

## Which Resources Are Most Important For A Successful SME Exporter?

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### Abstract

*This paper shows that some firm resources are more important than others for a successful SME exporter. We include six resources grouped into three categories: domestic resources (human and technological resources), experience-related resources (organisational and international experience) and foreign resources (subsidiaries abroad and foreign shareholders). The results show that the most important resources for a successful SME exporter are its human resources, its international experience and the existence of subsidiaries abroad. However, the deployment of Internet-based technology and SME organisational experience are revealed as important resources in those firms with low or medium export volume. The underlying premise and contribution of this study is that SMEs with different levels of exports benefit differentially from their resources.*

**Keywords:** Resources, Spanish SMEs, successful exporter.

### 1. Introduction

Nowadays, politicians, managers and academics agree on the importance of small and medium-sized enterprises (SMEs) in the global economy. Smaller enterprises considerably outweigh their larger counterparts in number. They are responsible for creating jobs, driving innovation and competition, and generating a high percentage of gross domestic product (GDP).

In the European Union (EU-27), non-financial SMEs make up approximately 99.8 percent of all firms and provide two thirds of employment, generating more than 55 percent of the total value added and accounting for 40 to 50 percent of GDP (Eurostat, 2008). As a consequence, “*the competitiveness of the*

*European Union (EU) is fundamentally dependent on the wellbeing of its small and medium-sized enterprises”* (European Union website, 2012).

However, only a minority of small firms are currently engaged in exporting (Wolff and Pett, 2000). According to the European Commission (2010), 25 percent of SMEs within the EU 27 are exporting. And only two percent are active in Foreign Direct Investment (FDI). These statistics suggest that exporting is the most common foreign market entry mode, particularly among SMEs (Majocchi et al., 2005). Exporting is a faster and easier way to access international markets, in comparison to FDI. It involves comparatively low levels of commitment and risk because firms can use their existing facilities to serve foreign markets and this entry mode allows them to mitigate risks of political instability and/or fluctuating market conditions.

Although exporting requires relatively low levels of resource commitment, SMEs must have resources available to them to be able to export. But which resources are most important or necessary for a successful exporter? Previous studies have analysed how particular types of resources – such as human resources (Gomez-Mejia, 1988), technological resources (Clarke, 2008), or experience-related resources (Majocchi et al., 2005), among others – influence SME exporting processes. However, sparse attention has been paid to a global analysis of these resources. Tseng et al. (2007) studied the effects of several firm resources on growth in multi nationality; Kaleka (2012) studied the role of comprehensive sets of firm resources on export venture performance; but both papers are based on a sample of large firms. As Lu and Beamish (2006) say, empirical findings for large firms do not necessarily apply to SMEs. Lu and Beamish (2006), or more recently, Beleska-Spasova et al. (2012) studied resources determinants of exporting using a sample of firms, with the majority being small and medium sized enterprises, but the cross-sectional date used cannot account for cause-effect inferences. Longitudinal research design or time lags to assess the same panel of firms could effectively alleviate this problem (Katsikeas et al., 1996). Thus, further studies are needed to analyse the differences in the importance of these resources for the SME exporter.

In order to cover these issues, the present paper addresses which firm resources are most important for a successful SME exporter. We define a successful SME exporter as a continuous exporter with a high volume of exports. Our focus is on the success of the export activity, more than the success in individual foreign markets or exported products.

The resources analysed are those considered in the theoretical and/or empirical literature to date. They are classified into three categories: domestic resources and capabilities (human and technological resources), experience-related resources (organisational and international experience) and foreign resources (subsidiaries abroad and foreign shareholders). To the best of our knowledge, these resources have not to date been considered globally. This objective has been analysed in the geographical context of Spain because the number and importance (in terms of employment and added value) of SMEs in Spain is generally representative of the average in the European Union. Moreover, this data was most readily available, and allow us to include information from six years and from two databases.

This paper aims to contribute to literature by illustrating how firm resources benefit more to some exporters than to others. Most prior studies focused on the export performance of SMEs have assumed that the population of firms is rather homogenous and that these firms are affected by their resources in a similar way. This paper relaxes that assumption and seeks to further refine the role and impact of the firm resources on the export activity of a heterogeneous set of small firms. In essence, the key underlying

premise and contribution of this study is that SMEs with different levels of exports can benefit differentially from their resources. Our findings indicate that because of the heterogeneity of resources in SMEs, the relationship between firm resources and export activity has to be nuanced.

Moreover, our approach is distinguished from other studies by using panel data of continuous exporters. Continuous exporter is considered as a firm who exports every year of certain period. We suggest that there is advantage in this focus. Sporadic exporters are usually focused on the receipt of unsolicited orders from customers overseas, it is a factor in stimulating current export decisions, but it does not implies a further export engagement. As enhancement of the global competency is very important and timely for SMEs, only continuous exporters can move forward to the next successful phase of rapid internationalization. Thus, an analysis on behaviour of continuous exporters in global markets can be helpful for other SMEs that have difficulties in acquiring global competitiveness. It is critical to take a look at distinct requirements of SMEs` long term success for leading the international market

To achieve our objective, the following section reviews the main firm resources that the literature to date considers necessary for exporting. It is upon these that our hypotheses are based. The subsequent section on methodology presents the sample, the variables and the statistical model used, followed by a section on results and a discussion. We conclude with our main conclusions.

## **2. Literature Review and Hypotheses Proposed**

During the last decades, the analysis of the firm's resources and capabilities has gained prominence with the Resource Based View (RBV) (Barney, 1991; Wernerfelt, 1984). The theoretical framework of the RBV is increasingly used in studies on the exporting process (for example, Beleska-Spasova et al., 2012; Dhanaraj and Beamish, 2003; Kaleka, 2012; Wolff and Pett, 2000).

Although success in exporting is determined by both the internal and external factors of a SME, the RBV gives priority to the internal firm resources, specifically, the resources owned and controlled by the firm. These resources allow the firm to gain a sustainable competitive advantage, thus increasing its success in international markets. The literature to date also highlights the importance of internal resources on export activity (Gomez-Mejia, 1988) and authors, such as Kirpalani and MacIntosh (1980) have even found that internal factors affect export activity more than external ones.

However not all firm resources are capable of generating and sustaining competitive advantage, only resources that are valuable, rare, imperfectly imitable and non substitutable. Firm resources are viewed as strengths that firms can use to conceive and implement their strategies in general (Barney, 1991). The scarcity of resources and capabilities is precisely the main hurdle facing SMEs if they want to progress in external markets (Camisón and Villar, 2010). Therefore, internal resources and characteristics are crucial factors for the success of small enterprises (Bijmolt and Zwart, 1994). In this paper, following Dhanaraj and Beamish (2003), the term *firm resources* includes all resources, capabilities, attributes or knowledge controlled by a firm and which can constrain or strengthen its export strategy. Through analysing firm resources, we can gain a more comprehensive picture of which ones may play the most important role in determining success in exporting.

In order to provide an integrative view of the most important resources and to facilitate its presentation, we have grouped them into three categories: domestic resources (human and technological resources), experience-related resources (organisational and international experience) and foreign resources

(subsidiaries abroad and foreign shareholders).

### *2.1. Domestic Resources*

As domestic resources we consider the human and technological resources, following and adapting classification of Grant (1991). These resources are crucial for developing and maintaining an export programme (Cavusgil and Naor, 1987).

The RBV posits that the labour force's know-how is one of the main factors contributing to a firm's success and one of its most durable resources (Kok and Uhlaner, 2001).

This importance is even greater in SMEs operating regularly in international markets. Firms with high commitments in foreign markets have to be able to engage managers and workers of their entire organisation in export-related activities. According to Tookey (1964), successful exporting demands the active cooperation of most firm's departments, for example of design for the development of new styles to satisfy overseas customers; of production for the making of samples and the meeting of schedules of export orders (often presenting problems in machine changes for short runs and inconvenient delivery dates); of the accounting department to handle complex credit arrangements for foreign customers and the documentation of overseas payments; and of the office to handle overseas orders, correspondence in foreign languages and more numerous and lengthy export invoices and other documents. This process requires the synergistic utilisation of most human capital and cannot be treated as a peripheral resource (Gomez-Mejia, 1988). So, more qualified workforce can ensure the high quality of its exported products (Schank et al., 2007).

In addition, exporting firms require workers and managers who are able to adapt to different cultural, economic and political environments. There emerges, consequently, a need for qualified personnel with the skills and competencies needed to manage the export process.

The more highly qualified managers are, the more capable they are of identifying and exploiting business opportunities and of avoiding potential threats in the international environment. More qualified personnel are also more likely to have skills such as the ability to communicate in foreign languages, to read signals, to solve problems and to understand customers in other cultures, which seem to have a positive impact on export activity (Mughan and Lloyd-Reason, 2007). So SME exporters require not only managers who have formal qualifications, but also those with a special "cultural sensitivity" that promotes the export activity of the firm (Shapiro et al., 2008). Furthermore, as an organisation becomes increasingly complex, it is necessary to have personnel capable of coordinating the firm (Penrose, 1959). Managers are also viewed as responsible for the mode, direction and speed with which the firm advances along the international path (Leonidou et al., 1998). This responsibility is more evident in SMEs characterised by a more active role given to the decision-makers of the firm (Hutchinson et al., 2006).

Thus, we formulate our first hypothesis:

Hypothesis 1. The more highly qualified the human resources of an SME, the greater the likelihood of it having a high volume of exports.

With regard to technological resources, we focussed on Internet-based technology (such as email, websites and electronic commerce) because over the last few years there has been much debate over the impact of the Internet on the creation of competitive advantages in firms (Fernández and Nieto, 2006). Even when, according to the RBV, the Internet cannot be considered a strategic resource in itself because this technology is widely used and accessible to all firms, it can be a powerful instrument for competitive

strategy and establish itself as a key factor for business success, as long as it complements and enhances strategic resources (Clemons and Row, 1991). Moreover, Internet-based technology could facilitate the international success of SMEs. The Internet has altered the perception of physical and psychological distance as a barrier to international trade (Freund and Weinhold, 2004) since it facilitates access to information on target markets. Access to information is probably one of the biggest benefits of the Internet. So the Internet has the potential to reduce asymmetric information in exports, reducing transaction costs (Afuah, 2003) and the uncertainty associated with foreign markets (Petersen et al., 2002).

The Internet is also a new distribution channel that firms can use to sell their products and services directly to consumers, to find potential customers and distributors, to finalise contracts on line (Clarke, 2008), to connect with numerous buyers simultaneously (Freund and Weinhold, 2004) or to improve their international image (Nieto and Fernández, 2005).

Thus, we propose our second hypothesis:

Hypothesis 2. A SME is likely to have a high volume of exports if it implements Internet-based technology.

## 2.2. *Experience-Related Resources*

Experience refers to the knowledge gained by the firm during its economic activity; that is, it originates in the interaction between capital goods and collective experience. It is considered to be both a strategic resource and source of competitive advantage. When experience is gained by the firm in the domestic market, it is called organizational experience. When it is gained in foreign markets, it is called international experience. Both types of experience influence export activity, although the reasons in each case are different yet complementary.

Organisational experience “*reflects the intangible nature of those resources related to corporate experience and knowledge in the company, throughout its working life, different from those of the international arena, which facilitate the adaptation to new environments*” (Ramírez et al., 2006, p. 171). It comes from the values, routines and practices developed by the firm in its original markets, allowing it to gain new knowledge that could be taken for granted and applied automatically in subsequent operations (Zucker, 1977) and in foreign markets (Lu and Beamish, 2006). This experience provides a better understanding of the existing businesses of the firm, the target market and market relations. It allows the firm to reduce the costs of control and coordination of activities (Benito and Gripsrud, 1992). This knowledge could be used to increase production volume to meet new demand from a foreign market (Majocchi et al., 2005). Moreover, the firm consolidates a strong and stable position in the domestic market, which favours the reduction of perceived risk associated with committing more resources to its export business (Schwens and Kabst, 2009). Thus, organisational experience allows firms to overcome the barriers to exporting (Leonidou, 2000).

Therefore, we formulate the third hypothesis:

Hypothesis 3. The higher the organisational experience of an SME, the greater the likelihood of it having a high volume of exports.

International experience comes from a learning process based on the gradual accumulation of knowledge on foreign markets (Johanson and Vahlne, 1990). It influences the behaviour of the firm and facilitates its expansion into other countries (Welch and Luostarinen, 1988) as confidence in international markets

increases.

With international experience, the firm acquires an ability to identify and evaluate business opportunities, which reduces the uncertainty associated with international operations (Johanson and Vahlne, 1977), and it can more easily overcome the difficulties caused by differences in institutional environments (Chetty et al., 2006).

In addition, as international experience increases, firms reduce the fixed costs associated with exporting (Roberts and Tybout, 1997), such as the establishment of distribution networks, advertising expenditures, product adaptation to international tastes, and increase their knowledge of market structure, competitors and legislation (Greenaway and Kneller, 2004). Consequently, a firm with more international experience will not only reach more and increasingly distant markets (Chetty et al., 2006), but also it will probably do so with a product that is more suited to foreign consumer tastes.

Therefore, the learning effect gained by exporting to different countries increases and improves the competitive advantage of the firm (Hitt et al., 2006), which is something that can be applied to new international markets. Thus, we formulate our fourth hypothesis:

Hypothesis 4. The higher the international experience of an SME, the greater the likelihood of it having a high volume of exports.

### *2.3. Foreign Resources*

Foreign resources refer to those resources of the firm that are in foreign markets (subsidiaries), or come from foreign markets (shareholders).

In general, SMEs start their internationalisation processes through exporting and, as an SME grows, it builds the capital resources necessary for making foreign direct investments (Johanson and Vahlne, 1990). Most studies on foreign direct investment (FDI) have investigated the factors affecting this choice of entry (Canabal and White, 2008), but we concentrate on the other side of the equation. This includes considering foreign subsidiary as a factor of interest to explain export performance, because it provides the firm with opportunities to gain better knowledge about host countries through local operations and also give access to various location-based advantages (Kogut, 1985). In particular, subsidiaries abroad provide access to local knowledge if experienced local professionals are recruited and work with those from the SME, this relationship between employees from both organizations facilitates multidirectional knowledge exchange. Moreover, local employees enable SMEs to develop networks of contacts with local parties, such as intermediaries and consultants (Meyer et al., 2009). These new benefits not only allow a SME to improve its competitiveness but also to increase its exports (Lu and Beamish, 2006). Thus, although subsidiaries abroad may seem to be a substitute for exporting, according to the RBV both modes of entry into international markets can coexist side by side and indeed, may be complementary (Head and Ries, 2004). So, in the case of multiproduct firms, Kneller and Pisu (2004) find that exports and subsidiaries abroad are positively correlated if the product lines are horizontally or vertically complementary. In the case of horizontal complementarities, the increased demand for the goods supplied by the foreign subsidiary could lead to increased demand for all goods produced by the firm, some of which would be exported. For vertical complementarities the establishment of an overseas plant to produce final products could lead to lower exports of that product, but would increase the export of intermediate products, from the home to the foreign country.

We therefore propose our fifth hypothesis:

Hypothesis 5. SMEs with subsidiaries abroad are more likely to have a high volume of exports.

Finally, although the influence of ownership structure (and the identity/nationality of the shareholders, in particular) on export activity has not been investigated in depth, some recent papers give several reasons for which the presence of foreign shareholders is positively associated with export activity (Filatotchev et al., 2008). This factor has an impact on a firm's resource endowment and its ability to sustain a competitive advantage. First, it has a network effect giving the firm access to international business networks, improving its knowledge of international markets and facilitating access to financial resources, trade and logistics (Wignaraja, 2008). Second, it produces an effective reduction of perceived risk associated with export activity owing to access to first-hand information on opportunities in a given market or on demand trends (Requena and Castillo, 2007).

Moreover, in cases where the firm and its foreign shareholders complement each other, firms are more likely to export, not only to the country of origin of the foreign capital and its surroundings, but also to other markets near to the exporting firm. Also, this increased level of exports may not just occur where there is a complementary relationship, but may also extend to other products of the firm (Kneller and Pisu, 2004).

We therefore propose our sixth hypothesis:

Hypothesis 6. SMEs with foreign shareholders are more likely to have a high volume of exports.

### **3. Methodology**

#### *3.1. Sample and Data Sources*

The target group of analysis was Spanish small and medium size (SMEs) continuous exporters. We follow the definition of SMEs used in the European Commission Recommendation 2003/361/EC<sup>i</sup>. Moreover, in accordance with Greenaway et al. (2007) "continuous exporters" are those firms that exported every year during the period under study. We focus on them because continuous exporters are more dependent on export market operations for their business than firms involved in sporadic exporting (Katsikeas, 1996).

We collected data primarily from two sources. First, the Spanish Chambers of Commerce, which, in collaboration with the Spanish Tax Agency, prepares the Directory of Spanish Import and Export Firms. It provides annual information on each exporting firm from 2000 to 2006 with regard to its level of exports (high – exports over one million euros, medium – between 100,000 and one million euros, and low – less than 100,000 euros)<sup>ii</sup>; export markets; exported products and the firm's website. And, the second source is the Iberian Balance Sheet Analysis System (SABI), a database elaborated by Bureau van Dijk, which provides annual financial information on Spanish firms.

The data on each exporter was compiled annually (2000-2006) and we obtained a final sample of 146 SME exporters. As our objective was to analyse the effect of SMEs' former resources on their export activity, a delay period was included to avoid the problem of endogeneity and we constructed a pool of data consisting of 876 observations (146 firms x 6 years).

#### *3.2. Variables and Methodology*

As dependent variable, we used export levels (high, medium and low) since this is the only information available at firm level in Spain. We used an ordinal variable which takes value one to the lowest export

level (less than 100,000 euros), value two to the medium export level (between 100,000 and one million euros), and value three to the highest export level (over one million euros).

We used six independent variables, one for each hypothesis.

We measured the level of qualification of human resources by means of the natural logarithm of the annual salary per employee in thousands of euros, following Bernard and Jensen (2004).

To capture the implementation of Internet-based technologies we used a dummy variable, which takes the value one for firms with a website in different languages (at least in English and Spanish), and zero otherwise.

To capture the organisational experience of the SME we used the age of the firm because the longer a firm remains in the market, the greater its knowledge about market relationships. Following Majocchi et al. (2005), we measured it by its natural logarithm since the experience gained from an extra year of corporate life is greater when the firm has less experience.

To measure firms' international experience, we took the natural logarithm of the number of their export markets, reflecting the assumption that firms learn from their previous international experiences at a decreasing rate (Barkema et al., 1996).

Following Majocchi and Zucchella (2001), the existence of subsidiaries abroad was measured by means of a dummy variable that took the value one when the firm has subsidiary abroad and zero otherwise.

Finally another dummy variable was used to reflect the presence of foreign shareholders in the firm. It took the value one for firms with foreign shareholders and zero otherwise (Greenaway et al., 2007).

Finally, we also included as control variables the firm size, the industry and the temporal effects. The size of the firm was measured by the natural logarithm of the number of workers (Hansson and Lundin, 2004). The industry variable was a dummy that takes the value one for manufacturing firms and zero otherwise. And the temporal effects were included by one dummy variable for each year (2000-2006) of the period under study.

The descriptive statistics of the variables are presented in Table 1. All independent and control variables were included with a one-year lag to reduce the potential problem of endogeneity. The correlation matrix and the variance inflation factors (VIF) of the variables are shown in Table 2. The VIF values range from a low of 1.06 to a high of 1.76, with the highest value well below of the limit of 10 recommended by Hair et al. (1999). Therefore, it can be assumed that there are no multi collinearity problems.

**Table 1:** Descriptive Statistics of Variables<sup>a</sup>

Variables	Mean	Standard Deviation
Low Export Volume <sub>t</sub> <sup>b</sup>	0.195	0.397
Medium Export Volume <sub>t</sub> <sup>b</sup>	0.459	0.499
High Export Volume <sub>t</sub> <sup>b</sup>	0.346	0.476
Qualifications of Human Resources <sub>t-1</sub>	3.249	0.395
Qualifications of Human Resources (€1,000) <sup>c</sup> <sub>t-1</sub>	27.984	12.896
Internet-based Technology <sub>t-1</sub>	0.658	0.475
Organisational Experience <sub>t-1</sub>	2.736	0.633
Organisational Experience (years) <sup>c</sup> <sub>t-1</sub>	18.404	10.393
International Experience <sub>t-1</sub>	1.660	1.072
International Experience (markets) <sup>c</sup> <sub>t-1</sub>	9.150	10.475
Subsidiaries Abroad <sub>t-1</sub>	0.075	0.264
Foreign Shareholders <sub>t-1</sub>	0.055	0.228
Size <sub>t-1</sub>	3.235	1.042
Size (workers) <sup>c</sup> <sub>t-1</sub>	41.078	43.055
Manufacturing Sector <sub>t-1</sub>	0.657	0.475

<sup>a</sup>Number of observations = 876

<sup>b</sup>Low export volume: less than €100,000; Medium export volume: between €100,000 and €1million; High export volume: over €1million.

<sup>c</sup>Absolute values are presented to facilitate comparison with other studies.

**Table 2:** Correlation Matrix and VIF<sup>a</sup>

Variables	1	2	3	4	5	6	7	8	VIF
1- Qualifications of HR	1.000								1.14
2- Internet-based Technology	0.146	1.000							1.11
3-Organisational experience	0.130	0.090	1.000						1.31
4-International experience	0.085	0.255	0.239	1.000					1.34
5- Subsidiaries Abroad	0.104	0.151	0.147	0.321	1.000				1.20
6- Foreign Shareholders	0.114	-0.017	0.076	0.019	0.159	1.000			1.06
7- Firm size	-0.097	0.139	0.416	0.394	0.286	0.111	1.000		1.76
8- Manufacturing Sector	-0.035	0.148	0.259	0.187	0.151	-0.016	0.479	1.000	1.33

<sup>a</sup>VIF: Variance Inflation Factors

Given the categorical and ordinal nature of the dependent variable we adopted an *ordinal logit* model that we tested with the statistical program STATA 12. As is well known, the estimated coefficients within the ordered model will provide no real indication of how the probability of the level of export volume will change as a dependent variable changes, these changes are captured by the marginal effects.

#### 4. Results and Discussion

Table 3 contains the results from the ordered logit model estimations and the marginal effects for each one of the three export levels. The results show an adequate fit, as the chi-square value is significant at 0.001 (likelihood ratio test) and correctly classifies 65.3 percent of the observations. The signs of the estimated coefficients can only be interpreted for effects on the probability that the export volume will be high or low (that is the two extreme categories). Therefore, marginal effects (for continuous independent variables) or changes in predicted probabilities (for discrete independent variables)<sup>iii</sup> are required to draw any further conclusions from the estimated model.

**Table 3:** Results of the Ordered Logit Analysis and Marginal Effects<sup>a</sup>

Category of resource	Variable	Coefficient t	SE <sup>c</sup>	Marginal effect on probability that the export volume is <sup>b</sup>		
				Low	Medium	High
Domestic Resources	Qualifications of Human Resources <sub>t-1</sub>	1.250***	0.205	-0.109***	-0.138***	0.247***
	Internet-based Technology <sub>t-1</sub>	-0.525**	0.161	0.043**	0.064**	-0.107**
Experience-related Resources	Organisational Experience <sub>t-1</sub>	-0.447**	0.132	0.039**	0.049**	-0.088**
	International Experience <sub>t-1</sub>	1.236***	0.090	-0.108***	-0.136***	0.244***
Foreign Resources	Subsidiaries Abroad <sub>t-1</sub>	1.251**	0.422	-0.073***	-0.216*	0.289**
	Foreign Shareholders <sub>t-1</sub>	-0.524	0.346	-	-	-
Control Variables	Firm Size <sub>t-1</sub>	0.882***	0.096	-0.077***	-0.097***	0.174***
	Manufacturing Sector <sub>t-1</sub>	0.303	0.173	-	-	-
Year dummies included						
Chi-squared		515.27** *				
Log likelihood		-656.53				
R2 McFadden		0.282				
R2 Cox and Snell		0.445				
R2 Nagelkerke		0.508				
Correctly Classified (percent)		Global		65.30		
		Low Export Volume		45.03		
		Medium Export Volume		72.89		
		High Export Volume		66.67		

<sup>a</sup> Number of observations = 876. <sup>b</sup> The marginal effects of each continuous variable represent the values

of the partial derivative of the logit probability for each category. For dummy variables, the reported marginal effect is the change in the logit probability from a change in value of the dummy variable. Export volume: low less than €100,000; medium between €100,000 and €1million; and high over €1million.<sup>c</sup> SE: Standard Errors.

\*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$ ; \*\*\*  $p \leq 0.001$ .

Because some coefficients, and hence variables, are not significant, the changes in predicted probabilities are not calculated for those variables.

Our results regarding the domestic resources are mixed. The first result shows that qualification of human resources increases (decreases) the probabilities of having a high (low) export level. The estimated coefficient is statistically positive (1.250;  $p$ -value  $\leq 0.001$ ). So Hypothesis 1 would not be rejected. According to the marginal effects, as qualification of human resources increases, export volume becomes more likely to be high (0.247;  $p$ -value  $\leq 0.001$ ), and less likely to be medium (-0.138;  $p$ -value  $\leq 0.001$ ) or low (-0.109;  $p$ -value  $\leq 0.001$ ). Our results confirm that a more qualified workforce facilitates a higher export activity. SMEs need workers and managers with the skills and competencies needed to manage the export process. This result is in keeping with the findings of Wagner (1996) for German firms, and Bernard and Jensen (2004) for U.S. firms.

Contrary to our expectations, the implementation of Internet-based technologies reduces the probability of having a high export level. Its estimated coefficient is negative and significant at a 0.01 level. Thus, Hypothesis 2 is rejected. When we focus on marginal effects we obtain that the Internet increases the probability of having a low and medium export level. The Internet can be useful for the firms with lower level of exports because it facilitates access to information on unknown markets and their export opportunities. However, when the level of exports is higher, the information provides by the Internet becomes less useful and thus less important. Moreover the Internet-mediated international contacts may work out well for low export levels, but do not necessarily lead to get a high export volume. As a distribution channel, the customers attracted by the Internet could have a positive impact on firms with lower export volume, but attracting customers is each time more difficult, so when the firm has a great export volume, the relative importance of the Internet as distribution channel can decrease. This result is in line with the proposal by Petersen et al. (2002).

In the group of experience-related resources, contrary to our expectations, we found that organisational experience reduces the probability of having a high export level. We obtain a negative and significant coefficient at a 0.01 level, leading us to reject Hypothesis 3. According to the marginal effects, organisational experience increases the probability of having a low and medium export level. Thus organisational experience can be helpful for firms with lower export level because it provides a better understanding of the existing business of the firm, facilitating the reduction of perceived risk associated with its export business. But when the level of exports is higher, experience often leads to inertia to change when this is needed, and firms have practices and established routines which make the reduction of the perceived risk provided by the organisational experience, less evident. Our findings reinforce the notion of the “learning advantages of newness” proposed by Autio et al. (2000).

Moreover, organizational experience loses importance when SMEs have more international experience. Indeed, our results show that SMEs’ international experience increases the probability of having a high export level and reduces the probability of having a low and medium export level. Therefore, Hypothesis 4 is not rejected. This result is consistent with those obtained in previous studies: when a firm gains more

international experience, it is able to reach more consumers and more countries (Chetty et al., 2006). International experience allows the firm to acquire the ability to identify and evaluate business opportunities, which reduces the uncertainty associated with exports (Johanson and Vahlne, 1977), and ultimately favours the firm having a high export volume.

The analysis of the effect of foreign resources on the export volume provides different results depending on the various factors. The existence of subsidiaries abroad (FDI) increases the probability of having a high export level and reduces the probability of having a low and medium export level, supporting Hypothesis 5. According to Lu and Beamish (2006), FDI broadens a firm's customer bases through entry into foreign markets, enabling the SME to achieve a larger volume of production, and larger export sales. Thus, according to the RBV, the existence of subsidiaries abroad rather than replacing exports, is complementary to export activity (Head and Ries, 2004).

Contrary to the prediction in Hypothesis 6, foreign shareholders are not a significant factor for explaining export volume of SMEs, because of that, the change in predicted probability is not calculated. A possible explanation comes from the foreign shareholders invest in SMEs with the main aim of entering the SMEs' domestic markets (Dacin et al., 1997; Wright et al., 2002), rather than boosting the exports of the SMEs themselves.

Finally, with respect to control variables, firm size is the only significant variable. However, we do not obtain industry and temporal effects.

## 5. Conclusions

The resources of the firm, together with their role on exporting, have become the subject of extensive study over the last decades. Most of previous empirical studies of RBV verify only one resource per article, just a few empirical studies have paid attention to a global analysis of the firm resources, and even fewer in the case of SMEs.

Against this background, this paper advances the RBV of the firm as a valuable theoretical framework in identifying critical resources with strong positive implications on export activity. We globally analyse six types of firm resources that may promote higher levels of exports. And our results reveal that these resources have different effects on export activity. Thus, highly qualified human resources, international experience and the existence of subsidiaries abroad have a positive effect on success in exporting when it is assessed in terms of export volume. This result is in agreement with the theoretical arguments offered in the relevant literature. However, the deployment of Internet-based technology and SME organisational experience, usually considered in the literature, do not have a positive impact on high export volume, but they are revealed as important resources in those firms with low or medium export volume, probably because the reduction of perceived risk associated with international trade provided by these resources, is more evident in firms with lower export volume than in firms with higher export volume. Finally, the foreign shareholders do not seem have influence on the export success of SMEs. Probably because they invest in SMEs with the main objective of entering the SMEs' domestic market, so the effect of foreign shareholders on the export volume becomes not relevant.

Possibly the most important insight from this paper is that not all SMEs benefit equally from their resources to further intensify exports. Thus this research provides managers of SMEs with more information to develop and enhance resources to achieve superior export performance. Success in

exporting is a fundamental issue, not only for firms but for a nation's economic welfare owing to the special importance of SMEs in the global economy. Sustained growth in exports leads to sustained high economic growth and provides a stimulus to improve economic well-being and societal prosperity. But success in export markets is costly and not all firms have the resources needed to meet these costs. Given that resources can be viewed as strategic commitments over an extended period of time (Fang et al., 2007), our reasoning is that there is great deal of insight to be gained into export performance by concentrating on continuous exporters. Sporadic exporters are usually focused on the receipt of unsolicited orders from customers overseas, it is a factor in stimulating current export decisions, but it does not implies a further export engagement. This is a distinctive aspect of this study, and one which we believe adds to the significance of our findings.

Interestingly, our results show that firms with low export volume show not significant differences from firms with medium export volume regarding all the considered resources. These results tend to suggest that firms with medium export volume are nearest from firms with low than with high export volume. Policy makers could employ our findings as valuable guidelines in directing their export support policies and programs, working to facilitate and improve the development of those resources that are most important for a SME exporter.

Finally, it should be noted that the dependent variable used in this study limits the generalization of the results. It is true that the use of levels of exports instead of export volume would give us less information, but it is also true that it is useful to shed light on the export arena. Moreover, this limitation is due to the lack of export volume information at firm level in Spain. In order to compensate this limitation, different from previous studies, we opt for using a panel data with information gathered from six years and from two databases. Thus, we believe that this study is a useful step in identifying the most important resources that favour the success of SME exporters.

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<sup>i</sup> According to the European Commission Recommendation 2003/361/EC, enterprises employing less than 250 persons and having an annual turnover of less than 50 million euros, and/or an annual balance sheet total less than 43 million euros are regarded as SMEs.

<sup>ii</sup> The only export information available at firm level is the level of exports. The quantity of exports is only available at industry or country level.

<sup>iii</sup> The marginal effects of each continuous variable represent the values of the partial derivative of the logit probability for each category. For dummy variables, the reported marginal effect is the change in the logit probability from a change in value of the dummy variable.