FOREIGN MARKET ENTRY MODES: THE INTERNATIONAL EXPANSION OF SPANISH WINERIES

Article type: Original
Corresponding author:
Marta Fernández-Olmos
maferno@unizar.es

Marta Fernández-Olmos[1]

[1] Universidad de Zaragoza, España

Abstract

Objectives: Most of the existing literature on the export behavior of small firms examines two single-stage decision-making processes—whether or not to export, and which export mode to use—or integrates both decisions simultaneously into a single-stage model. This article proposes that the export decision and the choice of export channel are nested and non-independent. In light of the above, this study aims to test different entry mode choice processes: independent decisions versus nested and non-independent decisions. **Methodology:** The study estimates and compares two models: (i) a simultaneous single-stage model with three entry mode choices, analyzed using a multinomial logit model, and ii) a two-stage model with the export decision preceding the channel decision, analyzed using a sequential logit model. **Results:** Resource-based factors are used to determine these internationalization decision-making processes, and empirical analysis is conducted on a DOCa Rioja sample of 177 firms. Using the Akaike and Schwarz information criteria, the empirical evidence supports a nested structure in which the export decision precedes the export mode decision. The implications and contributions of these findings are discussed. **Originality:** This hierarchical perspective of the choices involved in the process is noteworthy for two reasons. First, it supports the idea that people have limited analytical capacity. Managers often break down complex decisions into a hierarchical process to make them more manageable. Second, it acknowledges that important differences exist between entry modes.

Keywords: sequential logit model, two-stage choice process, export mode, wine industry
JEL: F23, L66, M16

Cómo citar: Fernández-Olmos, M. (2025). Foreign market entry modes: The international expansion of Spanish wineries. *Peruvian Journal of Management*, (2), 45-63. https://doi.org/10.26439/pjm2025.n002.7443
Historia del artículo: Recibido: 6 de febrero del 2025. Aceptado: 25 de abril del 2025. Publicado en línea: 17 de octubre del 2025.

MODOS DE ENTRADA AL MERCADO EXTRANJERO: LA EXPANSIÓN INTERNACIONAL DE LAS BODEGAS ESPAÑOLAS

Resumen

Objetivos: la mayor parte de la literatura sobre el comportamiento exportador de las pequeñas empresas examina dos procesos de toma de decisiones de una sola etapa —si exportar o no hacerlo, y qué modo de entrada utilizar—, o bien integra ambas decisiones simultáneamente en un modelo de una sola etapa. Este artículo propone que la decisión sobre exportar y la elección del canal de exportación son decisiones anidadas y no independientes. A la luz de lo anterior, el objetivo de este estudio es probar diferentes procesos de elección del modo de entrada: decisiones independientes y decisiones anidadas y no independientes. **Metodología:** la metodología estima y compara los siguientes dos modelos: (i) un modelo simultáneo de una sola etapa con tres elecciones de modo de entrada (utilizando un modelo logit multinomial); ii) un modelo de dos etapas con la decisión de exportación precediendo a la decisión del canal utilizando un modelo logit secuencial. **Resultados**: el estudio utiliza factores basados en recursos para determinar estos procesos de decisión en materia de internacionalización y lleva a cabo un análisis empírico utilizando una muestra de 177 empresas de la DOC Rioja. Utilizando los criterios de información de Akaike y Schwarz, la evidencia empírica apoya la existencia de una estructura anidada, donde la decisión de exportar precede a la decisión del modo de exportación. Se discuten las implicaciones y contribuciones de los hallazgos. **Originalidad:** esta perspectiva jerárquica de las elecciones involucradas en el proceso es atractiva por dos razones. En primer lugar, apoya la idea de que las personas tienen una capacidad analítica limitada. Los gerentes a menudo descomponen una decisión compleja en un proceso jerárquico porque esto la hace más manejable. En segundo lugar, reconoce que existen diferencias importantes entre los modos de entrada.

Palabras clave: modelo logit secuencial, proceso de elección en dos etapas, modalidad de exportación, industria del vino

1. INTRODUCTION

Yes, we really do need more entry mode studies!
Jean-François Hennart and Arjen H. L. Slangen

The literature has traditionally analyzed the export activity of firms through multiple perspectives because of the various sub-decisions involved in the decision-making process (Li et al., 2024). The basic choice made by firms—i.e., whether or not to export to foreign markets—is usually discussed in the literature on probabilistic choice as a single decision (Chen et al., 2016), often using binomial logit models (García et al., 2002). If the focus is on the method of exporting, authors usually consider a single decision: selecting one entry mode among several alternatives, defined in terms of commitment and control (e.g., selling through external intermediaries, engaging in joint ventures with a foreign distributor, or creating one's own export channel). In such cases, they apply binomial and/or multinomial

logit models (Hessels & Terjesen, 2010). Another line of research combines both decisions, generating three entry mode choices: no export, export without one's own channel, and export with one's own channel. This approach analyzes these three choices simultaneously in a single-stage process to choose only one (Merino & Salas, 2001).

As an alternative to previous research, Pan and Tse (2000) and Kumar and Subramaniam (1997) argue that the entry mode decision is a more complex process, with a natural hierarchy among the various modes of entry. They regard the choice between equity and non-equity modes as the first level of hierarchy. After this first choice, firms decide a specific mode within equity (wholly owned operations versus equity joint ventures) or non-equity modes (contractual agreements versus export). To test this process, Pan and Tse (2000) use a hierarchical model, because it resolves the problem of the assumption of independence from irrelevant alternatives (IIA), making it more suitable for the analysis of multi-choice decisions.

Following this multi-stage approach, we propose that the decision to sell abroad and the choice of export channel (indirect versus direct export) are nested and non-independent. We thus assume that firms make two sequential decisions before arriving at their final choice: whether to enter foreign markets and which channel to employ.

This hierarchical perspective of the choices involved in the process is noteworthy for two reasons. First, it supports the idea that people have limited analytical capacity (Simon, 1955). Managers often break down complex decisions into a hierarchical process to make them more manageable (Steinbruner, 1974). Second, it acknowledges that important differences exist between entry modes (Anderson & Gatignon, 1986).

In light of the above, this study aims to test different entry mode choice processes: independent decisions versus nested and non-independent decisions. To this end, the study estimates and compares two models: (i) a simultaneous single-stage model with three entry mode choices, analyzed using a multinomial logit model, and ii) a two-stage model with the export decision preceding the channel decision, analyzed using a sequential logit model. Resource-based factors are used to determine these internationalization decision-making processes, and empirical analysis is conducted on a DOCa Rioja sample of 177 firms.

2. LITERATURE REVIEW

Previous research on entry mode choice in international markets has assumed that this is a single-stage, rational, analytical decision made by a manager or a team of managers (Kumar & Subramaniam 1997). Much of the literature presumes that managers consider all entry modes at the same level and that each factor is given equal importance. However, Simon (1955) recognized that human analytical capacities and resources are limited and there is thus no satisfactory analytical method for resolving complex problems. Decision makers address problems according to a cognitive strategy known as "bounded rationality," which leads them to "satisfice" rather than optimize when choosing among several options (Ruiz-Moreno et al., 2007; Simon, 1955).

According to the cybernetic decision-making model proposed by Steinbruner (1974)—which is a combination of the notions of satisficing and models for cognitive processes—decision makers break down both the problem and the environment into stable subsystems. They simplify the decision-making process by sequentially eliminating alternatives that fail to meet a certain threshold, based on key criteria. These strategies can be described as heuristic processes.

Following Kumar and Subramaniam (1997), given the diversity of entry modes, some are more similar to one another than others; therefore, a natural hierarchy exists among them. Entry mode choice then follows a hierarchical process in which managers first structure the alternatives into a multi-level hierarchy and define a set of evaluation criteria for each level (Pan & Tse, 2000).

This hierarchical (or "cybernetic") decision-making strategy is supported by the works of Kumar and Subramaniam (1997) and Pan and Tse (2000), who propose hierarchies that better reflect the general behavior of managers in the entry mode choice. Specifically, Pan and Tse (2000) propose a natural hierarchy in which the first stage differentiates equity from non-equity modes, and the second stage classifies non-equity modes as exporting and contractual agreements, while equity modes are categorized as equity joint ventures and wholly owned subsidiaries.

Drawing upon the previous literature, this research proposes that entry mode choice can be examined from a hierarchical perspective, where "exporting versus non-exporting" and "direct exporting versus indirect exporting" are nested and non-independent decisions. Then, we ask: Is this two-stage decision-making process superior to the single-stage decision-making process? Based on this premise, the following hypothesis is proposed: A hierarchical decision-making process is superior to a single-stage decision-making process in the choice of direct or indirect export.

Several theoretical approaches have been used to study foreign entry mode choice. This research focuses on the resource-based view, as it is helpful for explaining the extent of both the export (export versus non-export) and the channel (direct versus indirect export) choices (Canabal & White, 2008; López Rodríguez & García Rodríguez, 2005).

2.1 Determinant Factors

2.1.1 Regarding the Export Decision

According to the resource-based view, firms' competitive advantages significantly impact on export behavior (Barney, 1991; Hitt et al., 1997). A firm may gain a competitive advantage in foreign markets by deploying a wide range of strategic resources and core competencies.

The ability of a firm to provide differentiated products is one of the key factors in its expansion or internationalization. Differentiation allows firms to tailor products to customer requirements or develop higher-quality products (López Rodríguez & García Rodríguez, 2005). From this perspective, Styles and Ambler (1994) argue that product strength—in terms of quality and uniqueness—is a key element in the export success of many companies. Similar conclusions have been reported by Burton and Schlegelmilch (1987), Cavusgil et al. (1993), Madsen (1989), and McGuinness and Little (1981).

Human capital in terms of educated workers and managers may be crucial for generating internationalization capabilities (Rialp et al., 2002). Consistent with this view, previous literature have suggested that human capital and exports appear to go hand in hand during the growth process (Contractor & Mudambi, 2008).

The relationship between firm size and export behavior has been widely analyzed in the international business literature (Pla-Barber & Alegre, 2007). The resource-based view, like the majority of theoretical explanations, suggests a positive relationship between firm size and exporting (Dhanaraj & Beamish, 2003). Larger firms are better positioned to absorb the risks

associated with foreign market entry, possess greater economies of scale, and have more financial resources to overcome the fixed or sunk costs of becoming exporters (Bernard & Jensen, 1999; Majocchi et al., 2005; Verwaal & Donkers, 2002; Wagner, 1995). Empirical evidence supports that larger firms are more likely to export (López Rodríguez & García Rodríguez, 2005).

International business literature also suggests that long-established firms may have accumulated a stock of knowledge that allows them to build their capabilities and achieve better leverage to compete in global markets. However, it is also argued that mature firms may be more rigid, while newly created firms may be more flexible, aggressive, and proactive in entering foreign markets (Lefebvre & Lefebvre, 2002).

Foreign ownership of a firm's capital may also facilitate entry into international markets as a result of the international experience inherent in such ownership. Firms with foreign owners are often familiar not only with conditions in their home country but also with information on other international markets. Consequently, firms with foreign ownership are generally more likely to start exporting (Wignaraja, 2002).

Finally, the resource-based view highlights that the implementation of a website provides firms with information and communication capabilities which assist domestic firms in the export process (Bennett, 1997; Hornby et al., 2002). In particular, the internet helps firms to communicate with customers, suppliers, and business partners at no cost, regardless of time and distance.

2.1.2 Regarding the Export Channel Decision

The most common methods of exporting are: (i) exporting directly to customers abroad or (ii) exporting indirectly through an intermediary.

Export intermediaries perform an important "middleman" function by linking firms and customers in geographically distinct markets that might otherwise remain unconnected. A number of different intermediaries can be involved, ranging from agents and distributors—whether domestic or foreign—to local subsidiaries of multinational enterprises (MNEs). This indirect export mode enables firms to avoid the direct trade costs of entering international markets. Export intermediaries often help their clients save the costs associated with searching for new customers, monitoring contract enforcement, and helping them to take advantage of the intermediaries' contacts, experience, and knowledge of foreign markets (Hessels & Terjesen, 2010; Peng & York, 2001).

Firms may hire export intermediaries to reduce uncertainties and other risks associated with operating in foreign markets. Moreover, the use of such intermediaries may enable firms to perform certain export-related functions more efficiently or at a lower cost than they could on their own, for example, when the intermediaries have the know-how required to enter foreign markets (Li, 2004). However, using export intermediaries also involves transaction costs and commissions (Acs & Terjesen, 2007). Another disadvantage is the potential loss of control over how the product is marketed and serviced (Blomstermo et al., 2006; Fernández-Olmos et al., 2024). Highly differentiated products require greater management skills and more specific asset investments (Rialp et al., 2002). For this reason, the degree of product differentiation may be a significant factor in determining if direct exporting is the preferred option. Empirical evidence for this theory can be found in Anderson and Coughlan (1987), who found that markets characterized by product similarity and price competition were more successfully handled by agents and distributors.

Compared to indirect export modes, direct exporting requires a large commitment of human resources. Consequently, firms lacking sufficient human resources are more likely to prefer indirect exporting. The same reasoning may be applied to firm size. Since indirect exporting involves a smaller commitment of financial resources than direct exporting (Johanson & Wiedersheim-Paul, 1975), the literature predicts that smaller firms tend to prefer the indirect export mode (Campa & Guillén, 1995; Osborne, 1996; Rialp et al., 2002).

Export intermediaries may be particularly beneficial for young firms with limited business experience, as they face greater risks and uncertainty during internationalization process (Peng & Ilinitch, 1998). In contrast, older firms that have clear competitive advantages derived from their market knowledge may be less likely to need to rely on intermediaries.

At the theoretical level, foreign-owned firms are more likely to have technical, economic, human, and informational resources than firms without foreign investment participation. These resources may encourage them to create their own export channels (Rialp et al., 2002).

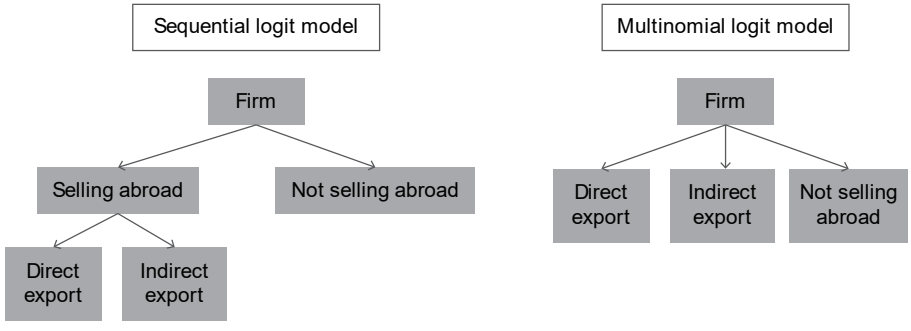
Finally, it is generally assumed that the internet allows firms to exchange information with their customers, suppliers, and business partners abroad without setting up and maintaining expensive networks (Amarasena, 2008). Thus, the internet is expected to reduce firms' reliance on intermediaries to identify and communicate with international customers.

3. METHODOLOGY

To test whether the two-stage model is superior to the single-stage decision-making process in the choice of export mode (Hypothesis 1), this study assesses two models. First, a simultaneous single-stage model is estimated with three different entry modes (no export, indirect export, and direct export), using a multinomial logit model. Second, a two-stage model is evaluated with the export decision preceding the export channel decision. In the first stage, the choice is whether or not to export. Firms which choose to export in the first stage go on to a second stage, in which they decide between direct and indirect export modes. A sequential logit model is used to assess the abovementioned two-stage model (Figure 1).

Figure 1

Alternative Logit Models



Specifically, a sequential logit model represents an alternative to the more traditional multinomial logit model, as it avoids the assumption of independence from irrelevant alternatives (IIA). IIA, a property of the multinomial logit model, implies that adding another alternative does not affect the relative odds between two given alternatives. However, this implication is unrealistic in applications with similar characteristics.

For instance, consider a firm that is planning to export and must choose between two channels: its own export channel (direct export) or an intermediary abroad (indirect export). If an additional intermediary with the same characteristics is introduced, the multinomial logit model would—regardless of the likelihood of being chosen—proportionally reduce the probability assigned to each existing option. However, intuition suggests that the probability of choosing direct export should remain the same. Suppose the initial probabilities for each of the two options are 1/2, once the third option (the new intermediary) is added, the multinomial logit model assigns an equal probability of 1/3 to each option. A statistical explanation for this phenomenon lies in the violation of the assumption of independence of the random term (Debreu, 1960; Nicolau & Más, 2008).

In the multinomial model, the response variable consists of a collection of purely discrete, unrelated categories. By contrast, in the sequential model, the response categories can be perceived as a sequence of stages, where subsequent decisions are nested within the earlier ones (Liao, 1994). In our study, the export decision follows a two-stage sequence: first, whether a firm plans to export, and second, whether it will adopt the direct export mode.

y = 1, if the firm decides not to export

y = 2, if the firm decides to export indirectly through an intermediary

y = 3, if the firm decides to export directly to customers abroad

The related probabilities can be expressed as follows (Amemiya, 1975; Maddala, 1983):

$$P_1 = F\left(\sum_{k_1}^{K_1} \beta_{k_1} x_{k_1}\right)$$

$$P_2 = \left[1 - F\left(\sum_{k_1}^{K_1} \beta_{k_1} x_{k_1}\right)\right] F\left(\sum_{k_2}^{K_2} \beta_{k_2} x_{k_2}\right)$$

$$P_3 = \left[1 - F\left(\sum_{k_1}^{K_1} \beta_{k_1} x_{k_1}\right)\right]\left[1 - F\left(\sum_{k_2}^{K_2} \beta_{k_2} x_{k_2}\right)\right]$$

Where the subscripts k1 and k2 denote the sets of variables included in Stages 1 and 2, respectively. The parameter βk1 is estimated by dividing the full sample into two groups: firms that do not export and those that do. The Stage 2 parameter βk2 is estimated from the subsample of exporting firms, which is divided into two groups: those who have chosen direct exporting and those who have chosen indirect exporting.

3.1 Dependent Variables

To estimate the single-stage simultaneous model, this research uses a polychotomous variable with three options: (i) non-exporting, coded as 1 if chosen and 0 otherwise; (ii) indirect export, coded as 1 if chosen and 0 otherwise; and (iii) direct export, coded as 1 if chosen and 0 otherwise. For the two-stage model, two dummy variables are used: (i) export decision, where 1 indicates exporting and 0 non-exporting; and (ii) export channel, where 1 denotes direct and 0 indirect.

3.2 Independent Variables

3.2.1 Product Differentiation

Previous studies (Anderson & Coughlan, 1987; Coughlan, 1985; Coughlan & Flaherty, 1983) have measured product differentiation with dummy variables coded as 1 for highly differentiated goods and 0 for less differentiated goods. The Regulatory Council of the DOCa Rioja classifies Rioja wines according to their added value. In Spanish nomenclature, the first group includes mostly "guarantee of origin" wines, which have not been aged in oak casks. The second group includes "crianza" wines, which have been aged for at least three years, with one year in oak casks. Finally, the third group comprises "reserva" and "high profile" wines, which are carefully selected and represent the highest-quality categories underpinning the DOC's great reputation and quality. Following this classification, product differentiation was defined as the percentage of a winery's production represented by this category.

3.2.2 Human Capital

The literature on human capital theory often uses employee education level as an indicator of labor productivity. In this paper, we include the proportion of employees holding university degrees as a proxy for human capital, using the approach proposed by Plechero and Chaminade (2010).

3.2.3 Firm Size

Following previous studies (Brouthers et al., 2003; Goerzen & Beamish, 2003), firm size is operationalized as the number of employees, expressed in logarithmic form to remedy the significant positive skew (Tabachnick & Fidell, 2001). Hessels and Terjesen (2010) also employ the natural log of firm size.

3.2.4 Firm Age

Similarly to other empirical studies (Bouquet et al., 2004; Delios & Henisz, 2003; Majocchi et al., 2005), firm age is measured through a logarithmic transformation.

3.2.5 Foreign Investors

A dichotomous variable was constructed to indicate whether the firm has foreign ownership in its capital structure, as outlined by López Rodríguez and García Rodríguez (2005).

3.2.6 Internet

This variable was measured through a direct question which enabled us to create a dummy coded as 1 if the firm had its own website and 0 otherwise. This measure has been used in various studies (Dejo-Oricain & Ramírez-Alesón, 2009; Nieto & Fernández, 2005).

3.3 Sample Data and Variables

The main sources used to obtain the list of wineries in the target population were the directories issued by the Regulatory Council of the DOCa Rioja. Data for this study were collected through a structured survey conducted in 2010. The population was based on the 2007 list provided by the Regulatory Council of the DOCa Rioja. The sample was selected from a population comprising wineries that met the following criteria: (1) belonging to the DOCa Rioja, (2) operating as wine-making processors, (3) required to submit accounting information to the authorities, and (4) not organized as cooperatives. Usable responses were obtained from 177 wineries (83 %).

4. DATA ANALYSIS

A preliminary analysis was conducted to determine the relationships between pairs of independent variables. The Kolmogorov–Smirnov test indicated that the variables were not normally distributed; consequently, Pearson's correlations were deemed inappropriate. Instead, Spearman's correlations were computed for each pair (Table 1). The correlations ranged from −0,08 to 0,39, indicating weak to moderate associations. Additionally, the variance inflation factor (VIF) was calculated for each of the regression coefficient. The maximum VIF obtained across the three models was 2,10, well below the conservative cut-off of 10 typically considered acceptable for multiple regression models (Hair et al., 1998; Neter et al., 1985).

Table 1

Spearman's Correlations and Variance Inflation Factors

Variables	1	2	3	4	5	6	VIF
Differentiation	1,00						1,15
Human Capital	0,08	1,00					1,01
Size	0,32**	0,06	1,00				1,34
Age	0,18*	0,06	0,11	1,00			1,08
Foreign Investors	0,02	-0,05	-0,08	-0,04	1,00		1,01
Internet	0,27**	0,13	0,39**	0,11	-0,05	1,00	1,20

Note. ** prob < 0,01; * prob < 0,05.

Table 2 shows the means of the variables for each functional group, as well as the ANOVA test results evaluating differences across the groups. As expected, several of these differences are statistically significant.

Table 2

Summary Statistics (Means and Standard Deviations) of Independent Variables and Results of ANOVA Tests

Variables	Entire Sample (n = 177)	Non-Exporters (n = 39)	Indirect Exporters (n = 35)	Direct Exporters (n = 103)	F-Test	Significance
Differentiation	22,27	6,21	18,80	29,53	11,04	0,000
% "Added Value" Wines	(28,35)	(9,66)	(25,24)	(31,36)		
Human Capital	0,22	0,20	0,17	0,24	1,30	0,276
% University Employees	(0,23)	(0,29)	(0,20)	(0,21)		
Size	1,79	0,85	1,53	2,24	29,80	0,000
Ln(Employees)	(1,13)	(0,63)	(0,95)	(1,10)		
Age	3,14	2,94	3,13	3,21	1,16	0,316
Ln(Years)	(0,96)	(0,96)	(0,80)	(1,01)		
Foreign Investors	0,10	0,05	0,14	0,10	0,89	0,414
Dichotomous Variable	(0,30)	(0,22)	(0,36)	(0,30)		
Internet	0,77	0,46	0,69	0,91	20,70	0,000
Dichotomous Variable	(0,42)	(0,51)	(0,47)	(0,28)		

This section examines alternative decision-making processes for entry mode (no export, indirect export, and direct export) using two logit-type models (Tables 4 and 5). Among the various model selection methods using information criteria, the Akaike and Schwarz information criteria (AIC and SIC) are the most widely applied in practice. This study employs both criteria, defined as:

$$AIC = \left[-2\,log\left(L_n(k)\right) + 2\mathrm{k}\right]/n$$

$$SIC = \left[-2\,log\left(L_n(k)\right) + k\,log\,(n)\right]/n$$

Where Ln(k) is the maximum likelihood of a model with k parameters based on a sample of n observations.

A model with many parameters will provide a very good fit to the data, but it will have few degrees of freedom and limited utility. These models, in addition to considering the likelihood function, promote parsimony by imposing a penalty for including too many terms in a regression model. The preferred model is the one with the lowest AIC and SIC values.

Table 3 shows the fit of each model for the two decision-making processes proposed: (i) Model 1, a simultaneous single-stage structure with three entry mode choices; and (ii) Model 2, a two-stage model in which the first stage determines whether to export, and the second stage specifies the export channel (direct versus indirect).

Table 3

Comparison of Model Structures

	Model 1: Multinomial Logit	Model 2: Sequential Logit
AIC	287,233	284,283
SIC	331,699	328,749

Using the minimum AIC and SIC, the two-stage structure (Model 2) provides the best fit. This finding indicates that the optimal structure to represent the export decision sequence is a nested one, with a first stage in which managers decide whether or not to export, followed by a second stage in which those who decide to export choose between indirect and direct export channels. Consequently, Hypothesis 1 is not rejected, as the results show that the hierarchical decision-making process is superior to the single-stage process in the entry mode choice.

Additional support for the sequential logit model is provided by the Hausman test, which rejects the IIA assumption. Once the best-fitting model has been identified, we proceed to analyze the results presented in Table 5.

Table 4

Results of the Multinomial Logit Model (Model 1)

Independent Variables	Simultaneous Single-Stage (3 Options) Structure		
	Eq. (1): Indirect Export vs. Non-Export	Eq. (2): Direct Export vs. Non-Export	Eq. (3): Direct Export vs. Indirect Export
Differentiation	0,036* (0,020)	0,044** (0,020)	0,007 (0,008)
Human capital	-0,982 (1,102)	0,881 (0,966)	1,863* (1,033)
Size	0,895** (0,354)	1,502*** (0,347)	0,607** (0,241)
Age	0,089 (0,269)	-0,062 (0,257)	-0,152 (0,229)
Foreign investors	1,094 (0,929)	1,029 (0,926)	-0,065 (0,644)
Internet	0,267 (0,552)	1,360** (0,571)	1,093** (0,542)
Constant	-1,864* (0,938)	-2,898*** (0,956)	-1,033 (0,868)

Note. Standard errors in parentheses. *** Significant at the 1 % level, ** at the 5 % level, * at the 10 % level. Number of observations = 177

Table 5

Results of the Sequential Logit Model (Model 2)

Independent Variables	Two-Stage Structure	
	Eq. (1): Direct & Indirect Export vs. Non-Export	Eq. (2): Direct Export vs. Indirect Export
Differentiation	0,041** (0,020)	0,009 (0,008)
Human capital	0,082 (0,868)	2,616** (1,107)
Size	1,248*** (0,323)	0,642*** (0,245)
Age	0,007 (0,236)	-0,246 (0,243)
Foreign investors	1,029 (0,869)	0,079 (0,682)
Internet	0,837* (0,491)	1,376** (0,569)
Constant	-1,661** (0,839)	-1,222 (0,910)

Note. Standard errors in parentheses. *** Significant at the 1 % level, ** at the 5 % level, * at the 10 % level. Number of observations = 177

5. RESULTS AND DISCUSSION

As shown in Eq. (1) in Table 5, the export decision is not independent of the firm's product differentiation strategy. Our results indicate that wineries marketing differentiated (high-priced) wines tend to export more than their counterparts marketing lower quality products (β = 0,041; p < 0,05). However, the evidence does not support a positive relationship between higher levels of product differentiation and direct export (Eq. [2] in Table 5). Contrary to our initial expectations, we found no evidence that firms employing more highly educated workers are more likely to export. One possible explanation lies in the many export assistance programs offered by public sector institutions (most notably, the Spanish Institute of Foreign Trade (ICEX) and the Spain Chamber of Commerce), which support domestic firms in their export activities.

With regard to channel decision, the data in Eq. (2) in Table 5 reveal a significant positive relationship between human capital and direct exports for the wineries in our DOCa Rioja sample. This is in line with previous research indicating that the skills of highly educated employees, such as speaking foreign languages (Knowles et al., 2006) or understanding new technologies (Bojnec & Ferto, 2010), make it easier for the firm to establish its own export channel. The coefficients of firm size are positive and significant at the 1 % level in Eqs. (1) and (2) of Table 5. These results are consistent with previous findings, confirming that larger firms are more likely to engage in direct exporting (Rialp et al., 2002). This suggests that exporting, particularly through direct mode, requires a high level of investment.

The data in Eqs. (1) and (2) in Table 5 show that firm age does not have a significant effect. This aligns with the generally inconclusive results reported in the literature (Fryges, 2006; Majocchi et al., 2005; Moen & Servais, 2002).

It was postulated that firms receiving foreign investment would make significantly greater use of direct exporting; however, our data do not support this (β was not significant in either equation in Table 5). A possible explanation is the limited level of foreign participation in DOCa Rioja wineries. We acknowledge that this explanation is somewhat speculative and encourage future researchers to further examine the impact of foreign investment on the exporting activity of wineries.

We find some support for the belief that the internet positively influences export decisions. Our findings also indicate that wineries with their own websites are more likely to engage in direct exporting.

6. CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH LINES

This section outlines the theoretical or practical contributions of the study (depending on the focus, not all studies provide both). The narrative emphasizes how the results relate to the existing literature and their relevance to the field, either supporting or challenging previous findings. The section concludes by addressing the research questions or objectives established. It is crucial to recognize and discuss the limitations of the study. This research assumes that export decisions are sequential and non-independent, which justifies decomposing the choice of export channel into a two-stage process: first, deciding whether or not to export, and second, selecting between direct and indirect modes. This hierarchical decision-making process is considered superior to single-stage processes in complex situations such as export decisions. The rationale is that human analytical capacities are limited, which leads decision makers to simplify the process by sequentially eliminating alternatives that fail to meet key criteria. This phenomenon was analyzed using a sample of 177 DOCa Rioja wineries. The methodology employed was based on a sequential logit model, which overcomes the independence of irrelevant alternatives property of the multinomial logit model.

The following conclusions can be drawn from the empirical analysis. The modeling reveals the sequential and non-independent character of the export decision and the choice of export channel, showing the multi-stage nature of the decision-making process. The structure which best represents the export decision sequence involves a first stage of deciding whether or not to export, followed by a second stage in which firms choose between indirect and direct export modes. Given their interdependence, the choice of export channel should be modeled jointly with the export decision. The paper also highlights some limitations which point to interesting avenues for future research. First, from a methodological standpoint, sequential logit models are more sensitive than many other alternatives to potential bias arising from unobserved heterogeneity (Cameron & Heckman, 1998). Nevertheless, the theoretical rationale developed while formulating the hypotheses supports the use of this methodology.

Although our study focused on the simple dichotomy between direct and indirect exporting, we acknowledge that there is a wide array of indirect export channels, such as export promotion organizations or trade representatives (Albaum et al., 2002). Although they share some features, they exhibit many distinct strengths and weaknesses that may affect the decision-making process. However, we do not consider specific export channels, because this could affect our ability to assess the impact of factors specific to each export mode.

Despite the limitations mentioned in the previous paragraphs, the findings of this research have important implications for export researchers, managers, and public policymakers. The methodology employed and the results obtained provide a clearer understanding of what affects the choice of export entry mode and the level at which they operate. In particular, this approach help avoid the mistake of disregarding key factors that may not have a

significant impact on the decision of whether or not to export or on the choice of export channel. For example, this paper shows that human capital does not influence the first stage of the decision-making process but does exert substantial influence on the choice of export channel in the second stage.

Overall, this study employed a methodology that can be critical for obtaining a better understanding of DOCa Rioja wineries' export channel decisions. It may assist various stakeholders in exploring these firms' potential growth into multinational corporations. This outcome is particularly relevant for sectors such as the Spanish wine industry, where the domestic market is saturated.

STATEMENTS

Data Availability

The author declares that no new data were created or analyzed in this study. Data sharing is not applicable to this article.

Use of Artificial Intelligence

No generative AI tools were used for content creation or analysis.

Conflict of Interests

The authors declare no conflicts of interest.

Funding

This work was supported by the grant PID2021-123154NB-I00, funded by MCIN/AEI/10.13039/501100011033 and "ERDF: A Way of Making Europe," as well as by the COMPETE (S52_23R) research group, funded by Government of Aragón (Spain) and ERDF.

Author Contributions (CRediT)

MFO: conceptualization, methodology, formal analysis, writing, original draft, review & editing, project administration.

Ethical Approval

Not applicable.

Declaration of Originality

This paper is an original work that has not been published elsewhere. It was previously presented in an internal seminar at the University of Zaragoza in 2015.

REFERENCES

Acs, Z. J., & Terjesen, S. (2007). *Born local: Two avenues to internationalization* (Jena Economic Research Paper No. 2007-022). Kelley School of Business. http://dx.doi.org/10.2139/ssrn.1019435

Albaum, G., Strandskov, J., & Duerr, E. (2002). *International marketing and export management*. Prentice Hall.

Amarasena, A. (2008). The internet in the performance of small exporting firms. A developed to developing country market context. *Journal of Internet Business*, *5*, 51-80.

Amemiya, T. (1975). Qualitative response models. *Annals of Economic and Social Measurement, 4*(3), 363-372. http://www.nber.org/chapters/c10405

Anderson, E., & Coughlan, A. T. (1987). International market entry and expansion via independent or integrated channels of distribution. *Journal of Marketing*, *51*(1), 71-82. https://doi.org/10.1177/002224298705100106

Anderson, E., & Gatignon, H. (1986). Modes of foreign entry: A transaction cost analysis and proposition. *Journal of International Business Studies*, *17*, 1-26. https://doi.org/10.1057/palgrave.jibs.8490432

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99-120. https://doi.org/10.1177/014920639101700108

Bennett, R. (1997). Export marketing and the internet: Experiences of web site use and perception of export barriers among UK businesses. *International Marketing Review*, *14*(5), 324-344. https://doi.org/10.1108/02651339710184307

Bernard, A. B., & Jensen, J. B. (1999). Exceptional exporters performance: Cause, effect or both. *Journal of International Economics*, *47*(1), 1-25. https://doi.org/10.1016/S0022-1996(98)00027-0

Blomstermo, A., Sharma, D. D., & Sallis, J. (2006). Choice of foreign market entry mode in service firms. *International Marketing Review*, *23*(2), 211-229. https://doi.org/10.1108/02651330610660092

Bojnec, Š., & Ferto, I. (2010). Internet and international food industry trade. *Industrial Management & Data Systems*, *110*(5), 744-761. https://doi.org/10.1108/02635571011044768

Bouquet, C., Hébert, L., & Delios, A. (2004). Foreign expansion in service industries: Separability and human capital intensity. *Journal of Business Research*, *57*(1), 35-46. https://doi.org/10.1016/S0148-2963(02)00282-5

Brouthers, K. D., Brouthers, L. E., & Werner, S. (2003). Transaction cost-enhanced entry mode choices and firm performance. *Strategic Management Journal*, *24*(12), 1239-1248. https://doi.org/10.1002/smj.362

Burton, F. N., & Schlegelmilch, B. B. (1987). Profile analyses of non-exporters versus exporters grouped by export involvement. *Management International Review, 27*(1), 38-49.

Cameron, S. V., & Heckman, J. J. (1998). Life cycle schooling and dynamic selection bias: Models and evidence for five cohorts of American males. *Journal of Political Economy*, *106*(2), 262-333. https://doi.org/10.1086/250010

Campa, J. M., & Guillén, M. F. (1995). *Firm determinants of export internationalization and the choice between commercial alliances and proprietary distribution channels* (Working Paper No.

3758-BPS/95). Massachusetts Institute of Technology Sloan School of Management. https://dspace.mit.edu/bitstream/handle/1721.1/47931/firmdeterminants00camp.pdf?sequence=1

Canabal, A., & White, G. O. (2008). Entry mode research: Past and future. *International Business Review*, *17*(3), 267-284. https://doi.org/10.1016/j.ibusrev.2008.01.003

Cavusgil, S. T., Zou, S., & Naidu, G. M. (1993). Product and promotion adaptation in export ventures: An empirical investigation. *Journal of International Business Studies*, *24*, 479-506. https://doi.org/10.1057/palgrave.jibs.8490242

Chen, C., Wang, Q., Martek, I., & Li, H. J. (2016). International market selection model for large Chinese contractors. *Journal of Construction Engineering and Management*, *142*(10). https://doi.org/10.1061/(ASCE)CO.1943-7862.0001122

Contractor, F. J., & Mudambi, S. M. (2008). The influence of human capital investment on the exports of services and goods: An analysis of the top 25 services outsourcing countries. *Management International Review*, *48*, 433-445. https://doi.org/10.1007/s11575-008-0025-9

Coughlan, A. T. (1985). Competition and cooperation in marketing channel choice: Theory and application. *Marketing Science*, *4*(2), 93-176. https://doi.org/10.1287/mksc.4.2.110

Coughlan, A. T., & Flaherty, M. T. (1983). Measuring the international marketing productivity of US semiconductor companies. In D. A. Gautschi (Ed.), *Productivity and Efficiency in Distribution Systems* (pp. 123-139) Elsevier.

Debreu, G. (1960). Review of individual choice behavior: A theoretical analysis, by R. D. Luce. *American Economic Review*, *50*(1), 186-188.

Dejo-Oricain, N., & Ramírez-Alesón, M. (2009). Export behaviour: A study of Spanish SMEs. *Journal of Globalization, Competitiveness and Governability*, *3*(2). https://doi.org/10.3232/GCG.2009.V3.N2.03

Delios, A., & Henisz, W. J. (2003). Political hazards, experience, and sequential entry strategies: The international expansion of Japanese firms, 1980-1998. *Strategic Management Journal*, *24*(11), 1153-1164. https://doi.org/10.1002/smj.355

Dhanaraj, C., & Beamish, P. (2003). A resource-based approach to the study of export performance. *Journal of Small Business Management*, *41*(3), 242-261. https://doi.org/10.1111/1540-627X.00080

Fernández-Olmos, M., Ma, W., & Florine, P. L. (2024). Linking Spanish wine farmers to international markets: Is direct export better than indirect export in improving farm performance? *Economic Analysis and Policy*, *81*, 153-163. https://doi.org/10.1016/j.eap.2023.11.027

Fryges, H. (2006). *Hidden champions – How young and small technology-oriented firms can attain high export-sales ratios* (ZEW Discussion Papers No. 06-045). Zentrum für Europäische Wirtschaftsforschung. https://hdl.handle.net/10419/24500

García, J. M., Álamo, F. R., & Suárez, S. M. (2002). Determinantes organizativos y directivos de la actividad exportadora: evidencia empírica en el sector vitivinícola español. *Cuadernos de Economía y Dirección de la Empresa*, *13*, 519-544. https://accedacris.ulpgc.es/handle/10553/57186

Goerzen, A., & Beamish, P. W. (2003). Geographic scope and multinational enterprise performance. *Strategic Management Journal*, *24*(13), 1289-1306. https://doi.org/10.1002/smj.357

Hair, J. F. Jr, Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Prentice-Hall.

Hessels, J., & Terjesen, S. (2010). Resource dependency and institutional theory perspectives on direct and indirect export choices. *Small Business Economics, 34*, 203-220. https://doi.org/10.1007/s11187-008-9156-4

Hitt, M. A., Hoskisson, R. E., & Kim H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, *40*(4), 767-798. https://doi.org/10.2307/256948

Hornby, G., Goulding, P., & Poon, S. (2002). Perceptions of export barriers and cultural issues: The SME e-commerce experience. *Journal of Electronic Commerce Research*, *3*(4), 213-226.

Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalization of the firm – Four Swedish cases. *Journal of Management Studies*, *12*(3), 305-323. https://doi.org/10.1111/j.1467-6486.1975.tb00514.x

Knowles, D., Mughan, T., & Lloyd-Reason, L. (2006). Foreign language use among decision-makers of successfully internationalised SMEs: questioning the language-training paradigm. *Journal of Small Business and Enterprise Development*, *13*(4), 620-641. https://doi.org/10.1108/14626000610705787

Kumar, V., & Subramaniam, V. (1997). A contingency framework for the mode of entry decision. *Journal of World Business*, *32*(1), 53-72. https://doi.org/10.1016/S1090-9516(97)90025-0

Lefebvre, E., & Lefebvre, L. A. (2002). Innovative capabilities as determinants of exports performance and behaviour: A longitudinal study of manufacturing SMEs. In A. Kleinknecht & P. Mohnen (Eds.), *Innovation and firm performance: Econometric explorations of survey data* (pp. 281-309). Palgrave Macmillan. https://doi.org/10.1057/9780230595880_12

Li, L. (2004). Research note: The internet's impact on export channel structure. *Thunderbird. International Business Review*, *46*(4), 443-463. https://doi.org/10.1002/tie.20018

Li, L., Chen, C., Martek, I., & Li, G. (2024). An integrated model for international market and entry mode selections for Chinese contractors. *Engineering, Construction and Architectural Management*, *31*(6), 2457-2477. https://doi.org/10.1108/ECAM-12-2021-1090

Liao, T. (1994). *Interpreting probability models: Logit, probit and other generalized linear models*. Sage Publications.

López Rodríguez, J., & García Rodríguez, R. M. (2005). Technology and export behavior: A resource-based view approach. *International Business Review*, *14*(5), 539-557. https://doi.org/10.1016/j.ibusrev.2005.07.002

Maddala, G. S. (1983). *Limited-dependent and Qualitative Variables in Econometrics.* Cambridge University Press. https://doi.org/10.1017/CBO9780511810176

Madsen, T. K. (1989). Successful export marketing management: Some empirical evidence. *International Marketing Review*, *6*(4). https://doi.org/10.1108/EUM0000000001518

Majocchi, A., Bacchiocchi, E., & Mayrhofer, U. (2005). Firm size, business experience and export intensity in SMEs: A longitudinal approach to complex relationships. *International Business Review*, *14*(6), 719-738. https://doi.org/10.1016/j.ibusrev.2005.07.004

McGuinness, V., M., & Little, B. (1981). The impact of R&D spending on the foreign sales of new Canadian industrial products. *Research Policy*, *10*(1), 78-98. https://doi.org/10.1016/0048-7333(81)90011-1

Merino, F., & Salas, V. (2000). *The relationship between firm-specific assets and internationalization in Spanish manufacturers* (Working Paper No. 0001). Fundación Empresa Pública.

Moen, Ø., & Servais, P. (2002). Born global or gradual global? Examining the export behavior of small and medium-sized enterprises. *Journal of International Marketing*, *10*(3), 49-72. https://doi.org/10.1509/jimk.10.3.49.19540

Neter, J., Wasserman, W., & Kutner, M. H. (1985). *Applied linear statistical models: Regression, analysis of variance, and experimental designs.* R. D. Irwin.

Nicolau, J. L., & Más, F. J. (2008). Sequential choice behavior: Going on vacation and type of destination. *Tourism Management*, *29*(5), 1023-1034. https://doi.org/10.1016/j.tourman.2008.01.004

Nieto, M. J., & Fernández, Z. (2005). The role of information technology in corporate strategy of small and medium enterprises. *Journal of International Entrepreneurship*, *3*, 251-262. https://doi.org/10.1007/s10843-006-7854-z

Osborne, K. (1996). The channel integration decision for small-to medium-sized manufacturing exporters. *International Small Business Journal*, *14*(3), 40-56. https://doi.org/10.1177/0266242696143002

Pan, Y., & Tse, D. (2000). The hierarchical model of market entry modes. *Journal of International Business Studies*, *31*, 535-554. https://doi.org/10.1057/palgrave.jibs.8490921

Peng, M., & Ilinitch, A. (1998). Export intermediary firms: A note on export development research. *Journal of International Business Studies*, *29*, 609-620. https://doi.org/10.1057/palgrave.jibs.8490010

Peng, M., & York, A. (2001). Behind intermediary performance in export trade: Transactions, agents, and resources. *Journal of International Business Studies*, *32*, 327-346. https://doi.org/10.1057/palgrave.jibs.8490955

Pla-Barber, J., & Alegre, J. (2007). Analysing the link between export intensity, innovation and firm size in a science-based industry. *International Business Review*, *16*(3), 275-293. https://doi.org/10.1016/j.ibusrev.2007.02.005

Plechero, M., & Chaminade, C. (2010). *Different competences, different modes in the globalization of innovation? A comparative study of the Pune and Beijing regions* (Working

Paper No. 3/2010). Centre for Innovation, Research and Competence in the Learning Economy. https://journals.lub.lu.se/piis/article/view/26799/23442

Rialp, A., Axinn, C., & Thach, S. (2002). Exploring channel internalization among Spanish exporters. *International Marketing Review*, *19*(2), 133-155. https://doi.org/10.1108/02651330210425006

Ruiz-Moreno, F., Mas-Ruiz, F. J., & Nicolau-González, J. L. (2007). Two-stage choice process of FDI: Ownership structure and diversification mode. *Journal of Business Research*, *60*(7), 795-805. https://doi.org/10.1016/j.jbusres.2007.02.013

Simon, H. A. (1955). A behavioral model of rational choice. *The Quarterly Journal of Economics*, *69*(1), 99-118. https://doi.org/10.2307/1884852

Steinbruner, J. D. (1974). *The cybernetic theory of decision: New dimensions of political analysis*. Princeton University Press. https://www.jstor.org/stable/j.ctv1nxctxf

Styles, C., & Ambler, T. (1994). Successful export practice: The UK experience. *International Marketing Review*, *11*(6), 23-47. https://doi.org/10.1108/02651339410072999

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Allyn & Bacon.

Verwaal, E., & Donkers, B. (2002). Firm size and export intensity: Solving an empirical puzzle. *Journal of International Business Studies*, *33*, 603-613. https://doi.org/10.1057/palgrave.jibs.8491035

Wagner, J. (1995). Exports, firm size, and firm dynamics. *Small Business Economics*, *7*, 29-39. https://doi.org/10.1007/BF01074314

Wignaraja, G. (2002). Firm size, technological capabilities and market-oriented policies in Mauritius. *Oxford Development Studies*, *30*(1), 87-104. https://doi.org/10.1080/136008101200114912