



The role of the SDGs as enhancers of the performance of Spanish wine cooperatives

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ABSTRACT

According to the Brundtland Report, a new era of economic prosperity is possible through forceful yet socially and environmentally sustainable growth. In 2015, the United Nations set 17 Sustainable Development Goals (SDGs) to eradicate poverty and achieve sustainable development. The social economy is a key force in achieving the SDGs. We argue that the alignment of business activity with SDGs directly enhances business performance. We study wine cooperatives and show that their performance depends on structural and organizational variables linked to certain SDGs. The aim of this study is to analyze the factors that can boost the performance of Spanish wine cooperatives with websites. Using fuzzy-set qualitative comparative analysis (fsQCA), we study the influence of key factors cited in the recent literature and linked to the SDGs as drivers of high performance. We consider concern for the environment (through organic production), innovation (as a cross-cutting tool) in terms of website quality, internationalization (level of export activity), end-market orientation, and company size. The results show that cooperatives' performance is enhanced by these factors and that they are linked to the SDGs. A key finding is that higher performance results from the interaction of several variables, including size. However, there is also a need for the presence of other variables, including diversification, which can simultaneously lead to greater performance.

1. Introduction

In 1987, the Brundtland Report was published. The report proclaimed that it was possible to achieve “a new era of economic growth – growth that is forceful and at the same time socially and environmentally sustainable” (Brundtland, 1987). Thus, the United Nations (UN) set a challenge for the world economy: to achieve the desired economic development, but to do so in a sustainable manner. Fortunately, most national governments took up the challenge, subscribing to the Millennium Development Goals (MDGs) in September 2000. These goals bound leaders and governments to combat poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women (World Health Organization, 2018). The MDGs united the efforts of numerous countries in a mass movement against poverty, which, at

the time, was the most successful in history (United Nations, 2015a). After 15 years, in September 2015, the heads of state and government of more than 150 countries met again at the UN Assembly and approved the 2030 Agenda for Sustainable Development. The 2030 Agenda includes 169 targets, grouped into 17 Sustainable Development Goals (SDGs) aimed at eradicating poverty and achieving sustainable development across its social, economic, and environmental dimensions (United Nations, 2015b). Not only did the 2030 Agenda request the participation of all governments, but it also called upon the help of citizens and corporations (Mozas-Moral, 2019), with the latter playing a leading role in achieving the SDGs. The UN has even acknowledged that “private business activity, investment and innovation are major drivers of productivity, inclusive economic growth and job creation” (United Nations, 2015b).

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Various reports have linked the business sector to the SDGs (PwC, 2015; Accenture, 2016; Foretica, 2016). One of these reports (PwC, 2015) explained that the ratification of the SDGs would cause changes both in the way business is done and in demand, calling for corporate responsibility and commitment to the SDGs. Corporations can take many forms, but those within the social economy are crucial for achieving the SDGs, a reality recognized by the UN. Both the UN Inter-Agency Task Force on Social and Solidarity Economy and numerous researchers have noted the importance of the social economy, indicating that it could play a key role in meeting the aims of the 2030 Agenda (Inter-Agency Task Force on Social and Solidarity Economy, 2014, 2015; Falcó and Fuentes, 2019; Bernal-Jurado et al., 2019; Borrero, 2019; Valcárcel-Dueñas and Solórzano-García, 2019; Mozas et al., 2020a, 2020b; Hernández-Perlines et al., 2020; Castilla-Polo and Sánchez-Hernández, 2020; Meliá-Martí et al., 2020). The prime exponents of all entities within the social economy are cooperatives.

However, although research has highlighted the need to align business activities with the SDGs (PwC, 2015; Measure What Matters, 2016; MSCI, 2016; SDG Compass, 2019), no studies have shown that this linkage positively affects business performance. This gap is addressed in this paper. Specifically, we examine whether certain structural and organizational variables that are directly related to the SDGs (e.g., size, commitment to organic production, internationalization, and market orientation) can positively affect business performance.

We argue that aligning the actions of cooperative businesses with the SDGs directly improves business performance. The literature indicates that business performance is affected by organizational and structural factors. The size of the business (Arcas et al., 2011; Grashuis, 2018; Medina et al., 2014), commitment to organic production as a way of protecting the environment (Miroshnychenko et al., 2017; Seles et al., 2019; Meliá-Martí, 2020), innovation (Bernal-Jurado et al., 2019; Ye et al., 2019), export activity (Bernard and Jensen, 1999; Kraay, 1999; Zhang, 2005; Sánchez et al., 2014; Moral-Pajares et al., 2015; Mozas-Moral et al., 2020b), and greater market orientation can make this enhanced performance of cooperatives a reality (Borges et al., 2009; Bernal-Jurado et al., 2020; Triana, 2019). We attempt to show that cooperative performance depends on structural and organizational variables linked to certain SDGs. We focus primarily on SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all), SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation), SDG 12 (Ensure sustainable consumption and production patterns), SDG 13 (Take urgent action to combat climate change and its impacts), SDG 15 (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss), and SDG 17 (Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development).

In accordance with these arguments, the aim of this study is to analyze which SDG-linked factors help enhance the performance of Spanish wine cooperatives. Using fuzzy-set qualitative comparative analysis (fsQCA), we study the influence of factors reported in the recent literature and linked to the SDGs as determinants of higher performance. To do so, we use statistical data provided by cooperative associations, as well as data gathered directly from the websites of the analyzed firms. After this introduction justifying the need to research this problem and defining the research objectives, the second section offers a review of the theoretical framework in the recent literature and presents the study's research propositions. The third section focuses on the method and the study population. The fourth section presents the results. The article closes with the main conclusions of the study.

2. Theoretical framework

According to the [General Confederation of Agricultural Cooperatives in the European Union \(COGECA, 2014\)](#), the socioeconomic importance

of agri-food cooperatives in both Europe and Spain is beyond question, given that they provide a powerful source of revenue and employment.

Growth offers an indication of a company's health, vitality, and strength. Furthermore, it is necessary in dynamic and competitive environments for firms to maintain their competitive position (Guerras and Navas, 2015). Growing a business can make companies stronger and more efficient in increasingly competitive markets, where new and more professionalized structures are required in the form of structural and organizational changes (e.g., an increase in the number of members and their diversity, as well as the hiring of managers in the case of cooperatives) to support greater levels of activity (Chaves, 2004; Arcas et al., 2011). Through SDG 17, the UN establishes the need to forge partnerships to achieve the SDGs. In this sense, cooperatives constitute stable partnerships between a large number of members, allowing them to join together to act in ways that each member on its own could not. That is, cooperatives create companies and businesses through alliances and commitment among partners. At the European Conference on "The cooperative, mutualist and associative economy. Contribution to the construction of Europe" held in Brussels in 1986, Willi Croll (1987), former President of COGECA, stated that cooperatives had historically been "daughters of necessity." Even then, it had already been noted that the development of certain community policies required the use of structures entailing greater commitment and social action, which only cooperatives and other such associations can ensure (Juliá and Meliá, 2004).

Business size has historically been cited as one of the main problems facing agricultural cooperatives. Numerous researchers have highlighted size and the integration of cooperatives as fundamental ways of surviving in the market (Bel, 1996; Mozas-Moral, 1999). Size is conducive to higher business performance because of the greater ease of innovation and adaptation to information and communication technology (ICT; Wamba and Carter, 2014; Medina et al., 2018), a better financial situation, greater capacity to perform the roles of more parts of the production chain (Cook, 1995), and the ability to secure economies of scale (Lunan and Haugland, 2008). Meliá-Martí et al. (2020) reported that the integration of cooperatives makes it possible to achieve objectives more effectively, thereby benefitting partners, with this gain in size acting as a key factor in strengthening the business (Medina et al., 2018). Grashuis (2018) and Medina et al. (2014) reported that an increase in size is crucial to the survival of the agri-food cooperative sector. Based on these arguments, the following proposition may be formulated:

Proposition 1: A greater business size contributes to improving the performance of wine cooperatives.

The UN highlights innovation in the SDGs (SDG 9—Industry, Innovation and Infrastructure; [United Nations, 2015b](#)). Furthermore, it expressly cites innovation in ICT as a cross-cutting element for achieving the SDGs (Mozas-Moral, 2019).

In the literature, innovation is reported as being essential for business management and, hence, for higher business performance. Accordingly, Bernal-Jurado et al. (2020) cite technological innovation as a source of good business management in the wine cooperative sector. A prime example of this form of innovation is the adoption of e-commerce. Specifically, a website provides a virtual online portal through which to establish and strengthen relationships with existing or potential customers (Laroche et al., 2013). However, what differentiates the extent of technological innovation of the companies in our study is not simply having a website but rather the quality of the website. It is this quality that gives them a competitive advantage (Perçin, 2019). A high-quality website is more highly rated by users.¹ This higher user rating increases visibility and traffic and leads to greater trade, thanks to greater purchase intention (Bernal-Jurado et al., 2019; Ye et al., 2019).

¹ The quality of a website covers three dimensions: information quantity and usefulness, degree of connectivity, and ease of customer-company interaction (Chiu et al., 2005).

Based on these arguments, the following proposition may be formulated:

Proposition 2: Innovation enhances the performance of wine cooperatives.

In recent years, society's growing awareness of environmental degradation and the importance of healthy and organic food has caused a shift in consumption habits toward organic products (Bernal-Jurado et al., 2019). This shift has led to greater purchase intention (Kong et al., 2014) and willingness to pay a higher price for these products (Meliá-Martí, 2020). The growing importance of organic production is also reflected in the SDGs. This form of production is linked to SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 15 (Life on Land; United Nations, 2019).

This greater consumer interest in organic products, which in turn influences environmental protection, means that businesses that focus on organic production and distribution achieve higher commercial performance. Indeed, several scholars have suggested a positive relationship between the marketing intensity of organic products and business performance (Miroshnychenko et al., 2017; Seles et al., 2019). According to Meliá-Martí (2020), the process of producing and selling organic products creates new opportunities for businesses, especially agricultural cooperatives. In addition, organic production contributes to opening new markets, introducing new technologies, and improving financial performance with respect to companies that do not produce these products (Miroshnychenko et al., 2017). Based on these arguments, the following proposition may be formulated:

Proposition 3: The performance of wine cooperatives is enhanced by offering organic products.

There is some debate as to whether exporting companies are the most productive before exporting (Girma et al., 2004; Wagner, 2005) or whether such higher returns owe to the learning they acquire in international markets (Park et al., 2010; Moral-Pajares et al., 2015), as reported by Meliá-Martí et al. (2020) and Mozas-Moral et al. (2020b) for the cooperative agri-food sector. The scientific literature points to the achievement of higher business returns by companies that are present in international markets (Manjón et al., 2012; Moral-Pajares et al., 2015; Mozas-Moral et al., 2020b). These higher returns equate to more advanced positions within the company and higher wages (Meliá-Martí et al., 2020). Thus, a presence in international markets contributes to achieving SDGs 8 and 17 (United Nations, 2019). In fact, generating growth through business expansion in traditional markets is not the only UN recommendation (SDGs 8 and 17). The section on the means of implementation of global partnerships expressly cites the promotion of exports as a way of achieving greater development, expressly recognizing "international trade as an engine for inclusive economic growth and poverty reduction, and an important means to achieve the Sustainable Development Goals (SDGs)" (United Nations, 2019). Based on these arguments, the following proposition may be formulated:

Proposition 4: The performance of wine cooperatives is enhanced by trade in international markets.

The high volume of exports of undifferentiated bulk wine, which has a significantly lower unit price than other types of wine (Compés et al., 2014), and the potential for diversifying this product highlight the need to bottle wine to obtain higher returns (Compés et al., 2014; Langreo and Castillo 2014) and focus on the end market.² Selling in bulk to international markets at low prices results in low competitiveness and profitability because producers are unable to move up the value chain of

² Wine is an ideal product for designing differentiation strategies because of its lively nature, its complexity, and the range of consumer choice criteria. Technically, many endogenous and exogenous factors are involved in its production, and diverse objective and subjective characteristics determine its value to consumers. In few products is it truer that "no two wines are alike" (Compés, et al., 2014). In addition, there has been growth in the production of organic wines, various trials with non-alcoholic or low-alcohol wines, and wine-based soft drinks (Langreo & Castillo 2014).

their products through their cooperatives. That is, they do not reach the end consumer (Heyder et al., 2011; Cristóbal et al., 2020). Moreover, a commitment to bottled products aimed directly at end consumers increases an organization's market reputation, especially if combined with other types of complementary strategies (Fernández et al., 2019). Thus, bottling captures the added value that is lost if the product is sold in bulk (Triana, 2019). Hence, the integration of bottling and an end-market orientation offers a strategy for wine companies to increase their performance and market position (García et al., 2012). The UN 2030 Agenda, specifically Target 8.2, indicates that higher levels of economic productivity should be achieved through diversification, technological modernization, and innovation. This target addresses the problems facing this sector. Therefore, in addition to helping improve the performance of wine cooperatives, greater market orientation contributes to achieving SDG 8 (United Nations, 2019; Mozas-Moral, 2019). Based on these arguments, the following proposition may be formulated:

Proposition 5: Wine cooperatives' greater market orientation, measured as sales to end consumers, improves performance.

These relationships are illustrated in Figure 1.

3. Data and method

3.1. Sample and data collection

The Spanish cooperative wine sector was chosen for this empirical study for several reasons. First, it plays a leading role internationally (International Organisation of Vine and Wine, 2020). According to wine production figures, Spain is the third largest producer in the world (after Italy and France), with production in 2020 estimated at 37.5 million hectoliters, an increase of 11% with respect to 2019. However, this high production is in stark contrast to domestic wine consumption, where the Spanish market is only the seventh largest in the world (International Organisation of Vine and Wine, 2018). This excess of domestic supply has forced Spanish producers to focus on foreign markets, exporting an average of 22 million hectoliters of wine each year (Ministerio de Agricultura Pesca y Alimentación, 2020a). Second, the sector must improve its business performance. For example, 56% of the entire volume of exports is marketed as "bulk" wine, thereby losing much of the added value created in the bottling and marketing phases. This situation reflects the traditional business model, which is based on low prices, high volume, and a strong reliance on traditional markets (Cervera and Compés, 2018). Third, it is a strategic sector for population retention. In vineyard cultivation alone, this sector generates close to 18 million working days (Ministerio de Agricultura Pesca y Alimentación, 2020b). Finally, cooperatives play an important socioeconomic role in the Spanish wine sector. According to OSCAE (2019), wine cooperatives account for 21% of all cooperatives in Spain. These cooperatives produce 60% of the wine in Spain, but bottle less than 5% of their overall production. This disparity highlights the serious commercial problem that this sector has been facing for decades (Cooperativas Agroalimentarias, 2011).

The data for this study were taken from a survey conducted by the Socioeconomic Observatory of Spanish Agri-food Cooperativism (Observatorio Socioeconómico del Cooperativismo Agroalimentario Español – OSCAE) in 2019.³ This organization represents the interests of Spanish agri-food cooperatives when dealing with national and international public and private entities. This organization was chosen by the Ministry of Agriculture, Fisheries, and Food (Ministerio de Agricultura, Pesca y Alimentación) to produce this report. This observatory performs

³ Some of the data for this study were collected by the authors from the websites of the companies in the study population. Others were requested from Agri-food Cooperatives of Spain (Cooperativas Agro-alimentarias de España) within the framework of OSCAE. This study was carried out with the collaboration of Agrifood Cooperatives of Spain and the Ministry of Agriculture, Fisheries, and Food.

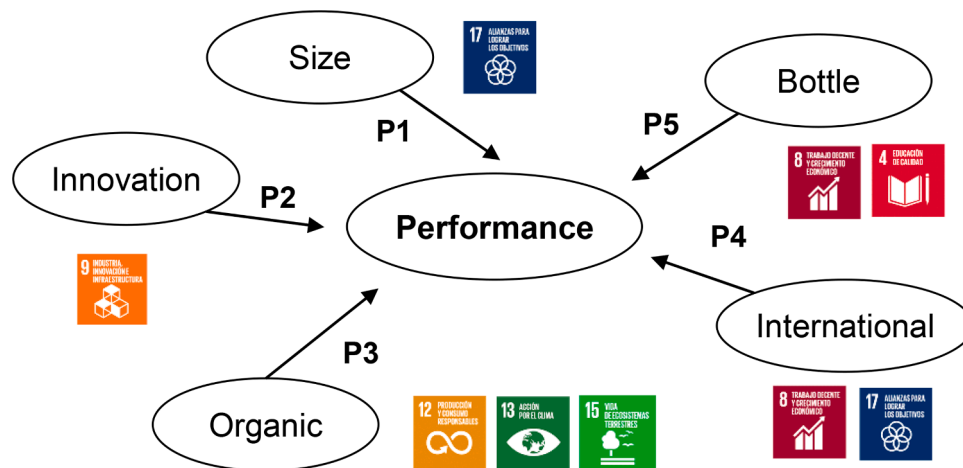


Fig. 1. Conceptual representation of the research model

a survey of its members every two years. We were granted access to these organizational data to perform the present study. Agricultural associations (Entidades Asociativas Agrarias – EAAs), consisting primarily of 3,699 agricultural cooperatives, account for much of the economic activity within the Spanish agri-food sector. Collectively, their turnover was 29,365 million Euros in 2018. Our study focused on the wine sector, wine being one of the main agri-food products in Spain. The sources described earlier revealed 404 wine-producing companies (CNAE code 1102).⁴ We initially identified the organizations with their own website,⁵ resulting in a total of 165 wine-producing entities forming the focus of this study. The database provided by OSCAE was supplemented by metrics of website use and quality gathered from the websites of the companies in the population (35 items in total). Our study targeted these organizations.

3.2. Predictors and method

The dependent variable was cooperative performance. This variable was measured using the 2018 sales to membership ratio (turnover/number of cooperative members) of the wine cooperatives. This variable is often used to analyze the performance of cooperatives (Meliá-Martí et al., 2020). It is valid and reliable for achieving the proposed objective (Epstein, 2001) because most, if not all, of the profits of cooperatives are distributed among the members as remuneration for their agricultural contributions (i.e., for their role as suppliers). This system explains why most profit and loss accounts of cooperatives show minimal, sometimes symbolic, real profits. Cooperative researchers commonly use cooperative performance, referring to the total turnover divided by the number of members. According to Hanisch and Rommel (2012), turnover per cooperative member is a useful general approximation of the performance of a cooperative. Meliá et al. (2017) noted that this relative indicator (performance per member) makes the results perfectly

⁴ In Spain, CNAE refers to the Spanish National Classification of Economic Activities. A code is assigned to each economic activity. For example, 1102 corresponds to the category “Manufacture of wine from grape”.

⁵ The 2030 Agenda expressly states the goal of “setting out together on the path towards sustainable development, devoting ourselves collectively to the pursuit of global development” and of working toward building “dynamic, sustainable, innovative and people-centred economies.” In fact, SDG 17 (Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development) consists of a set of tools for participants to achieve the other SDGs. The UN stresses the need to “increase the use of enabling technologies, particularly information and communications technology” (United Nations, 2015b). ICT thus constitutes a cross-cutting tool to achieve sustainable development. Therefore, we focus on companies that use ICT.

comparable between cooperatives, regardless of their size. Therefore, this variable overcomes the distorting effect of size.

The independent variables were organic sales, exports, and bottled products as a percentage of total company turnover, as well as the number of employees (size) and the quality of the company website (innovation). These variables are detailed in Table 1.

The quality variable was the result of analyzing the content and tools on the website, including social networks and the virtual store. Specifically, for each website, we analyzed the presence or absence of 35 elements grouped into the following three areas (Fransi et al., 2017):

- Information provided about the organization and its offering (10 items): contact details; information on the organization’s location; information on activities; email and/or contact form; information on the product; attendance at events or fairs; website availability in more than one language; quality certifications; communication of news; promotions and incentives on the Internet.
- Elements that help the company interact with customers and users who visit the website (22 items): prices and basic product information; links to other interesting product information (benefits of consumption, recommendations by doctors, etc.); possible recipes and cooking tips; information about visits; promotions; site map; page sharing; downloading of photos and/or brochures; privacy policy or legal notice; FAQs; search engine; online store; exclusive area for customers/partners; multimedia applications; blogs, forums, and/or chats; email newsletters; access to social network profiles; possibility of collecting online comments from customers; possibility for customers to rate quality; satisfaction with products; virtual tour of the winery; mobile version of the website.
- Transactional elements related to the presence and characteristics of a virtual store and the secure purchase process (3 items): complete purchase process; secure online transactions and interaction with the server; database queries.

Table 1
Variables used in the fsQCA

Variable	Description	Type of variable
Performance	Turnover/number of members	Continuous*
Antecedents	Description	Type of variable
Innovation	Development of website	Continuous*
International	Percentage of exports	Continuous*
Organic	Percentage of sales of organic products	Continuous*
Size	Number of employees	Continuous*
Bottle	Percentage of bottled wine	Continuous*

Source: Authors.

Notes: * The continuous variables were calibrated using fsQCA 3.0 software.

The method used to achieve the research objective was fsQCA. Qualitative comparative analysis (QCA) is based on Boolean algebra. It uses verbal, conceptual, and mathematical language, making it a hybrid qualitative and quantitative approach and endowing it with the main advantages of both (Ragin, 1987). Accordingly, applying QCA makes it possible to analyze a set of cases systematically to determine causal patterns between a set of conditions and an outcome in the form of relationships of necessity and sufficiency (Schneider and Wagemann, 2010). With respect to regression analysis, this method has the advantage that it establishes relationships between subsets of variables to explain patterns in the data. This technique also works with medium-sized samples that would not be large enough to apply traditional quantitative methods (Rihoux and Ragin, 2009).

QCA can be combined with other qualitative or quantitative techniques. Doing so is considered good practice in research innovation (Schneider and Wagemann, 2012). However, the use of this technique in isolation is still the predominant approach in the literature (Rihoux et al., 2013). In sum, QCA has numerous advantages, making it a valid, reliable technique in its own right (Pappas and Woodside, 2021).

Fuzzy-set qualitative comparative analysis (fsQCA) was used for this study because it overcomes one of the main criticisms of crisp-set qualitative comparative analysis (csQCA), which is that csQCA is a strictly dichotomous approach (Sehring et al., 2013). Unlike multiple regression, fsQCA has greater explanatory power and can be used alone to provide a rich overview of relationships of interest (Gligor and Bozkurt, 2020). Likewise, in fsQCA, it is assumed that asymmetry, equifinality, and causal complexity can exist, which mitigates some of the limitations of multiple regression (Ragin et al., 2006).

To apply this technique correctly, we followed the phases recommended in the literature (Schneider and Wagemann, 2012): calibration of the variables, if necessary, for both conditions and the outcome; analysis of necessity; and analysis of sufficiency. First, the variables were calibrated. Next, necessity analysis of the efficiency scores for the causal conditions was performed to verify that no value exceeded the consistency threshold of 0.9 recommended in the literature (Ragin, 2006).

4. Results and discussion

Table 2 shows the descriptive statistics for the variables used in this study.

These descriptive values show that, on average, the cooperatives are small. This feature is a disadvantage when seeking to compete in an increasingly competitive and dynamic market. Given the organizational characteristics of these cooperatives and their commitment to differentiation strategies, several observations can be made. In relation to the use of the website, which is fundamental when operating in a digital environment, there are clear weaknesses. While these organizations innovate by maintaining an online presence via their company website,

Table 2
Descriptive statistics for the variables used in this study

Variable	Statistics for the sample
Performance	Mean turnover: 5,475,181.22€ Mean number of members: 477 Mean turnover per member: 17,745€
Size	Mean number of employees: 11
Innovation	Key statistics: 57% of cooperatives had a website available in more than one language. 68% of cooperatives had links to social networks on their website. 21% of cooperatives had a blog or chat on their website. 59% of cooperatives had a mobile version of their website. 56% of cooperatives had an online store on their website.
International	52% of cooperatives had exports. Mean exports as a percentage of turnover: 13%
Organic	18% of cooperatives sold organic products. Average organic sales as a percentage of total sales: 1.25%
Bottle	36% of cooperatives sell most of their production in bottled form. Average bottled sales as a percentage of total sales: 39%

Source: Authors.

only about half of these websites have the basic quality-related attributes that are necessary for efficient use. For instance, many organizations do not offer links to social networks, chats, blogs, or consumer reviews. However, these are considered key elements in the online buying process (Khorsheed et al., 2020). Similarly, given the level of exports in this sector, offering a website in different languages is fundamental. Furthermore, offering a mobile version of the website and including a virtual store are important differentiating features to ensure that wine organizations can successfully implement sales strategies geared toward e-commerce.

For these companies to generate value, key elements may include the sale of bottled products aimed at end consumers, a commitment to organic products (a market where demand is growing), and access to other markets through internationalization. The results in Table 2 show that there is considerable room for improvement for wine organizations in the three strategies mentioned earlier. These organizations face a series of challenges in implementing all of these strategies, but, with efficient planning and action, they can move forward along the path to growth. The use of new technology not only serves to improve the quality and efficiency of a company's current offering but also offers a complementary, motivational tool. Internationalization blurs the physical barriers between consumers and companies. With organic products, disadvantages such as misinformation and proximity to the client can also be mitigated. Finally, with the sale of bottled wine to the end market, organizations can reach consumers more directly and efficiently, regardless of their resources.

The next part of the study required the use of fsQCA software. The truth table was calculated by considering the aforementioned variables. After analyzing the truth table, further analysis was carried out on these variables. The results are shown in Table 3. A combination of the parsimonious and intermediate solutions was used to offer a more detailed, aggregate overview of the findings (Fiss, 2011). A black circle (●) indicates the presence of a condition. A circle with a cross in the center (⊗) indicates the absence or negation of a condition. A blank space indicates that a condition is irrelevant. The distinction between a core and peripheral condition is denoted by the use of large and small circles, respectively (Pappas and Woodside, 2021). In this case, the core conditions are size, internationalization, and the combination of innovation and bottling.

According to the results, the first configuration has a raw coverage of 44.77%. This configuration highlights the links between internationalization, a focus on organic production, and company size (number of employees) as variables associated with high organizational performance. The second causal configuration includes organic wine production by the cooperative and company size, together with the quality of the company website and sales from bottled wine (raw coverage = 42.08%).

Overall, this model has a coverage of 60.94%, which denotes the proportion of organizations explained by these variables. This index is analogous to the coefficient of determination (R²). Following the recommendations of Ragin (2008), this value should be greater than 0.45.

Table 3
FsQCA results

Configurations	1	2	3	4
Size	●	●		●
Innovation		●	●	⊗
International	●		●	
Organic
Bottle	.	●	●	⊗
Raw coverage	0.447740	0.420809	0.374659	0.261360
Unique coverage	0.0588444	0.0454383	0.0342863	0.0469808
Consistency	0.859094	0.856763	0.870692	0.860211
Model coverage	0.715781			
Model consistency	0.886783			

Source: Authors.

The overall model consistency is 81.63%, which is also above the recommended value of 0.74 established in the literature (Ragin, 2008). The results confirm the proposals. Thus, the results reveal that the variables, which are aligned with certain SDGs, enhance the performance of these cooperatives. Accordingly, these results indicate that the performance of the cooperatives analyzed in this study is consistent with the established strategies, which in turn are aligned with the SDGs.

5. Conclusions

The social economy, particularly the cooperative sector, plays a prominent role in achieving the SDGs. A democratic approach to operations and the values and principles of cooperatives are in line with the 2030 Agenda. Therefore, cooperatives are better aligned with the 2030 Agenda than other firms. Cooperatives embody the principle of sustainable development in its economic, social, and environmental dimensions (Mozas-Moral and Puentes, 2010). The aim of this study was to examine the influence of the economic and organizational variables highlighted in the recent literature and linked to the SDGs as drivers of cooperative performance.

The UN SDGs, which have been ratified by most countries, contribute to economic development by ensuring a higher standard of welfare and prosperity for the world population. This study considered variables that are directly linked to the SDGs and examined their impact on the performance of cooperatives. The SDGs associated with protecting the environment were addressed using the variable of organic production. Innovation was also addressed as a cross-cutting tool that affects the other SDGs. It was evaluated in terms of the use and exploitation of ICT, specifically the company website. Internationalization through exports was considered as a variable of economic growth. Producers' orientation to the end market was also considered as a measure of local development through the capture of value added in the latter stages of the product value chain. In the agri-food sector, these activities are usually performed by intermediaries because of the predominance of bulk sales. This variable was measured as the percentage of sales from bottled products. These variables all reflect the diversification of these organizations. Finally, organizational size was also considered, measured as the number of employees.

The fsQCA results verify that cooperative performance is enhanced by these factors, which are linked to the SDGs. The propositions captured in the theoretical model in this study are thus accepted as proposed. In short, the SDGs analyzed here through the corroborated propositions (SDGs 4, 8, 9, 12, 13, 15, and 17) show that the implementation of these SDGs boosts the cooperative performance of the most innovative Spanish winemakers, thus contributing to the economic development and prosperity of regions and nations. It may be concluded that, besides reflecting a commitment to social responsibility, the SDGs are a means of promoting cooperative development and performance. The SDGs not only ensure the competitive position of cooperatives but are also in line with their principles of corporate social responsibility (CSR). Finally, a valuable result of this research is that companies should not only seek to grow in size to achieve higher performance. Better performance is a consequence of the interaction of several variables in addition to size. Other variables, including activities related to diversification, must also play their part, simultaneously causing higher performance.

Based on the results of this study, a series of recommendations can be provided for the wine cooperative sector. In addition to increasing their organizational size so that they can pursue more ambitious marketing strategies, these organizations can achieve enhanced economic performance in the following ways. First, they can adopt a stronger market orientation by focusing on bottling wine for end consumers. Second, they can focus on organic production, given that today's consumers place greater value on healthy and environmentally friendly products. Third, changes in consumer behavior mean that greater efforts in online positioning are required by improving the design of the website as an

alternative to traditional sales channels. Finally, cooperatives in this sector should also adopt a stronger orientation toward exports, which can reduce their dependence on fluctuations in domestic sales.

This study advances previous research in other similar sectors such as olive oil cooperatives (Mozas et al., 2020a). This line of research could be extended to other agri-food sectors or other types of organizations to confirm that the objective of the study applies to all organizations, regardless of their activity or nature. Thus, it would be of interest to replicate this study in companies outside the social economy. Doing so could overcome the main limitation of this study, namely the characteristics of companies within the social economy (e.g., the small size of cooperatives), which condition or limit the ability to achieve better performance. Therefore, a study of firms outside the social economy may provide different results.

Author statement

Let me also inform you, on behalf of my co-authors, that the material in the manuscript has not been published, is not being published or considered for publication elsewhere and will not be submitted for publication elsewhere unless rejected by the journal editor.

Author Contributions

All authors have contributed equally in all phases of elaboration, from data collection and literature search to statistical analysis and paper writing. All authors have read and agreed to the published version of the manuscript.

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