Internationalization and performance: the role of depth and breadth

Internacionalización y desempeño de la empresa: el papel de la profundidad y la extensión

Received 1 May 2017
Revised 3 October 2017
Accepted 25 November 2017

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Abstract

Purpose – The purpose of this paper is to analyze the relationship between multinationality and firm performance (M-P) in Latin American companies, commonly referred to as multilatinas. The study conceptualizes the depth (intensity) and breadth (geographical scope) of internationalization and examines their effect on financial performance. Although scholars have studied how internationalization in various contexts and industries affects performance, little is known about firms in Latin America.

Design/methodology/approach – The authors conducted an analysis of the effect of the depth and breadth of multilatina internationalization on financial performance by creating a database using information from *America Economia*, a specialized Chilean magazine that publishes an annual ranking of multilatinas. Additional data came from the Osiris database of Bureau Van Dijk and Compustat. The hypotheses were tested using an autoregressive heteroskedastic model.

Findings – The results show that the extent of the depth and breadth of internationalization affects financial performance. Multilatinas' depth of internationalization has a curvilinear (U-shaped) impact on performance while breadth has an inverted curvilinear impact on performance.

Research limitations/implications – The theory portion and results expand the literature on firm internationalization and performance by distinguishing between two types of international firm expansion, depth and breadth, and discussing how each contributes to different stages of the three-stage theory of multinationality and performance.

Originality/value – The findings indicate that multilatinas benefit from their regional expansion, but outside Latin America, expansion has a negative effect on financial performance. They also show that firms can implement different types of internationalization strategies in terms of intensity and scope to achieve better performance.

Keywords Internationalization strategies, Internationalization depth, Internationalization breadth, Internationalization scope, Firm performance, Latin America, Multilatinas

Paper type Research paper

Resumen

Objetivo – Este artículo analiza la relación entre la multinacionalidad y el desempeño de la empresa (M-P) en compañías latinoamericanas, conocidas como multilatinas. El estudio conceptualiza la profundidad (intensidad) y extensión (alcance geográfico) de la internacionalización, y examina su efecto en el desempeño financiero. Aunque varios investigadores han estudiado cómo la internacionalización en diversos contextos e industrias afecta el rendimiento, poco se sabe con respecto a las empresas en América Latina.

Academia Revista Latinoamericana de Administración
Vol. 31 No. 1, 2018
pp. 91-104

1012-8255
DOI 10.1108/ARLA-04-2017-0125

Diseño/metodología/enfoque – Los autores realizaron un análisis del efecto producido por la profundidad y extensión de la internacionalización de la multilatina en el desempeño financiero, mediante la creación de una base de datos con información de América Economía, una revista chilena especializada que publica anualmente un *ranking* de multilatinas. Datos adicionales provienen de la base de datos Osiris de Bureau Van Dijk y de Compustat. Las hipótesis fueron probadas usando un modelo heterocedástico autoregresivo.
Resultados – Los resultados muestran que el grado de profundidad y extensión de la internacionalización afectan el rendimiento financiero. La profundidad de internacionalización de las multilatinas tiene un efecto curvilíneo (en forma de U) sobre el desempeño financiero, mientras que la extension geográfica tiene un efecto curvilíneo invertido en dicho desempeño.
Limitaciones/implicaciones de la investigación – La sección teórica y los resultados extiende la literatura sobre la internacionalización y el desempeño de las empresas al distinguir entre dos tipos de expansión internacional: profundidad y extensión. También se discute cómo cada uno contribuye a las diferentes etapas de la teoría de la multinacionalidad y desempeño.
Originalidad/Valor – Los resultados indican que las multilatinas se benefician de su expansión regional. Sin embargo, fuera de América Latina, dicha expansión tiene un efecto negativo sobre el desempeño financiero. También se señala que las empresas pueden implementar diferentes tipos de estrategias de internacionalización en términos de intensidad y alcance para lograr un mejor desempeño.

Palabras clave Estrategias de internacionalización, Profundidad de la internacionalización, Extensión de la internacionalización, Alcance de la internacionalización, Desempeño financiero, América Latina, Multilatinas

Tipo de documento Trabajo de investigación

1. Introduction

Scholars are devoting more attention to emerging market multinationals, especially since they may demonstrate patterns that could broaden the current knowledge about multinationals (MNEs) in general (Cuervo-Cazurra, 2016). It is not a coincidence that most scholarly work on multinationals from emerging markets focuses on China and India and, to a lesser extent, on South East Asia (Ciravegna *et al.*, 2013), as these regions are dramatically changing the world's economic landscape. However, until recently little consideration was given to MNEs from Latin America (Aulakh *et al.*, 2000; Brenes *et al.*, 2014; Perez-Batres *et al.*, 2010). Cuervo-Cazurra (2008) coined the term "multilatinas" to draw attention to the region. This effort is a great opportunity for scholars to test theories and models of MNEs or emerging market multinationals in a different context that helps expand the knowledge and existing theories of the multinational firm (e.g. Aguilera *et al.*, 2017; Carneiro and Brenes, 2014; Hennart *et al.*, 2017).

One of these models examines the relationship between multinationality and performance (M-P), for long an important subject in international business research. Despite a consensus in the field about the many advantages of firm internationalization, dozens of empirical studies published in the last three decades report mixed results on the link between multinationality and financial performance (Borda *et al.*, 2017). The three-stage theory on international expansion (Contractor *et al.*, 2003), which states that firms travel a path of the negative-positive-negative relationship in regard to their financial results during their international expansion, reconciles apparently contradictory results. In brief, when first expanding outside the home country (stage 1 in Figure 1), the incremental costs exceed incremental benefits, reducing performance. Later, in stage 2, the effect of further multinational expansion on performance is positive until stage 3, with excessive international expansion, incremental costs again outweigh incremental benefits. Nevertheless, the M-P relationship requires further analysis for a full understanding of the implications of internationalization on firm performance (Bausch and Krist, 2007).

While several empirical studies investigate the relationship between the degree of internationalization and performance (see Hennart, 2007), only two of them investigate multinationals in Latin America. Thomas (2006) studies the M-P relationship in Mexican multinationals, while Borda *et al.* (2017) study Brazil, Chile and Mexico. No studies investigate the relationship between multinationality and performance in firms

in the region as a whole. Firms in Latin America, however, have different characteristics compared to those in other regions of the world. The Latin American setting is unique compared to other contexts because, unlike other emerging markets, Latin America is rather homogeneous and geographically isolated. It encompasses several countries with similar cultural, linguistic, historical and economic contexts (Cuervo-Cazurra, 2016). In addition, the Latin American market is considerably smaller than the Chinese and Indian markets. Multilatinas and their internationalization patterns can therefore expand our knowledge on internationalization studies.

This research contributes to finance, strategy and international business research by examining how different dimensions of internationalization affect firm performance. The study focuses on two dimensions of internationalization strategy: depth, the extent to which the firm activity is performed outside the host country (e.g. the ratio of foreign to total sales of the multinational); and breadth, the geographical scope of international activities (e.g. the number of foreign countries the firm operates in). The study proposes that different internationalization strategies (depth and breadth) will lead to different effects on firm performance. That is, organizations launching operations abroad may be able to configure combinations of particular internationalization strategies in order to achieve greater financial returns.

This study uses the three-stage theory (Contractor *et al.*, 2003; Lu and Beamish, 2004; Thomas and Eden, 2004) to examine how different internationalization strategies impact the financial results of the firm. However, this paper goes further, and adds to the theory, by exploring how different measures of multinationality (depth and breadth) may be associated with different stages of the three-stage theory.

The hypotheses on the relationship between the different dimensions of internationalization strategy and firm performance are tested by using an unbalanced panel data set of 147 multilatinas during the 2009-2015 period. Results suggest that the relationship between the internationalization depth strategy for multilatinas and firm performance has a U-shape. In contrast, the relationship between internationalization breadth (or geographic scope) and performance shows an inverted U-shape.

This research makes several contributions. First, it contributes to the multinationality-performance (M-P) literature by theorizing and empirically examining how different internationalization strategy choices affect financial performance. Second, the three-stage model of international expansion is tested in the Latin American region using multilatinas, therefore drawing much needed attention to studies about the region and from the region. Third, from a practitioner perspective, this study suggests ways for multilatinas to take advantage of the different types of internationalization strategies to improve financial performance.

The rest of the paper is structured as follows: Section 2 provides a literature review on the M-P relationship, particularly on the three-stage theory of international expansion and the study of multilatinas, followed by the hypotheses. Section 3 describes the data sources and methodology. Section 4 presents the results obtained from the regression models, and Section 5 presents the conclusions.

2. The multinationality and performance relationship (M-P)

The United Nations has 193 member nations. However, examining the financial reports of firms – even giant multinationals – vanishingly few have controlled affiliates (affiliates or subsidiaries whose management is controlled by a parent company) in more than 50 nations. Rugman and Oh (2010) observe that most firms have a regional, as opposed to a global scope. The majority of multinational firms expand regionally, but not globally (Rugman and Verbeke, 2004), which is especially the case for Latin American multinationals.

This raises a key question in the international business field, namely, what are the limits to the international expansion of firms? The field has reached consensus regarding the many benefits of internationalization (Contractor, 2007), building on earlier international business theories (such as Hymer, 1976; Vernon, 1971), and strategic considerations such as access to resources which increase a firm's competitive advantage and enhance their capabilities (Aulakh, 2009; Rugman, 1981). But two key questions remain inadequately answered: "Why do most firms not expand their foreign direct investment beyond 40 or 50 nations, at most?" and "What is the optimum degree of internationalization?."

The degree of internationalization or multinationality refers to a firm's sales expansion beyond its national borders across different countries and regions (Hitt *et al.*, 1997). More than 100 studies address the M-P relationship, with mixed empirical results: positive linear (Delios and Beamish, 1999), negative linear (Denis *et al.*, 2002), U-shaped (Ruigrok and Wagner, 2003), inverted U-shaped (Hitt *et al.*, 1994) and no relationship at all (Morck and Yeung, 1991). For a more thorough review of the literature on results of the M-P relationship, readers can refer to Contractor *et al.* (2003, 2007) and Shin *et al.* (2017). The mixed results of previous studies were not contradictory, according to scholars attempting to reconcile the outcomes, but rather complementary, since the contradictions only capture part of the whole picture. Therefore, a more complex sigmoid curvilinear model (S-shaped) was proposed based on the three-stage theory of internationalization (Contractor *et al.*, 2003; Lu and Beamish, 2004).

Following the S-shaped logic of the three-stage theory, the M-P relationship changes as firms go through the three sequential stages of internationalization (Contractor *et al.*, 2003; Aulakh, 2009). These stages are defined as early, later and excessive internationalization, as illustrated in Figure 1. In the early stages, the incremental costs of internationalization (e.g. liability of foreignness) are higher than the incremental gains; therefore, the relationship is negative (loss). In the mid-stage, the gains from further internationalization (such as economies of scale) outweigh incremental costs of further expansion and the relationship becomes positive (profitability has a positive slope in Figure 1). In the third and last stage of international expansion, the multinational firm expands into yet more markets where the yield or benefits may not match the incremental expansion costs because the firm may have expanded into distant, small or peripheral markets. Moreover, the greater the geographic coverage of the firm, the greater the complexity and difficulty of managing a spread-out network. Hence, in stage 3, profitability again assumes a negative slope in Figure 1 (Contractor *et al.*, 2003; Hitt *et al.*, 1997).

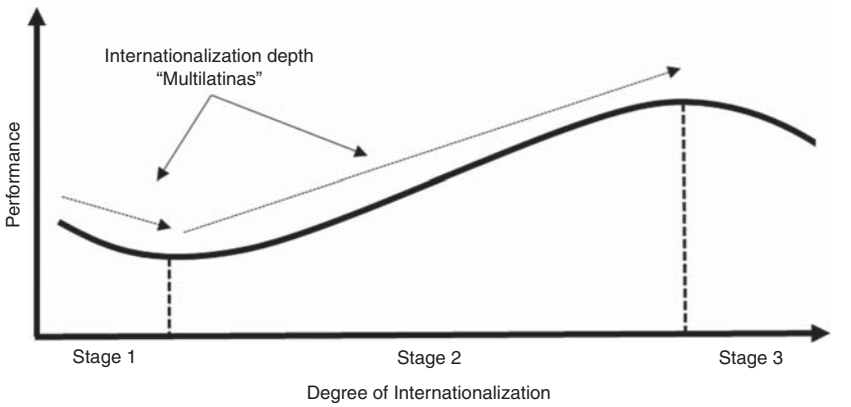


Figure 1.
Type A multilatinas with limited geographic coverage

Source: Adapted from Oh and Contractor (2014)

The explicitness of the three-stage theory helps reconcile the apparent contradictory findings of previous studies. The relationship is negative in the first stage and is succeeded by a positive second stage, reflecting the U-shape that some studies on internationalization show. Combining the second and third stage exhibits an inverted U-shape relationship that other studies have found when analyzing firms that mostly cover the range of the second and third stage degrees of internationalization (Contractor, 2007).

The study of the M-P relationship has been replicated in multiple industries, countries and regions. For example, Capar and Kotabe (2003) find a U-shaped relationship with a sample of German service firms; Ruigrok *et al.* (2007) find an S-shaped relationship in large Swiss manufacturing firms (2011); Endo and Ozaki (2011) find a U-shaped relationship in Japanese service firms; and Contractor *et al.* (2003) use a multicountry service sector sample to show the existence of the S-shaped relationship.

For emerging markets, studies about the M-P relationship examine China (Chen, 2007) and India (Contractor *et al.*, 2007; Gaur and Kumar, 2009; Kumar and Singh, 2008) but only two investigate Latin America. Thomas (2006) studies Mexican multinationals and their M-P relationship shows a U-shape. But Borda *et al.* (2017) study Brazilian, Mexican and Chilean multinationals, and find an inverted U-shaped relationship between business group diversification and performance and a positive moderating effect of business group diversification on the M-P relationship, demonstrating the complexity of this relationship in firms from the biggest Latin American economies. Multinationals in emerging markets are different from developed country firms since they do not have the proprietary or internalized ownership assets, such as high technology, that their developed country counterparts have. The latter own assets that they can deploy locally and globally, allowing them to benefit more quickly from economies of scale and learning curves. On the other hand, emerging market multinationals also have a unique managerial style and home country advantages (see Contractor, 2013) and in some cases, they can still benefit from their less-saturated and/or protected home markets (Aulakh, 2009).

Another difference is that the speed of internationalization for emerging market multinationals is higher than it is in developed countries since a primary motivation is learning in order to catch up (Nelson, 2004). This is in line with the so-called springboard perspective (Luo and Tung, 2007), which posits that these firms internationalize to have access to resources needed to compete globally and reduce their vulnerability to institutional and market constraints at home.

2.1 Internationalization depth vs breadth

This paper further explores the theoretical and operational distinction between internationalization "depth" vs "breadth." Depth is often operationalized by ratios like "Foreign Sales to Total Worldwide Sales" (FSTS). Other studies, such as Kirca *et al.* (2012), use a breadth measure by counting the number of countries each multinational firm operates in. Firms usually have one of two approaches to internationalization: to expand to fewer countries, concentrate their efforts and become more embedded in their markets (depth); or to expand to many countries (breadth or scope) (Kafouros *et al.*, 2012). The first is captured by the proportion of foreign sales to total sales (FSTS), foreign to total assets or number of employees abroad to total employees – ratios of foreign to total worldwide activity. On the other hand, the number of plants in countries and geographic zones where the company operates can measure breadth (Contractor *et al.*, 2003). Kafouros *et al.* (2012) and Kirca *et al.* (2012) conclude that international breadth has a stronger association with firm performance than internationalization depth.

In addition to benefits of economies of larger scale, internationalization increases a firm's productivity performance, expands its knowledge externalities and improves learning (Miller *et al.*, 2007). Internationalization into other nations also provides a broader pool of

resources and greater scope for arbitrage opportunities. In general, greater geographical coverage also naturally diversifies political and currency risk (Contractor, 2007).

Each measure – depth and breadth of multinationality – has methodological strengths and limitations, depending on the type of multinational strategy: type A, depth: an Argentine company that operates in Chile and Brazil may have more sales and assets outside Argentina, in which case its FSTS ratio is high and exceeds 0.50. But its foreign exposure, network, learning and arbitrage opportunities are restricted to only two foreign nations. And type B is breadth: by contrast, a Colombian company may also have 50 percent of its sales outside Colombia. But because its foreign coverage spans several Latin American countries, as well as Europe and North America giving it a much bigger geographic scope, its learning, network and arbitrage opportunities are, in theory, greater than the Argentine multinational. On the other hand, the Colombian company will also have higher costs because of the dispersed nature of its operations and a shallower representation in each of its foreign locations. With excessive geographic dispersion, for a type B company, the incremental costs of expanding into the last few (or *n*th) countries may be greater than the incremental benefits it derives, thus reducing profitability.

In this paper, the authors propose the subtle hypothesis that type A companies tend to occupy stages 1 and 2 (which together exhibit a U-shape performance curve), whereas type B companies occupy stages 2 and 3 (which together exhibit an inverted U-shape curve). However, this issue has not been broadly studied, specifically in the case of emerging market multinationals, which may present a different pattern.

2.2 The Latin American context and multilatinas

Latin America, as a laboratory to study the international diversification of firms, offers an interesting setting. It has unique geographic, historical, economic, cultural, institutional and political characteristics that are fairly homogeneous. Most Latin American economies were highly protectionist until the 1980s, using an import substitution industrialization system (Cuervo-Cazurra, 2008). The system collapsed and forced countries to open to world markets. They invited foreign direct investment and began to encourage local firms to internationalize. For example, starting in the 1980s, Latin American countries not already part of the Global Agreement on Tariffs and Trade (GATT) began to join: Colombia in 1981, Mexico in 1986, Costa Rica and Bolivia in 1990. In 1995, when the GATT was reframed under the World Trade Organization, basically all the rest of Latin America joined (World Trade Organization, 2017). Free trade agreements also began to increase, for example Mercosur in 1991, Chile-Mexico in 1991, NAFTA in 1994 and Chile-Canada, 1996, to name a few.

Most Latin American firms began to expand internationally starting in the 1980s, which makes it a fairly recent initiative. As Thomas (2006) mentions in his study on Mexico, as firms started expanding internationally, they faced higher liability of foreignness since they had no competitive pressures in their previously protected local environment, but that these drawbacks would be later overcome by learning effects and multicountry economies of scale. Since Latin American firms have only recently internationalized, one would assume that they are at stage 1 of international expansion, where losses predominate. But some Latin American firms, namely, multilatinas, expanded so quickly that they crossed the threshold of losses and began counting positive returns (stage 2) (see Figure 1).

In line with Kafouros *et al.* (2012), one would expect multilatinas to expand first into contiguous countries, initially incurring net costs (or reduction in profitability in stage 1) followed by positive increase in profits in stage 2 with further international expansion. However, on the assumption that their absorptive capacity is weaker than multinationals based in advanced nations (Aulakh, 2009), their transit through stages 1 and 2 will take longer since they would benefit more slowly from idiosyncratic or foreign learning and

economies of multicountry scale. Overall, we hypothesize that the beginning and middle stage internationalization of multilatinas (greater depth of internationalization) will fall into a U-shape:

H1. The relationship between depth of multinationality and financial performance of multilatinas presents a U-shape with a negative slope for the early stage of multinationality (stage 1) and a positive slope for the medium level of multinationality (stage 2).

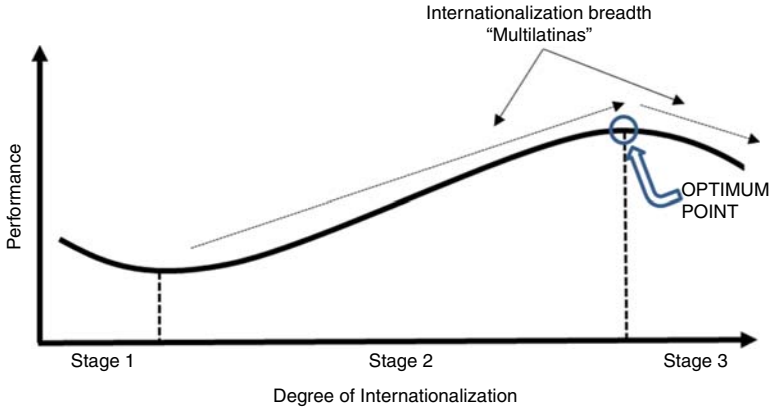
In contrast, when multilatinas increase their breadth or scope (number of countries or regions) of internationalization beyond an optimal level, it is expected that the benefits of incremental internationalization will be outweighed by higher coordination costs from reaching out to other continents (Oh and Contractor, 2014). Moreover, on the assumption that stage 1 expansion is confined mainly to Latin America (and this could apply also in stage 2), further stage 3 expansion has a greater likelihood to be in nations beyond Latin America, and/or into smaller and less attractive markets. The assumption that the smaller and more peripheral markets are more likely to occur in stage 3 comes from the logical reasoning that a firm will first choose to expand into the bigger and lucrative markets (stages 1 and 2) and only later (stage 3) would it tackle smaller, riskier and more distant countries. One would expect that multilatinas will likely face higher coordination costs and liability of foreignness when they "over-expand" or reach beyond Latin America (see Figure 2). Therefore, we propose the following hypothesis:

H2. The relationship between breadth of multinationality and financial performance of multilatinas presents an inverted U-shape with a positive slope for the medium stage of multinationality (stage 2) and a negative slope for the high level of multinationality (stage 3).

3. Methodology

3.1 Data and sample

This study analyses how multilatina international growth affects performance using data from *America Economia*, a specialized Chilean magazine that publishes an annual multilatinas ranking based on a series of factors, including the percentage of sales abroad, number of countries and geographic zones where the companies have expanded, and the



Source: Adapted from Oh and Contractor (2014)

Figure 2.
Type B multilatinas with broader geographic scope or larger number of countries

potential for growth. The firms in the ranking are based in Brazil, Mexico, Chile, Colombia, Argentina, Peru, Venezuela, Guatemala and Bolivia.

America Economia has been publishing the multilatinas ranking since 2009, resulting in a total of seven periods (2009, 2010, 2011, 2012, 2013, 2014 and 2015). The authors created a longitudinal data set by carefully matching each period, the accepted way to test the internationalization performance relationship (Glaum and Oesterle, 2007). The sample includes only firms from the real sector and excludes service sector firms. A total of 147 single firms are included in at least one of the seven periods. Since the study focuses on the effect of the different dimensions of internalization on performance, the firm is the level of analysis in the regressions. The 147 firms in the sample account for a total of 571 firm-year observations (hereafter called observations).

The sample was then merged with financial data from the Osiris database of Bureau Van Dijk (2016) and Compustat (Standard and Poor's, 2016) to include additional financial variables needed for the analysis, such as the return on assets (ROA). Merging the *America Economia* ranking with the Osiris and Compustat databases reduced the number of organizations in the sample by 40 to 107 single firms because the Osiris database does not have information on some privately held companies that do not report their financial data. The 107 companies in the sample account for a total of 317 observations.

To check for selection bias in the final sample, the authors compared the composition of firms in relation to the pre-merged sample and found no significant differences ($p > 0.05$) in the mean values of total sales, proportion of sales abroad, amount of foreign investment, number of countries and geographic zones operating abroad[1].

3.2 Measures

Dependent variable. The dependent variable that measures the financial performance of the firm is calculated through ROA, the same approach used in other studies on the impact of internationalization on financial performance (Borda *et al.*, 2017; Contractor *et al.*, 2003; Gomes and Ramaswamy, 1999; Ramaswamy, 1995).

Independent variables. Internationalization depth is operationalized using the firm proportion of sales abroad (foreign sales/total sales) with potential values that range from 0 to 1.

Internationalization breadth is operationalized using a geographic zone index that ranges from 0 to 100, based on both the number of countries and the regions where multilatinas operate.

Control variables. This study included several control variables used in prior research on the topic of internationalization and financial performance (Contractor *et al.*, 2003; Oh and Contractor, 2014; Thomas, 2006). Size was measured by the natural logarithm of a firm's total sales. Age was measured by the natural logarithm of the number of years since the firm's foundation. These two control variables are operationalized using natural logarithm to account for their skewness in their distribution, so these variables do not affect the statistical results of the estimation models. Firm's country was measured using different dichotomous variables that track the firm's country of origin. The regressions also include controls for year and industry type (services, commodities, technological and others).

As the hypotheses indicate, the study tests two different models to explain the financial performance of multilatinas. The authors test the U-shape for internationalization depth and inverted U-shape for internationalization breadth in relation to performance according to the following equations:

$$\mathrm{PERF}_{it} = \beta_1 \mathrm{SIZE}_{it} + \beta_2 \mathrm{AGE}_{it} + \beta_3\ \mathrm{INT}\ .\mathrm{DEPTH}_{it} + \beta_4 (\mathrm{INT}\ .\mathrm{DEPTH}_{it})^2 + \Sigma\beta_m \mathrm{COUNTRY} + \Sigma\beta_n \mathrm{YEAR} + \varepsilon_{it}$$

$$\mathrm{PERF}_{it} = \beta_1 \mathrm{SIZE}_{it} + \beta_2 \mathrm{AGE}_{it} + \beta_3\ \mathrm{INT.BREADTH}_{it} + \beta_4 (\mathrm{INT.BREADTH}_{it})^2 + \Sigma\beta_m \mathrm{COUNTRY} + \Sigma\beta_n \mathrm{YEAR} + \varepsilon_{it}$$

3.3 Estimation

Since this study focuses on each firm-year observation in a cross-sectional fashion, data were analyzed using a pooled cross-section/time series regression method. The model estimation adopted an autoregressive heteroskedastic estimation technique comparable to that used in other studies on the M-P relationship (e.g. Contractor *et al.*, 2003; Gomes and Ramaswamy, 1999; Kmenta, 1971). Pooling estimations allow for estimating variations among cross-sectional units concurrently with changes within firm units over time (Bergh, 1993). Overall, the unbalanced characteristic of the sample is regulated by using an autoregressive heteroskedastic estimation technique along with controlling for year.

4. Results

Table I shows descriptive statistics and correlations for all the variables in the final sample except for the dichotomous industry and country variables. The ROA mean is 3.70 percent. The average firm age is 64 years. The average level of foreign to total sales is 46.71 percent. The average geographic zones abroad index is 63.29. The highest correlations amongst the variables in the sample are between internationalization depth and breadth ($r = 0.39$). To check for potential multicollinearity problems, the variance inflation factors (VIFs) are calculated. All VIFs are below the recommended 10 (Chatterjee and Price, 1991), with the highest at 3.29.

Table II shows the regression results. Hierarchical regression analyses were conducted by entering control variables first (model 1). Model 2 includes the independent variables internationalization depth and breadth, including the main and the square effect. The Wald χ^2 for each model is significant for model 2 in comparison to model 1, reflecting the overall fit of the models. Since the model estimation is by autoregressive heteroskedastic model, year and firm effects are controlled for.

Table II displays how internationalization depth and breadth affect financial performance. The results with controls only (model 1) suggests that neither the size nor the age of the multilatina affects financial performance. Firms located in Chile and Argentina are the exceptions, showing a significant positive effect on firm performance.

H1 was supported, suggesting a curvilinear relationship (U-shaped) between the degree of internationalization depth and financial performance. Both the main depth internationalization effect and the square term of internationalization depth were significant ($p < 0.05$, $p < 0.10$, respectively).

H2 was strongly supported, positing an inverted curvilinear relationship (U-shaped) between the degree of breadth in internationalization and financial performance. Table II

	Variable	Mean	SD	1	2	3	4
1	Performance	3.70	5.35				
2	Firm size	8.39	1.32	0.08			
3	Age	64.90	30.87	0.02	−0.12		
4	Internationalization depth	46.71	23.99	−0.14	0.12	−0.07	
5	Internationalization breadth	63.29	18.16	0.05	0.39	0.04	0.26

Notes: Number of observations, 317. Correlation coefficients greater than 0.03 or less than −0.03 are significant at $p < 0.05$

Table I.
Descriptive statistics and correlations

	Model 1	Model 2
Firm size	0.33 (0.25)	0.45 (0.30)
Age	0.00 (0.01)	−0.00 (0.01)
Year	Yes	Yes
Country	Yes	Yes
Internationalization depth		−0.16** (0.05)
Internationalization depth square		0.00**** (0.00)
Internationalization breadth		0.07* (0.03)
Internationalization breadth square		−0.04* (0.02)
Constant	2.01 (2.13)	2.21 (2.63)
Σ^2		
Constant	26.93*** (1.59)	24.61*** (1.47)
Log likelihood	−1,002	−958
χ^2	20	67
AIC	2,037	1,955
Number of observations	327	317

Table II.
Regression results of firm performance

Notes: *$p < 0.05$; ** $p < 0.01$; ***$p < 0.001$; ****$p < 0.10$, based on two-tailed tests and clustered at the organizational levesl

shows that both the main and the square effect of internationalization breadth on financial performance are significant, being positive for the main effect ($p < 0.05$) and negative for the square variable ($p < 0.05$).

As a robustness check, the calculations include the measure of size determined by the natural logarithm of a firm's total employees instead of the natural logarithm of a firm's total sales, with the same results. Moreover, in addition to controlling for country of origin, we differentiated the firms in terms of region, Central America or South America. The results hold but also show that multilatinas from Central America perform better than their South American counterparts.

Finally, this study tests a cubic variable for depth to explore the possibility of finding a complete three-stage shape between the degree of internationalization and financial performance (see Contractor *et al.*, 2003; Oh and Contractor, 2014). However, the cubic coefficients are not significant.

5. Conclusions

This paper investigates how internationalization strategies affect firm performance in multilatinas. The paper also refines multinationality and firm performance or the M-P theory by showing that both depth and breadth internationalization strategies fit different stages of the three-stage paradigm of international expansion. The results confirm the overarching hypothesis that there are differences between companies that have expanded their international business to a reasonable extent (stages 1 and 2 captured by the depth measure), and companies that have "over-expanded" beyond an optimal or reasonable level into more distant regions, or riskier and peripheral markets (stages 2 and 3 captured by the breadth measure).

The U-shape in stages 1 and 2 reflects a pool of multilatinas that are either newly internationalizing or moderately international in terms of percentage of operations abroad (e.g. FSTS ratio). Such companies benefit from internationalization within the Latin American region (stages 1 and 2) and have not yet over-internationalized (as in stage 3).

On the other hand, an inverted U-shape in relation to firm performance suggests that some multilatinas have expanded beyond Latin America, sometimes into smaller and riskier countries where the costs of international coordination, smaller incremental gains and higher risks outweigh the benefits and result in diminishing and negative returns (stage 3).

This study contributes to the literature on the M-P relationship and emerging market firms by analyzing it from the multilatina perspective. By combining the depth and breadth measures of internationalization, the authors offer a more nuanced and subtle interpretation of the three-stage paradigm instead of more general assertions that breadth is more lucrative than depth (Kafouros *et al.*, 2012) or that the breadth measure is uniformly better than the depth measure (Kirca *et al.*, 2012). The findings help to reconcile the seemingly contradictory results of prior studies, opening new windows for future research on the M-P relationship and the breadth vs depth and performance relationships from an emerging market perspective.

Practical implications

The results provide useful insights to multilatina managers. Multilatinas appear to benefit more from specializing in their own region (depth) rather than overextending their networks outside Latin America (breadth). But managers may logically ask how one knows when crossing beyond the optimal degree of internationalization and risking overexpansion and harm to financial performance. This is not only a managerial question but also a fruitful area for further research, referring especially to the optimum or profit maximization point in Figure 2.

The internationalization strategy is not a simple either-or choice but involves a complex set of strategic decisions on both the intensity and the scope of external activities. Managers need to carefully monitor comparable firms in their sector and country to determine their relative position and decide when to slow down their expansion process. (For scholars researching the "optimal" degree of internationalization, this requires the gathering of a homogeneous sample from the same industry).

This study has some limitations. The sample size could be bigger and it would be good to control for market size. For the dependent variable, it would be ideal to measure other types of performance outcomes but data availability is limited. Therefore, ROA was the chosen financial performance dependent variable, consistent with previous research on the M-P relationship.

Note

1. Since population and income per capita were taken from the Osiris database, the authors were not able to test differences in these variables between the starting sample and the final sample.

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