

# Agri-food cooperatives: what factors determine their innovative performance?

## Cooperativas agroalimentarias: ¿Qué factores determinan su rendimiento innovador?

Celia Sama-Berrocal

*Department of Economics, Faculty of Agriculture, University of Extremadura, Badajoz, Spain, and*

Beatriz Corchuelo Martínez-Azúa

*Department of Economics, Faculty of Economics and Business Science, University of Extremadura, Badajoz, Spain*

### Abstract

**Purpose** – The agribusiness in Extremadura (Spain) is one of the main economic activities in the region. Within this industry, cooperativism stands out as a strategic component that influences the fixation of the rural population and the development of the territory. Likewise, innovation is fundamental for the competitiveness of companies. The aim of this study is to analyse the existence of a relationship between several business variables: strategy, culture, work climate, management, organisation and market orientation in the innovative performance of agri-food cooperative companies. Differences with other types of agri-food organisations are also analysed.

**Design/methodology/approach** – The authors proposed a conceptual research model, which aims to determine the influence of several business variables on innovative performance. A qualitative methodology was used through a multiple case study where five Extremaduran agri-food cooperatives were chosen to carry out the research.

**Findings** – The results show that the business variables are valued positively as factors that enhance innovative performance. Moreover, the peculiarities of cooperatives show several differences with respect to non-cooperative companies.

**Originality/value** – The results contribute to agri-food cooperatives' managers developing specific actions that improve the competitiveness and sustainability of agribusiness based on innovation.

**Keywords** Agri-food cooperatives, Innovative performance, Multiple case study, Extremadura

**Paper type** Research paper

### Resumen

**Objetivo** – La agroindustria en Extremadura (España) es una de las principales actividades económicas de la región. Dentro de esta industria, el cooperativismo destaca como un componente estratégico que influye en la fijación de la población rural y en el desarrollo del territorio. Asimismo, la innovación es fundamental para la competitividad de las empresas. El objetivo de este estudio es analizar la existencia de relación entre diversas variables empresariales: estrategia, cultura, clima laboral, gestión, organización y orientación al mercado en el



desempeño innovador de las empresas cooperativas agroalimentarias. También se analizan las diferencias con otros tipos de organizaciones agroalimentarias.

**Diseño/metodología/enfoque** – Se propuso un modelo conceptual de investigación, cuyo objetivo es determinar la influencia de diversas variables empresariales en el rendimiento innovador. Se utilizó una metodología cualitativa a través de un estudio de caso múltiple en el que se eligieron cinco cooperativas agroalimentarias para llevar a cabo la investigación.

**Resultados** – Los resultados muestran que las variables empresariales se valoran positivamente como factores que potencian el rendimiento innovador. Además, las peculiaridades de las cooperativas muestran varias diferencias con respecto a las empresas no cooperativas.

**Originalidad/valor** – Los resultados contribuyen a que los gestores de las cooperativas agroalimentarias desarrollen acciones específicas que mejoren la competitividad y sostenibilidad de la agroindustria basada en la innovación.

**Palabras clave** Cooperativas agroalimentarias, Rendimiento innovador, Estudio de casos, Extremadura

**Tipo de papel** Trabajo de investigación

## 1. Introduction

The agribusiness in Extremadura, located in the west of Spain bordering Portugal, is one of the main economic activities in the region. According to data from the Spanish National Statistics Institute (January 2021), there were 1,378 companies related to the food, beverage and tobacco industries, which represents 4.6% of the total companies (MAPA, 2022). The weight of the agricultural sector and its associated industries is substantially higher than the national average. The region contributes to 4.7% of the country's agri-food industry, compared to 2% of the national total (Extremadura, 2020). Within this industry, cooperativism stands out as a strategic component that influences the fixation of the rural population and the development of the territory. In the case of Extremadura, the cooperatives have a special importance in the agri-food industry, influencing the fixation of the rural population and the development of the territory. Studies by INNODE (2018) show that in Extremadura, the evolution of the cooperative fabric is directly related to the demographic trend. In 2019, cooperatives in Extremadura represented 8.7% of Spanish agri-food cooperatives and accounted for 7.4% of the turnover (MAPA, 2022). There are numerous studies related to the agri-food sector that highlight the role of cooperative organisations for the economic and social development of the regions. Lajara and Server (2017) reported on the role of agri-food cooperatives in providing services to their members, such as marketing, supply and information. They underlined their negotiating power, as well as the function that they have in supplying food to society, generating employment and contributing to the development of the natural environment. Mastronardi *et al.* (2020) pointed out the importance of cooperatives as a tool for the resilience and development of the inland regions. Schwab do Nascimento *et al.* (2020) showed that cooperatives and the activities they carry out contribute to the economic, social, ecological and political sustainability of family farming. In Spain, Martín *et al.* (2021) emphasised the role that cooperative entities have, especially for the future of the local primary sector.

Likewise, knowledge and technology are essential for development, incorporating innovations that implying an increase in competitiveness (Escobar *et al.*, 2018). On the one hand, as in other agri-food organisations, cooperatives are not outsiders to change and innovation. Data from the Socioeconomic Observatory of Spanish Agri-food Cooperatives (OSCAE, 2020) indicate an important characteristic of cooperatives in Extremadura that is the constant commitment to innovative projects. In this sense, Extremadura is the second Spanish autonomous community in promoting research and development (R&D) in the cooperative sector, with 62% of cooperatives participating in innovative projects. On the other hand, cooperatives, unlike other agri-food organisations, have a double function, social and business, that constitute a unique space for innovation. Outward innovation seeks business competitiveness and inward innovation drives the competitiveness of its members and the relationship of cooperatives with them (Alguacil *et al.*, 2020). In the current context, in

which environments are changing, cooperatives must constantly seek new adaptation formulas that allow them to gain positioning, notoriety and competitiveness in the market. Business strategies adopted by cooperatives will determine their survival in the medium and long term (Bretos and Marcuello, 2017). Likewise, according to various studies, the specific characteristics of the region are essential when it comes to driving innovative activity (Kaufman and Tödting, 2002; Keizer *et al.*, 2002; Zeng *et al.*, 2010).

In this context, the objective of this study is to analyse the influence of various business variables on the innovative performance of Extremaduran agri-food cooperatives. The results are compared with those previously obtained in a previous study for other legal forms (Corchuelo *et al.*, 2020). The research question is: Are type of management, innovative strategy, organisational structure, innovative culture, organisational climate and market orientation, factors that influence agri-food cooperatives' innovative performance? The study applies a qualitative methodology based on a multiple case study that analyses, from an internal point of view of the organisation, what elements contribute to the ability to develop an innovative activity.

Few studies have addressed this problem applied to various industries and regions. In relation to the factors that foster and drive the innovation in companies, Jiménez and Sanz (2004) obtained a classification of the internal factors that determine it. They highlighted strategy, organisational structure, management and leadership, human resources and other factors such as technological capital and market orientation. Focusing on the agri-food industry, studies related to the analysis of innovation, drivers of innovation, types of innovation and orientation towards innovation are scarce (Avermaete *et al.*, 2003; Menrad, 2004; Capitano *et al.*, 2010; Corchuelo and Ferreiro, 2019; Corchuelo and Martín-Vegas, 2019). Especially noteworthy is the lack of empirically proven studies on innovation in small and medium food enterprises (Avermaete *et al.*, 2004; Baregheh *et al.*, 2012). Traill and Meulenbergh (2002) also revealed the lack of research on innovation orientation and its link with organisational performance. Recently, Castillo-Valero and García-Cortijo (2021) reported on internal and external factors in the propensity to innovate in agri-food companies in Castilla-La Mancha (Spain). Corchuelo and Sama-Berrocal (2022) analysed the objectives and barriers that influence the willingness of the agri-food companies to innovate. In relation to agri-food cooperatives, to our knowledge, there are few studies related to the analysis of factors that influence innovation (Drivas and Giannakas, 2006; Castilla-Polo and Sánchez-Hernández, 2022).

This study is novel in several aspects. First, it aims to contribute to the existing literature by analysing innovation in agri-food cooperatives, especially referring to a regional environment. Second, it is original in terms of the methodology used. Finally, the research addresses a theoretical research gap by analysing several business variables from the internal point of view of the organisation as determinants of innovative performance.

## 2. Materials and methodology

### 2.1 Methodology

According to the objective of the research, a qualitative methodology was used to understand and explore in depth the factors proposed in the conceptual research model based on Corchuelo *et al.* (2020) applied to Extremaduran agri-food cooperatives. The qualitative methodology provides a unique contribution, making it possible to explore other approaches that methods of a quantitative nature do not allow to discover (Choy, 2014). According to Ruiz (2007, p. 33) choosing a qualitative research strategy "imposes a context of discovery and exploration", a circumstance that fits the objective of this study. From the point of view of the social sciences, several researchers have highlighted the importance of using qualitative methodology in this type of study (Van Wynsberghe and Khan, 2007; Brinkmann *et al.*, 2014).

In relation to the research method, the multiple case study using a holistic design was used. According to Yin (2014), the case study permits to examine a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and its context are not clear. In our case, an exploratory approach was adopted, as we considered it to be the most appropriate to understand the issue under investigation (Yin, 1989).

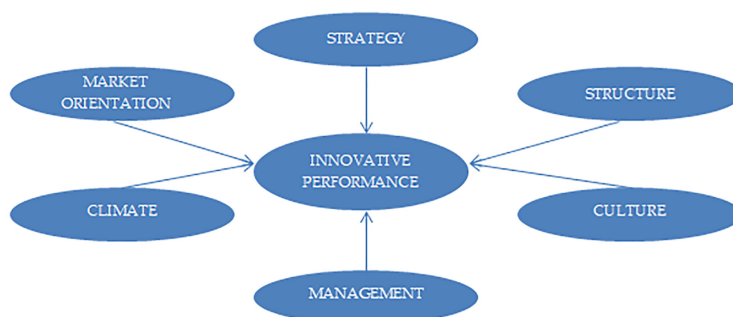
### 2.2 Conceptual research model and premises

One of the key stages of the research design was to define the theoretical framework. An extensive review of the literature was carried out on the factors and elements that enhance the innovative performance of organisations. The hypotheses and experimentations were reviewed to facilitate the interpretation and analysis of the data (Mohajan, 2018). Figure 1 shows the elements of the proposed conceptual research model, which aims to determine the influence of several business variables on innovative performance (Corchuelo *et al.*, 2020).

Based on the proposed model, the following research premises were established. The premises were determined based on the literature review for each of the business variables by compiling the questions in a protocol that included the main aspects to be analysed.

*Premise 1 (P1).* There is a positive relationship between management and innovative performance.

The role that management innovation represents was studied to analyse the influence of management on the innovative performance of agri-food cooperatives. Among the aspects analysed, it was important to know whether the innovative process was the product of the creative capacity of the people within the organisation only, or if, additionally, a management dynamic was required to coordinate the different agents (internal and external). Another aspect addressed was whether the company's management provides the necessary resources to make the organisation's objectives viable, and whether it systematises processes, motivates action and provides an innovative culture. Additionally, it was studied whether management style enhances the company's innovation, establishes the necessary means to improve its performance by developing its long-term strengths and stimulates change by setting a strategy (Naqshbandi and Jasimuddin, 2018; Roehrich *et al.*, 2019; Cabello-Medina *et al.*, 2019; Hullova *et al.*, 2019).



Source(s): Author's own elaboration

Figure 1.  
Conceptual  
research model

*Premise 2 (P2).* There is a positive relationship between strategy and innovative performance.

The second business variable analysed was the relationship between a formal innovative strategy and the innovative performance of the agri-food companies. We studied the importance for the company of carrying out an analysis of threats and opportunities; the level of formalisation of strategic actions through internal documents; actions developed accompanied by control mechanisms; and types of innovation strategies (Prajogo, 2016; Gallowaya *et al.*, 2017; Martin-Rios and Ciobanu, 2019; Wei *et al.*, 2019).

*Premise 3 (P3).* There is a positive relationship between organisational structure and innovative performance.

Another business variable analysed was the influence of the organisational structure and the innovative performance. The role played by the structure of the organisation with respect to innovative activity was studied through various aspects: first, the assessment of the importance of defining who is responsible for the different activities and second, the existence of a high level of specialisation (marketing, human resources, production, R&D, etc.) and the establishment of a hierarchy of authority (organisational chart). Finally, the definition of how work is organised (structure), and the responsiveness to changes in the environment were also explored (Pierce and Delbecq, 1977; Miles *et al.*, 1978).

*Premise 4 (P4).* There is a positive relationship between organisational climate and innovative performance.

We analysed the relationship between organisational climate and innovative performance. Assessment of the importance of having a positive work environment that generates trust and commitment in all areas and among the personnel of the organisation was analysed. Also, flexibility at work and evaluation systems that value work, creativity and innovation were explored (Popa *et al.*, 2017; Fomujang *et al.*, 2018; Dabic *et al.*, 2018).

*Premise 5 (P5).* There is a positive relationship between market orientation and innovative performance.

The importance of the central objective of satisfying the needs of customers, having fluid communication with suppliers, monitoring the actions of the competition and the participation of all areas of the company in the definition and implementation of solutions that are given to clients' needs, were evaluated to establish a relationship between market orientation and innovative performance (Teece, 2010; Ho *et al.*, 2018; Wang *et al.*, 2019; Alshanty and Emeagwali, 2019).

*Premise 6 (P6).* There is a positive relationship between culture and innovative performance.

Finally, we analysed the influence of culture on innovative performance in the agri-food cooperatives. Questions were asked about the staff's commitment to innovation, appreciation of the innovative culture and the values and principles transmitted to employees to assume an innovative role within the company. Likewise, we investigated the attitude of employees towards changes and innovation, the harmony with the strategic objectives of innovation and the willingness of management to implement a proactive search for answers to internal and external problems, encouraging the development of solutions (Curteanu and Constantin, 2010; Padilha and Gomes, 2016; Dabic *et al.*, 2018).

### 2.3 Population and case selection

In this research, the sampling was intentional, since the sample was selected to identify outstanding Extremadura agri-food cooperatives according to their management and

performance in terms of innovation to locate relevant examples of good practices. A report/directory of agri-food cooperatives was prepared based on the information available in different databases (Corchuelo *et al.*, 2020). Five cooperatives were chosen to carry out the case study. The selection of cooperatives was based on various criteria: belonging to branches of activity that develop or produce highly specialised products in the region; different sizes, turnover and whether they are dynamic and innovative organisations. According to Yin (1989), the selection criterion of five cases as units of analysis to form part of the sample is appropriate, since it is recommended not to exceed twenty units of analyses or cases. In general, it is observed that considering many cases could make it difficult to make comparisons, cross-analyse data, and inconsistent conclusions may be obtained (Mejía, 2000). Table 1 shows the main characteristics of the cooperatives.

### 2.4 Protocol and interviews

The third step in the research design was the preparation of the semi-structured interview (Valles, 2014). After reviewing the relevant literature, in accordance with the variables proposed in the conceptual model, a script/protocol was prepared. The interview protocol was organised in several blocks of questions following the study by Corchuelo *et al.* (2020). The protocol was sent to the person responsible in the selected cooperatives before the interviews. Table 2 collects information from the interviews conducted.

Cooperative	Fundation	Activity subsector	Employees	Legal form	Billing	Exports
C1	1982	Wine making	10	A.T.S.	1,000,001–2,000,000€	Yes
C2	1985	Manufacture of products for animal feed	70	A.T.S.	>10,000,000€	Yes
C3	1985	Processing and preservation of fruits and vegetables	110	Second-degree cooperative society	>10,000,000€	Yes
C4	2003	Processing and preservation of fruits and vegetables	6	First-degree cooperative society	6,000,001–10,000,000€	Yes
C5	2017	Live animal trade	70	Second-degree cooperative society	>10,000,000€	Yes

**Table 1.** Main characteristics of the agri-food cooperatives

**Note(s):** A.T.S.: Agrarian Transformation Society

**Source(s):** Author’s own elaboration

Cooperative	Date	Duration	Modality	Interviewed	Gender
C1	18/06/2020	1h	Video conference	CEO	Men
C2	06/07/2020	1h 15 m	Video conference	CEO	Men
C3	15/10/2020	55m	Video conference	CEO	Women
C4	12/01/2021	1h 15 m	Video conference	CEO	Men
C5	26/04/2021	1h 20 m	Video conference	R& D& i/Quality Director	Women

**Note(s):** CEO: Chief Executive Officer

**Source(s):** Author’s own elaboration

**Table 2.** Interview data

The interviews were carried out from mid-June 2020 to the end of April 2021. To improve the analysis and prevent loss of information, the interviews were recorded with the prior consent of the interviewees. Afterwards, the interviews were transcribed, and the information obtained was triangulated with other secondary information. During the information triangulation process, qualitative analysis software was used (Atlas.Ti) (Ronzani *et al.*, 2020; Ang *et al.*, 2016).

To analyse the information, first an exploratory study was carried out through the analysis of the frequency of words with word cloud and frequency table resources (Sabariego-Puig *et al.*, 2014). Then, the categorisation and coding process was carried out deductively (Navarro and Díaz, 1994). Next, we set up the crossed analysis of the cases and the study of the relationship between the pre-established categories. Finally, the functional-structural analysis of the information was carried out.

### 3. Results

The results of the study were obtained from the information compiled in the transcript of the interviews, literature review and other secondary information located on the web pages of the cooperatives (Appendix, Table A1).

#### 3.1 Exploratory analysis

The results of the exploratory study correspond to the word cloud analysis and the frequency of the terms most repeated by the interviewees in relation to the variables of the proposed model. Figure 2 shows the 25 most repeated terms used by interviewees during the sessions. Among the 25 words with the highest frequency of repetition are terms that define the variables proposed in the research model (management, strategy, structure, organisational climate, culture and market orientation), thus evidencing the relationship between the model variables and innovative performance of cooperatives.

Subsequently, to facilitate the analysis of the results, the 25 terms obtained in the study of word frequency were grouped into five categories in relation to the variables of the model: strategic dynamics and management, organisational structure, organisational climate and market orientation, innovative culture, innovative dynamics and performance.

#### 3.2 Analysis of the variables

The responses of the interviews from the cooperatives were then analysed in relation to the variables proposed in the research model and their relationship with innovative performance.



Figure 2.  
Word cloud results

Source(s): Author's own elaboration



---

Appendix (Table A2) contains the transcripts of the main comments classified according to the categories established.

3.2.1 *Strategic dynamics and management*. Cooperative 1 (C1: *wine production*) follows a strategy of producing quality wines and transmitting the concept of well-being associated with the winery, developing and promoting wine culture. The wine sector is a traditional and competitive sector, where the main changes are introduced by young wineries. In response, the organisation seeks to differentiate itself in the market and professionalise the company. In the strategic dynamics of C1 and throughout the innovative process, it became clear that the manager is the main actor, in charge of guiding the company's strategy, promoting wine culture within the organisation, organising the structure of the business and market orientation.

The industrial activity carried out by the cooperative 2 (C2: *manufacturing of products for animal feed*) focuses on three objectives: making the activity carried out by its members profitable, facilitating advice and guidance for members and guaranteeing the marketing of their products in better conditions. According to the chief executive officer (CEO) of this cooperative, to achieve success in innovation activities within the organisation, it is necessary for the management to be involved.

For cooperative 3 (C3: *processing and preservation of fruits and vegetables*), the strategic dynamics and management are guided by the characteristics and form of constitution, a second-degree cooperative, which seeks to guarantee the profitability of its members' activity and to continue to be the engine economy of the area promoting the "Valle del Jerte" brand. To achieve its objectives, the role of management in C3 is essential and adds value to the organisation.

The fruit and vegetable marketing sector faces a lot of competition and those that affect them the most are those countries that produce outside the European Union and have cheaper labour costs. In addition, the sector has other peculiarities, such as its traditional character and great aversion to risk on the part of farmers and partners. The result of the process of adapting the C3 strategy is reflected in the internal activities carried out by the company. For example, in the beginning, they only carried out marketing activities for their partners' products and now they transform part of their own product. Therefore, although it does not have a formally defined strategy, it does have a strategic plan, where the aims to be achieved are to extend the useful life of its products to market them in more distant destinations or to take advantage of the by-products generated during its activities.

The internal characteristics of the garlic processing and marketing sector mark the strategic dynamics and management of cooperative 4 (C4: *fruit and vegetable processing and preservation*). The sector is not very professional due to the characteristics of its products, the size of the sector is small and allows all market players to know each other, and there is the presence of multiple intermediaries in export activities. Consequently, for the last 8 years, even though the company has not formalised a strategy, it is banking on independent trade of its products to foreign markets. The objective is to increase its client portfolio in countries such as Brazil, North America, Canada, or other European destinations. This has caused exponential growth, especially in the first years when they grew by 200%, and today they continue to proliferate with a more stable growth. The figure of the manager is integrated into each of the areas in which the organigram is organised.

The strategic dynamics and management of cooperative 5 (C5: *commercialisation of live products*) is marked by three aspects: 1) the merger of two cooperative groups of great reference on a national level under a single brand, allowing them to position themselves within the meat sheep sector and becoming a benchmark both nationally and at European level; 2) the seasonality of productions; 3) it is an uncompetitive sector at the national level where its main competitors are entities from other countries. This means that within the activities managed by C5 two different types of activity are differentiated. On the one hand,



sheep production, a highly professionalised activity, but with a static innovative character that makes changes very difficult. On the other hand, marketing, which is more specialised and dynamic.

*3.2.2 Organisational structure.* The structure of the C1 cooperative is defined in specific departments and functions, where the work environment is essential for the development of an innovative culture, new innovations and the commitment of the workers.

The organisational structure of the C2 cooperative is formally defined in an organisation chart with departments, specialities and functions that are carried out in each one of them. The existence of a good work environment and the involvement of company personnel are very important to achieve the objectives of the organisation.

In the C3 cooperative, they did not initially establish a formally defined strategy, but rather it was adapted according to the internal characteristics of the company and the sector, together with market demand. Currently, the structure is formalized in management and seven departments where each one carries out its functions.

The C4 cooperative has an organisation defined in an organisational chart determined by the formal structure of cooperatives, in which the manager plays a leading role in decision-making at factory level.

Within the C5 cooperative organisation, the structure is formally defined. However, it does not work in a watertight way, but all departments work together. The relationship with the company's management is close, which allows for the creation of an innovative culture in which commitment and a good working atmosphere among all employees stand out. Communication is fluid, but somewhat inefficient, so they have taken advantage of the pandemic to invest in improving their communication systems by implementing an ERP system to have all their work centres connected.

*3.2.3 Organisational climate and market orientation.* The C1 cooperative maintains fluid contact with customers and suppliers, allowing their needs and demands to be known and monitors their competition to know what they are doing, although they affirm that they do not do this as much as they would like, due to lack of resources.

In the C2 cooperative, both the management and the technical staff are constantly travelling and noting the needs demanded by the market. They maintain a very good relationship with their competition and not in an intense way. In the same way, its relationship with its clients is close, transparent and demanding.

In relation to market orientation, the C3 cooperative fosters communication and collaboration links between suppliers, customers and competitors. The intrinsic characteristics of this form of constitution mean that the farmer is not in direct contact with the market. For this reason, the cooperative unites its efforts to transfer the reality of the market to the rest of the organisation and leave behind the risk-averse mentality of its farmers. On the other hand, the large volumes of product with which it works require maintaining direct contact with its suppliers and customers to gain their loyalty and obtain guarantees. In general, in the cooperative a good work climate prevails and collaboration between the areas favours the emergence of ideas and encourages innovation.

In the C4 cooperative the organisation has a very good market orientation. The CEO is involved in the activities that allow to obtain information from the sector to transfer it to the rest of the company's areas. They maintain direct and regular contact with their customers, allowing them to carry out improvements to their products. They also attend fairs, events, make commercial visits to suppliers and even monitor their competition to finally achieve the most important thing, satisfying the needs of their customers.

To continue to remain a benchmark within the sector, the C5 cooperative is committed to innovation and market orientation. In this way, through its commercial department, they are permanently informed about the demands that arise both from their client markets and from

new markets. In addition, they maintain close relations with business organisations from leading countries in this sector such as Australia or Chile.

*3.2.4 Innovative culture.* In the C1 cooperative the innovative culture is linked to excellence, aimed at improving and achieving a niche in the world of wine.

The manager of the C2 cooperative highlighted the fact that the workers should be motivated, which is reflected in the transmission of the organisation's successes.

In the C3 cooperative, the manager acts as a link between the market and farmers, to transmit what the market demands are and is the element that drives the innovative culture within the organisation. In the cooperative, having an innovative culture where values prevail and where the commitment and involvement of the people is an added value, is essential for innovations to be successful.

The CEO of the C4 cooperative highlighted the importance of an innovative culture and that workers develop values such as commitment and a sense of belonging to the company and where a good work climate prevails as elements key to achieving their innovation goals.

Likewise, the CEO of the C5 cooperative highlighted the existence of a culture of innovation understood as a commitment to the activity carried out both by the commitment of the manager and by the vision of the workers who think of ways to improve.

*3.2.5 Innovative dynamics and performance.* In the C1 cooperative technological innovation is essential to bring new references to the market and improve agro-industrial processes that allow to increase the useful life of the product. It also develops non-technological organisational innovation and improves image and market positioning techniques through marketing innovations. The innovative dynamics of the cooperative is governed by the characteristics of the wine sector: intense dynamics of change, mature and highly competitive. According to this, the company's response has been aimed at promoting growth, business activity and the diversification of its products, producing quality wines and transmitting the cultural feeling of the wine. They also carry out innovation and research activities that arise from the internal dynamics of the company and from collaboration with other research centres to bring new references to the market, improve their image and increase the useful life of their products.

In the C2 cooperative the importance of technological innovation was also highlighted as a way to improve processes that allow for better performance and lower costs and prices. The specific characteristics of the agrarian sector, conservative and traditional, make the innovative dynamics a marginal process, where the innovations introduced have been previously developed in other industrial sectors and finally adapted to the needs of the market agrarian sector. In addition, the innovative dynamics of the cooperative is not endogenous, but has the collaboration of other partner companies, organisations and research centres. Innovations are fundamentally focused on optimising their processes, looking for machinery that allows them to gain versatility and reducing production costs to be more competitive.

The C3 cooperative pointed to the importance of technological innovation in improving its products and processes, allowing them to extend their useful life and providing an alternative to the by-products of their activities. The cooperative operates open-innovative dynamics through the internal collaboration of its workers, supported by research centres of reference at regional and national level. They have two main lines of innovation: to prolong the useful life of their products to market them in more distant destinations and to look for an alternative to the by-products they obtain from their activities.

Technological innovation in its products that favours the homogenisation of its productions and improvement of processes was indicated in the C4 cooperative. The innovative dynamics of the cooperative operates basically through the incorporation of technological innovations in its products and processes. This dynamic of innovation is open: the cooperative collaborates with research centres and other institutions to achieve the

homogenisation of its products through the production of a single seed that is used by all associated farmers. This project was created internally by the company's management and engineer. Another line of research seeks to extend the useful life of its processed products, so that it allows them to access more distant destinations. They have also carried out research to incorporate new transformed products into the market, although finally, one of the products they implemented was not commercialised due to the difficulty of competing with China, the leader in this transformed market.

The C5 cooperative highlighted the importance of technological innovation in meat conservation processes and non-technological innovations through organisational innovations that allow to manage external relations with other companies and institutions, as well as the incorporation of innovations in its commercialisation activities. The innovative activity of the cooperative focuses on opening new markets and adding value to the product through the improvement of processes. The cooperative is currently involved in meat preservation technologies without resorting to freezing and thus improve their competitiveness. To this end, they carry out endogenous innovation, promote synergies with research centres, universities, or related companies, given that their economic capacity does not allow them to undertake this type of project alone, and they maintain an ongoing relationship with associations of leading countries in technologies related to beef sheep such as Chile or Australia.

### 3.3 Cross analysis

The results of the joint analysis show that all the premises raised in the research model are validated. In this way, all the premises were positively valued by all those responsible for the management of the interviewed cooperatives as determining factors of innovative performance.

- P1. (*Validated*). Management is the driving force behind the organisation of the analysed cooperatives: it proactively engages, commits itself and becomes implicated in the use and utilisation of complementary resources, creating not only the right internal conditions, but also external ones for the success of innovative performance.
- P2. (*Validated*). The strategic lines set the course, the "how to do" and "how to improve" and above all, they are flexible and adapt to new needs that appear in the market.
- P3. (*Validated*). The structure organises work in a way that enhances human capital.
- P4. (*Validated*). The climate in the organisation can generate the enthusiasm and commitment necessary to achieve the objectives of innovative performance.
- P5. (*Validated*). Market orientation establishes the environment-organisation relationship as a source of recommendations, adjustments, ideas and benchmarks.
- P6. (*Validated*). Culture is a factor that fosters the right mindset, excellence and commitment that favours innovative performance within the cooperative.

## 4. Discussion

The results of this study are in line with and confirm those of previous research that concluded about factors that positively influence the innovative performance of Extremadura agri-food companies (Corchuelo *et al.*, 2020). These relationships are also validated in the case of agri-food cooperatives. However, although the variables proposed in the research model have positive relationships with innovative performance, there are significant differences in the findings of the study applied specifically to cooperatives and which differentiate them

from other agri-food organisations. Of the six variables that arise in the research model, the agri-food cooperatives mainly highlight management (P1), structure (P3) and organisational culture (P6), as factors that determine innovative performance and favour innovative activities of organisations.

Firstly, in relation to the management variable, it is observed that the study participants highlighted the importance of this variable as the driving force of the organisation. Management is an important element to consider in cooperatives in contrast to other organisations. Management drives and guides changes in the traditional mentality that prevails in the agricultural sector, providing the necessary means for innovative culture to be transmitted to farmers, ranchers, partners, Governing Council and Assembly of the cooperatives. In short, management is a link between the governing bodies and the operating bodies of the cooperative. It is also the focal point both inside and outside the organisation, allocating resources, giving guidance and balancing resource flows in the ecosystem of which the cooperative is a part (Hullova *et al.*, 2019). In the same line, Richer (1999) established that the legal representative, the execution of the agreements of the Board of Directors and the administration of the cooperatives, correspond to the manager, whose appointment oversees the Board of administration. Therefore, management is the figure that is involved in, directs and supervises the activities of the organisation, creating not only the appropriate internal conditions, but also the external ones for the success of innovative performance.

Concerning innovative performance, the study by Cabello-Medina *et al.* (2019) reports that the management of an organisation plays a remarkable role in identifying and promoting/supporting complementarities between technological (product and process) and non-technological (marketing and organisational) innovation. Therefore, management not only responds to contingencies due to the dynamism of environmental or competitive intensity, but within its responsibilities is also the management and coordination of alliances and the knowledge acquired from them, where success lies mainly in the ability to manage these alliances that allow to enhance the innovative performance of organisations. Similarly, Mei *et al.* (2019), concluded that the importance of the manager's role in innovative performance goes beyond the consolidation of the organisation-environment links, but is also notable in creating the absorptive capacity needed in open innovation.

Secondly, in relation to the organisational structure, the ownership structure of the cooperatives allows them to isolate themselves from environmental threats (external factors from the sector or from other socioeconomic elements) and from periods of economic crisis by having internalised the links with their suppliers and/or clients (Núñez and Moyano, 2004). Similarly, this characteristic ownership structure of cooperatives means that members have a special interest in the success of their organisation (Simons and Ingram, 2000).

The results show the importance of the structure variable for the interviewees in the cooperative. It is important to point out the peculiarities of this form of constitution which cause the structure of a cooperative to acquire outstanding relevance compared to other types of organisations. Cooperatives have governing bodies for decision-making and operational and business areas that each organisation establishes according to its needs. According to Mozas (2004), unlike a company constituted with another legal form which have a single form of organisational structure, the cooperative is a combination of two structures: an associative structure that works according to democratic rules and a business structure that works according to rules set by the association of members.

Finally, regarding culture, the cooperative principles can be considered as action guides aimed at providing both partners and cooperatives with the values that are established for each of them. According to Barney (1995), in the case of cooperative companies, there is an additional internal resource that could enhance the function of internal resources as generators of competitive advantage, especially if we compare the dynamics that emanates in cooperative companies with those of non-cooperative ones. This internal resource is the

special relationship that arises between the cooperative enterprise and its member-suppliers and their member-clients. This relationship could be a source of sustainable competitive advantage since, due to its intangible nature, it is a valuable resource, scarce and difficult to imitate and/or replace. [Bruque \*et al.\* \(2002\)](#) find that the competitive success of cooperatives is related to the degree of commitment of the member with the organisation. The figure of cooperativism is closely linked to its social and geographical environment and acquires an important role in the economic development of towns and cities. It is necessary, in the search for concrete solutions to the problems that cooperatives face, for cooperative principles to be respected, since the loss of their signs of identity would make these entities more vulnerable when facing their future ([Reisdorfer \*et al.\*, 2005](#)).

## 5. Conclusion

The multiple case study shows the existence of a positive relationship between the proposed factors (management, strategy, structure, climate, market orientation and culture) and innovative performance in Extremadura agri-food cooperatives. Nevertheless, three variables stand out as being directly related to the characteristics of cooperatives that make a difference from other agri-food organisations: management, organisational structure and innovative culture. Management is considered the driving force of the organisation in cooperatives. The cooperative manager, as the supervisor of the organisation's activities, makes it possible to create the internal and external conditions necessary for the innovative performance. The organisational structure of cooperatives determines the interest of their members in the success of the organisation, which positively influences innovative performance. Finally, cooperative principles act as a guide and internal resource that generates a dynamic that allows for sustainable competitive advantages in cooperatives compared to non-cooperatives. This aspect of the organisation's culture and its compliance is a factor that contributes positively to innovative performance.

The analysis carried out implies a theoretical contribution, not previously analysed, on the business variables that, in the case of agri-food cooperatives, influence innovative performance, determining specific characteristics that differentiate them from other types of organisations. As managerial implications, this study contributes to the promotion of the capacities and competences of the managers of agri-food co-operatives for the development of innovative activities that favour knowledge, external visibility and competitiveness extending them to cooperatives in other Spanish regions. Specifically, and based on the results obtained, management should establish formal or informal objectives and procedures to guide the innovative action of the cooperative. Likewise, the results contribute as information for the public administrations in developing policies to promote innovation adapted to the characteristics of the Extremaduran agri-food cooperative sector.

Our research has some limitations. As recommended by the case study methodology, the interviews should take place at the companies' headquarters to promote the exchange of information between both parties. However, mobility restrictions because of the state of alarm decreed by the Spanish Government in March 2020 meant that only the first two interviews were held at the companies' headquarters, the rest being conducted by videoconference.

Future lines of research will address whether the gender perspective in the management of cooperatives influences the innovative performance of companies. A quantitative study using a questionnaire to analyse specific aspects in the constructs considered and including a larger sample of cooperatives is an aspect to investigate in the future. The quantitative study could further support the results derived from the qualitative study performed.

---

**References**

- Alguacil, M., Navarro, S., Pastor del Pino, C. and Sacristán, F. (2020), *Modelos innovadores para impulsar a las cooperativas agroalimentarias, evitar el abandono de explotaciones y fomentar el relevo generacional*, Cátedra Cooperativas Agro-Alimentarias, Madrid.
- Alshanty, A.M. and Emeagwali, O.L. (2019), "Market-sensing capability, knowledge creation and innovation: the moderating role of entrepreneurial-orientation", *Journal of Innovation and Knowledge*, Vol. 4 No. 3, pp. 171-178, doi: [10.1016/j.jik.2019.02.002](https://doi.org/10.1016/j.jik.2019.02.002).
- Ang, C., Embi, M. and Md Yunus, M. (2016), "Enhancing the quality of the findings of a longitudinal case study: reviewing Trustworthiness via ATLAS.ti", *The Qualitative Report*, Vol. 21 No. 10, pp. 1855-1867, doi: [10.46743/2160-3715/2016.2480](https://doi.org/10.46743/2160-3715/2016.2480).
- Avermaete, T., Viaene, J., Morgan, E.J. and Crawford, N. (2003), "Determinants of innovation in small food firms", *European Journal of Innovation Management*, Vol. 6 No. 1, pp. 8-17, doi: [10.1108/14601060310459163](https://doi.org/10.1108/14601060310459163).
- Avermaete, T., Viaene, J., Morgan, E.J., Pitts, E., Crawford, N. and Mahon, D. (2004), "Determinants of product and process innovation in small food manufacturing firms", *Trends in Food Science and Technology*, Vol. 15 No. 10, pp. 474-483, doi: [10.1016/j.tifs.2004.04.005](https://doi.org/10.1016/j.tifs.2004.04.005).
- Baregheh, A., Rowley, J., Sambrook, S. and Davies, D. (2012), "Innovation in food sector SMEs", *Journal of Small Business and Entrepreneur Development*, Vol. 19 No. 2, pp. 300-321, doi: [10.1108/14626001211223919](https://doi.org/10.1108/14626001211223919).
- Barney, J.B. (1995), "Looking inside for competitive advantage", *The Academy of Management Executive*, (1993-2005), Vol. 9 No. 4, pp. 49-61.
- Bretos, I. and Marcuello, C. (2017), "Revisiting globalization challenges and opportunities in the development of cooperatives", *Annals of Public and Cooperative Economics*, Vol. 88 No. 1, pp. 47-73, doi: [10.1111/apce.12145](https://doi.org/10.1111/apce.12145).
- Brinkmann, S., Jacobsen, M.H. and Kristiansen, S. (2014), "Historical overview of qualitative research in the social sciences", in *The Oxford Handbook of Qualitative Research*, Chapter 2, Oxford University Press, Oxford, pp. 17-42 DOI: [10.1093/oxfordhb/9780199811755.013.017](https://doi.org/10.1093/oxfordhb/9780199811755.013.017).
- Bruque, S., Hernández, M., J.Vargas, A. and Moyano, J. (2002), "¿Son más competitivas las sociedades cooperativas? Un análisis en el sector de distribución farmacéutica", *CIRIEC-España, revista de economía pública, social y cooperativa*, Vol. 42, pp. 131-157.
- Cabello-Medina, C., Carmona-Lavado, A. and Cuevas-Rodríguez, G. (2019), "A contingency view of alliance management capabilities for innovation in the biotech industry", *BRQ Business Research Quarterly*, Vol. 23 No. 1, pp. 1-17, doi: [10.1016/j.brq.2019.01.002](https://doi.org/10.1016/j.brq.2019.01.002).
- Capitania, F., Coppola, A. and Pascucci, S. (2010), "Product and process innovation in the Italian food industry", *Agribusiness*, Vol. 26 No. 4, pp. 503-518, doi: [10.1002/agr.20239](https://doi.org/10.1002/agr.20239).
- Castilla-Polo, F. and Sánchez-Hernández, I. (2022), "International orientation: an antecedent-consequence model in Spanish agri-food cooperatives which are aware of the circular economy", *Journal of Business Research*, Vol. 152, pp. 231-241, doi: [10.1016/j.jbusres.2022.07.038](https://doi.org/10.1016/j.jbusres.2022.07.038).
- Castillo-Valero, J.S. and García-Cortijo, M.C. (2021), "Factors that determine innovation in agrifood firms", *Agronomy*, Vol. 11 No. 5, p. 989, doi: [10.3390/agronomy11050989](https://doi.org/10.3390/agronomy11050989).
- Choy, L.T. (2014), "The strengths and weaknesses of research methodology: comparison and complimentary between qualitative and quantitative approaches", *IOSR Journal of Humanities and Social Science*, Vol. 19 No. 4, pp. 99-104, doi: [10.9790/0837-194399104](https://doi.org/10.9790/0837-194399104).
- Corchuelo, B. and Martín-Vegas, F. (2019), "Characteristics of extremaduran agri-food companies according to innovation strategies", *Technology Transfer and Entrepreneurship*, Vol. 6 No. 1, pp. 10-24, doi: [10.2174/2213809906666181218114223](https://doi.org/10.2174/2213809906666181218114223).
- Corchuelo, B. and Sama-Berrocal, C. (2022), "Objectives of and barriers to innovation: how they influence the decision to innovate?", *Journal of Open Innovation, Technology, Marketing and Complexity*, Vol. 8, p. 134, doi: [10.3390/joitmc8030134](https://doi.org/10.3390/joitmc8030134).

- Corchuelo, B. and Ferreira, F.J. (2019), "Agri-food industry in Extremadura: obstacles to innovation, willingness to innovate, and demanded public actions", *Investigaciones Regionales*, Vol. 45, pp. 191-199.
- Corchuelo, B., López-Salazar, P.E. and Sama-Berrocal, C. (2020), "Determining factors of innovative performance: case studies in extremaduran agri-food companies", *Sustainability*, Vol. 12 No. 21, p. 9098, doi: [10.3390/su12219098](https://doi.org/10.3390/su12219098).
- Curteanu, D. and Constantin, I. (2010), "Organizational culture diagnosis - a new model", *Manager Journal*, Vol. 11 No. 1, pp. 14-21.
- Dabic, M., Laznjak, J., Smallbone, D. and Svarc, J. (2018), "Intellectual capital, organisational climate, innovation culture, and SME performance", *Journal of Small Business and Enterprise Development*, Vol. 26 No. 4, pp. 522-544, doi: [10.1108/JSBED-04-2018-0117](https://doi.org/10.1108/JSBED-04-2018-0117).
- Drivas, K. and Giannakas, K. (2006), "The effect of cooperatives on product innovation in the agri-food system", *Paper presented at the American Agricultural Economics Association Annual Meeting*, Long Beach, California, July 23-26.
- Escobar, A., Velandia, G. and Navarro, E. (2018), "Gestión del conocimiento y competitividad en las cooperativas con sección de ahorro y crédito", *REVESCO. Revista de Estudios Cooperativos*, Vol. 127 No. 127, pp. 90-115, doi: [10.5209/reve.59769](https://doi.org/10.5209/reve.59769).
- Extremadura 2030 (2020), "Diagnóstico Territorial de Extremadura. Estado de situación para el desarrollo de una economía verde y circular", available at: <https://extremadura2030.com/diagnostico-de-extremadura/>.
- Fomujang, V.A., Wu, C. and Tassang, A. (2018), "The assesment of a creative climate within an organization", *International Journal of Science and Research*, Vol. 8 No. 3, pp. 310-317, doi: [10.21275/ART20195871](https://doi.org/10.21275/ART20195871).
- Gallowaya, T.L., Millerb, D.R., Sahaymc, A. and Arthurs, J.D. (2017), "Exploring the innovation strategies of Young firms: corporate venture capital and venture capital impact on alliance innovation strategy", *Journal of Business Research*, Vol. 71, pp. 55-65, doi: [10.1016/j.jbusres.2016.10.017](https://doi.org/10.1016/j.jbusres.2016.10.017).
- Ho, K.L.P., Nguyen, C.N., Adhikari, R., Miles, M.P. and Bonney, L. (2018), "Exploring market orientation, innovation, and financial performance in agricultural value chains in emerging economies", *Journal of Innovation and Knowledge*, Vol. 3 No. 3, pp. 154-163, doi: [10.1016/j.jik.2017.03.008](https://doi.org/10.1016/j.jik.2017.03.008).
- Hullova, D., Simms, C.D., Trott, P. and Laczko, P. (2019), "Critical capabilities for effective management of complementarity between product alliance and process innovation: cases from the food and drink industry", *Research Policy*, Vol. 48 No. 1, pp. 339-354, doi: [10.1016/j.respol.2018.09.001](https://doi.org/10.1016/j.respol.2018.09.001).
- INNODÉ Consultoría estratégica (2018), "Despoblación Rural Y Cooperativismo ¿vasos Comunicantes?".
- Jiménez, J.D. and Sanz, V.R. (2004), "Determinantes del éxito de la innovación", *Revista de Empresa: la fuente de ideas del ejecutivo*, Vol. 7, pp. 24-28.
- Kaufman, A. and Tödtling, F. (2002), "How effective is innovation support for SMEs? An analysis of the region of Upper Austria", *Technovation*, Vol. 22 No. 1, pp. 147-159, doi: [10.1016/S0166-4972\(00\)00081-X](https://doi.org/10.1016/S0166-4972(00)00081-X).
- Keizer, J., Dijkstra, L. and Halman, J.I.M. (2002), "Explaining innovative efforts of SMEs. An exploratory survey among SMEs in the mechanical and electrical engineering sector in The Netherlands", *Technovation*, Vol. 22 No. 1, pp. 1-13, doi: [10.1016/S0166-4972\(00\)00091-2](https://doi.org/10.1016/S0166-4972(00)00091-2).
- Lajara, N. and Server, R. (2017), "Cómo se puede mejorar la competitividad de las cooperativas agroalimentarias?", *CIRIEC-España, Revista de Economía Pública, Social y Cooperativa*, Vol. 90, pp. 103-121.
- Ministerio de Agricultura, Pesca y Alimentación (MAPA) (2022), *Informe anual de la industria alimentaria española*, MAPA, Madrid, pp. 2021-2022, available at: <https://www.mapa.gob.es/es/>



- [alimentacion/temas/industria-agroalimentaria/20230126informeanualindustria2021-2022t22ok\\_tcm30-87450.pdf](#).
- Martín, V.O.M., Darias, L.M.J. and Villazán, L.S. (2021), “Crisis por cooptación del cooperativismo agrario en Canarias: una interpretación desde la geografía agraria”, *Investigaciones Geográficas*, Vol. 75, p. 203, doi: [10.14198/INGEO.17214](#).
- Martin-Rios, C. and Ciobanu, T. (2019), “Hospitality innovation strategies: an analysis of success factors and challenges”, *Tourism Management Perspectives*, Vol. 70, pp. 218-229, doi: [10.1016/j.tourman.2018.08.018](#).
- Mastronardi, L., Giagnacovo, M. and Romagnoli, L. (2020), “Bridging regional gaps: community-based cooperatives as a tool for Italian inner areas resilience”, *Land Use Policy*, Vol. 99 C, 104979, doi: [10.1016/j.landusepol.2020.104979](#).
- Mei, L., Zhang, T. and Chen, J. (2019), “Exploring the effects of inter-firm linkages on SMEs’ open innovation from an ecosystem perspective: an empirical study of Chinese manufacturing SMEs”, *Technological Forecasting and Social Change*, Vol. 144, pp. 118-128, doi: [10.1016/j.techfore.2019.04.010](#).
- Mejía, J. (2000), “El muestreo en la investigación cualitativa”, *Investigaciones Sociales*, Vol. 4 No. 5, pp. 165-180, doi: [10.15381/is.v4i5.6851](#).
- Menrad, K. (2004), “Innovations in the food industry in Germany”, *Research Policy*, Vol. 33 Nos 6-7, pp. 845-878, doi: [10.1016/j.respol.2004.01.012](#).
- Miles, R.E., Snow, C.C., Meyer, A.D. and Coleman, H.J. (1978), “Organizational strategy, structure, and process”, *The Academy of Management Review*, Vol. 3 No. 3, pp. 546-562, doi: [10.5465/AMR.1978.4305755](#).
- Mohajan, H.K. (2018), “Qualitative research methodology in social sciences and related subjects”, *Journal of Economic Development, Environment and People*, Vol. 7 No. 1, pp. 23-48.
- Mozas, A. (2004), “La violación del modelo de gestión democrático en las cooperativas oleícolas”, *CIRIEC-España. Revista de Economía Pública, Social y Cooperativa*, Vol. 48, pp. 167-192.
- Naqshbandi, M.M. and Jasimuddin, S.M. (2018), “Knowledge-oriented leadership and open innovation: role of knowledge management capability in France-based multinationals”, *International Business Review*, Vol. 27, pp. 701-713, doi: [10.1016/j.ibusrev.2017.12.001](#).
- Navarro, P. and Díaz, C. (1994), “Análisis de contenido”, in Delgado, J.M. and Gutiérrez, J., (Eds), *Métodos y Técnicas cualitativas de investigación en ciencias sociales*, Ed. Síntesis, Madrid, pp. 177-224.
- Núñez, N. and Moyano, J. (2004), “Ownership structure of cooperatives as an environmental buffer”, *Journal of Management Studies*, Vol. 41 No. 7, pp. 1131-1152, doi: [10.1111/j.1467-6486.2004.00469.x](#).
- Observatorio Socioeconómico del Cooperativismo Agroalimentario Español (OSCAE) (2020), “El Cooperativismo Agroalimentario Español”, Informe 2020.
- Padilha, C.K. and Gomes, G. (2016), “Innovation Culture and performance in innovation of products and processes: a study in companies of textile industry”, *RAI Revista de Administração e Inovação*, Vol. 13 No. 4, pp. 285-294, doi: [10.1016/j.rai.2016.09.004](#).
- Pierce, J.L. and Delbecq, A.L. (1977), “Organization structure, individual attitudes and innovation”, *The Academy of Management Review*, Vol. 2 No. 1, pp. 27-37, doi: [10.2307/257602](#).
- Popa, S., Soto-Acosta, P. and Martínez-Conesa, I. (2017), “Antecedents, moderators, and outcomes of innovation climate and open innovation: an empirical study in SMEs”, *Technological Forecasting and Social Change*, Vol. 118, pp. 134-142, doi: [10.1016/j.techfore.2017.02.014](#).
- Prajogo, D.I. (2016), “The strategic fit between innovation strategies and business environment in delivering business performance”, *International Journal of Production Economics*, Vol. 171 No. 2, pp. 241-249, doi: [10.1016/j.ijpe.2015.07.037](#).

- Reisdorfer, V.K., Koschewska, S.R. and Salla, N.G. (2005), "Planeamiento financiero: Su importancia y contribución para la gestión de las empresas cooperativas", *Visión de Futuro*, Vol. 3 No. 1, pp. 1-11.
- Richer, M. (1999), "Distinctive characteristics of cooperative organizations", *Revista Venezolana de Gerencia*, Vol. 4 No. 8, pp. 11-27.
- Roehrich, J.K., Davies, A., Frederiksen, L. and Sergeeva, N. (2019), "Management innovation in complex products and systems: the case of integrated Project teams", *Industrial Marketing Management*, Vol. 79, pp. 84-93, doi: [10.1016/j.indmarman.2018.10.006](https://doi.org/10.1016/j.indmarman.2018.10.006).
- Ronzani, C.M., Da Costa, P.R., Da Silva, L.F., Pigola, A. and De Paiva, E.M. (2020), "Qualitative methods of analysis: an example of Atlas.Ti software usage", *Revista Gestão and Tecnologia- Journal of Management and Technology*, Vol. 20 No. 4, pp. 284-311.
- Ruiz, J.I. (2007), *Metodología de la Investigación Cualitativa*, 4th ed., Universidad Deusto, Bilbao.
- Sabariego-Puig, M., Vilà Baños, R. and Sandín-Esteban, M.P. (2014), "El análisis cualitativo de datos con ATLAS.ti", *REIRE Revista de Innovación e Investigación en Educación*, Vol. 7 No. 2, pp. 119-133, doi: [10.1344/reire2014.7.2728](https://doi.org/10.1344/reire2014.7.2728).
- Schwab do Nascimento, F., Calle Collado, Á. and Muñoz Benito, R. (2020), "Economía social y solidaria y agroecología en cooperativas de agricultura familiar en Brasil como forma de desarrollo de una agricultura sostenible", *CIRIEC-España. Revista de Economía Pública, Social y Cooperativa*, Vol. 98, pp. 189-211, doi: [10.7203/CIRIEC-E.98.14161](https://doi.org/10.7203/CIRIEC-E.98.14161).
- Simons, T. and Ingram, P. (2000), "The Kibbutz for organizational behaviour", *Research in Organizational Behavior*, Vol. 22, pp. 283-343.
- Teece, D.J. (2010), "Business models, business strategy and innovation", *Long Range Plann.*, Vol. 43, pp. 172-194, doi: [10.1016/j.lrp.2009.07.003](https://doi.org/10.1016/j.lrp.2009.07.003).
- Trail, W.B. and Meulenber, M. (2002), "Innovation in the food industry", *Agribusiness*, Vol. 18 No. 1, pp. 1-21, doi: [10.1002/agr.10002](https://doi.org/10.1002/agr.10002).
- Valles, M. (2014), *Cuadernos Metodológicos. Entrevistas Cualitativas*, Vol. 32, Centro de Investigaciones Sociológicas, Madrid.
- VanWynsberghe, R. and Khan, S. (2007), "Redefining case study", *International Journal of Qualitative Methods*, Vol. 6 No. 2, pp. 80-94, doi: [10.1177/160940690700600208](https://doi.org/10.1177/160940690700600208).
- Wang, D., Su, Z. and Guo, H. (2019), "Top Management team conflict and exploratory innovation: the mediating impact of market orientation", *Industrial Marketing and Management*, Vol. 82, pp. 87-95, doi: [10.1016/j.indmarman.2019.02.014](https://doi.org/10.1016/j.indmarman.2019.02.014).
- Wei, S., Zhang, Z., Ke, G.Y. and Chen, X. (2019), "The more cooperation, the better? Optimizing enterprise cooperative strategy in collaborative innovation networks", *Physica A: Statistical Mechanics and Applications*, Vol. 534, pp. 1-12, doi: [10.1016/j.physa.2019.04.046](https://doi.org/10.1016/j.physa.2019.04.046).
- Yin, R.K. (1989), *Case Study Research: Design and Methods (Applied Social Research Methods)*, Sage, Newbury Park, CA.
- Yin, R.K. (2014), *Estudio de Caso de Investigación: Diseño y Métodos*, Sage Publications, Ed Kindle, Thousand Oaks, CA.
- Zeng, S.X., Xieb, X.M. and Tam, C.M. (2010), "Relationship between cooperation network and innovation performance of SMEs", *Technovation*, Vol. 30 No. 3, pp. 181-194, doi: [10.1016/j.technovation.2009.08.003](https://doi.org/10.1016/j.technovation.2009.08.003).

*C1. Wine production*

Cooperative 1 (C1) is an organisation constituted with the legal form of Agrarian Transformation Society (A.T.S.) in 1979 and located in Almendralejo (Badajoz). It is family-owned, with a tradition of more than five generations in the cultivation of vines and the production of quality wines in Extremadura. They seek the excellence of their wines. For this, they control the entire value chain, from the field to the winery where they have 10 workers. They are pioneers in the introduction of cultivation and varietal techniques in the Tierra de Barros area, in the proximity of Almendralejo

Among the wines they produce are: red, white, and semi-sweet, under the Ribera del Guadiana Denomination of Origin. In recent years, they have begun to produce a sparkling wine, on which they focus all their efforts and for which they built a second winery in 2019 for its exclusive production

Since 2006, the organisation has begun an expansion process with the opening of a restaurant within the winery's facilities. Here they run tastings, pairings, events and guided tours. In this way, they materialize a new growth path through the diversification of activities and the promotion of wine culture

They market their products nationally and internationally, their main customers being Portugal, Germany and France. Their recent participation in the Wine Marketing Plan of the Common Market Organization (CMO), has allowed them to expand exports to other markets, such as the United States and Japan

*C2. Manufacture of animal feed products*

Cooperative 2 (C2) is an A.T.S. located in Don Benito (Badajoz). It began its business activity in 1985, carrying out only corn drying and marketing processes. Since then, it has diversified its agroindustrial activity to other products such as tomatoes, oil, rice, compound feed, seeds, fertilizers, or phytosanitary products

Currently, C2 has five production centres, including a feed factory with two dryers, an oil mill, a unified manufacturing plant devoted to animal feed, three dryers and a seed selection plant, and a feed factory. In addition, they are also shareholder partners of several agricultural and livestock companies in the region. Its expansion into foreign markets is carried out mainly through the export of olive oil to Italy, although it also markets seeds and animal feed to Portugal

The result of its activity has made the cooperative consolidated as a benchmark within regional and national agricultural cooperatives. So much so that according to the Report "Most Relevant Social Economy Companies 2019–2020" carried out by the Spanish Business Confederation of Social Economy (CEPES), of the total of 722 national agri-food cooperatives, Cooperative 2 occupies position No. 67 in the ranking with a turnover of 68.41 million euros and 70 employees

*C3. Processing and preservation of fruits and vegetables*

This organisation is a second-degree cooperative society located in Valdastillas (Cáceres) since 1986. It is made up of 16 other first-degree cooperative members belonging to the Valle del Jerte and la Vera region, in the north of Cáceres. Its main industrial activity is focused on marketing the products of the associated cooperatives, among which are cherries, chestnuts, dried figs, plums and berries. They also carry out transformation activities in their own distillery and mill, although of a residual nature. They decided to outsource the production of the rest of the processed products that market under their brand, as is the case with fruit jams. This cooperative promotes the "Valle del Jerte" brand and has experienced progressive growth, allowing it to reach an annual production of more than 20,000 tons of its products. In addition, they work with 3,500 farmers and have 110 permanent employees, to which must be added temporary workers they have during their campaigns, raising the number to 1,000 employees

Between 50 and 60% of its products are exported. Most of its foreign trade is with Europe, specifically countries such as the United Kingdom, Italy, France, Scandinavia, and Portugal. They have also exported to other non-European countries, such as the United Arab Emirates and Hong Kong, although they have yet to find a way to extend the useful life of their products and so optimize their processes to market in distant countries

The cooperative is a leader in the marketing of their products in the retail channel, especially with their star product, the cherry. In this channel they work directly with their clients, which are large hypermarket and supermarket chains, such as Mercadona. In addition, being leaders and concentrating production allows them to have a wide advantage in negotiating capacity with their clients

*(continued)***Table A1.**  
Case descriptions

---

*C4. Processing and preservation of fruits and vegetables*

Cooperative 4 is a company from Extremadura dedicated to the transformation of fresh whole garlic, garlic paste and peeled garlic cloves, for subsequent marketing. It was established in 2003 through the association of several farmers who sought to improve marketing activities in this crop. It is located in Aceuchal (Badajoz), a town with a long history of garlic production. Its facilities are located there, characterized by having the most modern technology in the sector, with 6 permanent work employees and another 74 temporary ones. Currently, it has 45 partners, they produce more than 5,000 tons of garlic, they work with 400 hectares of crops, and they invoice between €6,000,000 and €10,000,000 per year

The sector is characterized by being relatively small, which allows all the actors to know one another. It is also unstable and non-professionalised. Within this sector, although this organisation is a benchmark in the commercialization of garlic at a national and international level, China leads the market and is its main competitor, producing more than 85% worldwide at lower prices

Since 2012 they have focused their efforts on export activities to other countries and the search for new clients in Brazil, North America, Canada and in European countries such as Germany, France and Italy. The organization has undergone a great evolution in recent years and its commitment to foreign trade caused an exponential growth of the company in the first years, reaching a growth rate of over 200%. However, to maintain that level of growth is not an easy task, and in 2020 the growth rate stood at 10%

*C5. Commercialisation of live animals*

Cooperative 5 is a cooperative group constituted in 2017 by the union of two second-grade cooperatives.

Between the two, they make up eight base entities distributed among the provinces of Badajoz, Cáceres, Ciudad Real, Córdoba, Seville, Huelva, and Cádiz. The resulting group has about 70 workers, 3 work centres located in Villanueva de La Serena (Badajoz), Trujillo (Cáceres) and Madrid, an approximate census of 815,000 sheep and 1,600 members

Its activity focuses on the production and marketing of live or carcass lamb. The organization is considered a benchmark in the production and marketing of sheep meat from the Spanish southwest, so much so that it is the cooperative with the largest volume of lamb in Europe, with sales of more than 800,000 head of sheep per year. Its clients are mainly distributors, and their destination countries are France, Italy, Belgium and third countries such as Saudi Arabia, Algeria, or Israel. In addition, in the latter, the demand for their products, lamb, is highly influenced by religious celebrations, with their consumption being based on the political-social situation of the destination countries

**Table A1.****Source(s):** Author's own elaboration

---

*Management*

- C1. "Without the involvement of the manager it is impossible to develop any innovation . . ."  
 C2. "Management gets involved so that all the innovation processes are carried out because if not, they don't come out properly."  
 C3. "The management is important [ . . . ] to identify the people who are participatory, who propose, and, in the end, they are people I count on and I see what they propose and whether we can carry it out. So, I support that innovation, even if I don't get so involved in the development."  
 C4: " . . . we are the ones who take care of the management and direct the activities of the cooperative day by day"  
 C5. "The management of the company is very committed to innovation and its handling."

*Strategy*

- C1. "We make up documents every year, it is a business plan, which can be considered a strategic plan."  
 C2. "There is always strategic planning, but we don't have it formally embodied on paper."  
 C3: "[ . . . ] more than a marked and defined strategy from the management, what we have are lines within our strategic plan and we see what we want to improve or not."  
 C4. "We don't have a formalized strategy [ . . . ] But since I joined the cooperative, together with the partners and the governing council, our aim was to start export activities [ . . . ] We set ourselves a series of objectives."  
 C5. "The strategic lines to innovate have changed over time, according to the needs of the company"

*Structure*

- C1. "In the wineries there are 10 of us working and in the restaurant 5, and if you count the people who work in the field, there are about 25 people altogether."  
 C2. "There is an organization chart, some departments and specialization of people."  
 C3. "We have a formal structure. I am the general director and below me I have 7 directors who head the departments, financial, commercial, operations, quality . . . and within the operations department there is a person who is responsible for R&D"  
 C4. " . . . we have an organization chart [ . . . ] our structure is made up of the Assembly [ . . . ] then there is the Governing Council [ . . . ] And then, at the factory level, there is the figure of the manager, who in this case is me. Below me, the structure is subdivided into warehouse manager and quality technician"  
 C5. " . . . we have the internal structure, the organizational chart, presentation and others [ . . . ] in this organization, flexibility stands out above all. We are not watertight departments, for better or for worse [ . . . ]"

*Climate*

- C1. "The climate is fundamental, if you don't have a good work climate within the company and a good environment, it is very difficult for innovation to arise, because innovation must emerge from the trust of the workers who propose innovative initiatives for the company."  
 C2. "The work environment is essential for the success of the company."  
 C3. "The work environment is closely related to the results. When there is an optimal work environment, people feel more relaxed or motivated to contribute new ideas [ . . . ] It is important to create a good work environment"  
 C4. "In small companies like ours, we are a big family and having a good work environment is very important."  
 C5. "[ . . . ] the work environment is fundamental, it is fundamental"

*Market orientation*

- C1. "We have two people in the commercial department who are constantly travelling and going abroad to see what the needs of the market are, seeing what the consumer is asking for and trying to meet their expectations."  
 C2. "We are continually reading, observing, being in contact with many people, we travel a lot and see what problems they have in other places and how the sector is doing"  
 C3. "[ . . . ] from the cooperative, we are always trying to provide information for all areas and to our farmers so that they are informed of market changes and trends."  
 C4: "[ . . . ] we have a lot of information about what is being done in the market [ . . . ] we try to be as well informed as possible"  
 C5. "[ . . . ] you have to see what these countries or this type of consumer consume by doing market research."

---

*Culture*

C1: "We seek excellence, we try to make things better every day and to improve and carve out a niche for ourselves in the world of wine."

C2: "The people who work here are quite flat and we like to pass on our successes, because the employees have to be motivated"

C3: "The greatest added value comes internally from the ideas of our people. Although not everyone has that innovative mentality, in certain key positions there are such profiles, and we look for people who can analyse and propose new things"

C4: "[. . .] A culture within the organization and in which the workers develop the commitment to innovate would be the most important thing"

C5: "[. . .] We have that culture of innovation [. . .] I think the word for me is the commitment to the activity that you develop and the company you work for, because behind the commitment are people who think of ways to improve . . . "

**Table A2.**

**Source(s):** Author's own elaboration

---

**Corresponding author**

Celia Sama-Berrocal can be contacted at: [celiasamaberrocal@unex.es](mailto:celiasamaberrocal@unex.es)