A configurational approach to SMEs' export activity determinants

Un enfoque configuracional de los factores determinantes de la actividad exportadora de las PYME

Joaquín Monreal-Pérez[a,*] ✉ ⓘ, Omar Ifakhkharen-Rziki[b] ✉ ⓘ
a, b) University of Murcia (Spain)
* Primary Contact: joaquinmonrealperez@gmail.com (Joaquín Monreal-Pérez)

Abstract

With a perspective rooted in the resource-based view (RBV), this study focuses on analysing the configurational interaction of various strategic determinants that influence the export activity intensity of small and medium enterprises (SMEs) in the Spanish agricultural sector. Five key determinants are examined –innovation, collaboration, export promotional instruments, internal resources, and export destination– adopting a qualitative comparative analysis of fuzzy sets (fsQCA) to identify combinations of conditions that lead to higher SME export activity. Based on data from 68 agricultural SMEs in Spain, results show the importance of combined strategic adoptions vis-à-vis improving SMEs' export activity. The study contributes to the literature by providing new insights into the impact of multiple resources on the export performance of SMEs

Keywords: export activity; configurational approach; SMEs
JEL Classification: M10; M14; M16

Resumen

Con una perspectiva enraizada en la visión basada en los recursos (RBV), este estudio se centra en analizar la interacción configuracional de diversos determinantes estratégicos que influyen en la intensidad de la actividad exportadora de las pequeñas y medianas empresas (PYME) del sector agrario español. Se examinan cinco determinantes clave -innovación, colaboración, instrumentos de promoción de las exportaciones, recursos internos y destino de las exportaciones- adoptando un análisis cualitativo comparativo de conjuntos difusos (fsQCA) para identificar las combinaciones de condiciones que conducen a una mayor actividad exportadora de las PYME. A partir de datos de 68 PYME agrícolas españolas, los resultados muestran la importancia de las adopciones estratégicas combinadas para mejorar la actividad exportadora de las PYME. El estudio contribuye a la literatura proporcionando nuevas perspectivas sobre el impacto de los recursos múltiples en los resultados de exportación de las PYME

Palabras clave: actividad exportadora; enfoque configuracional; PYMEs
Clasificación JEL: M10; M14; M16

1. Introduction

Most studies confirm that exporting firms show a higher productivity rate compared to non-exporting firms (Sousa et al., 2021; Bernard et al., 2007; De Loecker, 2007). Some studies have linked this performance to the strong interaction between experience and export activity performance through the phenomenon of learning-by-exporting (LBE) (Freixanet et al., 2020; Sánchez Marín et al., 2019). This theory has been the subject of much debate (Wu and Chiou, 2021), with the majority of studies highlighting the relationship between export activity and firms' performance level. Furthermore, because of the "self-selection" phenomenon, companies are likely to be selected again by the market (Bravo-Ortega et al., 2014; Bernard et al., 2007) due to the implementation of certain determinants in export activity and the effect of learning-by-exporting, which improves the firm's export intensity.

The current business fabric is mainly composed of small and medium enterprises (SMEs). In Spain, for example, SMEs represent 99.80% of all companies (according to the Spanish government report from the Ministry of Industry, Commerce and Tourism, April 2023), which makes studying their economic scope crucial –especially with regard to their international activities. In fact, many studies focus on identifying factors related to SMEs' export activity. Balabanis et al. (2003) examine the effect of the entrepreneurial concept on export performance. Other authors, such as Golovko et al. (2011), look at the complementary relationship between innovation and exporting in terms of how SMEs' outcomes are improved, while other authors explore the impact of human capital on SMEs' export activity (Gail et al., 2006; Navarro-García et al., 2016).

With the exception of Haddoud et al. (2018) –who examine the role of firm resources and capabilities in explaining the likelihood of exporting– studies have traditionally looked at the direct individual impact of certain determinants of export activity on export intensity (EI). This has left a gap in terms of understanding the relationship between export activity and the configurational interaction of multiple strategic determinants as a set.

1

Furthermore, we believe that analysing the effect of export determinants through a configurational approach is essential, given the lack of necessary resources for the success of any SME in foreign markets (Rexhepi et al., 2017; Etemad, 2004; Calof, 1994; Bonaccorsi, 1992; Zou et al., 1998). The presence of other demographic variables –such as age and export experience– can atone for this scarcity and, together with a set of strategic variables, can enable the SME to conduct its activity optimally and effectively, and thereby have an intense impact on export activity.

Our aim is to address this research gap by examining the configurational interaction among a set of determinants that influence export activities, and which have been established as crucial in the literature (e.g., Danish et al., 2021; Geldres-Weiss et al., 2018; Ahmad et al., 2017 Monreal-Pérez et al., 2012; Onkelinx et al., 2010; Isobe et al., 2008; Sousa et al., 2008). These determinants encompass innovation, collaboration, promotional instruments, the use of internal resources, and export destination. They are believed to exert a substantial impact on SMEs' export intensity, as evidenced by the existing literature and in line with the resource-based view (RBV) theory perspectives. Our aim is to demonstrate how the delineation of SMEs` characteristics (Dhanaraj et al., 2003) can be a source of competitive advantage by incorporating new resources that contribute to improved outcomes, as highlighted by Habbershon et al. (1999). SMEs can thus overcome their of lack resources and improve their competitive position.

For this reason, we employ the qualitative comparative analysis of fuzzy sets (fsQCA), which provides a deep understanding of complex, nonlinear, and synergistic effects (Chuah et al., 2021). This configurational approach allows us to identify combinations of conditions that can lead to the same outcome (Yu et al., 2021). Our empirical research is based on data from 68 agricultural companies in Spain, and aims to identify which factors contribute to higher export activity.

Our focus on the agricultural sector is also primarily due to its importance in the Spanish economy, where it accounts for 9.7% of total national GDP, and to its significant position at the European level (Spain ranks fourth in the EU in terms of the number of agricultural farms, and holds second place in terms of agricultural land used). Additionally, Spain leads the way in the production of certain products, such as citrus fruits, which accounted for 59.7% of total EU production in 2021. Spanish SMEs in this sector constitute 99.93% of all companies (as reported by the Spanish government Ministry of Industry, Commerce and Tourism, April 2023).

Additionally, few studies address the impact of a set of resources on improving the export activity of SMEs in the agricultural sector. This is particularly relevant, considering that agricultural production in Spain has experienced a downward trend, having fallen by 7.6% between 2009 and 2020, according to data provided by the National Institute of Statistics in Spain[1], which has affected export activity in this sector.

The work is structured as follows. After a brief introduction –where the scope of the study is defined and its rationale is justified– the second section presents the theories that link the determinants of export activity with SMEs, under which the propositions are formulated. In the third section, we explain the methodology used for the empirical analysis and present the findings. Finally, the conclusions and discussion of the main results are provided, together with directions for possible future research.

2. Literature review and propositions

The growing globalization of markets –coupled with technological progress– has driven SMEs to maintain their export activities and to seek a competitive position in the international market (Fernandes et al., 2020). Hence, the importance of a company's adaptability and ability to change –in response to shifting environmental conditions, according to the resource-based view (RBV) theory– lies in the fact that companies seek to enhance their performance by

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[1] EpData, the platform created by Europa Press to facilitate the use of public data by journalists: the agricultural sector in graphics (epdata.es).

optimizing internal resources and by acquiring new resources depending on their needs, thus aiming to sustain their competitive advantage (Dhanaraj et al., 2003). However, SMEs face a particular challenge as a result of resource scarcity, which can complicate the decision-making process and potentially hinder the pursuit of riskier strategies that might lead to enhanced performance (Fernández et al., 2006; Buckley, 1989).

This competitive advantage translates into superior performance under specific conditions (Habbershon et al., 1999), thanks to the combination of specific resources with other factors that SMEs often have access to as a result of their market position. Depending on their variability, these factors instil confidence, and enable SMEs to minimize economic and strategic risks.

2.1. Determinants of activity export: Innovation

Exporting firms that invest heavily in foreign R&D expand their knowledge base and enhance their competitiveness (Sousa et al., 2021; Smith, 2014), which would consequently have a positive effect on export activity. Previous research has examined the direct relationship between innovation and performance (Danish et al., 2021). In turn, Jang et al. (2021) and Danish et al. (2021) confirm that the introduction of a new product or an enhanced process leads to an improvement in the firm's position within the existing market and creates potential access to international markets.

As regards SMEs, Golovko et al. (2011) examine the effect of innovation and export on SMEs' organizational growth and confirm that they exhibit a complementary relationship that benefits firm performance. Yoruk et al. (2021) focus on studying the promotion of innovation through the interaction of internationalization and knowledge.

In this context –and considering the importance of innovation– SMEs face the barrier of limited resources to invest in innovation (Monreal-Pérez et al., 2012). We therefore believe that studying innovation in combination with other factors such as age and export experience, as

well as other strategic determinants, is crucial vis-à-vis assessing whether SMEs have sufficient resources to engage in export activities effectively.

In this way, innovation as a determinant drives export intensity. Companies that innovate before exporting gain more knowledge, build confidence in understanding the market and its environment, and thereby minimize the risks involved in exporting (Eriksson et al., 1997). We therefore believe that when correlating with other determinants, innovation would have an even more positive effect on export activity. We thus suggest the following proposition:

Proposition 1: A combination of innovation and selected determinants leads Spanish SMEs to develop a higher level of export activity.

2.2. Determinants of activity export: Collaboration

Collaboration is a crucial element that opens doors for seeking new resources or expanding existing ones internationally through partnerships. It helps improve the company's competitive position in the market (Isobe et al., 2008). In this regard, Navarro-García et al. (2016) emphasize the importance of having qualified human capital within the SME – particularly in terms of communication– in order to establish and maintain relationships with different foreign partners. Over time, this allows the company to gain export experience and to expand its knowledge, which can be key to the success of export activities (Beamish et al., 2003).

An SME that possesses a network of collaborators has a stronger market presence and more opportunities to be contacted through its network connections, which positively affects its export activity. However, this strategy requires a significant financial investment, which an SME may not have readily available. As a result, we believe that combining collaboration with other factors such as age and export experience –coupled with the presence of other determinants– allows the company to acquire resources to carry out and enhance its export activity. Consequently, our proposition is as follows:

Proposition 2: A combination of collaboration and other determinants leads Spanish SMEs to develop higher levels of export activity.

2.3. Determinants of activity export: Instruments of Promotion Agencies

To facilitate the entry of companies into foreign markets, export promotion agencies (EPAs) have been established (Geldres-Weiss et al., 2018; Lederman et al., 2007; Geldres-Weiss et al., 2011; Diamantopoulos et al., 1993). These agencies support the export activities of companies by providing external research, enabling participation in international trade missions and fairs, and by reducing uncertainty in decision-making. This support allows companies to acquire knowledge and experience (Eriksson et al., 1997).

The relationship between export promotion instruments such as trade missions and fairs and export performance has been the subject of extensive research. Trade missions allow companies to learn about foreign markets and consumer needs, and provide them with learning and knowledge updates (Geldres-Weiss et al., 2018). Trade fairs provide opportunities to showcase products and to establish business agreements that can improve sales and contribute to export growth (Geldres-Weiss et al., 2018).

As mentioned, companies that adopt an export promotion programme (EPP) tend to achieve their financial goals and have more opportunities to increase their export sales (Durmuşoğlu et al., 2012; Geldres-Weiss et al., 2011). According to Geldres-Weiss et al., (2011), it is SMEs who most use these programmes, given their lack of experience and information about foreign markets and their lack of resources (Fernández et al., 2006) to carry out the export operations required to improve their export performance (Durmuşoğlu et al., 2012). We therefore believe that the level of impact is positive in improving the export activity of SMEs when combined with other export determinants and the presence of other factors such as age and export experience. We thus propose the following:

Proposition 3: A combination of promotion and certain determinants leads Spanish SMEs to develop a higher level of export activity.

2.4. Determinants of activity export: Own means

Exporting through one's own means is an entry mode into foreign markets that involves a significant investment of resources by the company, especially in markets where costs are high (Root, 1987). However, this investment can bring benefits in the medium and long term by transferring experience, skills, and technology from the company to the destination country.

The "Uppsala model" states that companies grow internationally through a gradual process, which commences with nearby markets before firms advance to more distant markets (Onkelinx et al., 2010 Johanson et al., 1977). This model of internationalization behaviour is especially relevant for SMEs, who often have limited resources (Rexhepi et al., 2017). However, for these companies, entering international markets can be an important step. Yet, choosing to do so through their own means may prove costly for SMEs vs large companies, who usually have sufficient resources. Nevertheless, the presence of other factors such as age and export experience (Kücher et al., 2020) –combined with other strategic determinants– can make a difference in how successful this process becomes in a way that enhances SMEs' international expansion. Therefore, our next proposition is:

Proposition 4: A combination of adopting own means of exporting and certain determinants leads Spanish SMEs to develop greater export activity.

2.5. Determinants of activity export: Export destination

Markets in developed countries are preferred by many exporting companies because they offer better transaction conditions such as selling at better prices and providing higher added value, which allows significant profits to be achieved (Ahmad et al., 2017; Beamish et al., 2003; López Rodríguez et al., 2005). Additionally, these markets provide other advantages for exporting companies, such as acquiring solid export experience through "LBE" (Freixanet et al., 2020; Irvansyah et al., 2020; Sánchez Marín et al., 2019; Love et al., 2013; Monreal-Pérez et al., 2012), and by expanding and keeping their commercial and technical as well as technological

knowledge up to date (Wu et al., 2021), since foreign markets are more attractive (Atkin et al., 2017; Bai et al., 2017).

On the other hand, exporting to these developed countries involves a significant economic investment that limits SMEs, and which acts as a barrier for these companies to make such a decision. Schwens et al. (2018) confirm that accumulated experience in a particular mode of entry has an impact on the choice of market destination. We therefore believe that the presence of factors such as age and export experience –which enable SMEs to have the necessary resources and that facilitate the selection of a more developed target market– leads to increased exports. We thus propose the following:

Proposition 5: A combination of exporting to developed regions coupled with certain determinants leads Spanish SMEs to develop greater export activity.

3. Data and Measurement

3.1 Sample

The data of the companies included in this analysis were extracted from the Database of the Ministry of Agriculture, Commerce, and Tourism of Spain, and SABI. A filtering of companies in the agricultural sector in Spain was carried out based on the C.N.A.E. The agricultural sector was chosen due to its importance in the Spanish economy, as it represents 9.7% of total national GDP, and because Spanish agricultural companies hold a strong position at the European level and even lead in the production of certain products such as citrus, which accounted for 59.7% of total EU production in 2019 (National Institute of Statistics, 2021).

Our sample is based on interviews with 68 agricultural companies in Spain, from which SMEs were selected, with an SME being deemed a company that has 250 employees or less (Kraus et al., 2017; Buckley, 1989). The data we analysed were collected in 2021 through a questionnaire sent via email to the directors/managers of agricultural companies in order to ensure the reliability of the responses. Three rounds of emails were sent to 570 agricultural

companies between April and September. As the first two rounds of emails sent failed to yield sufficient responses to allow for a broad sample, a third round was sent (the period in question coincided with the end of the COVID-19 period and the subsequent recovery of companies' activities). The final response rate was 11.9%, which is better than the 3.9%, 2.6%, and 5.5%-3.6% (in two samples) obtained by (Fernandes et al., 2020; Kotaskova et al., 2020), respectively.

3.2 Model

In contrast to correlational techniques, we use a fuzzy set qualitative comparative analysis (fsQCA). This analysis constitutes the emergence of a neo-configurational perspective in the study of management and organizations that allows a detailed conceptualization and an empirical investigation of causal complexity through the logic of set theory (Misangyi et al., 2017). Based on set theory, this method is therefore ideal for studying explicit connections due to its ability to analyse complex causality, which is defined as a situation wherein a result can be derived from several different combinations of causal conditions or causal "recipes" (Ragin, 2008). In other words, an fsQCA can generate multiple relationships, consisting of several combinations of independent variables but leading to the same dependent variable. In short, multiple relationships can demonstrate different behaviours (Huarng et al., 2019). As a configurational approach that allows us to identify combinations of conditions that can lead to the same outcome (Yu et al., 2021), qualitative comparative analysis (QCA) provides us with an in-depth understanding of these complex, non-linear and synergistic effects (Chuah et al., 2021).

According to Misangyi et al., (2017), the four fundamental elements that characterize an fsQCA are: 1) conceptualizing cases as set-theoretic configurations; 2) calibrating case memberships in sets; 3) viewing causality in terms of necessity and sufficiency relationships between sets; and 4) performing counterfactual analyses of unobserved configurations.

According to Ragin (2008), the instruments used to analyse causal complexity implementing QCA are: firstly, the truth table, which allows for structured and focused comparisons. Truth tables show the logically possible combinations of the causal conditions and the empirical result associated with each configuration. They therefore directly implement the second type of the above-described explicit connection, where we opted for the intermediate solution. As it is the most interpretable one, this solution is thus the most recommended, as it provides a balance between parsimony, which incorporates many counterfactual combinations (easy and difficult), and complexity, which produces little or no simplification –in line with the researcher's substantive and theoretical knowledge (Ragin, 2008).

The second main element of interest is set-theoretic consistency. With sharp sets, this calculation is simply the proportion of cases in a given row that shows the outcome in question and indicates how closely it approximates a perfect subset relationship. Moreover, consistency is a measure that indicates how consistently the combination produces the result (Ragin, 2008).

The third element is set-theory coverage which, in contrast, assesses the degree to which a cause or causal combination "explains" the instances of a result. When various paths lead to the same result, the coverage of a given causal combination may be small. The mentioned coverage thus measures relevance or empirical importance.

3.3 Variables

Export intensity (EI): outcome variable, which is measured by calculating the percentage of sales in foreign markets out of total sales (Bonaccorsi, 1992; Boehe et al., 2016). We consider a company to be an exporter with a value of (1) when its exports exceed 50% of its total sales, and (0) otherwise.

Causal variables: our objective is to examine cases where the variables indicated below share a specific causal condition or, more commonly, a specific combination of causal conditions, and to assess whether these cases exhibit the same outcome (Ragin, 2008).

Innovation: one of the most relevant components when analysing EI is innovation (Sousa et al., 2021). Some studies –such as Gkypali et al. (2021)– consider it a key ingredient in the early stages of the export process. A distinction is made between input innovation (R&D) and output innovation mainly related to the process and product (Love et al., 2016). It is a dichotomous variable that has a value of (1) when answered affirmatively –indicating the presence of either input innovation (R&D) or output innovation– and a value of (0) when answered negatively for both instances (Bratti et al., 2012).

Collaboration: in foreign markets, companies need to have more information about the business environment, which is why they always try to have a range of partners in the markets they export to in order to access up-to-the-minute information and exchange experiences (Isobe et al., 2008). This variable is constructed as follows: when collaboration is with clients, suppliers, competitors, universities and/or research centres or other organizations, it is assigned a value of (1), indicating that the company collaborates. The company is considered to collaborate when the response is affirmative to any of the collaboration options, whereas a value of (0) is assigned when the company does not collaborate with any organization (Musteen et al., 2010).

Promotional instruments (trade missions and fairs): participation in trade missions and fairs allows SMEs to have the necessary support, especially due to resource constraints and lack of experience (Geldres-Weiss et al., 2018). Durmuşoğlu et al. (2012) confirm that companies who use at least one of these instruments will display better export performance than companies who use none of them. The use of promotional instruments is measured through a dichotomous variable, where the company is deemed to use these instruments when the response is affirmative to at least one of the two questions regarding participation in trade missions and fairs (Francis et al., 2004).

Own means: SMEs always seek to create their brand and try to maintain it in order to gain a foothold in the market. This is why they prefer the export process to be carried out

entirely through their own means, without involving intermediaries who may affect the company's reputation or final product. This variable is dichotomous and is measured by the direct response to a question regarding the mode of entry. Its value is (1) when the response indicates the use of own means, and (0) when the company relies on other external means such as export intermediaries (Schwens et al., 2018).

Export destination: according to Ahmad et al. (2017), many exporting companies prefer to target markets in developed countries due to the better transaction conditions and prices they offer, as well as the opportunity to accumulate export experience (Atkin et al., 2017; Bai et al., 2017). To measure this, we use a qualitative variable obtained from a direct question aimed at finding out the export destination country. In this regard, we distinguish between markets in developed countries and those in undeveloped ones. We thus have a classification of countries depending on their level of development according to the categories established by the United Nations Department of Economic and Social Affairs (2020). In general, we consider Europe, North America and the developed countries of Asia and the Pacific as areas with developed economies. Following this classification, we assign the value (1) when exports are directed to a developed country, and (0) otherwise.

Control variables: these are variables that need to be considered since the effect of certain variables or the combination of variables may vary in small and large companies.

Age: this is considered an indirect indicator of experience (Love et al., 2016) and reflects the accumulated knowledge of the company and its entrepreneurial flexibility, and can which influence its ability to take risks, such as investment in innovation (Chen et al., 2014). It is measured by the number of years the company has been in existence (Fan et al., 2021; Love et al., 2016).

Export Experience: the company's international experience is considered a key determinant in export performance, as export activities are characterized by the risk and uncertainty associated with entering foreign markets, and which can be mitigated through

knowledge gained from practical experience abroad (Forsgren et al., 1992). It is measured by the number of years the company has been exporting since it first operated (Chen et al., 2016; Sousa et al., 2008; Spence, 2003).

3.4 Calibration

fsQCA is a tool that has allowed us to perform a calibration of the quantitative variables. Consequently, we were able to carry out a calibration process with the 95, 50 and 25 percentiles, in line with the thresholds defined by Woodside (Pappas et al., 2021). This provides for a maximum and minimum threshold as well as a crossover point that would allow us to determine a dichotomous variable, such that below the 50th percentile we have the value (0), and above the crossover point a value of (1) (Park et al., 2020). Table 1 shows the data calibration process. The highest level is considered as completely inside, the middle level as a crossover point or neither completely inside nor completely outside, and the lowest level as completely outside.

4. Results

The first part of descriptive Table 1 highlights the determinants considered by SMEs that help them carry out their export activities. Collaboration, innovation (both product and process), and exporting to developed countries are the main actions undertaken to enhance export performance (92.64%, 89.70%, and 79.41% respectively). In the second part, we show how calibration is carried out for each variable.

The next step is to focus on the construction of the truth table to generate the different causal condition combinations that are sufficient to achieve high export intensity, considering the consistent cut-off value as of 0.80 and the threshold number of cases as of 2 (Chuah et al., 2021). Table 2 shows that each row presents a combination of causal conditions leading to a presence or absence of our outcome variable (export intensity).

Table 1: descriptive table and variables calibration

		Descriptive statistics			Membership criteria	
Variable	Total firm	Mean	Std. Dev.	Full membership	Crossover point	Full non membership
Export intensity	68	44.69	34.53	90	42.5	0
Innovation *input*[a]	68	54.41%	50.17%		Crisp set (1,0)	
Innovation *output*[a]	68	89.70%	30.61%		Crisp set (1,0)	
Collaboration[a]	68	92.64%	26.29%		Crisp set (1,0)	
Instruments Promotion[a]	68	69.11%	46.54%		Crisp set (1,0)	
Own media	68	54.41%	50.17%		Crisp set (1,0)	
Export destination[a]	68	79.41%	40.73%		Crisp set (1,0)	
Age	68	27.33	20.65	51	24	4
Export experience	68	16.04	13.78	35	16	0

[a] These are dichotomous variables, and their means refer to the values of cases where the presence of the variable is 1.

The "cases number" column shows the frequency of cases assigned to each combination. Finally, we apply standard analysis to obtain the "intermediate solution" and to identify causal patterns leading to high export intensity.

After having studied the truth table, we also analyse these variables. We use an intermediate solution combination to offer a more detailed overall view of the findings (Fiss, 2011). The black circle (●) symbolizes a presence of a condition. The circle with a cross in the centre (⊗) indicates the absence or denial of a condition. A blank space indicates that a condition is irrelevant (Pappas et al., 2021; Park et al., 2020; Xie et al., 2020). We also present the general solution consistency and the general solution coverage, which describes the extent to which the interesting result can be explained by the configurations and which is comparable to the coverage and consistency of the individual necessary condition of each variable.

Innovation input (R+D)	Innovation output (product and process)	Collaboration	Promotion missions and fairs	Own media	Export destination	Age	Export experience	Case number	Export intensity	Raw consist.	PRI consist.	SYM consist
												Table 2: Truth table
0	0	1	1	1	1	1	0	1	1	1.000.000	1.000.000	1.000.000
0	1	1	1	1	0	0	0	1	1	1.000.000	1.000.000	1.000.000
0	1	1	1	1	1	0	1	1	1	1.000.000	1.000.000	1.000.000
0	1	1	1	1	1	1	0	1	1	1.000.000	1.000.000	1.000.000
1	0	1	1	1	1	0	0	1	1	1.000.000	1.000.000	1.000.000
1	1	1	0	0	1	1	1	1	1	1.000.000	1.000.000	1.000.000
1	1	1	1	1	1	0	1	1	1	1.000.000	1.000.000	1.000.000
1	1	1	1	1	1	1	0	1	1	1.000.000	1.000.000	1.000.000
1	1	1	1	0	1	1	1	4	1	1.000.000	1.000.000	1.000.000
1	1	1	1	1	1	0	0	6	1	0.833333	0.833333	0.833333

Table 3 summarizes the results of the intermediate solution of the combinations. As shown, there are three causal configurations that lead to high EI.

Table 3: intermediate solution results.			
	A young and inexperienced SME that innovates only in R&D, collaborates, participates in missions and fairs, exports through its own means, and targets developed countries.	An old SME with experience that innovates in R&D and product/process, collaborates, and exports through external means	An SME without export experience that innovates in R&D and product/process, collaborates, participates in missions and fairs, exports through its own means, and exports to developed countries.
Innovation *input* R+D	●	●	●
Innovation *output* (product and process)		●	●
Collaboration	●	●	●
Instrument promotion (missions and fairs)	●		●
Own media	●	⊗	●
Export destination	●		●
Age	⊗	●	
Export experience	⊗	●	⊗
Consistency	0.857143	1.000000	0.857143
Raw coverage	0. 260870	0.217391	0.260870
Overall solution coverage		0.739130	
Overall solution consistency		0.944444	

R&D innovation is seen to be present in all three combinations, while product and process innovation is present in only two, indicating that the combination of innovation with other export determinants leads to a relative improvement in the SME's export activity. Therefore, our proposition 1 is partially accepted.

Collaboration is seen to be present in all three combinations, indicating that the combination of collaboration with other export determinants enhances the SME's export activity. Therefore, proposition 2 is accepted.

With regard to participation in trade missions and fairs, the use of own means for exporting, and exporting to developed countries, each of these determinants is equally present in only two combinations, indicating that the combination of each determinant with the other determinants leads to a small improvement in the SME's export activity. Therefore, propositions 3, 4, and 5 are partially accepted.

Table 4: contrast of propositions

Proposition		Result
P1: Innovation combined with other determinants → greater EI		Accepted partially.
P2: Collaboration combined with other determinants → greater EI		Accepted.
P3: Instrument promotion combined with other determinants → greater EI		Accepted partially.
P4: Own means combined with other determinants → greater EI		Accepted partially.
P5: Export to developed countries combined with other determinants → greater EI		Accepted partially.

5. Conclusions and discussion

5.1 Discussion of findings

Despite the lack of resources that can often prevent SMEs from making costly investments (Etemad, 2004), we observe that in our case these companies do dare to innovate in R&D under certain circumstances. Young firms without export experience need to position themselves in the market, which is why they attempt innovation when they collaborate, participate in missions and fairs, use their own means for exporting, and target markets in developed countries. To some extent, these SMEs try to compensate for their resource limitations by investing in various determinants, aiming to gather as much information as possible about the market and the competition. This approach allows them to develop their knowledge and experience, thereby enabling them to make such investments.

Mature SMEs with export experience not only innovate in R&D but also in their products/processes and collaborate with partners. However, they do not rely on their own means for exporting, and they do not consider participating in missions and fairs or targeting developed markets for their exports. This might be related to their level of maturity and their belief that R&D innovation helps them acquire market knowledge and become more competitive (Sousa et al., 2021). They also recognize that product and process innovation can help to reduce costs, especially when they focus more on process innovation (Jang et al., 2021; Danish et al., 2021; Golovko et al., 2014).

We also see how collaboration is a fundamental element for SMEs as it helps them to seek new resources or to expand existing ones abroad through partnerships and exchanges with collaborators (Isobe et al., 2008). The presence of collaboration is not influenced by the presence or absence of other factors. This confirms that SMEs focus on establishing a network of collaborators, which allows them to stay connected with their professional environment and to keep up to date with international markets and with which products are in demand (Beamish et al., 2003).

Young and/or inexperienced SMEs resort to adopting an export promotion programme (EPP) and to participating in fairs and missions (Durmuşoğlu et al., 2012; Geldres-Weiss et al., 2011). According to Fernández et al. (2006), SMEs turn to EPPs due to a lack of the resources required to carry out essential export operations. In contrast, mature SMEs with experience in foreign markets do not rely on participation in fairs and missions as they already have a solid market position.

Despite the significant investment required for using own means to export –which can often be unavailable to SMEs (Rexhepi et al., 2017)– these companies can be encouraged to do so when this is combined with other factors such as collaboration, innovation, participation in fairs and missions, and exporting to developed countries. These factors provide the company with additional resources that enable such an investment, especially for new market entrants and/or those without export experience, which in turn strengthens their position in terms of improving their export activity.

Our analysis indicates a strong orientation of exports towards markets in developed countries, especially for young and/or inexperienced SMEs. Firstly, SMEs seek better and more secure economic opportunities for their exports, which is why they try to target more attractive markets (Ahmad et al., 2017). Secondly, they aim to expand their knowledge base. According

to López et al. (2005) and the resource-based perspective, exposure to knowledge-rich and technologically advanced markets allows companies to improve their productivity by diversifying their experience and knowledge.

It can therefore be said that the combination of exporting to developed countries –together with other determining factors– helps to improve the export activity of young and/or inexperienced SMEs when they innovate, collaborate, participate in fairs and missions, and use their own means to export. This combination allows them to develop essential business skills to face existing competition, acquire economic resources, and gain experience through information exchange with their partners as well as to secure a more updated knowledge base (Wu et al., 2021).

Our work highlights the importance of the joint action of the determinants that an SME can adopt to improve its export activity, as it provides valuable information on how these factors can be used to achieve greater EI. Unlike existing literature, which has studied the individual effect of these factors (e.g., Gkypali et al., 2021; Paulraj et al., 2007; Ahmad et al., 2017), this work breaks new ground in analysing the impact of the configurationally-interdependent set of determinants on SMEs' export intensity.

This research shows how, by considering an additional configuration of determinants, firms may overcome the shortcoming of resources highlighted by RBV arguments (Barney, 1991; Beamish and Dhanaraj, 2003) –a shortcoming which is especially relevant in the case of small firms (Fernández and Nieto, 2006).

5.2 Academic and practical implications

From an academic perspective, this work opens the door to new research exploring different factors in a configurational combination, not only in relation to exportation but also expanding its application to other areas, such as overall SME performance. Furthermore, our

work underscores the relevance of considering the RBV when looking at these determinants in order to achieve a more comprehensive understanding. The study shows that SMEs can enhance their performance by optimizing their existing resources and by acquiring new ones based on market position needs, aligning with the economic objectives set out by management to maintain or gain a competitive advantage (Fernandes et al., 2020; Dhanaraj et al., 2003).

Additionally, this approach enriches LBE literature by evidencing that export activity improves as companies accumulate more experience in this field, allowing them to continuously learn, as suggested in previous studies by Freixanet et al. (2020), Sánchez Marín et al. (2019), and Monreal-Pérez et al. (2012). Our work thus makes a significant contribution in terms of assisting SMEs in the agricultural sector to overcome the challenge of resource limitations and to find an effective formula for making risky investments that lead to improvements in their EI.

This study can also be valuable to SME managers by providing them with information on which factors influence their export activity. SMEs can use this information to make informed decisions on how to improve their export activity and identify suitable products for investment. Additionally, SME managers can use this information to pinpoint strengths and weaknesses within their own organization and establish improvement plans for growth and development.

At the institutional level, this information can be used to develop policies and programmes that support SMEs, especially as regards new ventures that often face uncertainties and ambiguities about markets, and which lead to certain fears about making appropriate investments. By understanding the factors that influence SMEs' export activity and by addressing the specific challenges they face, institutions can design targeted initiatives to provide guidance, resources, and support in order to help SMEs overcome barriers and make informed investment decisions. This can help foster a favourable environment for SME growth and internationalization.

5.3 Limitations and future research

This study is not, however, without its limitations. In addition to the export determinants analysed herein, it might have proved enlightening to consider other entry strategies, such as foreign direct investment (Ahmad et al., 2017), in combination with other determinants. The study is also restricted to investigating the effect of combined determinants on EI in Spain, whereas other countries should also be explored in future research. Additionally, our work is confined to exploring SMEs in the agricultural sector, but could be expanded to other different sectors, such as the industrial sector (Onkelinx et al., 2010). Although this study conducted a cross-sectional analysis of a sample of Spanish agricultural SMEs, it would be useful to perform a longitudinal analysis in order to examine the change in variables or sets of variables over time or at different stages (Sousa et al., 2008; Chen, et al., 2016), for example by looking at the effects before and after the Covid-19 pandemic or before and after the crisis caused by the Russia-Ukraine war. This would provide insights into the dynamic nature of the determinants and their impact on SMEs' export activity in response to significant events or contextual changes.

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