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The export strategy of the Spanish wine industry

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Abstract

Aim of study: This study analyses how business strategy has influenced the export performance of the Spanish wine industry. In recent decades, Spain has been among those countries that have significantly increased their wine exports.

Area of study: We used data collected from a survey comprising 339 Spanish wine-making companies.

Material and methods: The empirical analysis was carried out by sending a survey and subsequent telephone call to all the independent wineries belonging to PDOs, the number of responses was 339, 14% of the sample. Using the Heckman methodology, we analysed the variables that determine the decision to export and the export intensity.

Main results: Spanish firms have successfully used different combined strategies in order to achieve an intensification of exports. This implies that the joint use of strategies that seek efficiency (through cost reduction) while increasing value for the customer (through innovation and improved communication processes and distribution) achieve an increase in the internationalisation of the company. Therefore, the results of this study add new strategic alternatives to those traditionally proposed by the literature.

Research highlights: Firm strategy also has an effect on export performance in the Spanish wine industry. To grow in international markets, companies can use a combination of different strategic options.

Additional key words: wine exports; wine firms' strategy; wine international market; wine companies export strategies.

Abbreviations used: PDO (protected designation of origin); PGI (protected geographical indication).

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Introduction

Profound changes have taken place in the global wine market since the mid-1980s. On the one hand, there has been a true globalisation of wine consumption, leading to a clear increase in demand in places where, until then, it had been very low, giving rise to a strong growth in its trade. On the other hand, the emergence of the New World countries as important exporters represented a major challenge for the traditional exporters of south-east Europe, whose share in the global market reduced significantly (Anderson & Pinilla, 2021). Within this context, there was a remarkable dynamism in Spanish wine exports which, despite the threat of the new countries emerging in the market, increased significantly in terms of volume their share in the international market.

As highlighted in many studies, export results largely depend on macroeconomic aspects and trade policies which change over time and affect the different exporting countries in different ways (Anderson & Wittwer, 2018). However, explaining the export results of different countries also fundamentally depends on the action of the companies participating in the market, which are, in short, the essential economic agents. The action and results of the exporting companies depend both on various kinds of exogenous comparative and cultural elements linked to national business models (Alonso-Ugaglia *et al*., 2019), but also on their own strategic decisions. These make up the black box that has been analysed very little and which, in recent decades, has been considered as being a key element in determining a successful trade strategy (Bargain *et al*., 2018).

Within this context, we consider that, to date, a considerable body of literature has been produced focused on analysing export results in the wine market based mainly on aspects that are external to the firms (Anderson & Wittwer, 2020; Bargain, 2020), with much less attention paid to the impact of their strategies. Therefore, the objective of this article is to attempt to fill this gap, analysing these business strategies and their impact on the increase in exports. To do this we will study a sample of Spanish wine firms. Spain has shown considerable dynamism in the global wine market and we seek to determine which strategies have favoured a greater degree of internationalisation.

Frequently, and also for the wine industry, it has been noted that firms should opt between low cost and differentiation as alternative strategies, in order to avoid being stuck in the middle (Porter, 1980). Particularly, it has been shown that the product differentiation strategy offering a wide range of services to the customer, the construction of a brand reputation in the industry and an orientation towards high price segments, favour internationalisation, as in the case of the champagne industry (Crozet *et al*., 2011) or that of China's wine export dynamics (Rodrigue & Tan, 2019). However, in the twenty-first century business strategy literature, models are emerging that take a different approach, far removed from the traditional Porter strategic models, such as the Delta model (Hax & Wilde, 2001), the Business Model (Amit & Zott; 2010) and the blue ocean strategy (Kim & Mauborgne, 2005) that combines innovation in terms of value and the search for efficiency, proposing a mix of Porter's two generic strategies. For example, it has been shown how upon entering the USA market certain Australian wineries developed a new average price strategy and improved the product quality with respect to the basic products (Cox & Bridwell, 2007). Another very similar case has been the boom of Prosecco sales on the international market over the last decade (Ponte, 2021). Reality shows many examples of companies that increase their presence in the international market through the combination of different strategies (Bardají *et al*., 2014; Simon-Elorz *et al*., 2015; Ferrer, 2021).

We will use a representative sample of Spanish wineries, included in different designations of origin, as they have been fundamental in the transformation of the sector (Fernández & Pinilla, 2014). Through the grouping according to geographical indications or seals of food quality, the small and medium-sized companies have increased their competitiveness and the value of their products, guaranteeing the consumer the fulfilment of food safety and quality standards and of the control of the production process. Despite their small size, Spanish wineries have been able to expand into emerging markets where there is a growing number of new wine consumers who are not only attracted by the brand and international prestige but also seek inherent characteristics of the product (Masset *et al*., 2016; Garcia-Cortijo *et al*., 2019). Spanish wineries are increasing their participation in these markets, not only through differentiation, but also through the combination of improvements and innovations in the product, constantly searching for improved efficiency.

For the empirical verification, we will use a dynamic Heckman-Probit model. In this way we will attempt to verify the effect of different type of strategies.

Material and methods

The rapid expansion of Spanish wine exports in the twenty-first century

Spain has a long tradition as one of the world's leading wine exporters. From the mid nineteenth century, it became highly specialised in the low quality and low-price segment (Fernández & Pinilla, 2018; Ayuda *et al*., 2020).

From the mid-1980s relevant changes can be observed in the global wine market. Primarily, we should highlight the significant growth of the production and exports of the New World countries (Australia, New Zealand, USA, Argentina, Chile and South Africa) whose participation in the global market grew powerfully. Furthermore, there was a

Table 1. World wine market: exports and rankings, 2018-19 (annual averages)

Country	Wine exports (2018-2019)		Export world rankings				
				Volume			
	×10⁶ L	×10⁶ €	Total	Total	Bottled still	Sparkling	Bulk
France	1.419	9.581	1	3	2	2	6
Italy	2.060	6.335	2	2	1	1	2
Spain	2.092	2.844	3	1	3	3	1

Source: Own calculation based on Anderson *et al*. (2017), pp. 32-33.

convergence in the consumer patterns of alcoholic drinks between countries with different traditions. This meant that wine consumption grew considerably in some more developed countries such as the USA, Germany, Great Britain or other western countries and decreased in the traditional exporting countries of south-east Europe (Holmes & Anderson, 2017). From the beginning of the twenty first century, wine consumption also increased in Asia where China in particular has acquired a growing share of the global market (Anderson, 2020).

One of the most salient consequences of these changes has been the rapid increase in the percentage of global wine production that is exported. In around 1980 this was a little under 15% and had increased to 40% by 2010 (Anderson & Pinilla, 2020). As a result, global wine trade has increased considerably and more than doubled between 1970-79 and 2010-16. Furthermore, the traditional exporters have encountered growing competition, particularly from the New World countries.

Therefore, the geography of international wine trade has been reshaped considerably. In general, the share of the traditional exporters has decreased significantly, while that of the New World Countries has increased. In this way, although the increase in trade enabled the world's two leading exporters in 1980-89, France and Italy, to continue increasing their exports in absolute terms, they lost a considerable share of global wine exports in terms of volume. In fact, the joint share of these two countries fell from 55% in 1980-89 to 35% in 2010-16. On the contrary, the third largest traditional wine exporter, Spain, which represented only 11% of global exports in the 1980s, increased its share to 20% in 2010-16[1]. At the same time, the relative weight of the New World countries (Australia, New Zealand, USA, Argentina, Chile and South Africa) increased significantly from 2% in 1980-89 to 27% in 2010-16 (Anderson *et al*., 2017).

It is in the type of wine in which Spain had a weak position, namely bottled still wine, where the growth has been the strongest. In 2006-08, Spain had a 9.2% share of world exports of this type of wine and it increased this share to 15.3% in 2014-16. This represented a 67% increase in its share, while in bulk wine it increased its share by 31.7% and in sparkling wine by 4.7%.

In short, Spain's exports were able to increase their share of the global market, within a context dominated by the export offensive of the New Word countries.

As a consequence of this exporting boom, Spain's highly relevant position in the international wine market has consolidated and improved in recent years: in volume it is the world's leading exporter, the third in terms of value and it is also among the top three positions in all types of wine (bulk, sparkling and still bottled) (Table1).

In order to explain the dynamism of Spanish exports we should refer to some substantial changes taking place in wine production and consumption in Spain. First, there was a distinct improvement in supply, with the introduction of innovations, which had been previously developed in other countries such as France, in maturation techniques characteristic of 'the wine revolution' (new presses, steel containers, temperatures control in the fermentation process and widespread bottling at source). This improvement in quality led to an increase in the number of producing areas legally considered as protected designations of origin which determined their quality standards in production. Between 1935 and 1977, a total of 24 designations of origin were created and between 1980 and 2011 a further 66 new ones emerged. Furthermore, in these designations of origin, the marketing of bottled wine became widespread while that of bulk wine practically disappeared.

The most noteworthy change in the demand side has been a progressive reduction in domestic consumption, particularly of low-quality wines, while that of bottled wines with designation of origin has increased. Consumption per capita fell from approximately 70 L in the 1970s to a little over 30 L in the 1990s (Anderson & Pinilla, 2020).

Finally, institutionally speaking, Spain's membership of the EU has been fundamental due to the access to an enormous market in which Spain could compete on equal terms with other traditional producers such as France or Italy, which strongly boosted the exports of the agri-food sector (Clar *et al*., 2015; Serrano *et al.*, 2015).

[1] If we measure exports in current values, the French and Italian losses are lower, falling from 63% in 1980-89 to 49% in 2010-16. Only France lost share in this case as Italy slightly improved. The Spanish gains in terms of value were much lower than in volume, increasing from 8% to 9%.

The panorama of the 1990s was, therefore, defined in Spain by the danger that the industry was in when faced with a brutal reduction in consumption, threatening is very survival, the opportunities of accessing a technological package that would lead to an improvement in quality and its access to an enormous market with no barriers to entry. In this context, Spanish wine exports grew very rapidly in terms of volume from the beginning of the twenty-first century and particularly after the economic crisis that began in 2008, much more than doubling those of the end of the twentieth century (Fig. S1 [suppl]). This expansion occurred together with an intense geographical diversification into regions where new wine consumers were emerging. In the last two decades the percentage of wine sold within the EU has decreased (Table S1 [suppl]). If we make the comparison without considering the countries that have joined the EU since the year 2000, this decrease is even more evident, as in volume, exports to the EU-12 have practically stagnated and their percentage of the total volume exported has fallen from 79% to 63%. Therefore, one of the keys to export success is the diversification of destinations and the increase in sales in new markets, particularly in Asia and the Americas, which represented 1% and 7.6% respectively in 2000 and currently 11% and 16.4% (27.4% in total). Undoubtedly, the case of China is revealing, as this market has grown from being a completely irrelevant destination to holding the fifth position with 6% of the volume of wine sold abroad (Table S1 [suppl]).

This large increase in wine exports has occurred with the participation of a growing number of companies. However, the average amount exported is small and has clearly stagnated. These two facts correspond to the high number and small size of Spanish wineries, which are smaller than their European counterparts, which are also relatively small. In January 2017, there were 4,093 wine companies in Spain, of which 3,426 (83.7%) had less than 10 employees, 589 (14.4%) between 10 and 50 employees, 71 had between 50 and 200 employees and only 7 had more than 200 employees (OEMV, 2016).

With respect to the composition of exports, three types of wine have been prominent in the formidable expansion of exports. On the one hand, there is clear leadership of bottled wine exports with protected designation of origin (PDO), protected geographical indication (PGI) and varietal wines (Fig. 1). The value of the exports of these wines in 2016 was approximately six times that of the mid-1990s. Their percentage of the value of total wine exports, in a context of strong growth, increased from 40% to 57% between 1995 and 2016. Therefore, this type of wine is the most important in the export boom of Spanish wine. This wine mainly came from the 90 producing areas with PDO. Heterogeneity is very important in the PDOs as they differ greatly between one another in terms of quality, value and price. A trend can be observed in the PDOs with lower unit values of their exports to sell a higher percentage of their production in external markets, being those that have expanded their sales the most in recent years. We could say that those PDOs with a lower reputation in the domestic market were forced to market their products abroad.

Together with this type of wine, the bulk wine and sparkling wine exports also grew significantly. In the former case, the enormous production of wine, mainly from the region of La Mancha, was mostly sent to the French market. In the case of sparkling wines, the growth in exports is also noteworthy from the 1960s, with a high level of concentration exclusively in two large business groups: Freixenet and Codorniu.

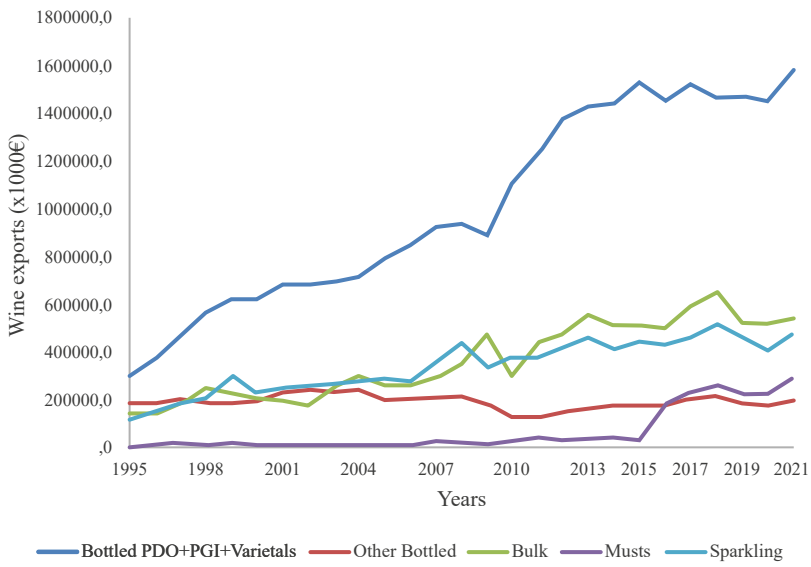

Figure 1. Breakdown of Spanish wine exports. Source: Own elaboration based on OEMV (2022)

Spanish wine exports, however, continue to have a low unit value compared to those of the other large exporters. Therefore, of the five countries with foreign sales representing more than 5% of the global exported value (France, Italy, Spain, Australia and Chile), the unit value of Spanish exports was the lowest (Anderson *et al*., 2017). This is clearly conditioned by the importance of Spanish bulk wine exports, with extremely low prices, but it also highlights that the exporting success of higher quality bottled wine (PDO, PGI and varietal wines) has also occurred in a relatively low value segment, mainly in the commercial-premium still wines (defined by Anderson *et al*., (2017) to be those between US$2.50 and $7.50 per litre before tax at a country's border or wholesale).

Bottled wine exports from areas with PGIs are, therefore, the principal protagonists of the export boom. Among them, those from the PDOs have an overwhelming importance. Their presence in foreign markets has been increasing with a very rapid expansion. On the one hand, the volume of their exports has increased from 3.45 million hectolitres in the 1996/97 campaign to 5.09 in the 2016/17 campaign, which implies an increase of 48% in only twenty years. It is also fundamental to point out that the bottled wine of the PDOs that represented 73% of their exports in 1996/97, reached 95% in 2016/17, implying an increase in volume of 92% of their bottled wine exports.

It is interesting to note that this dynamic behaviour of PDO bottled wine exports has continued to the present day. Their maximum value was reached in 2021. The volume exported increased until 2017, after which it has experienced a slight decrease. This implies that the unit value per bottle has been growing until today.

Within this context it is necessary to explain this strong growth of Spanish wine exports and particularly that of bottled wine from PDO. Undoubtedly, we could adopt a macroeconomic perspective using gravity models to attempt to identify the factors determining export growth. Many studies have adopted this methodology for different countries and periods, providing undeniably interesting results (Castillo *et al*., 2016; Ayuda *et al*., 2020; Bargain, 2020). However, as indicated in the Introduction, our objective here is to seek to determine the extent to which certain business strategies have played a fundamental role in explaining the export success. In short, our aim is to open the black box of the export sector to find out how firms have been able to increase their internationalisation process so quickly.

Theoretical framework

The benchmark model for analysing business strategy argues that in order to gain a competitive advantage, the company must choose between two strategic options, leadership in costs or leadership in differentiation, with no possibility of developing intermediate, "stuck in the middle" positions, which seek to offer differentiated products at a low price (Porter, 1985). Cost leadership focuses mainly on the production of low-cost products to satisfy price-sensitive customers. Differentiation focuses more on offering different and unique products and services in the industry but to a wide range of relatively price-insensitive customers (Soltanizadeh *et al*., 2016). However, alternative models have been developed for firms that consider the possibility of the existence of intermediate strategies. Particularly, in the case of wine, the literature has traditionally identified differentiation strategy as the star strategy for explaining the internationalisation success. Nevertheless, some studies have shown the success of intermediate internationalisation strategies, such as the case of Australian wine in the North American market in which, without increasing prices, the firms have introduced differentiation based on innovation or the large increase in the export volume of Italian Prosecco wine (Kim & Mauborne, 2005; Cox & Bridwell, 2007; Ponte, 2021). In the Spanish wine sector, faced with the challenge of internationalisation due to the decrease in domestic consumption, the wineries have been able to combine increases in value and new clients with efficient cost reduction models that has translated into very competitive prices with their entry into new markets (Bardají *et al*., 2014; Ferrer, 2021).

Sample

The sample universe, through which the name and address of the companies object of the study have been obtained, has been constructed by converging the records existing in the protected designations of origin and the SABI (2017), in Section 11.02 of the classification of economic activities (CNAE) for the year 2015. This double origin of records provides a more complete view of the companies operating in the Spanish wine sector, both those that have quality seals (PDO, PGI) and those that do not. The initial sample was made up of 3,286 companies. However, it was necessary to remove the so-called lost cases (Spanos & Lioukas, 2001), eliminating those data corresponding to repeated firms or those that did not have a valid telephone number or email address. Furthermore, those production centres which, when answering the survey, referred to other entities where the business decisions were made, were also eliminated from the study. This "cleaning" process was carried out by sending an email to the company directors together with a letter of explanation with a reference email and support telephone number in order to clarify any doubts. A month later a campaign of reminder telephone calls was carried out among those companies that had not replied. In this campaign all the casuistry could be captured of the different companies, lost data and production centres with no governing body. The process was carried out between

Table 2. Wineries in Spain, according to the number of employees (Dec 2015) and their percentages, compared with the wineries in the sample.

	Micro (< 10)	Small (10-49)	Medium (50-249)	Small & medium (0-250)	Large (>250)	Total
SABI data, % of total	83.2	14.5	2.3	99.8	0.2	100
Survey data, % of total	79.2	18	2.7	100	0	100

Source: Own elaboration and SABI (2017).

February and May 2016 and the data collected referred to the business situation at December 2015. Although these data only allow a cross-sectional analysis to be made, it is important to point out that the questions of the survey indicated that they should be answered considering the behaviour and situation of the firm over the last five years. The final population size was 2,413 wineries.

Finally, 339 valid surveys were obtained, 14% of the sample, the same size as the values reported by Baruch & Holtom (2008) for the industrial sector. The sampling error, based on the standard error of the mean, calculated for the case of finite populations for a confidence level of 95% and p = q = 0.5, was 5%.

The final sample reflects the reality of the sector in terms of both the size of the companies and the volume of the wine produced which is corroborated in Tables 2 and 3. In Table 2 we can observe that the sample offers a profile very similar to that of the wineries of the country as a whole, using the data drawn from SABI (2017), section 11.02. Table 3 shows the volume of wine produced and exported by the companies that participated in the survey and replied to the question relating to the export situation, comparing them with the sector according to the data from the Spanish Wine Market Observatory (OEMV, 2016, 2021). From this table we can conclude that the sample would have captured around 17% of the volume produced by the sector, and 20.6% of the exported wine.

Methodology

We use a dynamic Heckman-Probit model which corrects the problems related to selection bias. Bernard *et al*. (2012) described the decision to export by companies as the result of a series of individual characteristics of the firms and of the costs that they assume when entering foreign markets. Based on this idea, in this study a first equation (1) shows the probability to export which depends on their resources and capabilities, and the strategies established by the firms.

$$D_i^{\text{Export Status}} = \beta_1 \text{Strategies}_i + \beta_2 \text{Size}_i + \beta_3 \text{Age}_i + \beta_4 \text{R\&D}_i + \beta_5 \text{HumanResources}_i + \beta_6 \text{Business Group}_i + \text{Uijt} \quad (1)$$

In the model, the dependent variable ($D_i^{\text{Export Status}}$) is a dummy variable that takes the value 1 if the company exported and zero otherwise. This measurement of the propensity to export has extensively been used in the literature (Boehe, 2013, among others).

In order to capture the business strategies, the Dess & Davis (1984) and Robinson & Pearce (1988) scales were used to determine four strategies: Service, Efficiency, Marketing, and Innovation (see Table S2 [suppl] for more details). The strategies are determined by grouping the different questions of Robinson & Pearce (1988) related to the four principal strategies proposed therein.

Table 3. Volume of wine produced in Spain in 2015 and volume produced captured by the study according to the type of winery and its desire to export.

Type of winery and volume	Cases	Volume (× 1000 L)	Percentage
Wineries that do not export	46	24,106	3.7
Wineries that export	250	627,394	96.3
Total participating wineries responding to the questions of volume produced and exports	296	651,500	100
Lost cases	43		
Volume produced in Spain in 2015 (OEMV, 2016)		3,770,000	
Percentage of the total volume of wine produced captured by the study			17.3
Volume exported in Spain in 2015 (OEMV, 2021)		3,037,332	
Percentage of the total volume of wine exported captured by the study			20.6

Source: Own elaboration, based on own data and OEMV (2016, 2021).

In Table 4 we can observe the description and summary statistics of the variables used. The model also includes different control variables.

– Following different studies (Pla-Barber & Alegre, 2007), the empirical model includes the size of the company (***Size***) estimated through the volume of assets. Other studies take the number of employees or its logarithm (*e.g.* Ortega, 2010). In this case, authors following Ferrer-Lorenzo (2018) have opted for assets due to the extremely seasonal nature of wine production and the resulting distortion in the figures generated (correlation of 0.54 between the ranges of active and total employees). The assets of the winery are measured through a scale of seven intervals on which the directors place their companies (Ferrer-Lorenzo, 2018). We would expect a positive influence on the exporting activity related to the access to physical and financial resources (Boehe, 2013). Most theoretical explanations suggest that larger companies can better absorb the risks associated with entering foreign markets and have more resources in order to assume the costs of the initial phases of entering new markets (Maurel, 2009).

–The model also controls for the ***Age*** of the firm. Zahra & George (2002) argued that older firms are usually more stable than younger firms in their provision of resources; therefore, they have a greater capacity to undertake internationalisation processes.

–In accordance with Dunning's resource theory and eclectic paradigm (1977), firms with unique intangible resources can exploit their advantage in foreign markets (Lu & Beamish, 2004). The model includes the firm's ***Human Resources***, as it seems clear that companies that undertake a selection process hire employees with the best skills (Ferrer *et al*., 2020).

–The model estimates the ***R&D*** (research and development) activities. According to Qian *et al*. (2010), a positive effect is expected of companies that manage talent and invest in R&D.

–Finally, a dummy variable of belonging or not to a business group is included (***Business Group***).

The second stage of the Heckman model analyses the determinants of export intensity by using the following equation (2):

$$Export\ intensity_i = \beta_1 Strategies_i + \beta_2 Size_i + \beta_3 Age_i + \beta_4 R\&D_i + \beta_5 HumanResources_i + \beta_6 Business\ Group_i + U_{ijt} \quad (2)$$

In this second stage, the dependent variable is export intensity (***Exp_Intensidad***) which is defined as the volume of sales of the company abroad. It was calculated by using two questions of the survey: the first enables us to determine the percentage that exports represent of total sales, through six intervals (Ferrer-Lorenzo, 2018), the average value of the interval was multiplied by the volume of wine produced in thousands of litres, extracted from another question in the survey. As the aim was to analyse the influence of a firm's strategies on its export intensity, the model included the four strategic variables as in the previous stage (Service, Efficiency, Marketing and Innovation). It also included a group of multiplicative variables to study the effects of mixed combinations of strategies. We used strategies that seek efficiency (through cost reduction) while increasing value for the customer (through innovation and marketing) that have been outlined in the literature review. Specifically, four multiplicative variables were introduced: Efficiency * Marketing; Efficiency * Innovation; Efficiency * Marketing * Innovation; and also Marketing * Innovation.

The model also introduces control variables such as firm size, age, R&D, human resources management, and belonging to a business group.

Results

Before producing the estimations of the models described in the previous section, a preliminary analysis was conducted to determine the relationships between each of the independent explanatory variables used in the regression models. Table 5 shows the correlation matrix for each of the independent variables. As we can observe, the correlations between some of the strategies proposed in the model had fairly high values, implying serious multicollinearity problems. Among them we can highlight the high correlation between the strategies of Efficiency, Marketing, and Innovation. This high correlation between the strategies prevents their simultaneous inclusion in the models. In any case, the multicollinearity problems have been resolved by introducing the multiplicative variables that have been described in the previous section.

The first stage of the Heckman model is shown in Table 6 (columns 1, 2 and 3). As we can see, any of the four strategies considered enabled the company to export more than the others, as the results of the model showed coefficients with a positive sign and statistical significance for all of them.

However, in the second stage of our model, none of the strategies on their own enables a company to export more, as individually none of them show statistical significance. However, combining strategies improves the export performance of the companies. Therefore, from the results we should highlight the positive effect on the export volume of a combination of innovation and efficiency strategies (column 3b) and the combination of efficiency, innovation and marketing strategies (column 2d). The results also confirm the positive effect of differentiation strategies on export intensity, provided that they combine marketing and innovation (column 2c) as indicated in the previous literature.

With respect to the control variables referring to the resources and capabilities of the company, the results show the positive influence of several of those considered that

Table 4. Description and summary statistics of variables

Variable	Description	Observations	Mean	SD [1]	Min.	Max.
Dependent variables						
$D_i^{Export\ status}$ (1st stage)	Dummy variable that takes the value 1 if the company exported and zero otherwise. This measurement of the propensity to export has extensively been used in the literature (Boehe, 2013, among others).	326	0.846	0.360	0	1
Export_Intensity (2nd stage)	Log of export sales. Calculated by using two questions of the survey: the first enables us to determine the percentage that exports represent of total sales, through 6 intervals (Ferrer-Lorenzo, 2018), 1) 0%, 2) more than 0 and up to 10%, 3) more than 10 and up to 25%, 4) more than 25 and up to 50%, 5) more than 50 and up to 75%, and 6) more than 75%. The average value of the interval has been multiplied by the volume of wine produced in thousands of litres, extracted from another question in the survey.	326	45.62	28.656	0	87.5
Business strategy						
Service	Business strategy in Service (high price) [2]	319	3.674	0.655	1.2	5
Efficiency	Business strategy in Efficiency (low price) [2]	325	2.991	0.622	1	4.5
Marketing	Business strategy in Marketing (brand, distribution, marketing methods) [2]	326	2.984	0.787	1	4.75
Innovation	Business strategy in Innovation (Product and process innovation, development) [2]	327	2.970	0.785	1	5
Control variables						
Size	Amount of assets. The assets of the winery are measured through a scale of seven intervals on which the directors place their companies (Ferrer-Lorenzo, 2018). This scale ranges from 1) less than 400 thousand euros, 2) between 400 thousand and one million euros, 3) between 1 and 5 million euros, 4) between 5 and 10 million euros, 5) between 10 and 20 million euros, 6) between 20 and 40 million euros and 7) over 40 million euros	310	2.380	1.298	1	7
Age	Age of the firm.	329	33.446	32.549	0	186
R&D	Participation in R&D projects. The directors of the wineries evaluated the position of their company with respect to the competition on a five-point Likert scale, where 1 is "much weaker than the competition" and 5 is "much stronger than the competition". These items are adapted from Spanos & Lioukas (2001).	335	2.211	1.052	1	5
Human resources	Recruitment and staff selection system. - The directors of the wineries evaluated the position of their company with respect to the competition on a five-point Likert scale, where 1 is "much weaker than the competition" and 5 is "much stronger than the competition". These items are adapted from Spanos & Lioukas (2001).	334	2.598	0.801	1	5
Business group	Business group. This is a dummy variable of belonging or not to a business group from which the company could benefit and obtain more resources.	329	0.073	0.934	-3.46	2.69

[1] SD: standard deviation. [2] Defined by Robinson & Pearce (1988).

significantly affect the exporting status of Spanish wineries. The results confirm that the larger companies, those with more experience (age) and those that manage their human resources better are more likely to export (see columns 1, 2, 3 and 3b), as would be expected.

Size shows a positive and statistically significant sign in both stages, influencing both the likelihood of exporting and the intensity of foreign operations. This result consolidates the opinion that large firms benefit more from size and have the necessary resources to start exporting.

Table 5. Spearman correlations matrix

	1	2	3	4	5	6	7	8	9	10	11
1	1										
2	0.632*	1									
3	0.231*	0.223*	1								
4	0.207	0.095	0.124	1							
5	0.249	0.128	0.308	0.701	1						
6	0.285	0.207	0.430	0.606	0.760	1					
7	0.284*	0.149*	-0.001	0.241*	0.247*	0.134*	1				
8	0.060	0.002	-0.129*	0.035	0.029	-0.097*	0.297*	1			
9	0.147*	0.151*	0.081	0.304*	0.398*	0.414*	0.177*	0.018	1		
10	0.196*	0.155*	0.130*	0.297*	0.351*	0.324*	0.106	-0.015	0.289*	1	
11	0.031	0.020	-0:092	0.125*	0.139*	0.109	0.263*	0.089	0.211*	0.098	1

1, Export_status. 2, Export_intensity. 3, Service. 4, Efficiency. 5, Marketing. 6, Innovation. 7, Size. 8, Age. 9, R&D. 10, Human resources. 11, Business group. * Significant at 5% (Observations: 263).

Discussion

The profound changes that have taken place in the wine market over the last few decades, namely the globalisation of wine consumption and the increased importance of exporters from the New World countries, have constituted a major challenge for traditional European exporters (Anderson & Pinilla, 2021).

Although the literature has traditionally analysed a firm's export results in the wine market based on external factors (Anderson & Wittwer, 2020; Bargain, 2020), internal factors should also be considered. We can explain the growing phenomenon of new firms in the wine industry incorporating export activities through very different strategies. Any of the four strategies analysed in our study allows exporter status to be achieved. However, the strategic model is more complex and requires different combinations and configurations in order to achieve an intensification of exports. Some examples are the differentiation strategy followed by the champagne industry or the Chinese wine sector (Crozet *et al.,* 2011; Rodrigue & Tan, 2019), a mix of Porter's generic strategies in the case of Australian wineries or Italian Prosecco (Cox & Bridwell, 2007; Ponte, 2021). In Spain, wineries have combined an increase in value and new clients with efficient cost reduction models, achieving very competitive prices and the penetration of new markets (Ferrer, 2021).

The study confirms our central hypothesis. This implies that the joint use of strategies that seek efficiency (through cost reduction) while increasing value for the customer (through innovation, improved communication processes and distribution) increases the internationalisation of the company. Nonetheless, if considered individually, none of the strategies increases exports. Therefore, the result adds new strategic alternatives to those traditionally proposed by the literature.

The previous literature, focused on the success of the export strategies of firms in the wine-making sector, had sought to show that, save for a few exceptions, the differentiation strategy determines success in the international market. However, in this study, we have verified that the firms which we have studied, those of the Spanish wine exporting sector, have significantly increased their exports through a combination of strategies based on the strength of their differentiating strategies (Barney, 1991) and the needs of their customers, attempting to offer a product that can compete in a difficult environment.

Previous literature has focused on analysing export performance in the wine market based on aspects exogenous to the firms. We have found that firm strategy also has an effect on export performance in the Spanish wine industry. We believe that this is a contribution that complements previous work.

Companies in the twenty-first century compete in an increasingly globalised world where the option to export is, in many cases, a necessity for the survival of the firm (Mariani *et al.*, 2012). In mature sectors, such as the wine industry in the Old World, where there has been a significant decline in consumption, rivalry has increased considerably. The response of companies has been internationalisation. In this respect, the literature has many examples of a clear relationship between export performance and differentiation strategies (Crozet *et al*., 2011; Brenes *et al*., 2014; among others). The paradigmatic example is that of French wine and its enormous penetration of the Asian market (Masset *et al*., 2016; García-Cortijo *et al*., 2019).

Our study has highlighted that in order for companies to grow in international markets, they can use a combination of different strategic options instead of considering them as antagonistic alternatives as indicated by Porter's tradi-

Table 6. Effects of strategies export status and intensity.

Variable	1st Stage			2nd Stage						
	(1)	(2)	(3)	(1a)	(2a)	(3a)	(2b)	(3b)	(2c)	(2d)
Service-hp	0.1349*** (0.0097)	0.1494*** (0.0109)	0.1483*** (0.0121)	0.0160 (0.0064)	-0.1525 (0.1478)	-0.2147 (0.1631)	-0.1153 (0.1811)	-0.2394 (0.0672)	-0.0762 (0.1121)	-0.0545 (0.1102)
Efficiency-lp	0.0944*** (0.0140)			0.0171 (0.1799)						
Marketing		0.0482*** (0.0142)			0.1938 (0.1410)					
Innovation			0.0400** (0.0153)			0.2633 (0.1726)				
*Efficiency * Marketing*							0.0411 (0.0283)			
*Efficiency * Innovation*								0.0601*** (0.0196)		
*Marketing * Innovation*									0.0544* (0.0307)	
*Efficiency * Marketing * Innovation*										0.0159** (0.0082)
Size	0.0173** (0.0072)	0.0304*** (0.0078)	0.0323*** (0.0078)	0.2590** (0.1025)	0.2488** (0.1025)	0.2631** (0.1130)	0.2964** (0.1446)	0.4106*** (0.1025)	0.3199** (0.1078)	0.3424*** (0.1446)
Age	0.0007** (0.0002)	0.0304** (0.0002)	0.0008** (0.0003)	-0.0033 (0.0031)	-0.0002 (0.0029)	0.0006 (0.0029)	0.0005 (0.0028)	0.0005 (0.0020)	-0.0001 (0.0031)	0.0005 (0.0031)
R&D	-0.0052 (0.0081)	-0.0036 (0.0094)	-0.0031 (0.0096)	0.0764 (0.1026)	0.0276 (0.0939)	0.0026 (0.0960)	-0.0014 (0.1086)	-0.0270 (0.0663)	0.0110 (0.1056)	-0.0124 (0.1058)
Human Resources	0.0353** (0.0333)	0.0497*** (0.0116)	0.0562*** (0.0115)	0.1091 (0.1315)	0.1504 (0.1362)	0.1659 (0.1527)	0.1704 (0.2184)	0.2264** (0.0787)	0.0629 (0.1459)	0.0498 (0.1495)
Business Group	-0.0048 (0.0073)	-0.0286 (0.0373)	-0.0273 (0.0377)	-0.1171 (0.0180)	-0.0504 (0.4189)	-0.1401 (0.4165)	-0.3134 (0.4824)	-0.3994 (0.2606)	-0.5633 (0.4576)	-0.7315 (0.4634)
Inverse Mills	…	…	…	…	…	…	…	…	…	…
Constant	…	…	…	…	…	…	…	…	…	…
Observations	267	267	269	229	228	230	232	232	232	232
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Standard errors in parentheses. *** Significant at the 1%, ** at the 5%, * at the 10% level .

tional model. Therefore, the combination of efficiency and innovation, and the combination of efficiency, innovation and marketing, enable companies to intensify their internationalisation.

In order to empirically verify our hypothesis, we have used a representative sample of Spanish wineries. The evolution of Spanish bottled wine exports and of those with a PDO, displays an enormous growth, being the world leader in terms of volume and holding a third place in terms of value, despite the fact that the companies have not followed the differentiation and high-quality strategy. With the combination of strategies, not only have the Spanish wineries increased their internationalisation but they have also been able to diversify the destinations of their sales and significantly penetrate certain more dynamic markets, such as the Americas or Asia, and especially China within this continent.

In the case of wine, some studies on the marketing of wine in China have already indicated this reality. Masset *et al.* (2016) and García-Cortijo *et al.* (2019), have explained that the Chinese market has experienced a reduction in the consumption of premium wines, which has favoured the entry of other wines from different countries but with a lower price. Bargain (2020) has also shown that, although premium and high-priced wines, such as the Bordeaux wines, have increased formidably in the Chinese market, growing opportunities have also arisen for moderately priced wines such as the Languedoc wines. The cause of this resides in the increase in the knowledge of wine, so that educated consumers are less influenced by national stereotypes and more open to trying different wines which are endorsed by elements of differentiated quality. The expansion of consumers to middle-income segments may also explain these new opportunities.

Furthermore, our study shows the importance of incorporating the business heterogeneity in business models, in this case, considering different strategic models and their influence on export performance. Therefore, an alternative explanation is offered that enables us to better reconcile business models with the existence of a large number of small exporters that operate in international markets (Eaton *et al*., 2011).

It is clear that in our study, focused on business strategies, we have not been able to consider macroeconomic aspects, trade policies, exogenous comparative advantages or cultural elements which are decisive in explaining export results. As a good part of the literature on the determinants of wine exports has focused on this aspect, we believe that by analysing the behaviour of firms we offer a complementary perspective that enriches the understanding of the determinants of exports.

Authors' contributions

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