 0.12 |
| 17 | Telecommunications | 5 | 44 | 9 | 0 | 6 | 3 | 1 | 68 | 0.03 | 0.10 |
| 18 | Textile | 4 | 33 | 5 | 2 | 6 | 10 | 2 | 62 | −0.02 | 0.13 |
| 19 | Transportation service | 4 | 15 | 8 | 1 | 5 | 0 | 0 | 33 | 0.01 | 0.12 |
| 20 | Vehicles and parts | 4 | 25 | 0 | 0 | 4 | 1 | 0 | 34 | −0.04 | 0.15 |
| | Total/average[a] | 83 | 435 | 214 | 40 | 149 | 128 | 35 | 1,084 | 0.02 | 0.11 |

**Table III.**
Descriptive statistics of the industries

**Notes:** [a]Columns referring to mean ROA and Std ROA report average, remaining columns report total; Arg.: Argentina; Bra.: Brazil; Chi.: Chile; Col.: Colombia; Mex.: Mexico; Per.: Peru; Ven.: Venezuela

Table IV includes some descriptive statistics that characterize the evolution of the GDP of each country in the sample. Information was gathered from the International Monetary Fund's World Economic Outlook. The table includes information on the average GDP of each country, total GDP growth and annualized GDP growth for the whole period under study. This information illustrates the relative size of the countries and their economic performance for the entire period of analysis. It can be observed that Brazil and Mexico are the largest economies while Chile and Peru are those showing the fastest growth within our time frame (139.6 and 96.1 percent, respectively).

It has been argued that the pattern of evolution of the GDP in emerging economies is more volatile than in developed economies (Calvo *et al.*, 2006). The use of statistics such as standard deviation might bias the result by penalizing those countries with the fastest growth. Therefore, we generate a statistic that allows us to see the kind of volatility we are interested in. This statistic computes the standard deviation of the residuals from the estimated trend, divided by the average GDP. This measure allows for comparisons between different countries' volatilities as it is adjusted for size. Row 5 in Table IV reports this statistic for each country. In order to assess the relative magnitude of growth and volatility, we also include in Table IV the same information for the USA.

It can be observed that the volatility in the USA is lower than in any country in the sample. Brazil has the lowest volatility in the region, which is even similar to the figure of the USA. Brazil is followed by Mexico and Chile with figures that double the volatility in the USA. Then comes Colombia and Peru which are relatively less volatile than Argentina and Venezuela. The latter two countries are the most unstable in the region having more than five times higher levels of volatility than that of the USA. Interestingly, there does not seem to be a clear relationship between the pace of growth and volatility. For example, Brazil and Venezuela are the two countries with the lowest GDP growth but Brazil has the lowest volatility whereas Venezuela has the second highest volatility level. Similarly, Argentina has the highest volatility and ranks third in growth, after Chile and Peru. Figure 1 shows the deviations of the GDP from its trend for the USA along with the two countries with highest volatility (Argentina and Venezuela). The figure illustrates that, while the evolution of the GDP for the USA is smooth, there are sharp deviations for the case of Argentina and Venezuela.

| Country | Average GDP | Total GDP growth (%) | Annual GDP growth (%) | (SSR/n − 1 respect to the time trend)/ mean GDP (%) |
|---|---|---|---|---|
| Argentina | 265,813 | 79.2 | 3.5 | 8.2 |
| Brasil | 570,300 | 50.1 | 2.4 | 1.7 |
| Chile | 69,160 | 139.6 | 5.3 | 3.3 |
| Colombia | 82,597 | 65.5 | 3.0 | 4.0 |
| México | 527,183 | 61.5 | 2.9 | 2.8 |
| Perú | 50,614 | 96.1 | 4.0 | 4.1 |
| Venezuela | 115,029 | 52.0 | 2.5 | 7.2 |
| USA | 9,036,390 | 59.3 | 2.8 | 1.5 |

**Source:** Own estimation based on IMF – World Economic Outlook

Table IV.
Descriptive statistics
of the countries

**Figure 1.**
GDP deviation
from the trend (%)
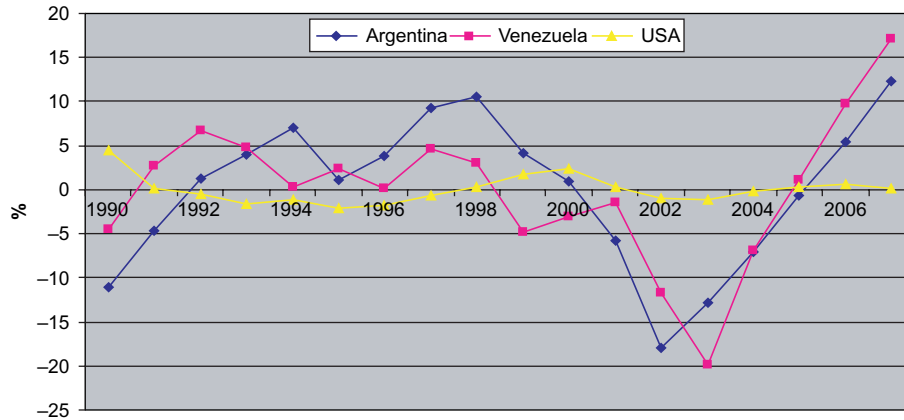
## Results
### Full sample
Table V presents results to address our *RQ1* and also the results of Brito and Vasconcelos (2006) and Makino *et al.* (2004) for easy comparisons. The simultaneous ANOVA results for the entire sample explain 40.7 percent of the total variance in firms' profit (row 7). This level falls within the range obtained by Brito and Vasconcelos (2006) in their multiple country analysis. The variance explained by the model captures the permanent effects while the unexplained part has two alternative interpretations: the transitory trend towards the permanent effect, or pure randomness. The country effect accounts for 2.1 percent of the total variance, the industry effect accounts for 3.8 percent the country-industry effect accounts for 2.5 percent while the firm-specific effect accounts for 30.4 percent. The results from the COV analysis are also shown in Table V, and are similar to the ones obtained by the ANOVA analysis[3]. The main conclusion regarding *RQ1* is that, even in a region dominated by extreme macroeconomic, political, legal, and regulatory volatility, the firm-specific effect is still the dominant one and it is similar in magnitude to the firm effects obtained for DCs.

Our results present similarities and differences with two previous studies which have provided some evidence for emerging economies. The country effect is similar to what Makino *et al.* (2004) obtained for Japanese subsidiaries competing in DC's (3.6 percent) but smaller than what they obtained for subsidiaries in NIC's and LDC's. This country effect is also smaller than the average country effect obtained by Brito and Vasconcelos (2006) who used a sample that combines developed and emerging countries (6.08 percent). These differences could have arisen from two sources: differences in either the sample or in the methodology. While these previous studies conducted multiple country analysis using a COV analysis, we used a nested ANOVA. Additionally, in an attempt to make our results comparable to the literature, we used a COV analysis and we obtained similar results for the most part except for the firm-specific effect, which had an important increase (Table V). We, therefore, conclude that the differences arise mainly from the sample differences themselves: Brito and Vasconcelos (2006) combined both developed and emerging markets, while we just refer to emerging markets; Makino *et al.* (2004) referred only to Japanese subsidiaries,

| Effect/s | Our study | | Makino et al. (2004) | | | | | Brito and Vasconcelos (2006) | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | ANOVA | COV | Full sample | Small LDC | Large LDC | NIE | DC's | Agriculture | Mining | Construction | Manufacturing | Transportation | Wholesale and retail | Insurance, finance, and real estate | Services |
| Year | 1.9 | 0.6 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.60 | 3.00 | 0.20 | 1.10 | 0.30 | 0.80 | 0.20 | 2.40 |
| Country | 2.1 | 2.1 | 4.3 | 7.7 | 6.2 | 4.4 | 3.6 | 17.70 | 7.50 | 13.50 | 2.10 | 0.00 | 5.50 | 2.30 | 0.00 |
| Industry | 3.8 | 4.3 | 5.0 | 8.8 | 7.6 | 6.7 | 5.5 | 0.00 | 8.20 | 0.00 | 1.30 | 5.90 | 0.00 | 8.60 | 1.20 |
| Country-industry | 2.5 | 5.5 | 7.5 | | | | | 4.50 | 7.50 | 11.70 | 0.00 | 45.00 | 12.20 | 19.00 | 0.00 |
| Firm-specific | 30.4 | 51.9 | 28.2 | 23.1 | 24.1 | 25.2 | 28.2 | 26.30 | 11.90 | 2.40 | 40.90 | 23.60 | 33.80 | 28.10 | 45.60 |
| Corporate-specific | | | 8.2 | 4.8 | 8.3 | 11.3 | 13.4 | | | | | | | | |
| Model | 40.7 | 64.4 | 53.3 | 44.6 | 46.3 | 47.7 | 50.8 | 49.1 | 38.1 | 27.9 | 45.3 | 74.8 | 52.3 | 58.2 | 49.2 |

**Note:** Less developed economies (LDC), newly industrialized economies (NIE's), and developed countries (DC's)

**Table V.**
Analyses of COV

while we include national incumbents as well as subsidiaries with headquarters in any given country in Latin America. Another plausible difference with Makino *et al.* (2004) is that they use ROS as a performance measure, while we use ROA. One possible explanation would be that sales are more correlated with economic cycles than returns, which might partially explain the differences.

Finally, similar to previous studies, the industry-country interaction effect is relatively more important than the country effect. This result once again supports the notion that country-industry cluster characteristics are more important for a firm's performance than any single country or industry effects.

A question that emerges from these findings relates to what type of capabilities lies behind the firm-specific effect. The inner structure of the ANOVA technique does not allow us to make any strong assessments and all our inferences are necessarily indirect (McGahan and Porter, 2005). However, in view of the macroeconomic information about Latin America presented in Table IV and Figure 1, it is reasonable to expect that such capabilities refer to the ability to deal with the instable macroeconomic environment. Moreover, studies on the level of institutional development of Latin America indicate that it is clearly lagging behind those of DCs (Diaz Hermelo and Vassolo, 2010). In such a context, it is also reasonable to expect that the firm-specific capabilities are mainly institutional-based capabilities. We will extend on this further in the discussion and conclusions section.

*Sub-samples for levels of performance*
RQ2 is about the relative importance of the country effect, *vis-à-vis* the firm-specific and industry effects for firms showing different levels of performance when competing in emerging markets. Table VI describes the magnitude of the different effects for samples containing the 10, 33, and 50 percent superior and inferior performance strata.

Results confirm that following a sampling procedure based on a performance level introduces a bias result. Sub-sampling reduces diversity, but the firms diversity is reduced more proportionally than industry and country. Therefore, the firm-specific effect decreases in magnitude compared to the other effects when comparing the sub-sample results to the entire sample results making comparison within the whole sample inappropriate (McNamara *et al.*, 2005). Thus, we focused the analysis of the results obtained on each sub-sample (50, 33, and 10 percent) and compared them between high and low performance strata. In all the sub-samples, the firm-specific effect is relatively more important for the superior stratum than for the inferior stratum. The same phenomenon could be observed with the country effect and also with the industry effect, even though the differences seem to be almost irrelevant. The opposite is true for the year effect: it tends to be smaller for firms belonging to the superior stratum than for firms belonging to the inferior stratum. Hence, random effects and year effects appear to be relatively more influential for lower performers. This result may be explained by the effect of macroeconomic crisis, which seems to have a more harmful effect on these lower performers. On the other hand, factors affecting high performing firms seem to be more permanent and to have a larger explanatory power since the total explained variance is always higher for these high performance sub-samples than for their corresponding low performance sub-samples. Finally, the relative magnitudes of the industry-country effect do not follow a clear pattern. However, when comparing country, industry and country-industry effects against the firm-specific effects, we found

| | ANOVA | | Half below median | | Half above median | | Low 33% | | High 33% | | Low 10% | | High 10% | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Fixed effects* | | | | | | | | | | | | | | |
| Intercept | 2.44 | | −2.66*** | | 6.88*** | | −4.39*** | | 8.94*** | | −12.46*** | | 13.88*** | |
| *Random effects* | | | | | | | | | | | | | | |
| Intercept | | | | | | | | | | | | | | |
| Year | 1.51 | 1.9% | 1.77 | 2.4% | 1.17 | 2.1% | 2.31 | 3.2% | 1.30 | 2.4% | 3.00 | 3.3% | 1.29 | 1.8% |
| Country | 1.61 | 2.1% | 0.89 | 0.6% | 1.04 | 1.7% | 1.08 | 0.7% | 0.80 | 0.9% | 0.01 | 0.0% | 0.93 | 0.9% |
| Industry | 2.18 | 3.8% | 1.59 | 1.9% | 1.48 | 3.4% | 0.02 | 0.0% | 1.68 | 4.0% | 1.73 | 1.1% | 1.95 | 4.0% |
| Country-industry | 1.76 | 2.5% | 1.51 | 1.7% | 1.36 | 2.9% | 2.07 | 2.5% | 1.04 | 1.5% | 0.01 | 0.0% | 1.74 | 3.2% |
| Firm-specific | 6.12 | 30.4% | 4.36 | 14.3% | 3.49 | 19.0% | 4.38 | 11.4% | 3.50 | 17.4% | 4.35 | 7.0% | 3.12 | 10.3% |
| Residual | 8.54 | 59.3% | 10.24 | 79.1% | 6.73 | 70.8% | 11.79 | 82.3% | 7.19 | 73.7% | 15.47 | 88.6% | 8.66 | 79.7% |
| −2 Loglikelihood | 89,565 | | 43,641 | | 44,198 | | 29,556 | | 30,082 | | 8,981 | | 9,355 | |
| Firm | 1,075 | | 537 | | 537 | | 355 | | 355 | | 108 | | 108 | |
| Observations | 12,265 | | 5,739 | | 6,516 | | 3,754 | | 4,354 | | 1,070 | | 1,288 | |

**Note:** Significant at: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ and ****$p < 0.1$

**Table VI.**
ANOVA results for
different sub-samples of
firm performance

their relative contribution (in terms of firm-specific effect) is larger for higher performers than for lower performers in all sub-samples.

The main conclusion regarding *RQ2* is that superior performance of firms competing in Latin America seems to be mainly the result of unique internal decisions (firm-specific effect). Other secondary conclusions are that random effects, which may be associated to macroeconomic volatility, are more influential on lower performers than on high performers. Finally, context elements, i.e. country, industry, and country-industry effects, seem to be relative more influential on high performers' than on low performers'.

## Discussion and conclusion

The dominance of the firm-specific effect over the country effect and the industry effect is interesting. At first sight, the results from the full sample seem to support the critical role of the firms' resources and capabilities in explaining performance of firms competing in Latin America. This conclusion is reinforced by the analysis of sub-samples' results by performance levels: in all the sub-samples, the firm-specific effect is by far more important for high performers than for low performers while the external effects (country, industry, and country-industry) do not show such a clear pattern as that.

These results have significant practical implications. First, low performers seem to be more vulnerable to a volatile environment, while high performers seem to be less exposed to random events and more dependent on their own firm-specific attributes. Therefore, firms can systematically differentiate from each other and the most successful ones are those that are able to differentiate at greater levels. The fact that the most successful firms are those in which the firm-specific effect dominates supports the existence of sufficient space for managerial creativity and action in order to adapt and create superiority and differentiation from competitors in emerging economies' business environment. In the face of weak institutional contexts and highly volatile macroeconomic environments, managers in the region have a significant amount of freedom in managerial decisions and therefore are able to obtain substantial differences in their economic performance. These activities might differ from those carried out in DCs, but the result would be the same: "successful differentiation".

Second, usually in emerging economies there has been too much focus on the business environment conditions (Hoskisson *et al.*, 2000; Peng *et al.*, 2008). However, we found that variation at the country level is less relevant than at the industry and firm level. Even after analyzing the pattern of evolution of the GPD in the region and showing its critical levels of volatility, this finding leads us to suggest that, while country volatility is much higher in emerging than in developed economies, the country effect on performance variance is similar in both environments. For example, unstable macroeconomic and weak institutional environments increase uncertainty and risk, usually discouraging investment in fixed assets, especially from foreign investment (Ahlquist, 2006; Globerman and Shapiro, 2003; Bénassy-Quéré *et al.*, 2007), but our results do not necessarily reflect such effect on performance in the same way.

Compared to single country analysis the industry effect is significantly smaller in our results. However, this seems to be the case when country effects are added (Brito and Vasconcelos, 2006; Makino *et al.*, 2004; McGahan and Victer, 2010). Part of the reduction in industry effect can be explained by the industry-country effect. In the case of Makino *et al.* (2004) and Brito and Vasconcelos (2006), the industry and industry-country

effects added are similar to the industry effects obtained in single country analysis (McGahan and Porter, 1997; McGahan, 1999; Roquebert *et al.*, 1996; Rumelt, 1991). However, we may also conclude that single country analysis tended to overestimate the industry effect since they did not discriminate between industry and country-industry factors. In summary, our results suggest that firms should put more emphasis on country-industry conditions and especially on firm-specific attributes. The fact that the country-industry interaction is found to be as strong as the country and the industry effects, and in some of the high performers sub-samples it is even more important, may be a result of most industries not being global yet and, therefore, not absolutely independent from country conditions (Ghemawat, 2003, 2007). In fact they may be deeply interrelated in a cluster and their dynamic interrelations are responsible for the industry-cluster competitiveness (Porter, 1990). Many "created" resources like human capital, infrastructure and institutional microenvironment are actually created or influenced by a particular network of firms, associates and customers described as an industry clusters. In summary, these results suggest that broader views of business environment and analysis of country or industry condition and their effect on firms' strategies and performance would be incomplete unless the cluster country-industry interactions are considered.

Finally our results suggest differences in performance variation among high and low performers. Similar to single country results from McGahan and Porter (2003), most of the performance variations arise from firm-specific variations. However, in our results for high performers, the industry effects appear to be less relevant than in the McGahan and Porter's results. Even considering the industry and country-industry together, the firm-specific effect is still the most important level effect by far. Probably, the most important implication for managers from our comparison of low and high performers is the fact that low performers are subject to more random variations than high performers, while on the case of high performers the source of performance differences is more clearly defined among the different levels: firm, industry, country-industry and country. Our findings are limited in the sense that we identified variations at different levels of variation (firm, industry, country, and country-industry) but we did not identify specific attributes at each level. Future research, may explore the key factors behind each level. Especially intriguing are the specific resource and capabilities behind the strong firm-specific effect compared to the country environment. In other words, what are the resources and capabilities behind such successful firms in volatile macroeconomic and weak institutional environments?

For example, in emerging economies firms adopt different capital structures in terms of leverage, debt maturity and currencies (Bleakley and Cowan, 2008). Also, they develop more flexible value chains, designing different business models, and adapting technology (Guillén and García-Canal, 2009). Finally, they may broaden their product portfolios, especially across different income segments, in order to diversify the effect of political and macroeconomic risk on sales (Grewal and Tansuhaj, 2001). In all the cases there is some evidence that firms implementing such actions achieve a higher performance in terms of returns, growth and or reduced returns' volatility.

Firms may also differ in their capabilities to manage political risk. They can learn from experience and develop active skills to manage political arbitraries in regulatory agencies or expropriation motivation from business partners (Delios and Henisz, 2000, 2003; García-Canal and Guillén, 2008). Large firms may develop large conglomerate

structures in order to reduce scarce resources transaction cost (Hoskisson *et al.*, 2000; Khanna and Palepu, 1997, 2000). As a last resort, they may develop more resilience in order to manage the macroeconomic and political cycles in a more calm and orderly fashion, resulting in a faster sales and profits recovery at a later time in history (Bae and Lawler, 2000). Our findings and the examples mentioned here, question the commonly held view that the existence of a weak institutional context always and uniformly represents serious risks for investment in Latin America and in emerging economies in general.

These results have some limitations that are difficult to overcome. McGahan and Victer (2010) warn that biases might emerge due to the use of accounting information, especially if accounting rules vary systematically by country. The presence of a set of accounting rules might artificially increase the industry, country and industry-country effects against the firm-specific effect. We acknowledge this limitation that particularly affects the aggregate results. However, we do not see that this problem would severely affect the findings that relate to changes in the magnitude of the different effects when considering sub-samples with different levels of performance. Accounting rules might be industry-specific within a country, but not group-specific within an industry.

Another limitation refers to the possibility of generalizing our conclusions to companies of different sizes. The companies in our sample are large corporations, since in Latin America small and medium enterprises (SMEs) do not usually trade publicly. Therefore, caution applies when extending our results to SMEs. SMEs may be less powerful, less influential on the government and, therefore, more affected by the environment in a context where institutions are weaker.

In addition, we acknowledge that our results are deeply embedded in the Latin American context. Results provide a valid starting point in order to understand the behavior of abnormal returns for firms competing in emerging markets, but they do not necessarily apply to other emerging regions such as Asia and Africa. It would be an interesting extension of the present study to carry out comparative studies between different emerging market regions.

In spite of these limitations, we sustain that our research makes highly relevant contributions to the understanding of business in emerging economies. This contribution not only relates to the work of scholars interested in strategic management and international business but also to that of practitioners in DCs who are responsible for operations abroad and are competing in emerging economies. Once managers acknowledge the magnitude and relative impact of the firm-specific, industry and country effects would help them make better managerial decisions in the future.

### Notes

1. The significant financial crisis that affected mostly DCs in 2008 also generated severe credit and GDP contractions, causing the developed world to experience conditions very similar to what we defined as a collapse. However, there is still an important difference in frequency. For example, the last collapse situation in the USA happened in 1929, whereas countries like Argentina or Brazil have faced at least three collapse crises between 1990 and 2006.

2. It should be noticed that the model is of mixed effects, where the grand mean is the only fix effect and all the others are random effects. The fact that the grand mean is a fix effect does

not mean that it is a dummy variable (a usual confusion) but that it is the same value for the entire sample, while the other values vary randomly.

3. Brush and Bromiley (1997) warn that variance component magnitudes do not reflect importance in a linear manner. Taking linear effects into consideration, the firm-specific effect is 2.3 times more important than the industry effect and 2.7 times more important that the country effect.

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