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Influence of the capacities of top management on the internationalization of SMEs

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International diversification strategies require managerial skills capable of positioning businesses efficiently within a complex international environment. Based on resources and capabilities theory, this study examines the relationship between top management characteristics (age, education, professional experience, and language knowledge) and the international diversification of a given business. It also follows on from Herrmann and Datta's work (2005) by analysing the relationship between these managerial characteristics and SME performance. The analysis is based on a sample of 219 SMEs with international diversification strategies from the La Rioja (northern Spanish region). Regression techniques were used and the results confirmed the existence of a material relationship between a number of managerial characteristics and geographical diversification strategies for SMEs. Empirical evidence was also obtained of the relationship between Spanish SME profitability and certain managerial attributes according to their level of international diversification. Finally, the potential implications of the results of this study for both researchers and real businesses are also discussed. Policy-makers and public agencies can benefit from these results: the development of certain attributes in TMTs strengthens the development of international diversification policies, thus allowing SMEs to improve risk diversification and protection against exchange rate fluctuations.

Keywords: international diversification; top management team; SMEs

1. Introduction

During the last two decades, the phenomenon of company internationalization has acquired remarkable attention (Manolova et al. 2002). Different aspects such as globalization, the dilution of trade barriers, or the significant increase in economic-business transactions in the euro zone have prompted many small and medium enterprises (SMEs) to consider international development as a core component of their managerial strategy (Knight 2001; De Chiara and Minguzzi 2002; Winch and Bianchi 2006; Wolff and Pett 2006). This fact has not gone unnoticed by companies based in Spain and specifically in the Autonomous Community of La Rioja. In fact, the international activity of companies based in this region has gradually increased,

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with more and more SMEs selling a larger proportion of their products in foreign markets.

Companies wishing to strengthen their international strategies require different resources, including directors with the characteristics and skills necessary to position the company effectively in this complex international environment (Cavusgil and Nevin 1981; Etemad 2004; Kumcu, Harcar, and Kumcu 2004). Therefore, the main aim of this study was to identify and analyse the attributes or skills SME management teams must possess in order to, first, foster the growth and development of their companies, and consequently the local areas and regions where they operate, and, second, acquire greater international competitiveness.

Studies focusing on this type of research draw from resources and capacities theory and are based on the notion that the observable experiences of directors are valid proxies for understanding their abilities, capacities, and knowledge and consequently influence their potential impact on the chosen strategy and performance of the company (Kundu and Katz 2003; Wiklund and Shepherd 2003). Kuratko (2006) highlights that much research in recent years has focused on performance in small companies and this is currently being examined from different perspectives (Westhead, Ucbasaran, and Wright 2005), including the study of international diversification (McDougall and Oviatt 2005).

That is the focus of this study, which tries to compensate for the noteworthy lack of studies that analyse the relationship between top management characteristics and business internationalization strategy (Lohrke and Bruton 1997; Hermann and Datta 2005). Specifically, *this research aims to examine how the international diversification strategies of SMEs are developed according to the characteristics of their management teams (TMTs)*. To do so, we used the definition of 'international diversification' proposed by Hitt, Hoskisson, and Kim (1997, 767), who defined it as 'expansion of companies across the borders of global regions and countries into different geographic locations, or markets'.

In addition to studying the relationship between management attributes and international diversification strategy, and following on from the studies developed by Datta and Rajagopalan (1998) or Herrmann and Datta (2005), we tried to *determine whether better performing small- or medium-sized companies designed their international strategies according to certain characteristics exhibited by their management teams*.

We decided to focus on small- and medium-sized companies not just due to their great importance in the socio-economic fabric of any country (Wolff and Pett 2006) but because these types of organizations have greater difficulty in penetrating foreign markets (Wilson 2000). This is because they have fewer capacities and resources and less market power than multinational companies (Winch and Bianchi 2006). Although SMEs can develop internationalization strategies with different degrees of commitment (licences, establishment of foreign sales offices, production plants, etc.), exports are considered to be the most common way of penetrating foreign markets because they entail less risk and require less available capital (De Chiara and Minguzzi 2002).

Following on from the studies by Wiersema and Bantel (1992) or Herrmann and Datta (2005), this research focused on analysing the characteristics of company directors (rather than CEOs) because, as explained by Hambrick and Mason (1984), business strategy decisions are rarely determined exclusively by a single individual and are normally the responsibility of top management as a whole.

Thus, the study contributes to international management literature by providing empirical evidence that can be useful for understanding whether the international strategy of a given SME is determined by the characteristics of its directors. Similarly, the study examines the relationship between the characteristics of company directors and international diversification strategy according to SME performance (Madsen 2007).

With the purpose of reaching these investigation objectives, we have used the correlation analysis and the regression models OLS, taking as dependent variable a ratio of international diversification and as explanatory variables the characteristics of the directive team. In order to achieve these research objectives, correlation analysis and ordinary least squares (OLS) regression models were used with an international diversification ratio as the dependent variable and management characteristics as the explanatory variables.

The study begins with a review of the theoretical framework and presentation of the research hypotheses. The description of the methodology used is followed by the research results and main conclusions and implications of the study.

2. SMEs and their role in international business

In spite of the great importance of SMEs in economic activity, most such firms do not participate actively in international business. As described by Cuervo-Cazurra, Maloney, and Manrakhan (2007), the internationalization of these firms may be hindered by different causes, including the loss of competitive advantage in foreign markets, the creation of disadvantages, or the lack of complementary resources. Numerous studies have identified these causes as technical restrictions to trade or insufficient financing, information, or resources, although the main cause highlighted in these studies is the existence of insufficient management capacities. These are reflected in a lack of commercial orientation, strategic vision, insufficient international and management experience, languages, etc. (Orlandi 2006). The key success factors are defined by management training in business and languages, as well as market knowledge. O'Cass and Julian (2003) affirm that company directors are the key element when it comes to guiding companies in the start-up, development, maintenance, and success of exporting activities. Similarly, human capital improvements, generating incentives to create personnel training programmes, foreign trade techniques, etc. are one of the combined public-private sector actions that would create a favourable environment for SMEs to develop their internationalization processes.

2.1. *Why must SMEs internationalize?*

As SMEs internationalize, their chances of achieving competitive advantages increase, although the task becomes much more complex and diverse because in the international market they do not only depend on resource and capacity investment decisions and on the appropriateness of such decisions for the development of their sector (Guisado 2003). In this regard, Kaleka (2002) argues that the differences existing between foreign and domestic markets in terms of economic, legal, socio-cultural factors, etc., prompt companies to implement different strategies in each of these markets, which may allow them to obtain different competitive advantages in these two business scenarios.

2.2. Market selection strategy

Although existing literature considers that the international growth strategies of companies are one of the factors determining their export results, there is no consensus on the type of strategy – concentration or diversification – that yields the best results (Lee and Yang 1990; Nicolau, Ruíz, and Mas 2000; Mas, Nicolau, and Ruíz 2002). Exporting results are determined by the international growth strategy (concentration vs. diversification) selected by the company, as well as the selected export countries' markets. The selection of countries that are geographically and/or culturally similar can reduce uncertainty in decision-taking and encourage more proactive attitudes on the part of companies towards the development of their international businesses (De Luz 1993). However, once they have consolidated their position in these countries, they should try to diversify markets in order to minimize the dependency of sales, growth, or profitability on exports in one or a few countries' markets (Navarro 2002). Authors who analyse the benefits of market diversification strategies (Aulakh, Kotabe, and Teegen 2000) argue that these allow companies to minimize risks, cover larger markets, access greater economies of scale, have access to greater accumulated know-how on foreign markets, and obtain greater profitability from the organization's competitive advantages.

2.3. Performance of exporting SMEs

Many studies (Cavusgil and Kirpalani 1993; Cavusgil and Zou 1994; Naidu and Prasad 1994; Leonidou, Katsikeas, and Piercy 1998) have examined the impact of company and management characteristics on export performance. Many of their conclusions are difficult to apply to small enterprises, with the exception of those drawn by Chetty and Hamilton (1996), Nakos, Brouthers, and Brouthers (1998), Naidu and Prasad (1994), and Louter, Ouwerkerk, and Bakker (1991). Most studies have focused on large exporting companies. However, the specific factors determining the business success of these firms have revealed differences between SMEs and large companies (Caloghirou et al. 2004). Since the theme of the economic contribution of SMEs is attracting growing attention from researchers (Jaffe and Pasternak 1994), new explanations must be sought regarding the performance and strategies developed by companies. Studies such as the one performed by Acedo, Fernández-Ortiz, and Fuentes (2007) have helped to fill this gap. The results reported by the aforementioned authors confirm that SMEs operating in foreign markets obtain greater profits per asset than those obtained by firms that only do business in domestic markets. The source of greater economic profitability differs according to company size. Thus, while larger companies record greater profits per unit of sale (margin), SMEs obtain greater profitability through greater rotation, i.e. through more efficient use of their assets.

These results were part of the reason for our decision to focus on determining whether companies that obtain better financial results structure their managerial resources by orienting them towards international strategies that involve greater risk diversification.

3. Theoretical framework and research question

International studies were a dominant focus of Top Management Team (TMT) research. A notable element of these studies is their diversity in approaching the topic.

Thus, the role of company management has been analysed from different theoretical perspectives, including, most notably due to its contributions from the upper echelons perspective, literature on corporate governance and strategic management.

The upper echelons perspective proposes that a firm's behaviour is viewed as a reflection of the cognitive bases and values of powerful actors within the firms (Hambrick and Mason 1984).

Within the stream of research on corporate governance, authors such as Jensen and Murphy (1990) or Gomez-Mejia and Balkin (1992) argue that board monitoring of executive teams is made more difficult in complex environments that require complex business strategies; this is the case with internationalization strategies. Other authors (Simeon 2001) show that the characteristics of TMT reflect important aspects of the corporate governance strategies needed to manage business strategies such as internationalization. Another aspect studied from this perspective is the composition of TMTs and its effects on the strategies developed by companies (Michel and Hambrick 1992). In this respect, O'Sullivan and Diacon (2003) studied the relationship existing between the composition of top management teams and company development. This current of thought can be easily linked with strategic management since, as reported by Daily and Dalton (2002), an interesting element is the strong focus on relationships between governance issues and strategic change.

The relationship between management team characteristics and the strategic management of companies has been studied by different authors (Wiersema and Bantel 1992; Papadakis and Barwise 2002; O'Sullivan and Diacon 2003). In fact, the analysis of the demographic characteristics of top management is one field of study within strategic management that is often used to understand the cognitive role of management and the processes that yield strategic results (Ginsberg 1990). We may affirm that the demographic characteristics of top management play an important role in strategic decision-taking (Nahavandi and Malekzadeh 1993; Karami 2005; Amason, Shrader, and Tompson 2006). Hence, fundamental factors in this decision-taking process are the aggressiveness of the top management team, the attitude towards innovation, and the desire to assume risks. Carlock and Ward (2001) argue that a geographic expansion strategy such as internationalization produces satisfactory results in well-managed companies with strong management. Similarly, Herrmann and Datta (2005) considered the different types of demographic characteristics and the relationships between these characteristics and the level of international diversification of companies. Similarly, Dichtl, Koeglmayr, and Muellor (1990) divided specific management characteristics that influence export activity into two groups: subjective characteristics (aversion to risk, risk tolerance level, personal ambition, etc.) and demographic characteristics (age, education, professional experience, language knowledge, number and variety of trips abroad). The subjective characteristics of TMTs may be summarized according to the perception of the advantages and drawbacks of international activity, the defence of certain business objectives, and the degree of international orientation (Leonidou 2004; Belso-Martínez 2006).

The decision to focus this study on demographic characteristics was prompted by the fact that previous studies (Michel and Hambrick 1992; Wiersema and Bantel 1992; Bantel 1994) have found empirical evidence linking these characteristics and the international strategies of companies. A central premise of research into top management is that its cognitive aspects and communication processes within

management teams can be deduced from the demographic characteristics of these teams (Ginsberg 1990). We are specifically referring to age, education, professional experience, and language knowledge. Numerous researchers have shown that the cognitive and socio-psychological aspects of groups, such as TMT, can be deduced from the demographic characteristics of their members. In fact, Tihanyi et al. (2000) explored the relationship between TMT demographics and the international diversification of firms. These are therefore the aspects to keep in mind in our empirical study because we consider that in this way we will be able identify the socio-cognitive aspects of TMT that would affect the international diversification strategies of these companies.

3.1. Age

Different authors have argued that a negative relationship exists between age and entrepreneurial attitude (Karami 2005). Nevertheless, no conclusive and confirmatory results have been obtained in this regard. Ursic and Czinkota (1989) suggest that the age of the decision-taker is positively related to export propensity and intensity. Karami, Analoui, and Kakabadse (2006) did not find any empirical evidence of a relationship between age and the degree of company development. Other authors (Andersson 2000; Westhead, Ucbasaran, and Wright 2001) affirm that the skills, competencies, and relationships acquired by managers as they gain experience may influence the decision to enter foreign markets. Some authors also argue that organizations with younger directors are more likely to adopt riskier strategies (Hambrick and Mason 1984; Karami 2005) and more innovative growth alternatives (Norburn and Birley 1988). In fact, certain authors (Moon and Lee 1990) claim that younger directors play a more active role in export growth. More senior directors tend to be more averse to risk (Vroom and Pahl 1971), compared with younger directors who propose riskier innovation and growth strategies (Guthrie and Olian 1991). Obben and Magagula (2003) affirm that more tops directors are less committed to export activities than younger directors. In view of the foregoing, we proposed the following research hypothesis:

Hypothesis 1: The age of SME management teams is negatively related to the degree of international diversification.

3.2. Education

The education level of management is a particularly interesting aspect in small companies operating beyond their domestic markets. The long-term keys to performance include the ability to construct a global vision, formulate consistent strategic objectives, and develop positive attitudes toward risk and international knowledge. A highly-qualified management team will influence the degree of complexity and administrative sophistication of companies (through formal planning systems, more complex structures, and more detailed budgets) (Hambrick and Mason 1984). Moreover, highly-qualified directors presumably have better knowledge and ability for achieving the best organizational development. This means that they contribute more rationally to the decision-taking process and to obtaining more creative solutions to complex problems (Bantel and Jackson 1989).

In turn professional qualifications, which may be considered to be a reflection of their capacities (Wiersema and Bantel 1992; Datta and Rajagopalan 1998), have been positively correlated with stronger company commitment to foreign markets (Rogers 1995). In fact, different authors (Bantel and Jackson 1989; Michel and Hambrick 1992) suggest that the education level of both directors and employees is related to the knowledge, capacities, and abilities for resolving problems, motivation, self-esteem, and the development of formal strategies (Karami, Analoui, and Kakabadse 2006). A better-qualified management team can obtain more in-depth knowledge of foreign countries, as well as different markets and cultures. A high level of education, as well as greater associated socio-cognitive capacities, should allow company management to go beyond ethnocentrism in the strategic decision-taking process. For all those reasons, the development of international activities may become a very interesting objective for companies. The qualification level of management will increase the company's confidence in the decision-taking process, provide a broader range of views, increase risk tolerance, and make it more receptive to change (Obben and Magagula 2003). A higher level of education implies the accumulation of learning capacities, making the director a more capable person cognitively speaking. The socio-cognitive complexity of TMTs can be deduced from the education level of its members, or similarly greater socio-cognitive complexity of top management may be the result of the higher education level of its members (Ginsberg 1990).

These aspects play an important role in the capacity of directors to promote riskier strategies (Amason, Shrader, and Tompson 2006).

In view of all the foregoing, the following working hypothesis may be drawn:

Hypothesis 2: The professional qualifications of SME management teams are positively related to high levels of international diversification.

3.3. Professional experience

The director's professional experience, obtained through previous work, technical experience, or product knowledge has also been associated with levels of export activity (Obben and Magagula 2003). Directors with certain export experience in the management of international business operations (Cheong and Chang 1988) and/or who have spent time working abroad (Simmonds and Smith 1968) will have a closer perception of the foreign market, as well as greater exposure to foreign cultures.

These aspects allow them to gather more experimental knowledge of these international markets. The international experience of the directors is therefore considered to be an influential factor in determining the level of commitment of companies to foreign markets (Bourantas and Halikias 1991). International experience is associated with the development of directors' transcultural capacities and minimizes chauvinistic attitudes that may hinder their international careers (Adler and Bartholomew 1992). Sullivan (1994) acknowledges the influence of the international experience of directors in the internationalization of companies. Directors with more international outlooks will presumably find it easier to identify trade opportunities abroad (Zou and Stan 1998) and be more tolerant to risks associated with export strategy (Gray 1997) since the perception of the risk of international transactions decreases as international experience increases (Pla-Barber and Escribá-Esteve 2006). Wiedersheim-Paul, Olson, and Welch (1978) argued that

'individuals with higher levels of international orientation will probably perceive potential changes and opportunities in the foreign market more quickly'.

Athanassiou and Nigh (2000) observed that companies with more internationally-experienced TMTs are more likely to implement internationalization strategies. These authors argue that the experience accumulated by a company's managers can provide it with business or professional contacts developed by the managers in foreign markets, increase its chances of achieving growth, and export agreements (Reid 1983), enrich management capacity and increase the company's 'aggressiveness' and results in foreign markets (Da Rocha, Christensen, and Da Cunha 1990).

Some authors (Ursic and Czinkota 1989) have examined the importance of this variable on export results, and have reported a strong positive relationship. Sambharya (1996) showed that international diversification was positively related to the international experience of TMTs.

In relation to this aspect, we considered the following research hypothesis:

Hypothesis 3: The international experience of SME management teams positively influences company international diversification policies.

3.4. Language knowledge

In addition to reflecting one of the director's cognitive characteristics, such as his/her greater psychological proximity to certain foreign countries, it also reflects another aspect important in the company's preparations for export (Hambrick and Mason 1984). This factor influences two aspects in the export process: the initiation of the export process itself; and the results of this export activity. In terms of the first aspect, Roux (1987), Dichtl, Koeglmayr, and Muellor (1990), and Holzmuller and Kasper (1990) conclude that directors with good language knowledge are more likely to undertake export operations than directors who only speak one language. The second aspect (the results of export activity), analysed in terms of export propensity and export growth, has been positively associated with language knowledge by different authors, such as Moini (1995).

Escolano and Belso (2003) show that more skilled human resources, where language knowledge is considered to be an essential element, with a more favourable attitude towards the international development of the business, achieve higher levels of foreign trade. Thus, according to these authors, entrepreneurs, or directors responsible for the international business of a company must have knowledge of foreign languages in order for this aspect to have a positive impact on company performance. Of the above-mentioned we propose:

Hypothesis 4: Foreign language knowledge of SME management teams is positively related to company international diversification levels.

3.5. Implications in performance

Over the years, many authors have studied performance in small companies and this has recently been analysed in different fields of business administration and management research (Westhead, Ucbasaran, and Wright 2005). Some authors (Ramanujan and Varadarjan 1989; Ruzzier, Antoncic, and Hisrich 2007) have identified a positive relationship between company performance and different

internationalization strategies (Chatterjee and Wernerfelt 1991; Robins and Wierserma 1995; Wolff and Pett 2006). If we focus on the scope of international diversification, different authors (Qian and Li 2002) have carried out in-depth studies of the relationship between international diversification and management results. However, the conclusions drawn have been mixed (Contractor, Kundu, and Hsu 2003; Thomas and Eden 2004). Thus, while certain authors have identified a positive linear relationship (Han, Lee, and Suk 1998), other studies highlight a curvilinear relationship (Ruigrok and Wagner 2003). Moreover, some researchers have reported that the relationship is initially positive and then becomes negative (Gomes and Ramaswamy 1999), while other studies have identified initially negative relationships that eventually turn into positive relationships (Lu and Beamish 2004).

Traditionally, most research in this area stems from the fields of internationalization theory (Rugman 1981), in relation to the 'eclectic paradigm' (Dunning 1980), or internationalization theory (Buckley and Casson 1976). Recently, researchers who have used resources-based theory (Eisenhardt and Martin 2000) to explain the effects of diversification on company performance base their arguments on the notion that managerial success is positively related to the acquisition of unique, valuable and unusual resources, including knowledge (Grant 1996). Companies that have regularly achieved positive performance are more likely, from a financial standpoint, to capture more valuable directors (Madsen 2007). These often have abilities and knowledge particularly suitable for the development of international diversification strategies. Some authors have suggested that high-quality management, measured according to directors' characteristics, is more likely to yield satisfactory results for the company (Hambrick and Mason 1984; Leonidou, Katsikeas, and Piercy 1998; Analoui 2000; Analoui and Karami 2003). Variables associated with exporting SMEs are not the same as those associated with superior firm performance (Gesteira, Wright, and Ucbasaran 2004). For these reasons, we considered the following hypothesis:

Hypothesis 5: The relationship between the characteristics of the SME directors considered in Hypotheses 1–4 and international diversification exists in better-performing companies.

The relationships considered are reflected graphically in Figure 1. This figure shows the relationships considered as hypotheses to compare the research, as well as the expected sign of this relationship. As can be seen, the independent variables considered directly (managerial characteristics) influenced the international diversification policy (strategy of internationalization) adopted by the company. Likewise, these conditions indirectly influence business performance (firm return). Business performance affects the export concentration/diversification strategy. This last fact is reflected in the study through Hypothesis 5. The arrows in the figure are unidirectional, which implies that the internationalization strategy of each business depends, among other things, on the characteristics of its managers and the performance of the company itself. Both are considered in this study, but other aspects not covered in this research work, such as the organizational, human, technological, and relational resources, could also account for part of the 'international diversification' variance.

4. Methodology

The sample of companies studied was obtained from an customized survey carried out in 2005 among the population of SMEs in the Autonomous Community of

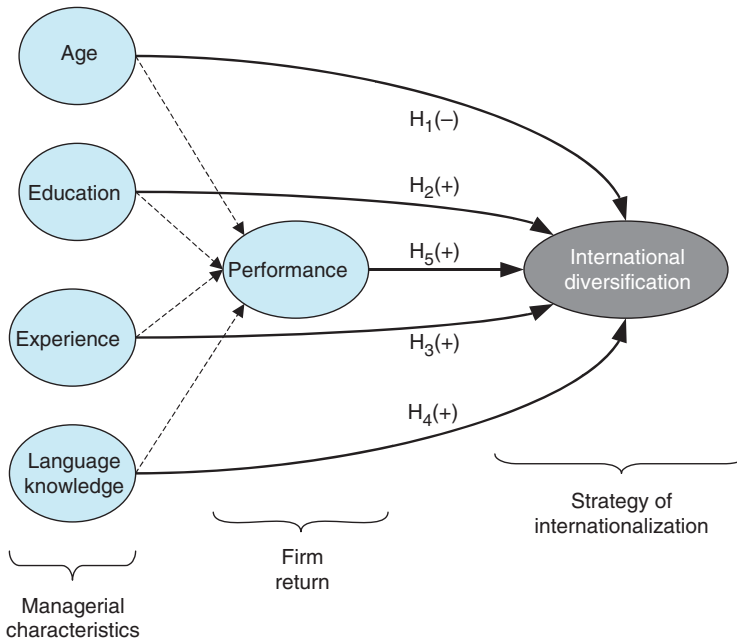


Figure 1. Graphic model of the relationships studied.

La Rioja, situated in northern Spain. For the purposes of this research, small- and medium-sized enterprises were defined according to the criterion established by the European Commission (1996), Euro-Info 88/ES.

When taking a sample of companies located in a relatively homogeneous geographical, cultural, legal, and political space, the potential impact of certain non-controllable variables on the results of the research is minimized (Amine and Cavusgil 1983). The final sample included 430 SMEs (there are 1350 SMEs operating in La Rioja, hence the response rate was 31.8%), of which 219 had export experience; these were the ones used in the study.

The region of La Rioja accounts for 0.75% of the GDP of Spain, with a cumulative growth of 23% from 2000 to the present date. The Spanish region's industrial profile is significant because of the predominance of small- and medium-sized enterprises and because of the high levels of specialization in traditional manufacturing industries: footwear (8.25% of the total value of the industrial production of La Rioja), furniture (3.2%), agrofood industry and wine production (43.7%). With these industries, we account for more than half of the industry in La Rioja. In turn, the industrial sector represents 23.32% of the total growth generated in the region. In terms of employment, these four industries represent 44.34% of industrial employment in La Rioja (30,761 jobs). These sectors, traditionally important to the region's industrial production, are nowadays facing important challenges due to factors such as globalization, personalization of markets, changes to employment, and labour market regulation. Asian countries and Eastern Europe have captured an important portion of these labour-intensive sectors. However, it is worth noting that the footwear industry had 311 companies and recorded foreign sales at 161.4 million euros in 2007, which implied an increase

of 47.6% (compared to the 17% growth of the exports in the region) from 2006 and turned it into the third best export good of La Rioja. Similarly, the competitiveness of the wine production sector has increased significantly as a result of the commercial pressure of the so-called 'new countries' (Chile, Australia, Argentina, etc.). In this regard, Rioja wine is the product that most contributes to regional wealth. In terms of exports, it is the first export product, i.e. 22% of value of these direct exports, and approximately 48% if complementary products are considered. Nevertheless, the combined pressure of technological opportunity and new international competitors has prompted firms to develop their managerial capacities and consider new channels, other than simply exporting, to access international markets.

The measurement instruments used were primary information, obtained by a self-administered postal survey, and secondary information, provided by the La Rioja Economic Development Agency. In terms of the primary information, the questionnaire contained questions on organizational, business, and managerial aspects relating to exports. The secondary information was used to complement the accounting, financial, and company information. A pre-test was performed with 16 export managers. The design and representativeness of the obtained sample was also evaluated. For this purpose, the Chi-square statistic was used to analyse the distribution of the sample by sector, size, company form, and age. This analysis showed that there were no significant differences between the obtained sample and the distribution of the study population. Moreover, no significant differences were observed between the companies that had answered the questionnaire and those that did not (student's *t*-test).

The dependent variable – *International Diversification* – was measured using a corrected ratio of Shannon's entropy measure. The criteria traditionally used to define foreign expansion strategies have focused on a multi-construct variable (Sullivan 1994; Thomas and Eden 2004) comprising the number of countries where the company operates, the number of product lines (Domínguez and Sequeira 1993), and the geographical dispersion of the target countries (Naidu and Prasad 1994). However, as postulated by Lee and Yang (1990), we believe that this method does not reflect the true multi-dimensional nature of the export growth of a company. For this reason, we created an indicator named 'GDESI' (geographical distribution of export sales index) to measure the geographical distribution of export sales strategy. This synthetic indicator has been used in research by Alonso and Donoso (1994), Hitt, Hoskisson, and Kim (1997), Rialp-Criado (1997), and Herrmann and Datta (2005). The formula is as follows:

$$\frac{\sum_{i=1}^6 V_i \text{Ln}(V_i)}{\text{Ln}(6)}$$

where V_i represents the company's sales in each area studied and Ln represents the neperian logarithm. In this case, and taking into account the export tradition of local SMEs, we took six different areas or markets (Northern EU, Mediterranean EU, Rest of Europe, USA-Canada, Latin America, and Rest of the World). This division was based on data obtained from the Spanish Institute of Foreign Trade. The index ranges between 0 and 1. Maximum index values would indicate more dispersed external growth strategies in a larger number of markets. In contrast, near-zero values would reveal a market concentration strategy.

As regards the independent variables, the *age* variable was controlled according to the average age of the directors in the management team of each SME (Michel and Hambrick 1992; Herrmann and Datta 2005). Their *education level* was also measured using a ratio corresponding to the number of directors with university degrees with respect to the total number of directors (Wiersema and Bantel 1992). International *professional experience* was reflected by the number of directors with six or more months' professional or academic experience abroad. The *foreign language proficiency level* of the management team was valued using a similar procedure to the previous ratio for qualifications.¹

Based on literature on international diversification, the control variables introduced were *company size* (Grant, Jammine, and Thomas 1988) (average number of workers on full-time employment contracts), *ROA* (Zahra and George 2000; Wolff and Pett 2006) (average return on assets in the company over the last five years), and *sector*. The latter was included as a dummy variable: '1' for SMEs engaging mainly in the industrial/manufacturing sector; and '0' for SMEs operating in the services sector (Thomas 2006). Variable 1 included the following industries: wine production, chemicals, agro-livestock, footwear, and furniture. The services sector included financial, IT, legal, security, and transport services. Table 1 shows the measurements of the variables.

Table 1. Measurement of variables of the model.

Variable	Estimator	Code	Measurement
Degree of international diversification	International diversification entropy index	GDSI	Corrected entropy index
Age	Average age of the management team	Clseded	What is the average age of the company's current management team?
Qualifications of management	Education and qualifications of the directors	Cualifd	How many directors in your company have university degrees?
International professional experience	International experience acquired by the company's directors	Exint	How many directors in your company have had 6 or more months work or academic experience abroad?
Language knowledge	Directors' command of foreign languages	Domid	How many directors can do business in a foreign language?
Company size	Number of employees	Size	How many employees (on full-time contracts) are there in your company?
Profitability	Average profitability of the SME in the last 5 years	ROA	Data obtained from the Mercantile Register
Sector	CNAE sector code	Sector	Code of the National Classification of Economic Activities

5. Results

The descriptive statistical analysis and study of correlations between the variables are shown in Table 2. The average level of the international diversification of the SMEs studied was 0.22. In general, the companies studied opted for policies of international diversification concentrated in relatively few regions. This decision is understandable bearing in mind that the EU is the largest target market for their exports. Some 86% of the companies engaged mainly in the manufacturing industry, while the remaining 14% operated in the services sector. It is also worth highlighting that the average profitability of the companies was around 10%. These aspects (sector and performance) were positively correlated with the level of diversification.

Table 3 shows the results for the different regressions used to test our hypotheses. Two regression models were built to examine the first four hypotheses considered: Model I included only the control variables, namely company size, company profitability and sector; and Model II, which included, in addition to these control variables, the study and hypothesis variables corresponding to the characteristics of the directors. The results showed that the *F* statistic was significant for both models (Models I and II, $p < 0.05$) indicating a good fit of the regressions considered. We also noted that the variance explained by the second model was higher by more than 14% (57.7% compared with 50.7%). This fact suggests that the characteristics of the directors accounted for a significant percentage of the variance. In global terms, the characteristics of the directors helped to explain the level of international diversification of the SMEs.

It is also important to consider the suitability of the control variables introduced because all of them (size, profitability, and sector) were significantly related in Model I. They were positively related, which means that factors such as the larger size of the SMEs, better profitability levels, or belonging to the industrial sector were positively correlated to higher degrees of international diversification.

As indicated in Model II, we found empirical support to confirm that management team age was negatively correlated with SME international diversification levels (Hypothesis 1; $p < 0.10$). This suggests that the younger the directors in internationalized SMEs, the more likely they are to undertake more active market diversification strategies. In this sense, our results coincided with those reported elsewhere by other authors (Dichtl, Koeglmaier, and Muellor 1990; Hermann and Datta 2005; Karami, Analoui, and Kakabadse 2006) who argued that younger directors show great flexibility and capacity for processing information, as well as a greater propensity for tackling the changes and risks that international diversification entails, and they are therefore more prone to influence export activity and adopt riskier strategies in company internationalization processes.

The second hypothesis refers to the relationship between the education level of the management team and the most proactive international diversification strategy. As the results show, no empirical evidence was found to support Hypothesis 2 (Sig.: 0.342). This result contrasts with the findings reported in previous research, which shows how better-qualified management teams influence SME performance (Karami 2005) and international diversification (Hermann and Datta 2005). This result should be considered with caution since it was obtained for a specific sample of companies. In short, further research should continue to examine the relationship between management qualifications and the international policies of companies.

Table 2. Means, standard deviation and correlations between variables.

Variables	Mean	Standard deviation	1	2	3	4	5	6	7	8
1. International diversification	0.22	0.16	–							
2. Average age of the MT	51.8	15.32	-0.292*** (0.001)	–						
3. Qualifications of the MT	0.67	0.57	0.146 (0.114)	0.067 (0.471)	–					
4. Professional experience of the MT	0.20	0.16	0.369*** (0.000)	0.125 (0.177)	0.144 (0.118)	–				
5. Language knowledge of the MT	1.67	1.46	0.460*** (0.000)	0.143 (0.121)	0.217** (0.001)	0.450*** (0.000)	–			
6. Company size	33.6	12.51	0.326*** (0.000)	0.140 (0.130)	0.060 (0.516)	0.147 (0.110)	0.481*** (0.000)	–		
7. Business profitability	9.21	8.80	0.642*** (0.000)	0.199** (0.038)	0.042 (0.667)	0.168 (0.080)	0.254*** (0.008)	0.181* (0.060)	–	
8. Sector	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

n.p.: not applicable because the 'sector' variable is a binary variable.

Table 3. Results of the regression models: Business diversification and management team characteristics.

Variables	Model I			Model II			Model III			Model IV		
	Beta	t	Sign.	Beta	t	Sign.	Beta	t	Sign.	Beta	t	Sign.
Size	0.215	3.07	0.003**	0.116	1.530	0.129	0.274	2.269	0.030**	0.116	0.840	0.404
Profitability	0.598	8.57	0.00***	0.532	7.810	0.000***	—	—	—	—	—	—
Sector	0.212	3.08	0.003**	0.138	2.037	0.044**	0.041	0.344	0.733	-0.179	-1.42	0.158
Average age of the MT				-0.125	-1.83	0.070*	-0.244	-2.19	0.035**	-0.118	-0.97	0.332
Qualifications of the MT				0.063	0.956	0.342	0.171	1.462	0.153	0.019	0.167	0.868
Experience of the MT				0.144	1.954	0.050**	-0.12	-0.07	0.945	0.195	1.616	0.111
Language knowledge of the MT				0.151	1.768	0.080*	0.535	3.048	0.004***	0.228	1.713	0.091*
Constant		4.394	0.00***		0.856	0.394		-1.38	0.175		1.977	0.053*
F		35.95 (0.000)			19.68 (0.000)			8.75 (0.000)			3.107 (0.001)	
R ²		0.507			0.577			0.602			0.234	
N		219			219			60			159	

Note: *p < 0.10; **p < 0.05; ***p < 0.01.

Although our measurement is similar to the one used in previous studies, it could be necessary to perform a more 'detailed' study of the education level of these management teams.

Hypothesis 3 was firmly based on empirical study ($p < 0.05$) because it confirmed that the international diversification of the SMEs was positively related to the level of international experience of their directors. The directors with experience in international markets had better perceptions of those international markets. This gave them better knowledge of those markets and the methods of doing business in them, reduced their levels of perceived risk, and had an important impact on the cognitive orientation of the directors (Gunz and Jalland 1996). In this sense, other empirical studies (Carpenter, Sanders, and Gregersen 2001) have confirmed the benefits that TMTs with international experience can contribute for the international diversification of companies. Similarly, Belso-Martínez (2006) concludes that firms that usually develop rapid internationalization processes are managed by international managers with more extensive international experience.

Hypothesis 4 yielded a significance level of 90% (Sig.: 0.08). Thus, diversification strategy was positively correlated with the directors' knowledge of foreign languages. This aspect is particularly significant in the specific case of SMEs. Their capacity to adopt more proactive internationalization strategies inevitably depends on them having qualified directors with in-depth knowledge of foreign markets and the capacity to develop business relationships in foreign languages. This result coincides with findings reported elsewhere by other authors (Dichtl, Koeglmayr, and Muellor 1990; Holzmüller and Kasper 1990; Fernández-Ortiz and Castresana 2006).

We tested Hypothesis 5 using the same methodology as that employed by Herrmann and Datta (2005). We divided the sample of 219 companies into two subgroups according to whether their level of profitability was higher or lower than the sample average: the first subgroup was formed by the most profitable companies; and the second subgroup comprised the less profitable SMEs (Models III and IV). Then we applied the regression models to both subgroups. In the high-performing group of companies, management team age and language level were related to the international geographical diversification of the SME. Age maintained its negative relationship ($p < 0.05$) while language level was positively related ($p < 0.01$). These results were consistent with the results obtained for the complete sample and those reported in other empirical studies (Amason, Shrader, and Tompson 2006). However, in the subgroup of low-performance companies, only foreign language knowledge on the part of the directors was somewhat positively related ($p < 0.10$) to diversification level. As regards the subgroup of high-performance companies (Model III), it is very significant to note that even when two of the four variables related to director characteristics were significant (age and language knowledge), the capacity of these characteristics for explaining variance was very high. We therefore considered that Hypothesis 5 was only partially ratified. Thus, using these variables and the size variable, we are able to explain 60.2% of the variance. This, together with the difference with respect to the subgroup of less profitable SMEs (60.2% compared with 23.4%), allowed us to affirm that there was empirical evidence to confirm the existence of a more solid relationship between management attributes and international diversification level in the most profitable companies.

6. Conclusions and implications

6.1. Conclusions

First and foremost, this study aims to compensate for the remarkable lack of studies that have analysed the relationship between top management characteristics and business internationalization strategies. The scarcity of resources and capacities characteristic of SMEs prompted us to focus our research on these characteristics because these types of companies are the ones that have most difficulty in implementing internationalization strategies.

Second, this study analyses whether the SMEs with higher performance levels designed their international strategies according to the characteristics displayed by their management teams.

Specifically, this study focused on the demographic characteristics of the TMTs of a sample of SMEs (age, education, professional experience, and language level) because previous studies have found empirical evidence on the influence of these characteristics and the international diversification of these companies.

As regards management team age, the results obtained revealed a negative relationship between age and the international diversification level of the SMEs studied. Thus, companies with younger management teams may be more likely to assume risks and take on board new investment projects to drive their growth in foreign markets. According to the professional qualifications of the management team, this study did not find empirical evidence to confirm a relationship between this demographic characteristic and international diversification. This lack of results may have been due to the absence of a more detailed breakdown of this indicator. The particularities of the target region studied (Autonomous Community of La Rioja) may have caused increased homogeneity in this variable that prevented us from identifying significant differences.

In terms of the professional experience of the management team and language level, both variables were positively related to the international diversification level of the company. This confirms the need for SMEs to have management teams with prior international experience, acquired while working previously in foreign companies or in national companies that have developed international strategies for some time.

Managerial resources must be treated as critical resources for the continuity and growth of the company (Katz et al. 2000; Heneman et al. 2002). Thus, internationalization requires active and committed business management (Pla-Barber and Escribá-Esteve 2006). This entrepreneurial orientation places the emphasis on risk assumption, innovation, and a more proactive attitude towards international expansion (Knight 2001). These companies select and develop risky projects such as internationalization and are usually pioneers in the development of new markets (Dess et al. 2003).

As regards our second research objective, namely to analyse the relationship between the demographic characteristics of SME top management teams and company performance, we found empirical evidence to confirm a stronger relationship between management characteristics and international diversification levels in the more profitable companies. These results therefore coincide with those reported in studies of SMEs that have established similar relationships in geographically different markets and in specific sectors (Analoui 2000; Analoui and Karami 2003).

In global terms, the results of this study are significant because they show that certain managerial characteristics are closely related to the geographical diversification policies of SMEs, specifically the young age of managers, their international experience, and good knowledge of foreign languages. These are directorial attributes that must be demanded by SMEs wishing to increase their export diversification policies. These characteristics are associated with directors who are more flexible, have a greater capacity for an international vision of business, more international culture, greater tolerance to risk, and greater capacity for developing international business. Companies that plan their results to regularly achieve positive performance are in a better position to capture these types of directors. In fact, in these SMEs managers play a more active role in the development of international growth policies; this directorial characteristic had the greatest impact of those studied.

6.2. *Implications for regional policy*

Policy-makers and public agencies can benefit from these results: the development of certain attributes in TMTs strengthens the development of international diversification policies, thus allowing SMEs to improve risk diversification and protection against exchange rate fluctuations.

The managerial profile knowledge required by businesses in this small Spanish region, as far as internationalization strategies are concerned, can provide government institutions and policy-makers in La Rioja with a valid tool to promote and shape the specific and idiomatic training needed by managers. Furthermore, as the study highlights, the focus of the industry in La Rioja on sectors with higher profitability margins can promote the recruitment of more valuable managerial resources in order to improve regional competitiveness through increased international diversification.

6.3. *Limitations and future research*

However, this study has its limitations. Since it is a cross-sectional study, our statements are conditioned by time, which means that we can only analyse the associations between management characteristics and diversification strategy. To broaden the scope of this study and answer questions such as whether companies with high levels of international diversification choose directors with certain personal characteristics, a longitudinal study would have to be performed. In the second place, this study does not attempt to analyse the intermediate decision-taking process in companies, i.e. to determine how decisions on strategic internationalization strategies are designed, generated and taken within SMEs. A third limitation of the study was the operativization of the 'language knowledge' variable. Since these companies are SMEs, it would have been more appropriate to have some additional proxy that would have linked directors' experimental knowledge in international markets.

Future research should continue with longitudinal studies using panel data and focus on the international validity of the results of this study. Two other lines of research were considered in this study: the first line of research analysed how internationalization strategies are consolidated in the creation of employment

in SMEs; and the second research line focused on incorporating new factors in the analysis that influence company profitability. Thus, the analysis model included the characteristics of the directors managing the companies. However, it is important to remember that business profitability is partly determined by the characteristics of the environment (competitive intensity, legal-political environment, channel accessibility, etc.) and the specific characteristics of the company (product uniqueness, international experience, resource commitment, etc.), as well as the concentration/diversification strategy of the export markets, among other factors (O'Cass and Julian 2007).

We hope that this study will contribute to the understanding of the complex aspects associated with the management teams and international strategies of SMEs. Likewise, we would like this study to be used by government officials in La Rioja to improve the industrial international policies of the region.

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Note

1. Additionally, to provide a more detailed explanation, both the number and the variety of trips abroad were introduced to analyse the extent to which this may indicate greater knowledge of foreign business practices. However, the representative items had to be eliminated due to the lack of representative response (absence of response above 62%).

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