

INTERNATIONALIZATION SPEED AND FIRM PERFORMANCE: A STUDY OF THE MARKET-SEEKING EXPANSION OF RETAIL MNES

Abstract. Existing research is divided on whether firms that rapidly expand their overseas operations perform better than firms that internationalize slowly. Drawing on Penrose's theory of the growth of the firm we argue that the positive effects of rapid internationalization give way to negative effects with increasing internationalization speed, leading to an inverted U-shaped association between internationalization speed and firm performance. We analyse the market-seeking expansion of 110 retailers over a 10-year period (2003–2012) and find support for a curvilinear relationship between internationalization speed and firm performance that is moderated by the geographic scope of firms' internationalization path and firms' international experience. Our study contributes to resolving conflicting views on the link between internationalization speed and firm performance.

INTRODUCTION

In contrast to the question of how quickly firms become international after their foundation, there has been comparatively little research on the speed with which firms expand their operations internationally after their first international expansion or after being focussed on their home market for an extended period of time (e.g., Bell, McNaughton, and Young 2001; Casillas and Acedo 2013; Hilmersson and Johanson 2015). Despite the growing interest in the factors that influence the speed of such ongoing firm internationalisation (e.g., Casillas and Moreno-Menéndez 2014; Mohr and Batsakis 2014) and even though there exist strong reasons to expect internationalisation speed to affect firm performance we still know very little about the effects that this type of internationalization speed can have on firm performance (Chang and Rhee 2011; Hilmersson and Johanson 2015).

In particular given the contradictory suggestions in the existing literature regarding the likely performance effects of rapid internationalisation, there have been calls for further clarification of the effects of internationalisation speed on firm performance (Casillas and Moreno-Menéndez 2014). Whereas research based on the stages theory of firm internationalization has stressed the importance of an incremental, slow internationalization process for firm performance (Barkema and Drogendijk 2007), research on competitive dynamics (Hennart and Park 1994; Mascarenhas 1986; Powell 2014), on the international expansion of emerging market firms (Bonaglia, Goldstein, and Mathews 2007; Mathews 2006), and on the development and launch of new products (Cohen, Eliasberg, and Ho 1996; Eisenhardt and Tabrizi 1995; Luo and Tung 2007) all highlight the positive effect of rapid international expansion for firm performance. Recent research has thus begun to explore the non-linear and

contingent nature of the relationship between internationalisation speed and firm performance (Chang and Rhee 2011; Hilmersson and Johanson 2015).

With this study we aim to extend this body of research and to contribute to closing the gap that exists with regard to our understanding of how the speed of firms' international expansion affects their performance. We do so by drawing on the work of Penrose (1959) to argue that there is a non-linear effect of internationalisation speed on the performance of firms that is moderated by the geographic scope of the firms' expansion path and by their international experience.

Drawing on the insights of Penrose (1959) on the limits to rapid firm growth allows us not only to theorize about the performance effects of internationalization speed but also expand the scope of the Penrosean perspective to explain internationalization speed as an under-researched facet of firms' internationalization strategies. We suggest that slow international expansion fails to provide firms with the benefits of rapid internationalization but that excessively rapid international expansion leads to diseconomies of time compression that reduce the net benefits of rapid internationalization. We thus argue for an inverted U-shaped effect of internationalization speed on firm performance, i.e., that firm performance is highest at moderate levels of internationalization speed.

We identify two moderators based on the role Penrose (1959) attributes to the complexity of firm growth and the role of experience in influencing firms' growth rates. Specifically, we argue that the geographic scope of firms' internationalization path and firms' international experience will influence the balance between benefits and costs at different internationalization speeds. The costs of rapid internationalization are likely to rise with the geographic scope of a firm's internationalization path because of the greater complexity that the firm will face.

However, we suggest that the benefits of rapid internationalization to grow even stronger with increasing geographic scope, as firms are more likely to gain first-mover advantages and to obtain and exploit strategic resources. We thus expect to find a positive moderating effect of the geographic scope of firms' internationalization path. In addition, Penrose (1959) has stressed the positive influence of experiential knowledge on the rate of firm growth. We thus expect firms' international experience to eliminate or at least reduce some of the costs associated with rapid internationalisation.

We test our hypotheses by using a feasible generalized least squares (FGLS) regression on data on the international, market-seeking expansion of 110 multinational enterprises (MNEs) in the retail industry over a ten-year period (2003-2012). The retail sector is a particular suitable setting for our study given the particular relevance of time-based competition in this sector as well as the anecdotal evidence of retailers that have rapidly internationalized their activities (e.g., Mentzer, Min, & Zacharia, 2000).

THEORETICAL BACKGROUND AND HYPOTHESES

The relationship between internationalization speed and firm performance

We suggest that rapid internationalisation will have a positive effect on firm performance by increasing the scope for first-mover advantages and the speed with which firms exploit and acquire valuable assets. *First*, rapid internationalization increases a firm's potential to obtain a first-mover advantage. Firms may create or obtain valuable resources that are difficult to imitate for late-comers to a market and/or put themselves in a better position to exploit their existing strategic resources (Lieberman and Montgomery 1988). In the context of retail expansion, first-mover advantages particularly relate to the ability of firms to access and secure desirable retail locations and thus block out or pre-empt late-coming competitors (e.g., Gielens and Dekimpe

2001; Gielens and Dekimpe 2007). First mover advantages are particularly important when a small window of opportunity exists for the introduction of products and services into a new market (Chang and Rhee 2011). A slow internationalization process can thus be detrimental to firm performance by reducing firms' chance of achieving a first-mover advantage (Lee, Smith, Grimm, and Schomburg 2000). The probabilistic nature of this argument must be stressed, however, given that high internationalization speed per se does not guarantee a first-mover advantage; equally, a slow internationalization process does not necessarily preclude firms from obtaining such an advantage (Mohr, Fastoso, Wang, and Shirodkar 2014).

Second, even if firms are unable to obtain a first-mover advantage in a particular market, rapid internationalization allows firms to quickly acquire and develop their strategic resources, such as, for example, the outlets of a local retailer, that allow them to quickly improve their position vis-à-vis their competition (see, for example, Bonaglia, et al. 2007; Mathews 2006). For this reason, rapid internationalization is a key means for firms from emerging economies to build up and acquire strategic resources and catch up with their competitors from developed countries (Luo and Tung 2007).

Third, rapid internationalization allows firms to exploit their valuable resources more quickly. The fast exploitation of firm resources exerts positive effects on firm performance because it minimizes opportunity costs and maximizes the value extracted from these resources before they become eroded and obsolete (Chang and Rhee 2011). For example, retailers that have developed or acquired strong and internationally recognised brand names, such as, for example, H&M, IKEA, or Zara are more likely to opt for rapid internationalization to exploit this valuable resource than firms with lesser-known brands. Such erosion may occur when competitors replicate particular resources or find substitutes, and when resources become

obsolete, for example, due to changes in consumer preferences (Lieberman and Montgomery 1988).

While we expect the above benefits to increase with rising internationalization speeds, we expect them to become increasingly offset by the exponentially growing costs associated with higher internationalization speeds, leading to diminishing net benefits as internationalization speed increases. In Penrose's (1959) theory of the growth of the firm, limited managerial resources play a central role in constraining the growth rate of firms. Firms that fail to account for the factors that limit their growth will suffer from inefficiencies and lose competitive advantage (Kor and Mahoney 2004). Increasing internationalization speed will thus strain a firm's limited managerial resources and its absorptive capacity, i.e., firms' ability "to recognize the value of new, external information, assimilate it, and apply it to commercial ends" (Cohen and Levinthal 1990: 128). As a result of this strain firms will experience diseconomies of time compression, i.e. exponentially increasing costs and inefficiencies when speeding up resource development and exploitation processes (Dierickx and Cool 1989; Jiang, Beamish, and Makino 2014; Vermeulen and Barkema 2002).

The need for quick decision-making associated with rapid internationalization combined with the fact that managerial decision-making is imperfect and takes time due to "bounded rationality and limited cognitive scope" (Vermeulen and Barkema 2002: 640), leads to an exponential increase in likelihood that sub-optimal decisions are taken that lead to higher costs and/or are costly to reverse. For instance, misjudging local demand for the products offered by a retailer because managers were unable to spend the required time on market research will lead to inefficiencies and opportunity costs if demand is overestimated or a loss of reputation that is costly to (re)build if demand is underestimated. The likelihood of such errors will increase with

the speed at which new markets are entered. Similarly, an increase in internationalization speed may lead to a sub-optimal choice of the location for a sales outlet (e.g., a location that is too far from the retailer's customers). Firms may thus fail to exploit the potential first-mover advantages of securing optimal locations possible through rapid international expansion. Similarly, the increasing demands associated with rapidly acquiring and processing new information may lead to firms choosing entry modes that allow for rapid market entry but limit firm performance. For example, operations acquired from a domestic firm may prove difficult to integrate into a firm's existing operations (Nadolska and Barkema 2007).

Furthermore, rapidly internationalizing firms have less time to adapt their strategic resources and capabilities to new host markets. Although the degree of needed adaptation is likely to vary with firms' retail segment and strategy, some degree of adaptation is likely to be necessary to transfer firm-specific assets (Rugman and Verbeke 2005) and to overcome firms' liability of foreignness (Zaheer, 1995). Consequently, rapid internationalization can negatively affect firm performance by preventing firms from overcoming their liability of foreignness. High levels of internationalization speed may thus prevent firms from fully exploiting their resources, reducing the net benefits of rapid internationalization.

Combining the cost and benefit curves leads us to expect the balance of costs and benefits to vary across different speeds of international expansion (see Figure 1).

*** Insert Figure 1 here ***

From *low to intermediate internationalization speeds*, the additional benefits associated with increase internationalization speed (dashed line in Figure 1) will be higher than the additional costs resulting from increased internationalization speed (dotted line in Figure 1). We expect this to be the case because the benefits of increasing internationalization speed materialize

right away, whereas costs increase only slowly with firms' internationalization speed from low to moderate internationalization speeds, because firms can draw on unused resources and avoid a disproportionate rise in costs (Penrose 1959). Modest increases in internationalization speed are also unlikely to be associated with necessary structural changes that would lead to a disproportionate rise in firms' costs (Wagner 2004). However, with increasing internationalization speed, firms' unused resources will be insufficient to address the additional demands of rapid internationalization, leading to diseconomies of time compression, i.e. a disproportionate rise in costs. Thus, while the net benefits increase with growing internationalization speed (bold line in Figure 1), the marginal net benefits begin to decline. The net benefits of increased internationalization speed are thus highest at a certain, optimal internationalization speed where the marginal benefits equal the marginal costs. At internationalization speeds that exceed this optimal level, the marginal costs are greater than the marginal benefits, and higher internationalization speeds are thus associated with declining firm performance. We therefore expect the relationship between internationalization speed and firm performance to take the shape of an inverted U-curve. Accordingly, we formulate the following hypothesis:

Hypothesis 1: There is an inverted U-shaped relationship between internationalization speed and firm performance.

The moderating effect of the geographic scope of firms' internationalization path

Based on Penrose's (1959) suggestion that the rate of firm growth will vary with the character of a firm's growth path, particularly its complexity, we expect the geographic scope of a firm's internationalization path to moderate the relationship between internationalization speed and firm performance. *First*, greater geographic scope of a firm's internationalization path makes firms

more likely to achieve a first-mover advantage through obtaining strategic resources or by putting them in a better position to exploit such resources in an overseas market. Expansion into a single overseas country may or may not generate such a first-mover advantage for a firm and if a firm does not achieve a first-mover advantage in a particular country, further expansion within the particular host country will not generate such an advantage. However, every entrance into a different market provides a firm with a potential opportunity to achieve a first-mover advantage, for example, by securing prime retail locations ahead of competitors. Hence, entering multiple markets maximizes a firm's chance of obtaining first mover advantages and improving its performance.

Second, rapid internationalization into a greater number of countries allows for a more rapid exploitation of firms' strategic resources. Through geographic diversification, firms take advantage of growth opportunities in different geographical markets (Feeser and Willard 1990) and exploit their strategic resources on a broader scale (Lu and Beamish 2004). Geographic scope should therefore strengthen the performance effects of rapid internationalization, as these geographic scope-related benefits are obtained more rapidly.

Finally, the benefits of rapid internationalization in terms of acquiring strategic resources are more pronounced for firms that expand into multiple countries than for firms expanding into a very small number of overseas markets. Critical resource acquisition is enhanced for such firms because the greater geographic scope of their internationalization trajectory increases the availability of resources and thus increases the likelihood that rapidly internationalizing firms can obtain critical resources enabling them to catch up with their competitors and improve their performance (Luo and Tung 2007).

In addition to increasing the benefits of rapid internationalization, greater geographic scope of a firm's internationalization path is likely to increase the complexity and thus the potential time compression diseconomies faced by a firm when expanding rapidly. However, we suggest that in the specific context of the market-seeking international expansion of retailers, the cost effects of increasing geographic scope are less pronounced when compared to the international expansion of firms in other sectors and/or for other motives. For instance, a firm's ability and strategies to achieve first mover advantages may not be easily transferrable across countries due to economic and cultural differences between countries that may render the firm's prior international experience inapplicable or even detrimental.¹ This will be of particular relevance where firms' reasons to internationalize vary across the entered markets (e.g. market seeking vs. efficiency seeking) and sources of first-mover advantages vary. Since the sources of first-mover advantages in the context of market-seeking expansion of retailers will be relatively similar across countries, we do not expect a significant negative effect of increasing geographic scope on firms' ability to achieve such advantages. Similar, while differences between countries are likely to decrease firms' ability to achieve economies of scale, given the particular nature of the retailing sector, in particular the inseparability of production and consumption, we suggest that economies of scale are of comparatively lower importance in the context of the market-seeking international expansion of retailer. We thus suggest that in the particular context of the market-seeking international expansion of retailers, the potential negative effects of geographic scope will not outweigh the positive effects of geographic scope outlined above.²

¹ We would like to thank one of the anonymous reviewers for highlighting this possibility.

² We account for the possibility that the (negative) effects of host country complexity might outweigh the suggested positive effects of geographic scope by controlling for host country economic and cultural complexity in our empirical models. We would like to thank one of the anonymous reviewers for this suggestion.

Based on these arguments, we expect geographic scope to widen the gap between the benefit curve and the cost curve in Figure 1, resulting in an upwards shift of the relationship between internationalization speed and firm performance. At the same level of speed geographically diversified firms will thus have better performance than firms with low levels of geographic scope. Accordingly, we formulate the following hypothesis:

Hypothesis 2: The geographic scope of firms' internationalization path positively moderates the relationship between internationalization speed and firm performance.

The moderating role of firms' international experience

International experience has been argued to play a central role in the context of firm's international expansion (Clarke, Tamaschke, and Liesch 2013). While focussed on firm growth in general, Penrose (1959) stresses that the experiential knowledge of a firm's management is positively related to the rate of firm growth as such firms are better able to identify and exploit "productive opportunities". We suggest that internationally experienced firms are more likely to reap the benefits of rapid internationalization and are at the same time less likely to suffer from the diseconomies of time compression when internationalizing rapidly.

International experience facilitates experiential learning and increases firms' absorptive capacity (Easterby-Smith, Graca, Antonacopoulou, and Ferdinand 2008; Gunawan and Rose 2014). Because of their enhanced ability to identify and assess opportunities, internationally experienced firms are more likely to be able to identify countries and markets where rapid entry is likely to generate a first-mover advantage and are thus more likely to obtain such an advantage. The ability to identify such markets is also likely to aid internationally experienced firms in discovering and rapidly acquiring strategic resources to maintain or improve their

competitive position. Finally, international experience in operating overseas and in exploiting strategic resources in other markets improves firms' ability to rapidly transfer and exploit these resources during rapid international expansion (Pennings, Barkema, and Douma 1994).

Regarding the costs of rapid internationalization, international experience allows firms to learn how to enter and operate in new markets and how to overcome their liability of foreignness (e.g., Barkema, Bell, and Pennings 1996; Pennings, et al. 1994). Internationally experienced firms should thus be able to overcome their liability of foreignness during rapid international expansion more quickly and more cost effectively than firms with little or no international experience. Because of their greater knowledge of operating overseas, internationally experienced firms are also less likely to make sub-optimal, costly decisions during rapid international expansion.

Finally, internationally experienced firms are also likely to have developed and/or adapted processes and structures to manage their international operations, reducing the costs of doing so during subsequent rapid internationalization. International experience thus mitigates increased the governance costs associated with rapid internationalization and prevents diseconomies of time compression that occur when a firm's absorptive capacity is not able to address complex demands associated with rapid internationalization (Jiang, et al. 2014; Vermeulen and Barkema 2002).

Overall, we thus expect international experience to increase the benefits and reduce the costs associated with a high pace of internationalization. As a result, we thus expect the gap between the cost and the benefit curve in Figure 1 to become wider with increasing international experience of firms and the performance curve to move upwards. Accordingly, we formulate the following hypothesis:

Hypothesis 3: International experience positively moderates the relationship between internationalization speed and firm performance.

METHODS

Sample

To test our hypotheses, we analyse the horizontal, market-seeking international expansion of retailers over a 10-year period. We suggest that this setting is suitable for our study because services firms share various common characteristics (simultaneity of production and consumption, intangibility, perishability, or need of customization) (Boddeyn, Halbrich, and Perry 1986; Zeithaml, Parasuraman, and Berry 1985) that render time-based competition and rapid international expansion particularly relevant for service sector firms in general and retailers in particular (e.g., Mentzer, Min, and Zacharia 2000). Our initial sample consists of 189 retailers that were included in at least one of the following rankings and had international operations: (i) PlanetRetail's Top Global 250 Retailers (2012); (ii) Deloitte's Top 250 Global Retailers (2011); and (iii) UNCTAD's 2012 ranking of the top 100 transnational corporations. For these retailers, we collected firm-level data for a 10-year period (2003-2012) from the PlanetRetail and ORBIS databases. More specifically, PlanetRetail provides information on the number of outlets each retailer has opened in a given country and a given year. Based on this information we are able to develop measures related to the internationalization process and international experience/scope of the selected firms. In order to complement the aforementioned firm-level data, we make use of ORBIS, a database specialized in providing financial information on private and public companies. Finally, we make use of several secondary sources in order to develop country-level measures related to the purpose of our study. After incorporating the aforementioned data and since ORBIS provides no information or very limited information on several retailers, our final

sample constitutes a panel dataset consisting of 110 international retailers. After addressing missing values and outliers, we obtained an unbalanced panel dataset ranging from 775 to 800 firm/year observations.

Measures

Dependent variable

We used firm profitability to assess firm performance as our dependent variable, adopting the ratio of net income to total assets (ROA) in line with previous studies (e.g., Hitt, Hoskisson, & Kim, 1997; Lu & Beamish, 2004; Vermeulen & Barkema, 2002). Despite the fact that ROA is a primary performance measure for the efficient use of a firm's assets, we also use net income to total equity (ROE) as alternative measure for firm performance.³

Independent and moderating variables

In line with past research (Chang and Rhee 2011; Mohr, et al. 2014; Vermeulen and Barkema 2002), we measured our main independent variable, internationalization speed, as the average number of foreign outlets divided by the number of years since the firm's first international expansion. This measure captures the speed with which firms expand into multiple countries and is particularly suited when studying the internationalization of large MNEs (Chetty, Johanson, and Martín Martín 2014). Following Barkema and Vermeulen (2002), we measured firms' geographic scope as the total number of foreign countries in which the MNE has established at least one outlet. To measure firms' international experience, we use the sum of the number of years that a firm has operated in each of its host countries (e.g., Mohr, et al. 2014).

³ We would like to thank one of the anonymous reviewers for stressing the importance of adopting ROE as an additional dependent variable.

Control variables

We included the following control variables. We measured firms' age as the year of observation minus the year of inception and measured firm size as the natural logarithm of a firm's total number of employees. In line with Chang *et al.* (2013), we measured intangible assets as the percentage ratio of intangible fixed assets to total assets. We also included firms' leverage, i.e., the percentage ratio of a firm's total debts to its total assets. We included a firm's market position to account for differences in performance depending on a firm's share of the relevant market. This variable was measured by calculating the ranking difference in sales between a firm and the market leader in the respective retail segment. For example, if a retailer was five ranks behind the market leader in the relative market segment, this variable took a value "5." Consequently, large (smaller) differences indicate a weak (strong) market position of a retailer in its market segment. We controlled for the rhythm of internationalization, i.e., the evenness of firms' international expansion, measured by the kurtosis of the count of new international expansions (i.e., outlets) made by a retailer during each year until the final year of observations in our dataset (e.g., Chang and Rhee 2011; Vermeulen and Barkema 2002). Because the firms in our sample are headquartered in regions with different economic, institutional and cultural backgrounds that are likely to lead to different approaches to strategic management, we account for firms' home region.⁴ We also controlled for the potential effect of firms' home-region concentration, which we calculated as the ratio of firms' home-region sales to total sales (e.g., Oh and Rugman 2012). We used Rugman and Verbeke's (2004) concept of the broad Triad to classify a firm's home-region.

⁴ We would like to thank one of the anonymous reviewers for raising this issue.

Finally, to control for the particular cultural and economic complexity between the home locations and the host markets that each retailer has invested in, we include two country-level control variables. We include added cultural distance by calculating the cultural distances between a newly entered country and all the countries a firm already operates in and then taking the smallest of these distances (Hutzschenreuter, Kleindienst, and Lange 2014; Hutzschenreuter and Voll 2008). We used Hofstede's cultural dimensions and Kogut and Singh's (1988) index to calculate these distances. Further, we account for the range of GDP/ per capita across the countries a firm operates in, by including the logged difference between the lowest and the highest GDP/capita (Tong & Reuer, 2007). Table 1 provides the variable definitions and data sources.

*** Insert Table 1 about here ***

Modelling procedures

Given the panel formation of our dataset, an ordinary least squares (OLS) model could be inefficient and could lead to biased estimates owing to unobserved heterogeneity (Wooldridge 2008). In general terms, the adoption of a Generalised Least Squares (GLS) estimator provides efficient estimates for such a dataset. However, after conducting several diagnostic tests we observed that heteroskedasticity and autocorrelation (using the White test and the Wooldridge test respectively) raise possible concerns for the validity of our results. We therefore decided to employ a Feasible Generalised Least Squares (FGLS) estimator, which provides an effective solution to both problems of heteroskedasticity and first-order panel-specific autocorrelation (AR1).

RESULTS

Table 2 reports correlations and descriptive statistics for all the variables. The descriptive statistics show that our sample's firms are well established with an average age of 51 years an average size of 93,000 employees. Furthermore, and despite the fact that our firms are geographically dispersed operating on average in almost 12 foreign markets each, the home region accounts for almost 89% of the sales of our firms. Finally, the descriptive statistics show that approximately 23% of the retailers did not have international presence before the year 2003, which is the starting point of our research.

We calculated variance inflation factors (VIFs) to check for multicollinearity. Since the highest VIF score (3.02) was well below the commonly used threshold value of '5', there was no indication of multicollinearity. However, multicollinearity may arise from the inclusion of quadratic and moderating effects in the regression models. Thus, following Aiken and West (1991), we mean-centred the respective variables before generating the quadratic and interaction terms. Such a procedure reduces non-essential ill conditioning among exploratory variables and their quadratic terms (Cohen, Cohen, West, and Aiken, 2003). Tables 3 and 4 present the results of the FGLS regression models testing hypotheses 1-3.

Model 1 (Table 3) reports the results of the relationship between internationalization speed and firm performance (ROA). The positive and significant coefficient for the first-order term of internationalization speed ($p < .01$) and the negative and significant coefficient for its second-order term ($p < .01$) indicate an inverted U-shaped relationship in line with *hypothesis 1*. We obtain similar results for the impact of internationalization speed on ROE, as alternative measure of firm performance. The results (Model 4, Table 4) show a positive and significant coefficient for the first-order term of internationalization speed ($p < .05$) and a negative and

significant coefficient for its second-order term ($p < .10$). Figures 2 and 3 show our results for the relationship between internationalisation speed and performance graphically.

*** Insert Tables 3 & 4 about here ***

*** Insert Figures 2 & 3 about here ***

To test the hypothesized moderating effects, we generated the interaction terms of internationalisation speed and each of the two proposed moderators (i.e., geographic scope and international experience), as well as the quadratic interaction terms. In *hypothesis 2*, we proposed a moderating effect of firms' geographic scope on the link between internationalization speed and firm performance. Models 2 and 5 (Tables 3 and 4 respectively) indicate that the interaction between the squared term of internationalization speed and geographic scope is positive and statistically significant ($p < .05$ and $p < .01$ respectively). Hypothesis 2 is thus supported. In order to better capture the moderating effect on the quadratic relationship, we split the sample into three subgroups based on firms' level of geographic scope (low, moderate, and high) and we examine the aforementioned interaction effects by graphing the relationship between internationalization speed and firm performance (both ROA and ROE) for each of the three subgroups.⁵ Figures 4 and 5 graphically illustrate the moderating effect of geographic scope. Both figures show that for firms with low geographic scope, performance levels (both ROA and ROE) are by large lower than for firms with moderate and high geographic scope. In addition, however, figures 4 and 5 also indicate a change in the shape of the relationship between internationalization speed and firm performance, which we will discuss below.

⁵ Aiken and West (1991) suggest splitting the sample into subgroups based on the moderating variables' mean and standard deviations (i.e., mean \pm 1 standard deviation). However, because the standard deviations of our moderating variables are greater than their means, we decided to form the three subgroups based on the mean and \pm 1/2 standard deviation (rather than the common \pm 1 standard deviation). As an alternative method of splitting our sample into subgroups, we used percentiles (low \leq 25% and high \geq 75%). The produced figures for both splitting samples are consistent.

*** Insert Figures 4 & 5 about here ***

In *hypothesis 3*, we suggested a positive moderating effect of firms' international experience on the relationship between internationalization speed and firm performance. With regard to the relationship between internationalisation speed and ROE, Model 6 shows that the interaction between the squared term of internationalization speed and international experience is positive and significant ($p < .01$). However, with regard to the effect of internationalisation speed on ROA, the results in Model 3 show that the interaction between the squared term of internationalization speed and international experience is insignificant. Hypothesis 3 is thus only supported when ROE is used as measure of firm performance. In figure 6 we graphed this moderation effect. Figure 6 shows that for firms with low international experience, performance levels (ROE) are lower than for firms with moderate and high levels of international experience, in particular at low and high levels of speed, while there is little difference in performance between these firms at moderate levels of speed. As in the case of the moderating effect of geographic scope, Figure 6 indicates a change in the shape of the relationship between internationalization speed and firm performance which we discuss in detail below.

*** Insert Figure 6 about here ***

Sensitivity analysis

To test the sensitivity of our results, we performed a number of robustness checks. First, although we had no such indication from the past literature on this relationship (e.g., Chang and Rhee 2011; Vermeulen and Barkema 2002), we considered whether internationalization speed is endogenous to firm performance. We therefore conducted the Davidson-MacKinnon test of endogeneity (Davidson and MacKinnon 1993). The results showed that the added residual was not significantly different from zero; thus, we concluded that no endogeneity bias exists in the

least squares estimates. Second, in order to further confirm that the observed relationship is indeed quadratic, we applied the techniques suggested by Haans, et al. (forthcoming). Specifically, we add the cubic term of speed to Model 1 in order to test whether the relationship between internationalization speed and performance is possibly S-shaped rather than U-shaped. The addition of the cubic term did not provide significant results. To further confirm the quadratic relationship, we split the data based on the turning point. We expect that the first (sub-) sample (i.e. the one with values below the turning point) will produce a positive linear relationship between speed and performance, while the regression on the second (sub-) sample (i.e. the one with values above the turning point) will produce a negative linear relationship. The results from these two regressions meet our expectations since a significantly positive and a significantly negative coefficient of speed is found respectively⁶.

DISCUSSION AND CONCLUSION

Our study was motivated by the lack of research into the performance-effects of the speed with which firms expand internationally once they have started internationalizing, in particular, when compared to research into the speed with which firms initiate their internationalization after their foundation (Bell, et al. 2001; Casillas and Moreno-Menéndez 2014; Hilmersson and Johanson 2015). We argued that such research is needed because of the conflicting views with regard to the effect of such rapid internationalization on firm performance in the literature. To contribute to reconciling these conflicting views, we draw on Penrose's (1959) theory of the growth of the firm to theorize the relationship between internationalization speed and firm performance as non-

⁶ These results are available from the authors.

linear and contingent on the geographic scope of firms' internationalization path and firms' international experience.

In our first hypothesis, we proposed an inverted U-shaped relationship between internationalization speed and firm performance. This hypothesis was based on the positive and negative effects associated with rapid internationalization and the shift in the balance between these effects with increasing internationalization speed. Our findings support this hypothesis, showing that the effect of internationalization speed on firm performance is positive at low to moderate internationalization speeds but negative at high internationalization speeds. Our findings thus contribute to reconciling the conflicting views in past research that argue that internationalization speed affects firm performance either positively (Cohen, et al. 1996; Hennart and Park 1994; Luo and Tung 2007; Mascarenhas 1986; Mathews 2006) or negatively (Barkema and Drogendijk 2007; Johanson and Vahlne 1977). For low to intermediate speeds of international expansion, our results support our argument that firms' ability to obtain first mover advantages and the rapid creation and exploitation of strategic resources enhance firm performance. Although this positive effect of rapid internationalization is in line with the literature on new product introduction and the internationalization of emerging market firms (Cohen, et al. 1996; Hennart and Park 1994; Luo and Tung 2007; Mascarenhas 1986; Mathews 2006) it contrasts with the predictions of stages theory. We argued that at high internationalization speeds the net benefits of rapid internationalization decline as a result of diseconomies of time compression. While these effects at higher levels of internationalization speeds are also line with stages theory, the use of Penrosean logic appears to provide a more complete explanation of the performance effects of rapid firm internationalization.

While our findings for hypothesis 1 support our decision to revisit the nature of the internationalization speed-firm performance relationship, we also acknowledge the important role of contingencies for this relationship highlighted by Chang and Rhee (2011). Drawing on the insights of Penrose (1959), we identify and propose the geographic scope of firms' internationalization path and firms' international experience as moderators of the link between internationalization speed and firm performance.

In *hypothesis 2*, we suggested that firms' geographic scope moderates the association between internationalization speed and firm performance. In line with our argument, we find that for most levels of internationalization speed, geographically diversified firms show higher levels of performance. However, graphing the moderation effect of geographic scope in Figures 4 & 5 shows that the moderating effect of geographic scope is so strong that it leads to a change of the shape of the curve representing the relationship between internationalization speed and firm performance. While the curve flattens up to a moderate level of geographic scope, beyond this point the shape "flips" and turns into a U-curve for firms with high levels of geographic scope.

We argued that the moderating effect of geographic scope would be due to a downward shift in the cost curve and/or an upward shift in the benefits curve (see figure 1). Shape-flipping, however, arises from a flattening or steepening of the relationships leading to a U-curve (Haans et al., forthcoming). The transformation of the relationship between internationalization speed and performance is thus likely to be caused by a change in the shape, not just the position, of the cost and/or the benefit curve shown in figure 1. This implies that firms' geographic scope not only widens the gap between benefit and cost curves, as per hypothesis 3; increasing geographic scope also appears to change the shape of the benefit curve and/or the cost curve in Figure 1. With regard to the benefits associated with rapid internationalization, firms that are already

established in multiple markets are likely to find the acquisition and exploitation of strategic resources in these markets easier than firms that do not yet have operations in the markets in which they expand. As a result, for geographically diversified firms the benefits associated with increasing speed may not develop in a linear way, but may grow at increasing rates. In terms of the cost curve, increasing geographic scope may allow firms to reduce the costs associated with rapid internationalization. Firms with high geographic scope may, for instance, decide to expand their international operations in existing overseas market, rather than enter new markets and thus avoid the costs associated with overcoming a ‘new’ liability of foreignness and having to adapt their strategic resources and capabilities to different host countries.

Our findings for hypothesis 2 also supports our argument that while geographic scope may potentially increase the costs of rapid internationalization, these additional costs are outweighed by the additional benefits of rapid internationalization into a wider set of countries. Whereas Penrose (1959) focused on the downsides of a complex growth path, our findings for the particular case of the geographic scope of a firm’s international growth path, suggest that firms may be able to deal with this complexity in cost-efficient ways and that this increasing complexity is likely to be associated with opportunities and benefits that outweigh any such downsides.

In *hypothesis 3*, we proposed that firms’ international experience positively moderates the inverted U-shaped relationship between internationalization speed and firm performance. This was based on the role ascribed to experiential knowledge in Penrose’s theory of the growth of the firm and treatment of international experience as a critical firm resource. We argued that firms with greater international experience are better able to exploit the advantages of rapid internationalization and to reduce the associated costs than firms with less international

experience. Our results partly support this hypothesis and thus underline the crucial role of international experience for successful firm internationalization that are highlighted by various authors studying various facets of firm internationalization (see, for example, Clarke, et al. 2013).

The graphic illustration of the moderating effect suggested in *hypothesis 3* shows that the moderating effect of international experience is strong enough to reverse the inverted U-shaped relationship between internationalization speed and firm performance. As was the case for the moderating effect of geographic scope, our findings imply that for internationally experienced firms the gap between the benefit and cost curves shown in figure 1 is larger than for firms with little international experience. This is likely to be due to changes in the shape of these curves resulting from increasing international experience. By drawing on their international experience firms may be better in reaping the rewards of rapid internationalization than firms with little experience and this advantage may grow at increasing, rather than constant rates, when internationalizing at higher speeds. On the other hand, the advantage that internationally experienced firms have in containing the costs of rapid internationalization may grow disproportionately. Internationally experienced firms may not only be able to avoid the assumed exponential increase in costs due to increasing time compression diseconomies; due to their experience of entering new markets and operating overseas these firms may be able to expand internationally at high speeds at little additional costs when compared to lower speeds.

Although our results on the direct effect of internationalization speed on firm performance contrast with the stages theory of internationalization by showing the positive effects of rapid internationalization, our results regarding firm's international experience thus

highlight the central and positive role of firms' international experience for their further international expansion.

Our study has several limitations. First, we study the speed with which retailers establish sales outlets overseas. Our arguments and findings are thus limited to a particular type of international expansion of a particular set of firms and are unlikely to be directly applicable to internationalisation undertaken by firms in other sectors and/or for different reasons (e.g., asset or efficiency seeking). For example, rapid internationalization to acquire geographically dispersed sources of knowledge is likely to be associated with different benefits and costs, and these associations may be moderated by different factors. Disentangling and understanding these different effects of rapid internationalization based on different internationalization motives and different sectors would be a worthwhile area of further research.

Second, decisions regarding internationalization speed are not necessarily one-off decisions in the sense that once the firm has expanded internationally, the speed of internationalization is no longer relevant. Rather, research shows that many firms' international operations are characterized by repeated expansion and retraction (e.g., Benito, Petersen, and Welch 2009). In the particular context that we studied, various firms have undergone such a process of internationalization and de-internationalization (e.g., British retailer Marks & Spencer), and internationalization speed thus remains an on-going issue for such firms. Investigating this "tidal nature" of firm (de)internationalization remains a largely unexplored area of research that would benefit from in-depth case studies.

Third, there are limitations regarding some of our measures. By averaging the number of new foreign outlets over the period since a firm has begun its international expansion, our measure of speed of internationalization assumes constant speed across this period. Although we

have controlled for the rhythm of firms' international expansion (Vermeulen and Barkema 2002), future research may be able to use finer-grained measures of firms' temporal internationalization pattern. Similarly, our measure of international experience assumes constant returns in terms of experiential learning and does not account for the potential location-boundedness of international experience (Clarke, et al. 2013).⁷ Further, data restrictions required us to employ less-frequently used measures that may limit the comparability of our findings with those of other studies. For example, we use the ratio of intangible assets to total assets to capture firms' intangible assets. Although this measure has been used as a proxy of intangible assets in previous studies (e.g., Chang, Chung, and Moon 2013), using advertising and/or R&D spending would have increased the comparability of our results with those of prior studies. Unfortunately, the databases that we used did not provide data for advertising spending, and the data for R&D spending suffered from many missing values.

Our study's findings are useful for both research and practice. From a research perspective, our results contribute to resolving conflicting views on the nature of the relationship between internationalization speed and firm performance. While the recent increase in research on the determinants of internationalisation speed (e.g., Casillas and Moreno-Menéndez 2014; Mohr and Batsakis 2014; Powell 2014) attests to the importance of internationalization speed, research on the outcomes of internationalization speed remains scarce. By drawing on Penrose's theory on the growth of the firm to analyse firms' ability to obtain first-mover advantages and acquire/exploit strategic resources through rapid international expansion we provide a theoretical explanation for both positive and negative performance effects of rapid internationalization. Our

⁷ We would like to thank one of the anonymous reviewers for pointing out the limitations with regard to our measures of internationalization speed and international experience.

study highlights the benefits of accounting for the distinct contribution of the Penrosean view to our understanding of firms' international strategies (Hutzschenreuter, Voll, and Verbeke 2011; Rugman and Verbeke 2002). Furthermore, by analysing the moderating effects of geographic scope and international experience we develop the insights of Penrose regarding the effects of complexity and experience for firm growth and extend these insights to the domain of firms' international expansion. Although applying Penrose's theory to the case of international growth did not require the adjustment of her theory, we argue in line with Penrose that the cross-border nature affects the strength and sometimes even the direction of the influence of some of the key concepts - as in the case of geographic scope/complexity - highlighted by Penrose. In particular, rather than focusing on the additional costs associated with growing across national borders, there appears to be greater need to account for the benefits associated with operating internationally when applying her theory to explain the rate of *international* firm growth. By highlighting some of these benefits in the particular case of the rapid internationalization of retailers, we contribute both to the development of Penrose's theory of the growth of internationally operating firms, but also to our understanding of the contingent nature of the performance effects of rapid internationalization (Chang and Rhee 2011).

From a *managerial perspective*, the inverted U-shaped relationship between internationalization speed and performance indicates that firms that maintain a moderate (i.e., neither very low nor very high) internationalization speed will show higher profitability than other firms. Our findings regarding the moderating role of the geographic scope of firms' internationalization trajectory indicate that rapid international expansion of firms' international sales operations is less beneficial if a firm is focused on a narrow range of overseas markets rather than international expansion across a wider range of overseas markets. We also find that

firms with high levels of international experience benefit more from rapid internationalization than firms with low levels of international experience. Our findings regarding the international expansion of retailers' sales operations thus indicate that firms with little international experience are well advised to obtain such experience through slow or moderately paced internationalization, before increasing the speed of their international expansion.

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FIGURES

Figure 1. Costs and benefits of internationalization speed

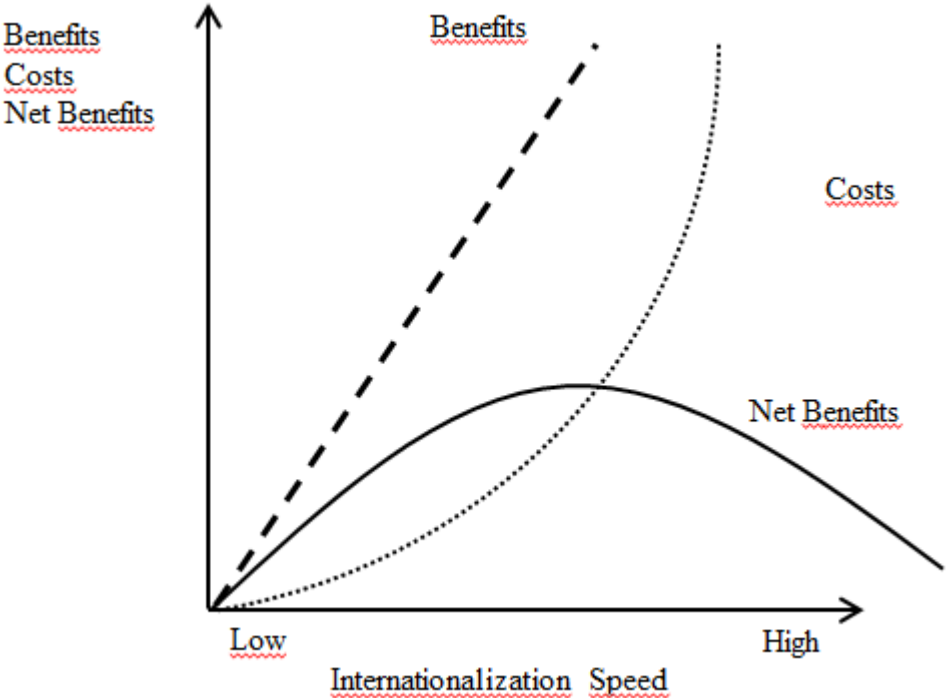


Figure 2. The inverted U-shaped relationship between internationalization speed and ROA

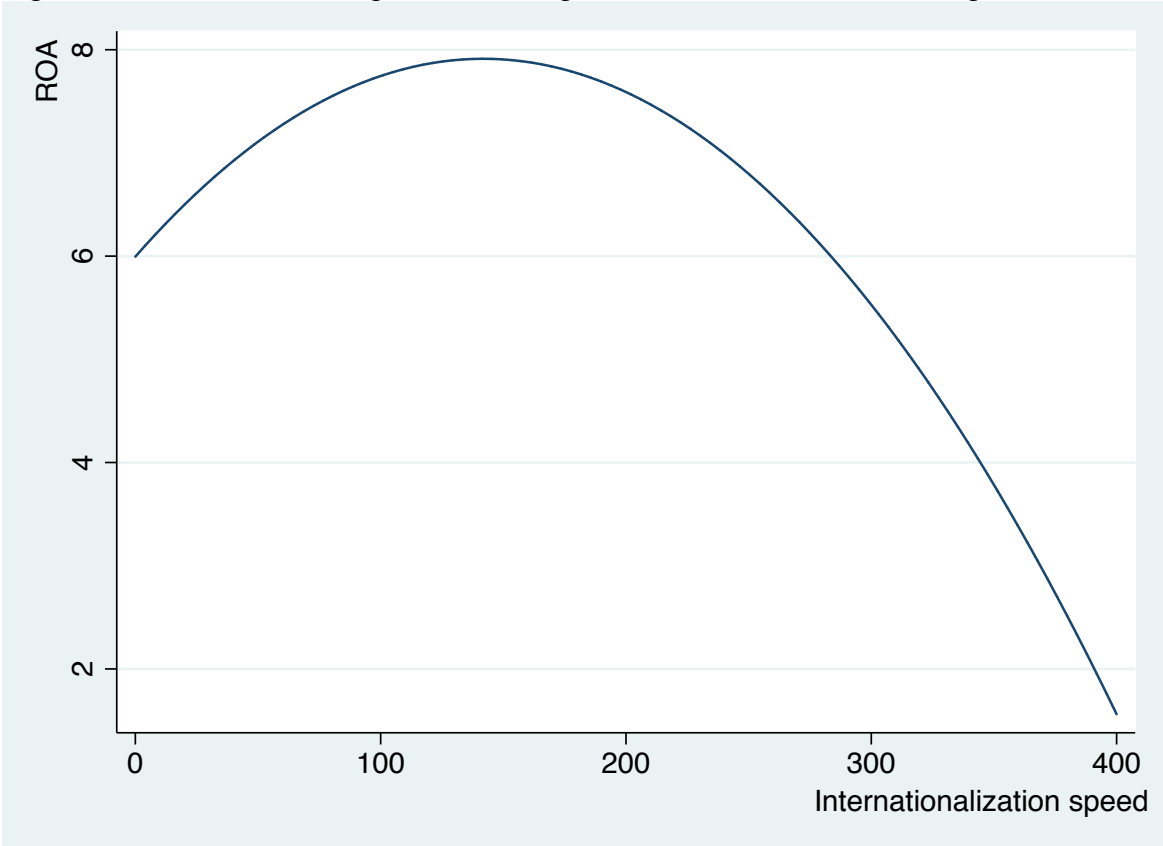


Figure 3. The inverted U-shaped relationship between internationalization speed and ROE

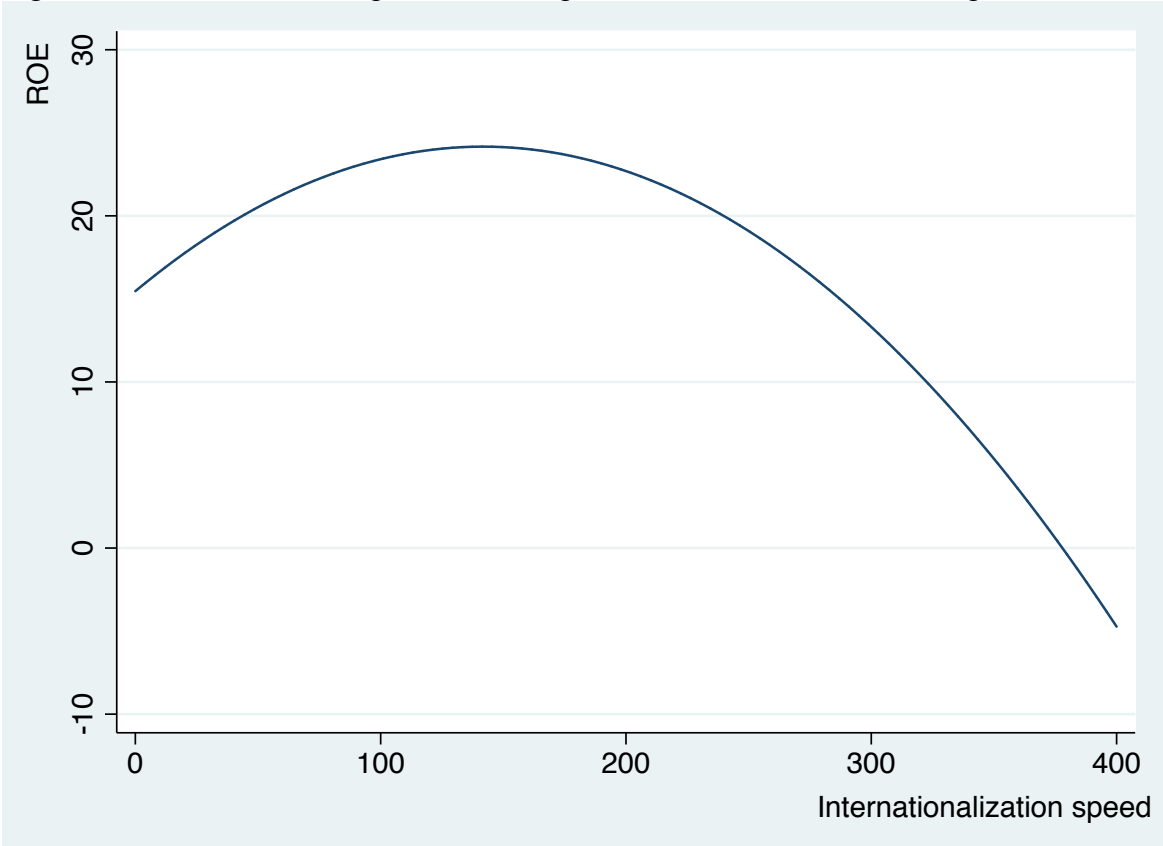
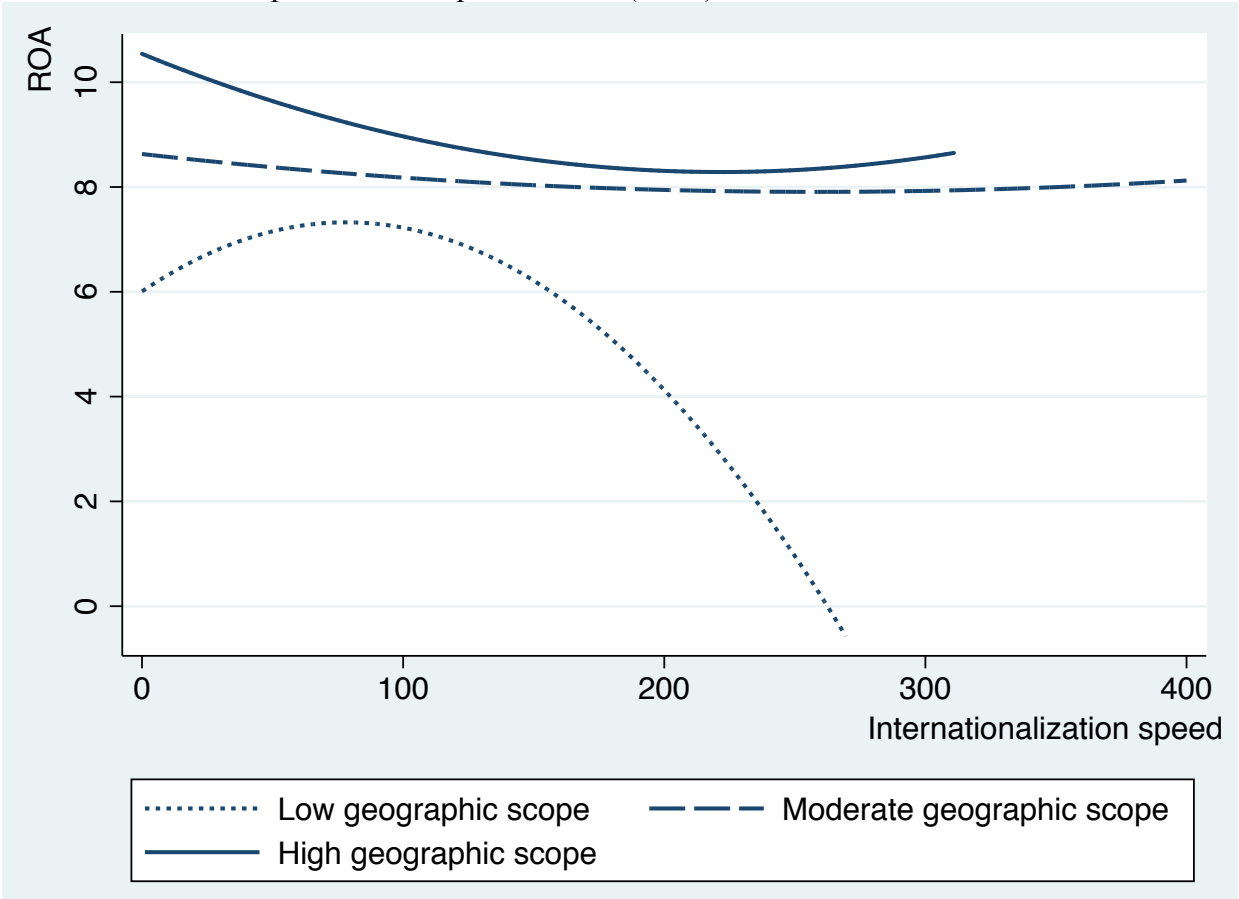
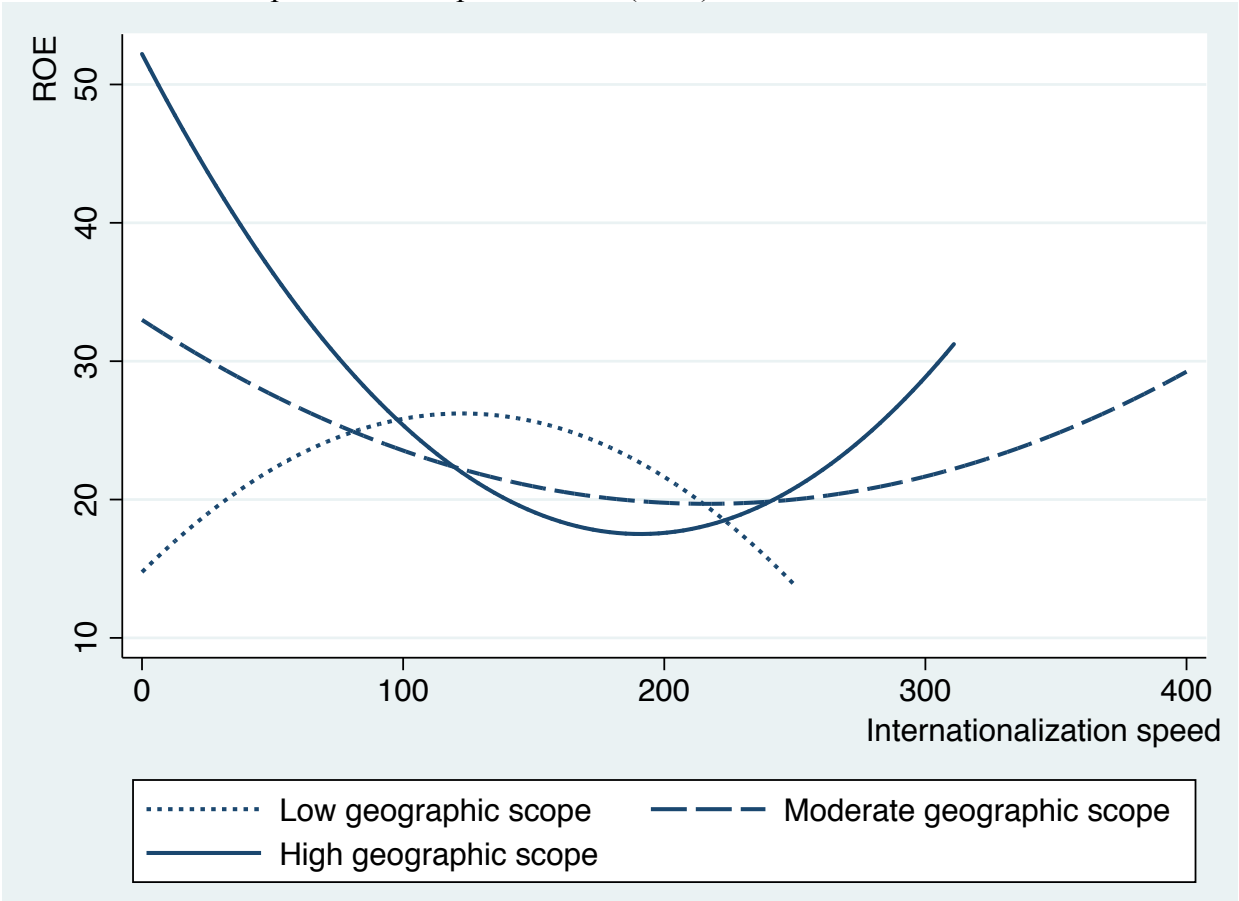


Figure 4. The moderating effect of geographic scope on the relationship between internationalization speed and firm performance (ROA)



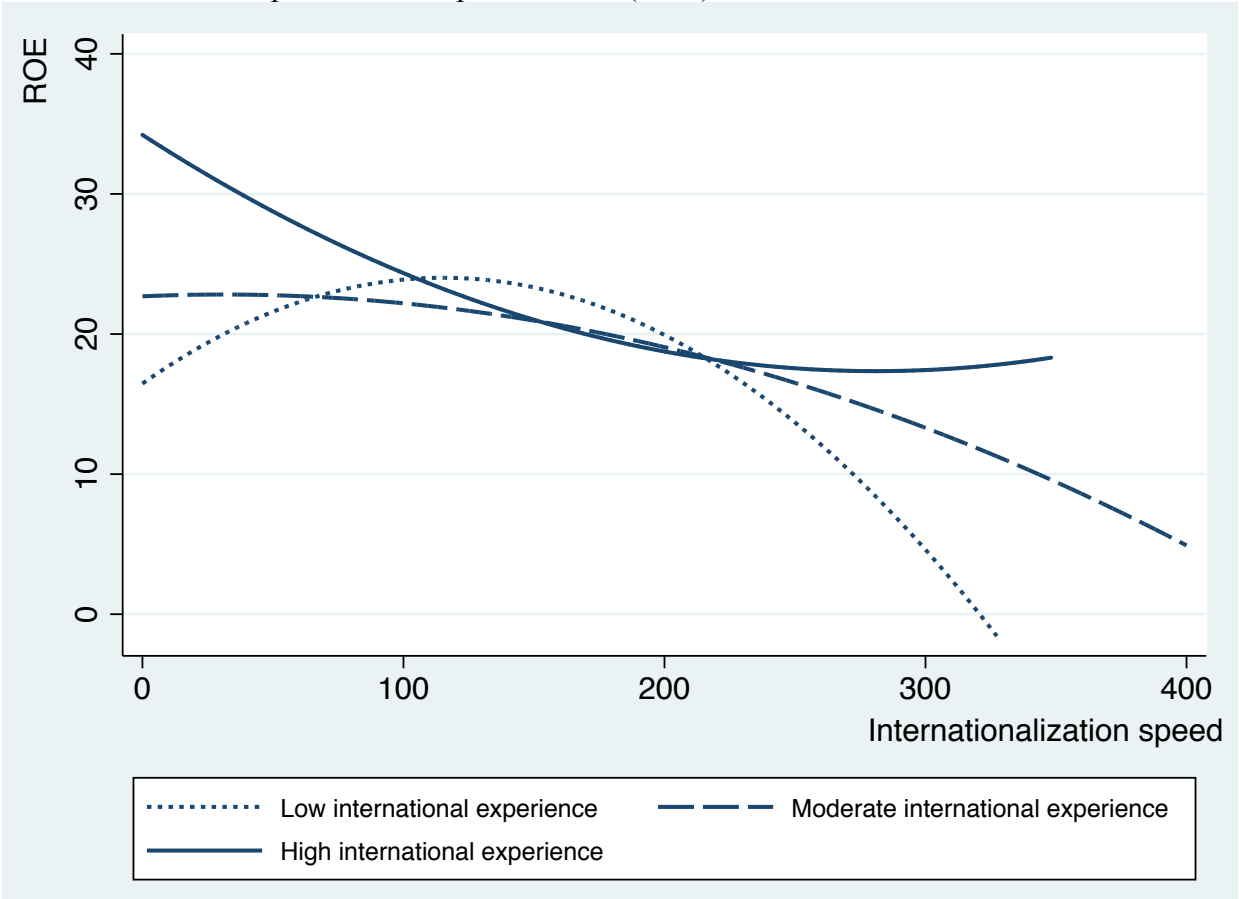
Note: Geographic scope and internationalization speed are lagged one year.

Figure 5. The moderating effect of geographic scope on the relationship between internationalization speed and firm performance (ROE)



Note: Geographic scope and internationalization speed are lagged one year.

Figure 6. The moderating effect of international experience on the relationship between internationalization speed and firm performance (ROE)



Note: International experience and internationalization speed are lagged one year

TABLES

Table 1. Variables, short definitions, and sources

Variables	Definition	Source
ROA (%)	The percentage (%) ratio of net income to total assets	PlanetRetail
ROE (%)	The percentage (%) ratio of net income to total equity	PlanetRetail
Speed	The average number of foreign outlets divided by the number of years since the MNE's first international expansion	PlanetRetail
Geographic scope	The total number of foreign countries in which the firm operates	PlanetRetail
International experience	Sum of years in an overseas market across all entered overseas markets	PlanetRetail
Age	Year of observation minus year of inception	ORBIS
Size	Natural logarithm of the MNE's total number of employees	ORBIS
Intangible assets (%)	The percentage ratio of intangible fixed assets to total assets	ORBIS
Leverage (%)	The percentage ratio of debt to total assets	ORBIS
Market position	A firm's gap from the market leader (of the retail segment) in terms of total banner sales	PlanetRetail
Rhythm	The kurtosis of the count of new international expansions made by a retailer each year	PlanetRetail
Regional concentration (%)	Ratio of home region banner sales to total banner sales	PlanetRetail
Added cultural distance	After computing the cultural distances between a host country and all existing countries a firm already operated in, we took the smallest of these distances (i.e. the added cultural distance). In the case of more than one entry in a given year, we summed up the added distances for all the entered countries.	The Hofstede Centre
GDP/Capita range	The logged difference between the highest GDP/capita country and lowest GDP/capita country in which the MNE operates	World Bank Indicators (WDI)

Table 2. Correlation matrix and descriptive statistics

	Mean	Std. dev.	1	2	3	4	5	6	7	8	9	10	11	12
1 ROA (%)	6.27	6.36	1											
2 ROE (%)	19.33	42.01	0.52	1										
3 Speed	47.15	70.86	0.05	0.03	1									
4 International experience	66.29	99.15	0.10	0.10	0.41	1								
5 Geographic scope	11.93	16.58	0.25	0.15	0.49	0.77	1							
6 Market position	42.32	49.60	-0.02	0.00	-0.04	-0.16	-0.21	1						
7 Age	50.76	45.70	-0.10	-0.05	-0.02	0.09	-0.03	0.05	1					
8 Size	10.67	1.28	0.02	0.03	0.23	0.29	0.28	-0.32	0.06	1				
9 Intangible assets (%)	10.70	13.36	-0.22	-0.07	0.11	0.14	0.15	-0.22	0.08	0.12	1			
10 Leverage (%)	19.06	30.26	-0.04	0.07	0.06	0.11	0.19	-0.11	0.00	-0.04	0.08	1		
11 Rhythm	0.73	2.94	-0.05	-0.03	-0.05	-0.06	-0.09	0.06	0.08	-0.10	-0.01	0.03	1	
12 Regional concentration (%)	88.93	20.20	-0.07	-0.03	-0.30	-0.38	-0.41	0.05	-0.09	-0.16	-0.19	-0.07	0.10	1
13 Added cultural distance	0.63	0.93	-0.11	-0.07	-0.21	-0.26	-0.28	-0.02	0.01	-0.14	-0.05	0.04	0.08	0.21
14 GDP/Capita range	9.25	3.33	0.01	0.04	0.30	0.29	0.34	-0.18	0.03	0.24	0.18	0.05	-0.11	-0.24

Correlation coefficients with values greater than $|0.06|$ are significant at the 5% level.

Table 3. FGLS regression estimates on MNE performance (ROA)

	Model 1	Model 2	Model 3
Speed	0.0133*** (0.00465)	0.0158*** (0.00485)	0.0143*** (0.00471)
Speed squared	-7.56e-05*** (2.17e-05)	-0.000109*** (2.64e-05)	-9.12e-05*** (2.38e-05)
Speed x Geographic scope		-0.000512 (0.000323)	
Speed squared x Geographic scope		3.11e-06** (1.40e-06)	
Speed x International experience			1.61e-05 (5.29e-05)
Speed squared x International experience			1.12e-07 (2.65e-07)
International experience	-0.0101*** (0.00249)	-0.0101*** (0.00265)	-0.0147*** (0.00326)
Geographic scope	0.103*** (0.0212)	0.106*** (0.0219)	0.108*** (0.0214)
Market position	-0.00625** (0.00314)	-0.00483 (0.00319)	-0.00614** (0.00311)
Age	-0.0105* (0.00583)	-0.0112* (0.00581)	-0.00935 (0.00584)
Size	-0.397*** (0.138)	-0.360*** (0.137)	-0.368*** (0.139)
Intangible assets	-0.130*** (0.0155)	-0.129*** (0.0157)	-0.126*** (0.0158)
Leverage	-0.0211*** (0.00718)	-0.0236*** (0.00731)	-0.0204*** (0.00715)
Rhythm	-0.0502*** (0.0171)	-0.0489*** (0.0173)	-0.0491*** (0.0172)
Regional concentration	-0.0599*** (0.0145)	-0.0536*** (0.0152)	-0.0567*** (0.0149)
Added cultural distance	0.100 (0.0987)	0.113 (0.0996)	0.102 (0.0996)
GDP/capita range	-0.0576** (0.0285)	-0.0716** (0.0299)	-0.0555* (0.0290)
Constant	17.66*** (2.059)	17.39*** (2.139)	16.85*** (2.140)
Year dummies	Included	Included	Included
Home region dummies	Included	Included	Included
Observations	800	800	800
Wald χ^2	178.03***	208.66***	186.50***

Notes: FGLS estimator that is robust to first-order panel-specific autocorrelation (AR1) and heteroskedasticity. Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10; Independent and control variables are lagged one year.

Table 4. FGLS regression estimates on MNE performance (ROE)

	Model 4	Model 5	Model 6
Speed	0.0475** (0.0240)	0.0323* (0.0191)	0.0375* (0.0221)
Speed squared	-0.000217* (0.000125)	-0.000209** (9.64e-05)	-0.000146 (0.000111)
Speed x Geographic scope		-0.00980*** (0.00146)	
Speed squared x Geographic scope		4.21e-05*** (6.30e-06)	
Speed x International experience			-0.000929*** (0.000298)
Speed squared x International experience			4.16e-06*** (1.56e-06)
International experience	-0.0509*** (0.0163)	-0.0519*** (0.0116)	-0.0283* (0.0159)
Geographic scope	0.258** (0.122)	0.722*** (0.0965)	0.236** (0.104)
Market position	-0.0419** (0.0200)	-0.00456 (0.0124)	-0.0389** (0.0185)
Age	-0.0438* (0.0263)	-0.0468** (0.0227)	-0.0518** (0.0246)
Size	-0.329 (0.680)	0.166 (0.490)	-0.186 (0.580)
Intangible assets	-0.442*** (0.0697)	-0.398*** (0.0587)	-0.396*** (0.0662)
Leverage	0.0300 (0.0534)	0.0220 (0.0449)	0.0222 (0.0504)
Rhythm	-0.0973 (0.0882)	-0.0442 (0.0788)	-0.0940 (0.0867)
Regional concentration	-0.225*** (0.0634)	-0.0453 (0.0487)	-0.150** (0.0602)
Added cultural distance	-0.363 (0.686)	-0.340 (0.620)	-0.173 (0.671)
GDP/capita range	-0.0972 (0.200)	-0.447** (0.181)	-0.164 (0.195)
Constant	44.52*** (9.271)	30.58*** (7.365)	39.37*** (8.794)
Year dummies	Included	Included	Included
Home region dummies	Included	Included	Included
Observations	775	775	775
Wald χ^2	78.16***	169.21***	86.14***

Notes: FGLS estimator that is robust to first-order panel-specific autocorrelation (AR1) and heteroskedasticity. Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10; Independent and control variables are lagged one year.