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## The internationalization: a driver of business volume? The case of Euronext 100 multinational companies between 2005 and 2009

### Abstract

The question of the impact of internationalization on performance has been discussed in the international management literature for more than three decades. Yet the form of the relationship between international expansion and performance remains a controversial issue, with empirical studies producing conflicting results. Most research on the relationship between internationalization and performance has provided evidence of an inverted U relationship. Beyond a threshold of internationalization reflecting a degree of cultural, economic and institutional heterogeneity, research indicates that coordination costs tend to outweigh the economic benefits. At the same time, the impact of the international profile on the volume of business has not been empirically tested, despite the fact that it is considered to be the primary means by which internationalization creates value. The proponents of the regionalist approach have provided evidence suggesting that the activities of almost all multinationals tend to be concentrated in the home region. However, this does not imply that regionalization is associated with a higher turnover in all geographic markets.

**Keywords:** internationalization, multinationals, turnover, Euronext.

**JEL Classification:** M16, F23.

### Introduction

The difficulties associated with a global examination of the link between internationalization and performance can be avoided by examining the impact of internationalization on the volume of business based on an individualized approach to internationalization. An approach along these lines also improves our understanding of the various components involved in the relationship, while helping to rationalize the international profile at the different stages of the process of internationalization (Prange, Verdier, 2011) based on a more comprehensive approach. Companies struggle to generate profits in the early stages of international expansion. New foreign market entrants will tend to focus on growth and increased market share by adapting to the demands of local customers. This requires a decentralized use of resources at the expense of potential economies of scope (Han, 2005), one of the foundations of the expected benefits of internationalization. Therefore, the strategic relevance of international expansion is not undermined by the non-maximization of returns – thus highlighting the value of examining the impact of internationalization on the volume of business (and not only on performance).

Based on the literature, the indicators used to operationalize the international profile of companies involve either the geographical distribution of sales or the share of foreign subsidiaries in total sales and assets. It is important to note that only the latter indicator takes account of foreign market entry. The first set of indicators (i.e. the geographic dispersion of sales) implicitly includes the distance between the targeted geographic markets, while the second set of

indicators operationalizes foreign direct investment and foreign market entry. Studies in this area have never examined the two dimensions simultaneously, with the exception of Goerzen and Beamish (2003)<sup>2</sup>, though only to a limited extent. However, the relocation of the value chain can have an impact on the capacity to generate growth through international expansion. Contractor (2007) showed that achieving this objective requires a strategy of export and direct investment involving participation in the capital of the foreign firm. This provides support for an indicator of internationalization strategy that combines distance and foreign market entry based on a simultaneous consideration of the geographic distribution of sales, assets and employees.

The links between growth trajectories and the internationalization profiles of Euronext 100 companies between 2005 and 2009 will be examined based on an empirical study of internationalization. First, a principal component analysis will be used to define the structure of the sample based on the volume of business, asset turnover ratio and growth trajectory. The individual classes highlighted by the principal component analysis will be compared based on equality of means tests in terms of the degree of internationalization. The development of a typology requires a consideration of growth trajectory rather than the level of activity, thus confirming the relevance of a dynamic approach – an approach that remains largely unexplored. The results indicate that internationalization profiles associated with moderate levels of geographic distribution of assets and employees achieve the most favorable growth trajectories (compared to low or high levels of geographic

<sup>2</sup> Goerzen and Beamish (2003) operationalized the internationalization profile based on the geographical dispersion of sales and the workforce.

dispersion). Research indicates that company profiles involving moderate levels of dispersion have been less affected by the crisis. By contrast, no significant result was found when the international profile was based on the geographic distribution of sales (consistent with most empirical studies).

Section 1 reviews the literature on the relationship between the degree of internationalization and the volume of business. Section 2 focuses on the empirical study and presents the sample, the variables and the method. Section 3 presents and discusses the results.

### **1. Degree of internationalization and the volume of business**

Empirical studies in this area generally examine the relationship between the internationalization profile and performance without distinguishing between sales and operating costs as performance indicators. Yet the general assumption is that the economic benefit of internationalization primarily involves expansion of the business volume beyond a saturated domestic market. Provided the global market (i.e. all geographic markets taken together) benefits from expansion, the company may see its negotiating power with geographically dispersed customers considerably strengthened, thereby increasing its turnover (Contractor, 2007). Sethi et al. (2003) identified the level of GDP and wages as key determinants of the location of American multinationals in Western Europe based on a study of foreign direct investment flows and stocks. This is interpreted as an indication of the attractiveness of the potential market, its growth and general purchasing power in the host country.

Contractor (2007) also highlighted the combination of significant size and multinationalization as a factor of cartelization. A multinational can increase its market power, in particular by developing technical standards and protocols that promote increased business volume, while also enabling it to generate super profits.

Internationalization is also seen as an opportunity for companies to optimize the lifecycle of their products by transferring them from mature to emerging areas, thus extending product life cycles affected by greater international competition (Vernon, 1966).

Another part of the literature focuses on the learning effects of internationalization. Diversity (i.e. the cultural, institutional and competitive diversity of the environments in which companies operate and consumer behavior) broadens the skill and knowledge base of companies, in addition to improving their technological and marketing capabilities. Barkema and Vermeulen (1998) found that the degree of multi-

nationalization is accompanied by an increased propensity to expand internationally through start-ups (as opposed to acquisitions), thus highlighting the experience effect of internationalization. Since the skills acquired in the home country cannot be applied directly to other markets, internationalization requires a degree of operational flexibility (Bartlett and Ghoshal, 1989) – a key capability in changing environments. In this sense, a multinational is able to use the skills developed on foreign markets on its domestic market, thus competing with domestic firms that are unable (by definition) to use the same skills (Barkema and Vermeulen, 1998).

However, the advantage of internationalization is to some extent offset by competition with local firms, as shown by Hymer (1976) as early as the 1970s. Hymer spoke of ‘the stigma of being foreign’ – a stigma that tends to be greater when the cultural and institutional distance with the home country is significant. Local firms also tend to have a better knowledge of the market and economic environment. Eden and Miller (2004) emphasized non-familiarity with the market and institutions of the host country as a key characteristic of foreign companies that have recently entered the country. This disadvantage can take the form of excess operating costs or limited market penetration penalizing foreign firms in terms of business growth. According to Eden and Miller (2004), a degree of experience of international business partly overcomes this disadvantage, which may also take the form of discrimination by the authorities – a political risk for multinationals (Henisz and Williamson, 1999). Even in the absence of legal and regulatory barriers to entry, stigmatization can come from within the host country – for example, from local consumers engaging in economic nationalism by supporting domestic firms (Balabanis et al., 2001). However, Eden and Miller (2004) only examined the impact in terms of operating costs, thus viewing revenue flow as a datum. Yet it seems reasonable to assume that the volume of business will also be affected.

However, it is important to note that internationalization may not necessarily result in an increased volume of business. The point is to consider the intensity of internationalization rather than a mere presence on foreign markets, given the coordination efforts required in a multinational context and the increased pressures on information processing, which are likely to slow down the decision-making process. Internationalization may be detrimental to responsiveness, thereby limiting business growth – a key argument in favor of an inverted U or S-shaped relationship between the degree of internationalization and performance, as noted in the literature (Rui-

gok et al., 2004). More specifically, coordination requirements increase in line with the increase in intra-organizational diversity and the distance between operational units. The 'CAGE'<sup>1</sup> framework developed by Ghemawat (2001) emphasizes cultural, administrative, geographic and economic distance. Because of the differences between geographic markets, products need to be adapted to local needs, resulting in greater managerial complexity linked to a high level of internal diversity.

Distance prevents the direct transfer of surplus strategic assets<sup>2</sup> from one geographical area to another when assets are location-specific (Rugman, 1981). According to internalization theory (Rugman, 1981), internationalization represents an opportunity to use surplus strategic assets that are not suitable for trade because of their specificity to the company. From a transaction costs perspective, their use in an administrative structure will be less costly than their use in a trade setting (Williamson, 1990).

Research also suggests that when surplus assets are specific to the home region, their use in regions outside the domestic market may be counter-productive unless they are adapted to the local environment. This reflects what Bartlett and Ghoshal (1989) described as a 'necessary balance between integration and responsiveness'. Bartlett and Ghoshal argued that the greater the distance between the domestic and the foreign market, the greater the complexity of the coordination of operational activities in different cultural and cognitive areas. Bartlett and Ghoshal introduced an additional parameter involving the capacity to transfer strategic assets from the domestic market to other geographical areas. They also distinguished assets according to their position in the value chain at the operational and strategic level of the company structure.

The international profile of the company will depend on assets that are specific to each location (whether they are linked to the market or the productive system). Bartlett and Ghoshal identified three profile types: multinational, international and global. The validity of the model developed by Bartlett and Ghoshal was later challenged by Rugman and Verbeke (2008) on the grounds that it is unsupported by evidence. According to Rugman (2005), a regional approach is more relevant for the analysis of the activities of a multinational enterprise since firms with a global profile represent only a minority of companies at a global level.

Rugman (2005) proposed a conceptual framework built on the model developed by Bartlett and Ghoshal (1989), but also included the specific location advantages of the targeted markets in order to explain internationalization profiles. Rugman's model posits that the internationalization profile is the result of the combination of the geographic scope of the company's strategic advantages and the location advantages of the host country. The findings of the study by Rugman and Verbeke (2008), indicating that a global profile characterized by a significant presence in all regions is the exception rather than the rule, are the result of the limited international transferability of strategic advantages, at the basis of the 'regionalist thesis'. The authors found that, on average, nearly three quarters of the sales of 320 Fortune 500 companies (out of a total of 380 companies for which information was available) are made in the home region, irrespective of sector. These findings apply to the entire value chain. For example, Rugman (2005) noted that research and production activities tend to be decentralized (though to a lesser extent in the electronics sector, where transport costs are relatively low compared to assembly costs) in order to respond to the specificities of the market. As a result, economies of integration remain possible, but only at an intra-regional level. The results of the study by Oh (2009) also highlighted the predominance of the regional profile in a sample of 227 European Fortune 500 multinationals between 2000 and 2006.

The findings of the study by Rugman and Verbeke apply even when the thresholds of the typology developed by Rugman (2005) are relaxed. Based on a different typology and less restrictive thresholds than those used by Rugman (2005), Aguilera et al. (2007) also found that companies with a global profile were in a minority, although their results question the predominance of the regional profile (while highlighting the importance of bi-regionalization).

Rugman and Sukpanich (2006) went further by explicitly and empirically testing the impact of profile (i.e. regional, bi-regional or global<sup>3</sup>) on performance according to the nature of strategic assets. Their study found that assets associated with size tend to be used more productively by global and bi-regional firms. In service activities, and in the specific case of strategic technological assets, the performance advantage tends to be greater when firms remain in their home region. In this sense, the materiality of the activity combined with the nature of surplus strategic assets appears to determine the international profile.

<sup>1</sup> CAGE stands for 'Cultural, Administrative, Geographic, Economic'.

<sup>2</sup> These may include skilled work, brands, technological knowledge, efficient production processes, and organizational capabilities.

<sup>3</sup> Consistent with the typology developed by Rugman (2005).

The foregoing results appear to support the idea of an inverted U relationship between the degree of internationalization and the volume of business. A number of postulates need to be tested. Four hypotheses are proposed: H1 and H3 imply a static approach, while H2 and H4 imply a dynamic approach.

## 2. The empirical study

**2.1. The sample.** The sample consists of European companies listed on the Euronext 100 between 2005 and 2009. Companies that are not in the index over the entire period are not considered. Basically, financial institutions, real estate development companies and entities with special status were eliminated, i.e. those with strong participation of the Government, their logic is not necessarily capitalistic. The final sample contains 68 companies.

**2.2. Variables.** The variables are computed from the consolidated financial statements and defined for each year of the study period.

**2.3. The degree of internationalization.** The geographical localization results from the combined consideration of degrees of geographic dispersion of respectively turnover, the workforce employed and segment assets. The typology of geographical areas used as reference is mainly continental, resulting from the information available in annual reports. The typology of reference, therefore, includes four geographical areas: Europe, the USA, Asia – Pacific Africa – Middle East. It is the Appendix note<sup>1</sup> on segment information which is used, the firms from the sample are all subject to IFRS norms, which ensures the comparability of financial indicators used.

Taken in addition to the geographical dispersion of sales, those of the workforce employed and segment assets have the advantage of crossing the implementation and the distance. Indeed, existing empirical studies (with rare exceptions) operationalize the degree of internationalization either by the geographic dispersion of sales (which do not allow us to distinguish whether the firm is a simple exporter or relocates certain links of its value chain) or by the contribution of foreign subsidiaries to the group's turnover, which considers direct investment in the form of equity participation and the implementation but ignores the heterogeneity of localization in geographic terms. Moreover, the entropy index is the degree of dispersion, calculated from continental structures of sales, workforce and assets.

<sup>1</sup> The notes included in the financial reports of the companies included in the sample.

**2.4. The size.** It is measured by the levels of turnover, the workforce employed and total assets.

Table 1. Indicators taken into account for each year of the study period

Variables	Notation
Sales geographic dispersion (Eca)	Eca = Entropy (*) calculated on the geographic structure of sales
Workforce geographic dispersion (Eeff)	Eeff = Entropy calculated on the geographic structure of the workforce
Assets geographic dispersion (Eta)	Eta = Entropy calculated on the geographic structure of assets
Level of sales (CA)	CA
Level of assets (TA)	TA
Level of the workforce (Eff)	Eff

Note:  $*Entropy = \sum P_i * \ln(1/P_i)$ , where  $P_i$  is the weight of the geographic area  $i$  (in sales, workforce or the total of assets).

**2.5. The method.** A principal component analysis (PCA) aims at structuring the sample according to the trajectory of growth over the period, according to a dynamic view of the relationship between the degree of internationalization and the business volume. Then, an analysis of variance is achieved in order to compare the classes provided by the PCA in terms of the degree of internationalization through the geographic dispersion of the turnover, the assets and the workforce employed.

**2.6. The results.** The PCA provides five classes according to the trajectory of growth in the turnover, the assets and the workforce employed, on a worldwide basis. The trajectory of growth for each of these three variables is different. It should be stressed that the third identified class includes nearly half of the sample, which could be considered as a limit to the discriminating power of the PCA.

The analysis of variance enables to compare those classes in terms of the degree of internationalization through the entropy indices. It appears that the geographic dispersion of the assets (except in 2009) and the workforce (in 2008 and 2009) are able to structure the observations (at the 10% level of risk), the geographic structure of the turnover not being discriminating.

This shows how important it is to capture the degree of internationalization through the location of assets. Internationalization turns out to go with an increase in the turnover level only when it is associated to the location of the assets and the workforce abroad. As a consequence, the export activity is not able to structure the sample. Here is the classification highlighted: category 5 < category 1 < category 4\* < category 3\* < category 2\_(\* according to whether the geographic dispersion of the assets or the workforce is considered). It is worth pointing out that the trajectories of growth are the most favorable for the types 3 and 4.

This would reflect a U inverted curve for the relationship between the degree of internationalization and the change in the activity level, the types 3 and 4 being characterized by the moderate degrees of internationalization. Moreover, the companies for which the trajectory of growth is the less favorable appear to be not different in terms of the geographic dispersion. Additionally, the firms which level of activity is relatively steady (type 5) are the less internationalized ones. Eventually, the companies belonging to the third category, for which the trajectory of growth is the most favorable with a mo-

derate degree of internationalization, are the only-firms that have become more internationalized over the period. The geographic dispersions of the turnover, the assets and the workforce appear as not being convergent. This could show the potential complementarities between these three variables that could be considered as three complementary dimensions of the internationalization strategy. Such a result shows how important it is to capture the international profile combining the three simultaneously. Then H2 and H4 are validated (at the 10% risk level); H1 and H3 are rejected.

Table 2. The results of the variance analysis (only the significant ones at the 10% risk level)

		Sum of the squares	ddl	Average of the squares	F	Signification
eef8	Inter-groupes	.461	4	.115	2.285	.070
	Intra-groupes	3.126	62	.050		
	Total	3.587	66			
eef9	Inter-groupes	.475	4	.119	2.388	.061
	Intra-groupes	3.085	62	.050		
	Total	3.560	66			
eta5	Inter-groupes	.500	4	.125	2.788	.034
	Intra-groupes	2.778	62	.045		
	Total	3.278	66			
eta6	Inter-groupes	.419	4	.105	2.267	.072
	Intra-groupes	2.862	62	.046		
	Total	3.280	66			
eta7	Inter-groupes	.406	4	.101	2.395	.060
	Intra-groupes	2.625	62	.042		
	Total	3.031	66			
eta8	Inter-groupes	.393	4	.098	2.178	.082
	Intra-groupes	2.801	62	.045		
	Total	3.194	66			

## Conclusion

Our results show a U inverted curve between the degree of internationalization and the change in the turnover. This could be expressed as the coordination costs through a lower responsiveness and a decrease in the turnover which represents an opportunity cost. On the other hand, the results show that the relocation of the assets abroad represents a necessary condition for moderate levels of the internationalization degree to be associated with an advantage in terms of turnover. Additionally, this gives confidence that the internationalization strategy should be captured

by crossing distance and location, not only through the export degree. However, except Goerzen et al. (2003), the studies usually consider either the geographic dispersion of the sales or the weight of the foreign subsidiaries into the total assets or turnover.

The empirical evidence could have been improved by exploiting a typology of the geographic areas better than a continent based one. Nevertheless, our results appear to be better than the Triad, which is commonly used. It would have been interesting to also consider the experience of internationalization (Glaum and Osterle, 2005).

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