

# Are there any differences in the corporate social responsibility strategy of fruit and vegetable production-commercialization cooperatives and other companies operating in southeastern Spain?

Antonio Martos-Pedrero<sup>1</sup>  | Luis J. Belmonte-Ureña<sup>1</sup>  |  
Francisco Joaquín Cortés-García<sup>2</sup>

<sup>1</sup>Department of Economy and Business, University of Almería, Almería, Spain

<sup>2</sup>Faculty of Business and Management, Universidad Autónoma de Chile, Santiago, Chile

## Correspondence

Luis J. Belmonte-Ureña, Department of Economy and Business and Research Centre on Mediterranean Intensive Agrosystems and Agrifood Biotechnology (CIAIMBITAL). University of Almería, Ctra. Sacramento s/n, 04120 Almería, Spain.

Email: [lbelmont@ual.es](mailto:lbelmont@ual.es)

## Abstract

Customers, civil organizations, the media, and society demand that companies behave in ways beyond regulatory requirements concerning social and environmental issues. Therefore, companies are striving to adapt to these new requirements and to express their commitment to stakeholders through their Corporate Social Responsibility (CSR) strategy. The values and principles of cooperatives make them ideal for responsible business management within the framework of CSR. Almería is a province in southeastern Spain and it is one of the areas with the highest concentration of agribusiness in Europe. This paper aims to empirically verify whether the CSR orientation of agricultural cooperatives in this province are greater than that of other companies because of the application of these principles. Or, if globalization and competition is pushing these organizations to abandon their principles and

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values while losing their distinctive identity. A cluster analysis was applied to a representative sample of 107 fruit and vegetable production-commercialization companies, and this included five dimensions of study applying the stakeholder theory: partners, employees, customers, farmers, and the environment. According to their legal form, we concluded that these entities do not significantly differ in their corporate social responsibility strategy. The Mann-Whitney nonparametric analysis indicates that only the employee dimension shows significant differences depending on the legal form.

**KEYWORDS**

agriculture, cluster analysis, cooperative sector, corporate social responsibility, stakeholders

**JEL CLASSIFICATION**

A13, M14, P13, Q01

## 1 | INTRODUCTION

Although Corporate Social Responsibility (CSR) is acquiring particular relevance in the productive sector, an increasing number of companies in the fruit and vegetable production-commercialization sector are opting for its transversal integration into this strategy. They are not only concerned about economic aspects, but also the social and environmental impacts of their activity (Friedrich et al., 2012). This deviation is due primarily to the demands and pressures of a society that is increasingly concerned and sensitive to issues such as food safety, the origin and traceability of products, their production process, and the environmental impact of the company activities in the sector (Jansen & Vellema, 2004; Forsman-Hugg et al., 2013; Abad-Segura et al., 2019). Customers, civil society organizations, the media, and society demand social and environmental actions from companies that, in many cases, go beyond regulatory requirements. In turn, public institutions, echoing these demands, pass them on through new regulations or recommendations (Heyder & Theuvsen, 2009). These pressures affect all stakeholders in the fruit and vegetable production-commercialization chain, and failure to heed them can threaten the reputation and legitimacy of companies and the sector itself (Heyder & Theuvsen, 2009; Luhmann & Theuvsen, 2016). The capacity of companies to integrate these social demands into their strategies can become an intangible asset that will ensure their long-term survival and that of the sector itself (Palazzo & Scherer, 2006). Subsequently, these companies are increasingly concerned about identifying and responding to the socio-environmental demands that affect their business (Luhmann & Theuvsen, 2016).

Within the agri-food sector, the role played by cooperatives in economic growth, job creation, and social development is becoming more relevant (Ruostesaari & Troberg, 2016), both from quantitative and qualitative points of view (social and territorial articulation). Spain has a long cooperative tradition, and it is one of the European countries with the most dynamic

cooperative sector (Díaz-Foncea & Marcuello 2015). There were a total of 3669 agri-food cooperatives in Spain in 2018. They comprised 1,159,579 members and had a turnover that reached €29,365 million, which represented 63% of the country's final agricultural production (OSCAE, 2019).

These organizations emerge as an alternative to the traditional business model (Figueiredo & Franco, 2018), with a dual economic and social nature (Puusa et al., 2013). They are grounded in values such as self-help, mutualization of efforts, risks and resources, responsibility, democracy, equality, equity, and solidarity. These values translate into a series of principles and rules of operation that are deeply rooted in the sector. The principles that guide its process are free membership, democratic management, member-economic participation, autonomy, training or cooperation, and commitment to the community (ICA, 2013).

One theory suggests that the application of these principles and the unique business and societal configuration of cooperatives give these organizations an advantageous position in their CSR orientation strategy (Marcuello & Saz, 2008; Bauer et al., 2012; Bretos et al., 2018). The present study sets out as a fundamental objective to empirically test whether CSR orientation in cooperative societies is greater as a result of their theoretical advantageous position.

Numerous works previously (Carrasco, 2007; Bollas-Araya et al., 2019; Castilla-Polo and Sánchez-Hernández, 2020) analyze the parallelism and harmony between the cooperative principles defining the business culture of these organizations and the principles of CSR. Most of these studies conclude that the cooperative principles implicitly include CSR commitment in its various manifestations. In other words, these types of organizations are tacitly presupposed to assume CSR strategies. Therefore, it could be considered that in cooperative societies there is an intrinsic CSR derived from the application of cooperative principles so that they start from a theoretical position of advantage concerning other companies for the development of CSR practices (Server Izquierdo and Capó i Vicedo, 2011).

On the other hand, the unique business and corporate configuration of cooperatives, their social implications, and their impact on the articulation of the territory facilitate the integration of the interests of the different stakeholders, given that the member can assume different roles, such as owner, supplier, worker, and even customer (Belhouari et al., 2005). This fact also facilitates the implementation of CSR strategies in this type of organization (Vargas and Vaca, 2005; Belhouari et al., 2005). Some documents, such as the Renewed EU CSR Strategy 2011–2014, concluded that “certain types of enterprises, such as cooperatives, mutual companies, and family businesses, have ownership and governance structures that can be particularly conducive to responsible corporate governance” (European Commission, 2011, p. 8). In short, one could conclude that the identity and nature of cooperative societies and their unique business configuration and corporate governance facilitate CSR in this type of organization (Marcuello & Saz, 2008; Bretos et al., 2018). However, this position of advantage does not translate into a position of leadership in these organizations in CSR (Torres-Pérez, 2017).

There is an open debate on the degenerative tendencies of cooperatives seeking to survive in a global market economy. Some studies (Sousa & Herman 2012; Heras-Saizarbitoria and Basterretxea 2016) endorse the so-called “degeneration thesis” (Cornforth, 1995) and suggest that globalization and competitive pressures have pushed cooperatives to lose their very nature and to stop applying their principles and values, leading them to become, in many cases, capitalist organizations. However, other studies (Narvaiza et al. 2017; Bretos et al., 2020) have shown that cooperatives can resist these degenerative trends by implementing organizational changes that allow them to regenerate these principles and values. Cooperativism presents an ideal business formula for CSR development due to its natural and intrinsic proximity to the territory, its social projection, and its link to decisive sectors for environmental management, such as agricultural. Nevertheless, to verify the level these companies can be considered socially responsible, it is

necessary to check the effective compliance with the cooperative principles (Pérez-Sanz et al., 2019) and the leading and most widely accepted CSR strategies.

To this end, CSR is conceptualized, in this study, based on stakeholder theory (Freeman, 1984). This theory considers the company as a plural organization composed of different agents (stakeholders) who can intervene within it or are affected by its decisions (Freeman, 1984; Donaldson & Preston, 1995). Stakeholder interest, which is sometimes conflicting, must be recognized to reach a balance that satisfies everyone (Evan & Freeman, 1988; Smith, 2003; Aguinis, 2011). In recent decades, this theory has become one of the most common theoretical frameworks for studying and operationalizing CSR. Its development has, to a large extent, allowed CSR to become not only a concept restricted to the academic world but also a part of the competitive strategy utilized by some companies (Carroll, 2021). "According to this theory, the long-term success of the company requires stakeholder management that seeks a balance between the expectations of all stakeholders based on the principles of equity and reciprocity (Freeman, 2001)". Based on this theoretical perspective, CSR is considered a multidimensional construct with five specific dimensions: partners, employees, customers, farmers, and environment (Turker, 2009; Öberseder et al., 2014; Dopico et al., 2012; Fatma et al., 2014; Luo et al., 2017).

The data emerges from 107 companies in the analyzed sector in Almeria (southeastern Spain). With clear social and environmental implications, this sector has demonstrated throughout its development an enormous capacity for growth and adaptation to the new demands of the markets. It has led the province of Almeria, one of the areas with the highest concentration of agribusinesses in Europe, to become a power in producing and distributing fruit and vegetables at the European level and a reference in protected crops under greenhouses. Many cooperative societies<sup>1</sup> in this sector gather farm owners and carry out the handling, packaging, transport, and marketing activities. They also provide their members with technical and agronomic services while also guiding and advising them in all matters related to their crops.

The first and main contribution of this paper is the empirical verification of the degeneration thesis in cooperatives. The results confirm that there are no significant differences in the CSR orientation of cooperatives concerning other firms, although they are assumed to have a theoretical advantageous position derived from the application of cooperative principles. These results may suggest that cooperatives may have renounced their founding principles to survive in more global and competitive markets. This process of disorientation towards cooperative values, moreover, is not affected by the size of the cooperative. It is also found that the commitment of cooperatives to their employees is greater than that of other companies, which may suggest that this degenerative trend affects, to a lesser extent, those principles that may have a more direct relationship with employee job satisfaction, such as the principles of equality, solidarity, and training.

<sup>1</sup> They adopt two different legal forms: (a) Agricultural Transformation Companies (ATS), defined as civil companies with an economic-social purpose for the production, transformation, and commercialization of agricultural products, are regulated by Royal Decree 1776/1981 (BOE, 1981); (b) Andalusian Cooperative Societies (Sociedades Cooperativas Andaluzas) (SCA), defined as democratically organized and managed companies that carry out their activity in a responsible and supportive manner with the community and in which their members, in addition to participating in the capital, also participate in the corporate activity by providing their work, satisfying their consumption or making use of their services to add value to their business activity. They are regulated by the Law 14/2011 (BOE, 2011).

**TABLE 1** Main stakeholder expectations

Stakeholders	Main expectations
Partners	Maximum financial performance and maximum information transparency
Employees	Family conciliation, fair remuneration, job stability and job security
Clients	Wide, reliable, high quality and reasonably priced product range
Farmers	Maximum prices received for their products and technical and agronomic support services.
Environment	Savings in water and energy consumption, use of alternative energies and waste management

Source: Own elaboration.

## 2 | LITERATURE REVIEW

### 2.1 | CSR and stakeholders theory

There is some conceptual confusion surrounding CSR and how to transfer its principles to the field of company management (Carroll, 2021; Matten and Moon, 2008; 2020). There are numerous theoretical perspectives regarding this concept, and its definition has been adapted to the economic and social reality of each moment (Sarkar and Searcy, 2016). This study adopts the stakeholder theory (Freeman, 1984; Donaldson and Preston, 1995), one of the most widely used and accepted to conceptualize and explain CSR (Carroll, 2021). This theory presents the company as an organization composed of various agents (stakeholders) that affect or are affected by its management decisions (Freeman, 1984). Within the framework of this theoretical perspective, the definition of CSR proposed by Aguinis (2011, p. 855) is adopted, according to which CSR is the set of “context-specific organizational actions and policies that take into account stakeholder expectations and the triple bottom line of economic, social, and environmental performance.” The previous definition includes the overlapping elements of many of the most relevant reports in the literature. CSR implies a constant commitment by the company to incorporate in its decision-making the expectations and interests of all stakeholders involved in or affected by its activity (Freeman, 1984; Donaldson and Preston, 1995; Smith, 2003), creating shared value (Inyang et al., 2011; Porter and Kramer, 2011), participation in the improvement of social welfare, and preservation of the environment (Elkington, 1998). Acting responsibly toward stakeholders leads the company to the best long-term results for all parties (Freeman, 1984; Evan and Freeman, 1988). This is a strategic way of doing business, which is related to the company’s mission and also considers economic, environmental, and social aspects (Panwar et al., 2010).

From the perspective of the stakeholder theory, based on previous research (Öberseder et al., 2014; Luo et al., 2017) and taking into account the context of this study (i.e., the agri-food sector), CSR is considered a construct with five dimensions that refer to the company’s level of commitment to meeting the expectations of its stakeholders. These dimensions are partners, employees, customers, farmers, and the environment (Table 1).

### 2.2 | Cooperativism and CSR

Cooperatives are organizations with a significant presence in the analyzed sector, having actively contributed to its growth and modernization. Cooperativism has been fundamental in the

economic development strategy of numerous communities (Gordon-Nembhard, 2015; European Commission, 2012). It has fostered the economic participation of many people and facilitated the structuring and development of rural areas, including the most depressed and/or depopulated regions. Throughout their development, agri-food cooperatives have gone from being small companies operating in limited geographical regions to increasing their size and turnover due to integration processes facilitated, in some cases, by specific national regulations. This increase in turnover is evident at the European level with cooperatives such as the German Bay Wa (€16,050 million), the Dutch Friesland Campina (€12,110 million), or the Danish Arla Foods (€9,600 million) (COGECA, 2019).

The International Cooperative Alliance (ICA) defines these organizations as “an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise” (ICA, 2013, p. 3). They are sustained by values such as self-help, self-responsibility, democracy, equality, equity, and solidarity. These values manifest in operating principles and rules, the so-called “cooperative principles,” which define their identity. The principles include (a) voluntary and open membership, which guarantees the free entry of members without discrimination of gender, race, social class, political or religious position; (b) democratic control by the members, which ensures the active participation of all members in the definition of policies and decision-making, regardless of the capital contributed by each of them; (c) the economic participation of members in profits or losses in proportion to the productive effort contributed by each through the work carried out, regardless of the capital contributed; (d) autonomy and independence, which guarantees the democratic management and control of the cooperative by its members, regardless of agreements with other organizations or dependence on external sources of financing; (e) education and training of members and employees as a way of increasing capacities, promoting cooperative knowledge, and informing the general public of the nature and benefits of cooperation; (f) cooperation among the cooperative societies themselves, based on solidarity and mutual aid with the aim of strengthening the cooperative movement and achieving greater effectiveness and efficiency in management; (g) concern for the community in which it is inserted and develops its activity, caring for aspects such as the environment, the improvement in the quality of life of the population, and so on.

They constitute a differential element that can provide cooperatives with certain competitive advantages. Compliance with these principles generates social capital (Marcuello and Saz, 2008; Bretos et al., 2018), improves the relationship between the stakeholders, and allows the creation of more stable and lasting relationships with customers and suppliers (Bauer et al., 2012). They implicitly capture many of the aspects of CSR (Server Izquierdo and Capó i Vicedo, 2011), which can make it easier for cooperatives to engage in CSR activities on a more systematic and regular basis (Carrasco, 2007; Bolla-Araya et al., 2019; Castilla-Polo and Sánchez-Hernández, 2020) while adopting a consistent strategy of participation in socially and environmentally responsible policies. This fact can further help them benefit more from CSR in financial performance (Tang et al., 2012).

Some institutional statements underline this idea. The UN recognized the role of cooperatives as a critical player to achieve the Sustainable Development Goals (SDGs) through the creation of the Inter-Agency Task Force on Social and Solidarity Economy. The International Labour Organization considers the principles and values of cooperatives to make these organizations well positioned to contribute to the triple outcome of economic, social, and environmental goals (ILO, 2015). The European Union believes that cooperatives have been pioneers to implement CSR, as their principles reflect the application of CSR in all its aspects (EU, 2017).

Another enabler of CSR in cooperative societies is their business configuration and governance model (Belhouari et al., 2005). The European Union points out in its renewed strategy on CSR 2011–2014 that “certain types of enterprises, such as cooperatives, mutual companies, and family enterprises, have ownership and governance structures that can be particularly conducive to responsible corporate governance” (European Commission, 2011, p. 8). These corporate configuration and governance of these organizations respond to a stakeholder model (Freeman, 1984). The cooperative seeks to align the interests of all stakeholders with whom it relates to ensuring its survival in the market. In these organizations, the member assumes different roles, such as owner, supplier, worker, and maybe customer when they consume the goods produced by the cooperative. This unique dynamic allows cooperative societies greater integration for their stakeholders. In turn, the integration will facilitate the dialogue between the stakeholders, their democratic participation in decision-making, transparency, trust, and the satisfaction of their expectations balanced (Belhouari et al., 2005; Arcas and Briones, 2017).

In short, the application of cooperative principles within these organizations and their governance model positively influence business performance in terms of sales and employment growth, playing a key role in local economic development (Hansmann, 1996; Guzmán et al., 2020). The application of cooperative principles, such as education, commitment to the community, and cooperation demonstrates the concern of these organizations for the development of their economic, social, and environmental surroundings. Their strong roots in the territory lead them to use the economic and human resources of the area, thus collaborating in local development (Guzmán et al., 2020; Guzmán et al., 2015).

Based on the above arguments, one could conclude that CSR is part of the identity and nature of cooperative enterprises. This type of organization has an advantageous theoretical position for its implementation concerning the rest of the enterprises. Therefore, cooperative enterprises could be considered essential to promoting sustainable economic, social, and environmental development (Aragón-Amonarriz et al., 2017). However, they have been forced to undertake a transformation process to adapt to globalized agri-food markets with heavy competition and high concentration. This adaptation process may have called into question the cooperative management model and that theoretical position of advantage. This is the so-called “degeneration thesis,” according to which cooperatives, to survive in a global market economy, have been forced to adopt capitalist forms of organization where decision-making becomes controlled by a managerial elite and economic objectives rise above social objectives (Cornforth, 1995; Bretos et al., 2020).

Numerous studies suggest that the profound transformations and major challenges of the economic-financial market are leading cooperatives away from their founding values and principles, resulting in the loss of their distinctive identity (Coté, 2001; Somerville, 2007; Sousa y Herman 2012; Heras-Saizarbitoria and Basterretxea 2016). To meet these challenges, cooperatives have been forced to face profound transformations at the institutional (creation of cooperative groups) and financial (entry of non-cooperative investors) levels, as well as in the areas of human resources and cooperative governance. This process of development and adaptation may have led to the loss of cooperative identity and a more flexible interpretation of cooperative principles and values, in many cases shifting from compliance with these principles in favor of meeting the minimum requirements demanded by law (Coté, 2001; Oczkowski et al., 2013). In Miranda's words (2012, p. 142): “the entities became led by people specialized in the business world, but alien to the cooperative ideology, who promote eminently economic practices that do not apply cooperative principles, and they detract from the social and humanistic purpose of cooperatives ... their purpose becomes the sole purpose of integrating the market as one of the many organized structures for production and service.”

Other studies show, however, that cooperatives do not inevitably end up becoming capital-ist organizations, as the “degeneration thesis” suggests, but can resist these degenerative trends by mobilizing resources and making organizational changes that allow them to recover their principles and values (Bretos et al., 2020). They can develop processes of constant renewal and transformation in response to changing market demands while maintaining, at the same time, their founding principles (Gijssels & Develtere, 2008; Narvaiza et al. 2017; Ammirato, 2018; Bretos et al., 2020). An example of this regeneration process is the Mondragon Cooperative Corporation, a network that brings together 95 cooperatives engaged in diverse activities (industry, distribution, finance, and knowledge) in 53 countries while employing 80,000 workers worldwide. This group represents a model of cooperatives that have prospered in highly competitive markets while maintaining the essence of its cooperative values (Storey et al., 2014; Bretos et al., 2020).

This paper aims to empirically test whether the cooperative level of commitment to CSR in its different dimensions is different from the commitment of the rest of the companies in the analyzed sector. The following hypotheses are proposed:

- H<sub>1</sub>. Cooperative commitment in the analyzed sector to CSR in their member dimension is different from that of other companies.
- H<sub>2</sub>. Cooperative commitment in the analyzed sector to CSR in their employee dimension is different from that of other companies.
- H<sub>3</sub>. Cooperative commitment in the analyzed sector to CSR in their customer dimension is different from that of other companies.
- H<sub>4</sub>. Cooperative commitment to CSR in the analyzed sector in their farmer dimension is different from that of other companies.
- H<sub>5</sub>. Cooperative commitment in the analyzed sector to CSR in the environmental dimension is different from that of other companies.

### 3 | METHODOLOGY

#### 3.1 | Questionnaire design

The questions used in the survey arose from the information obtained during the literature review phase. All the questions were based on a Likert-type scale, which is particularly useful for measuring user satisfaction (Cummins, 2003) with seven categories to ensure variability in response (Aaker et al., 2001). The advantage of this approach is that the literature review phase included all response options following the consulted bibliography. A control group was formed among managers of the principal fruit and vegetable production-commercialization companies. The initial questionnaire underwent a double revision process. First, a group of experts in the intensive agriculture sector in the province of Almeria revised the initial questions, rendering them more intelligible for the rest of the managers to be surveyed. Second, a pilot survey was carried out among several managers with extensive experience in managing fruit and vegetable companies and their corporate social responsibility in the province of Almeria. The purpose was to verify the operability of the proposed questionnaire. The questionnaire was structured around the notion of corporate social responsibility. This dimension is made up of five sub-dimensions and includes 27 questions: employees (7), partners/shareholders (3), customers (6), farmers/producers (6), and environment (5). The structure of this questionnaire is similar to others that have addressed CSR in recent literature (Öberseder et al., 2014; Luo et al., 2017). Annex 1 provides the model questionnaire used, as well as a grouping of the questions according to the dimensions to be analyzed.



**TABLE 2** Distribution of the sample according to the legal form of the trading company

Type of company	Total number of companies	No. of companies surveyed	% coverage
Cooperative societies	59	24	40.7
Capital stock companies	228	83	36.4
	<b>287</b>	<b>107</b>	<b>37.3</b>

Source: Own elaboration.

### 3.2 | Survey methodology

Of the total number of fruit and vegetable production-commercialization companies in Almería as of 2020 (287 companies), 107 were surveyed, representing 37.3% of the companies in the sector (Table 2). The representative sample was obtained from the census provided by SABI (Iberian Balance Analysis System). Although the sample is sufficiently representative of the population, it was not a random sample *strictu sensu*. The lack of randomness with a sample so close to the total number of marketers does not represent any analytical problem given that the main characteristics of the population are present, since a high percentage of its members have been surveyed (Aznar-Sánchez et al., 2021; Kraft et al., 2007; Robinson, 2014).

This is a representative sample of the companies operating in this sector in the province of Almería because of the low sampling error incurred ( $\pm 7.52\%$  with a confidence level of 95%) and the high coverage of the total population analyzed, especially in the case of cooperative companies.

One element to consider in the sample was the legal form of the fruit and vegetable production-commercialization companies. There were 59 cooperative fruit and vegetable production-commercialization companies and 228 companies of a commercial nature at the end of 2019. We selected a subset of companies, so the sample included a high percentage of the sector's turnover and employment and companies with minimum organizational infrastructure. This subset included the 164 companies with a turnover of more than €5 million, representing 94.16% of turnover and 91.9% of employment. An online questionnaire was sent to this subset of 164 companies. A total of 107 valid responses were obtained (65.2% of the questionnaires sent), of which 68% were answered by the president or manager of the company and 25% answered by human resources managers. Other positions responded to the 7% remaining.

Twenty-four cooperatives and 83 capital companies have been analyzed (Table 2). The surveys were conducted between December of 2019 and February of 2020 and they were conducted by the first author of this article as part of his doctoral thesis. In the selected sample, there is a balance regarding the legal form of the company surveyed.

### 3.3 | Data analysis

The processing of the survey data began with analysis of the general characteristics of the marketers. The analysis of the coefficient of variation (CV) has been relevant. This statistic is used to measure the relative dispersion of the data independently of the units in which the variable is expressed. Thus, the higher the CV, the greater the dispersion, that is, the less homogeneous the data.

Subsequently, a specific analysis, based on the legal form of the fruit and vegetable production-commercialization company, provided a better approximation of the CSR carried out by these entities. To this end, the 27 variables grouping the five dimensions of CSR in the 107 companies

were subjected to the K-means algorithm included in the SPSS v.27 statistical packages cluster analysis. This equation and other clustering algorithms have been widely applied to studies related to the agricultural sector. (Castel et al., 2010; Ding & He, 2004; Erickson et al., 2011; Mucherino et al., 2009). This analysis aims to determine if there are two distinct groups in the sample of companies. Once the characterization of the two groups occurs, it will then determine if there is evidence of the legal form representing them, in addition to the legal document and the collection of other financial variables, such as ROE, ROA, turnover, and EBITDA. These variables, which will serve to characterize each of the two clusters, do not participate in the classification algorithm to not condition the analysis of the variables representing the five dimensions of CSR.

Finally, testing occurred for hypotheses  $H_1$  to  $H_5$  using the Mann-Whitney U test for independent samples. This nonparametric test is suitable for detecting significant differences between the means of the two groups. In the Mann-Whitney U test, the null hypothesis is that there are no differences between the groups, and it is rejected if the  $p$ -value is less than 0.05. (Fagerland, 2012; Kraska-Miller, 2013). The application of a nonparametric test is justified given the results of the Shapiro-Wilk normality test, which shows that there is no normality in the sample ( $p$ -value < 0.05) (Shapiro & Francia, 1972).

## 4 | RESULTS

### 4.1 | Characterization of fruit and vegetable production-commercialization companies according to their orientation towards CSR

When analyzing the data obtained from the 107 fruit and vegetable production-commercialization companies surveyed, 27 typifying variables were grouped into five descriptive areas (employees, partners/shareholders, customers, farmers/producers, and environment) (Table 3). These are the variables that present the least homogeneity in the observed sample. The high uniformity of the observed values, as measured by the coefficient of variation, is noteworthy, except in the case of most of the variables corresponding to the environmental dimension (from Man2 to Man5) and the Emp6 variable (Evaluation of work climate and job satisfaction). In all these cases, the coefficient of variation presents values above 30%, that is, a priori. Values below 30% would indicate that the mean is representative of the sample (Cui, 1989; Penna et al., 2009).

### 4.2 | Analysis by type of entity: application of cluster analysis

The application of cluster analysis to the sample of 107 fruit and vegetable production-commercialization companies and 27 variables indicates a parameter that the formation of two clusters is required (k-means algorithm), which alludes to the two legal forms (cooperatives or other types of capital) of companies analyzed (Table 4). The ANOVA analysis shows that all the variables are significant when establishing the clustering, except for the Soc<sub>1</sub> variable (Orientation towards the achievement of maximum profit).

Characterization occurred for each cluster according to the variables that proved significant to identify the two groups of farms (Table 5). The application of this technique made possible the determination of characteristics that define each group. It also allowed for their quantitative and qualitative importance as an average of the behavior of the farms in each cluster.

TABLE 3 Variables and descriptive statistics

Area	Variable	Description	Min.	Max.	Average	Standard Dev.	Coef. of variation (%)
Employees	Emp <sub>1</sub>	Conciliation policies	1	7	5.64	1.25	22.3
	Emp <sub>2</sub>	Training and personal development programs	3	7	5.82	1.11	19.0
	Emp <sub>3</sub>	Positive discrimination programs	3	7	6.02	1.10	18.3
	Emp <sub>4</sub>	Promotion of stable employment	1	7	6.00	1.28	21.4
	Emp <sub>5</sub>	Availability of internal communication channel	2	7	5.26	1.46	27.8
Emp <sub>6</sub>	Evaluation of work environment and job satisfaction	1	7	5.34	1.68	31.5	
Emp <sub>7</sub>	Anti-discrimination policies for employees of foreign origin	1	7	5.71	1.43	25.0	
Members/Stakeholders	Soc <sub>1</sub>	Maximum profit orientation	2	7	6.00	1.09	18.2
	Soc <sub>2</sub>	Clarity and accuracy of information to partners and shareholders	2	7	6.19	1.08	17.5
	Soc <sub>3</sub>	Existence of an adequate communication channel	2	7	6.24	1.01	16.1
Customers	Cl <sub>1</sub>	Year-round supply capacity	4	7	6.18	0.91	14.7
	Cl <sub>2</sub>	Wide range of products, quality offer, and good value for money	2	7	6.07	1.11	18.3
	Cl <sub>3</sub>	Customer satisfaction surveys are conducted	2	7	5.41	1.52	28.1
	Cl <sub>4</sub>	Complete information is provided	3	7	6.36	0.84	13.2
	Cl <sub>5</sub>	Control procedures in place	3	7	6.37	0.98	15.3
	Cl <sub>6</sub>	Response to customer complaints and suggestions	4	7	6.52	0.74	11.4

(Continues)

TABLE 3 (Continued)

Area	Variable	Description	Min.	Max.	Average	Standard Dev.	Coef. of variation (%)
Farmers/Producers	Farm <sub>1</sub>	Level of contribution to economic welfare of farmers/producers	4	7	6.34	0.81	12.8
	Farm <sub>2</sub>	Level of compliance with labor conditions and supplier hiring policy	1	7	5.40	1.57	29.0
	Farm <sub>3</sub>	Existence of a communication channel with farmers/producers	2	7	6.07	1.19	19.6
	Farm <sub>4</sub>	Level of cooperation and assistance to producers	4	7	6.50	0.89	13.7
	Farm <sub>5</sub>	Promoting organic production	1	7	6.10	1.35	22.0
	Farm <sub>6</sub>	Good agricultural practices, food safety, and environmental certification system requirement	4	7	6.56	0.80	12.2
Environment	Mam <sub>1</sub>	Level of agricultural waste management	3	7	6.21	0.97	15.6
	Mam <sub>2</sub>	Existence of an energy saving program	1	7	5.16	1.71	33.1
	Mam <sub>3</sub>	Degree of use of alternative energies	1	7	4.41	1.88	42.7
	Mam <sub>4</sub>	Existence of a program to reduce water consumption	1	7	4.54	1.75	38.5
	Mam <sub>5</sub>	Level of performance of environmental audits	1	7	4.55	2.10	46.0

Source: Own elaboration.

TABLE 4 ANOVA analysis

Variable	Description	Cluster Quadratic mean	gl	Root mean square error	gl	F	Sig.*
Emp <sub>1</sub>	Conciliation policies	21.999	1	1.379	105	15.954	0.000
Emp <sub>2</sub>	Training and personal development programs	14.968	1	1.092	105	13.707	0.000
Emp <sub>3</sub>	Positive discrimination programs	16.933	1	1.057	105	16.013	0.000
Emp <sub>4</sub>	Promotion of stable employment	50.796	1	1.173	105	43.290	0.000
Emp <sub>5</sub>	Availability of internal communication channel	72.438	1	1.469	105	49.315	0.000
Emp <sub>6</sub>	Evaluation of work environment and job satisfaction	102.468	1	1.880	105	54.499	0.000
Emp <sub>7</sub>	Anti-discrimination policies for employees of foreign origin	26.153	1	1.808	105	14.464	0.000
Soc <sub>1</sub>	Maximum profit orientation	2.508	1	1.176	105	2.133	0.147
Soc <sub>2</sub>	Clarity and accuracy of information to partners and shareholders	12.489	1	1.065	105	11.732	0.001
Soc <sub>3</sub>	Existence of an adequate communication channel	22.964	1	0.807	105	28.462	0.000
Cl <sub>1</sub>	Year-round supply capacity	10.616	1	0.733	105	14.475	0.000
Cl <sub>2</sub>	Wide range of products, quality offer, and good value for money	18.537	1	1.067	105	17.378	0.000
Cl <sub>3</sub>	Customer satisfaction surveys are conducted	57.407	1	1.795	105	31.977	0.000
Cl <sub>4</sub>	Complete information is provided	8.720	1	0.627	105	13.918	0.000
Cl <sub>5</sub>	Control procedures in place	22.017	1	0.753	105	29.252	0.000
Cl <sub>6</sub>	Response to customer complaints and suggestions	8.797	1	0.475	105	18.512	0.000
Farm <sub>1</sub>	Level of contribution to economic welfare of farmers/producers	10.198	1	0.568	105	17.940	0.000

(Continues)

TABLE 4 (Continued)

Variable	Description	Cluster	Quadratic mean	gl	Root mean square error	gl	F	Sig.*
Farm <sub>2</sub>	Level of compliance with labor conditions and supplier hiring policy	39.831	1	105	2.094	105	19.020	0.000
Farm <sub>3</sub>	Existence of a communication channel with farmers/producers	34.684	1	105	1.103	105	31.433	0.000
Farm <sub>4</sub>	Level of cooperation and assistance to producers	7.899	1	105	0.732	105	10.792	0.001
Farm <sub>5</sub>	Promoting organic production	33.689	1	105	1.506	105	22.362	0.000
Farm <sub>6</sub>	Good agricultural practices, food safety, and environmental certification system requirement	14.982	1	105	0.508	105	29.474	0.000
Mam <sub>1</sub>	Level of agricultural waste management	24.551	1	105	0.719	105	34.142	0.000
Mam <sub>2</sub>	Existence of an energy saving program	139.565	1	105	1.607	105	86.848	0.000
Mam <sub>3</sub>	Degree of use of alternative energies	133.084	1	105	2.313	105	57.548	0.000
Mam <sub>4</sub>	Existence of a program to reduce water consumption	159.369	1	105	1.573	105	101.299	0.000
Mam <sub>5</sub>	Level of performance of environmental audits	145.933	1	105	3.046	105	47.903	0.000

\*At 95% confidence, all variables are significant except for: Soc<sub>1</sub>.

Source: Own elaboration.

TABLE 5 Characterization of farm clusters\*

Variable	Description	Cluster 1 Standard	Cluster 2 Pro CSR
Emp <sub>1</sub>	Conciliation policies	5.1	6.0
Emp <sub>2</sub>	Training and personal development programs	5.4	6.1
Emp <sub>3</sub>	Positive discrimination policies	5.5	6.3
Emp <sub>4</sub>	Promotion of stable employment	5.1	6.6
Emp <sub>5</sub>	Availability of internal communication channel	4.2	5.9
Emp <sub>6</sub>	Evaluation of work environment and job satisfaction	4.1	6.1
Emp <sub>7</sub>	Anti-discrimination policies for employees of foreign origin	5.1	6.1
Soc <sub>2</sub>	Clarity and accuracy of information to partners and shareholders	5.8	6.5
Soc <sub>3</sub>	Existence of an adequate communication channel	5.7	6.6
Cli <sub>1</sub>	Year-round supply capacity	5.8	6.4
Cli <sub>2</sub>	Wide range of products, quality offer, and good value for money	5.5	6.4
Cli <sub>3</sub>	Customer satisfaction surveys are conducted	4.5	6.0
Cli <sub>4</sub>	Complete information is provided	6.0	6.6
Cli <sub>5</sub>	Control procedures in place	5.8	6.7
Cli <sub>6</sub>	Response to customer complaints and suggestions	6.2	6.8
Farm <sub>1</sub>	Level of contribution to economic welfare of farmers/producers	6.0	6.6
Farm <sub>2</sub>	Level of compliance with labor conditions and supplier hiring policy	4.6	5.9
Farm <sub>3</sub>	Existence of a communication channel with farmers/producers	5.4	6.5
Farm <sub>4</sub>	Level of cooperation and assistance to producers	6.2	6.7
Farm <sub>5</sub>	Promoting organic production	5.4	6.6
Farm <sub>6</sub>	Good agricultural practices, food safety, and environmental certification system requirement	6.1	6.9
Mam <sub>1</sub>	Level of agricultural waste management	5.6	6.6
Mam <sub>2</sub>	Existence of an energy saving program	3.7	6.1
Mam <sub>3</sub>	Degree of use of alternative energies	3.0	5.3
Mam <sub>4</sub>	Existence of a program to reduce water consumption	3.0	5.5
Mam <sub>5</sub>	Level of performance of environmental audits	3.1	5.5
<b>Total marketers:</b>		<b>42</b>	<b>65</b>
<i>Of which cooperative societies</i>		<i>7</i>	<i>17</i>
<i>Of which other companies</i>		<i>35</i>	<i>48</i>

\*The mean values of each variable are shown.

Source: Own elaboration.

It is interesting to note that cluster 2 is the most numerous, accounting for 65 fruit and vegetable production-commercialization companies, and it is also the cluster that concentrates the majority of agricultural cooperatives. Although the legal form is not decisive in establishing the clusters, the proportion of cooperatives in cluster 2 is almost three times higher than in cluster 1, that is, 17

versus 7 cooperatives. A priori, there is a definite but not exclusive pattern depending on the legal form, showing some degree of preference for cluster 2.

The characteristics of each cluster, based on the mean records of the 26 representative variables, are presented below. Thus:

- a. **Cluster No.1. Standard.** This cluster gathers 42 of the 107 marketers surveyed, of which only 16.7% are cooperative societies (7 entities). It is important to note that this cluster presents the lowest average values for all the variables included in the five dimensions contemplated in the questionnaire. In particular, the lowest values are found in the dimensions of employees (Emp<sub>4</sub> to Emp<sub>7</sub>), environment (Man<sub>2</sub> to Man<sub>5</sub>), farmers (Farm<sub>2</sub>, Farm<sub>3</sub>, and Farm<sub>5</sub>), and customers (Cli<sub>3</sub>). It is noteworthy that the largest gap is found in the environmental dimension.

The study of other economic variables in the sample indicates that the companies in cluster 1 have the lowest average annual turnover (27.29 million) and the lowest EBITDA (1.12 million). On the contrary, they have the best records in terms of return on equity (ROE) and return on assets (ROA), with an average of 13.31% and 5.18%, respectively.

In the specific case of the seven cooperative societies included in this cluster, it is evident that they are small in size, both in terms of average sales volume (€14.94 million) and annual EBITDA of only €250,000.

- a. **Cluster No. 2. Pro CSR.** This cluster is the largest as it groups 65 of the 107 marketers, that is, 61% of the sample. It also groups the greatest number of cooperatives, which is 17 and represents 26.2% of the total sample. Unlike cluster 1, cluster 2 shows better results in all the variables corresponding to the five dimensions analyzed. The superiority of cluster 2 is less notorious in the case of the dimensions “members” and “clients.” This fact is related to the very definition of capital companies, whose main goal is the maximization of shareholder value. Furthermore, the companies in this cluster have a worse ROE and ROA than those in cluster 1. Specifically, the companies in cluster 2 score 8.49% and 3.94% in ROE and ROA, respectively.

The study of other economic variables that define the sample suggests a clear relationship between company size and CSR orientation. The companies in cluster 2, pro-CSR, have the highest average turnover, with €47.24 million per year, compared with €27.29 million per year in cluster 1. Likewise, in the case of the other fruit and vegetable production-commercialization companies, the highest average sales volume is found in cluster 2 (€37.56 million), compared with an average of €29.77 million for the same type of company in cluster 1.

Based on the volume of annual profits, measured by EBITDA, it is again observed that the companies in cluster 2, where there are more cooperative companies, obtain a higher yearly average profit: €1.49 million per year, compared with €1.12 million per year in cluster 1. In cluster 1, the situation reverses, as the average EBITDA of the cooperatives is €250,000 per year, while the average for the other companies is €1.29 million.

#### 4.3 | Analysis by type of entity: Mann-Whitney U test

The nonparametric Mann-Whitney test indicates no significant differences in four of the five dimensions of CSR in the sample analyzed. Significant differences were only observed in the employee dimension depending on the legal form of the fruit and vegetable



**TABLE 6** Hypothesis testing for dimensions of CSR—Mann-Whitney U test ( $p = 0.05$ )

Hypothesis	<i>W</i> -Wilcoxon	<i>p</i> -value	Decision
H <sub>1</sub> —Associate dimension	4,388.0	$p = 0.475$	No
H <sub>2</sub> —Employee dimension	4,153.0	$p = 0.014$	<b>Yes</b>
H <sub>3</sub> —Farmer dimension	4,405.0	$p = 0.563$	No
H <sub>4</sub> —Client dimension	4,661.0	$p = 0.179$	No
H <sub>5</sub> —Environmental dimension	4,428.5	$p = 0.689$	No

Source. Own elaboration.

production-commercialization company. In the other dimensions (partners, farmers, customers, and environment), the legal form is not significant in establishing differences between the variables in the sample. Table 6 presents the results of the Mann-Whitney U test for the five dimensions of CSR.

None of the proposed hypotheses, except for H<sub>2</sub>, are therefore supported. These results suggest that intrinsic CSR in cooperatives derived from their business configuration and cooperative principles may be non-existent, which is in line with the findings of previous work (Coté, 2001, 2009; Somerville, 2007; Yanbykh, 2018). However, there is a clear difference in CSR orientation in favor of cooperatives in the analyzed sector regarding their employee dimension. This fact suggests a more significant commitment of these organizations to meeting the expectations of their employees, in line with the findings of previous work (Leal et al., 1999; Gargallo-Castel, 2008).

On the other hand, although four of the five hypotheses proposed (H<sub>1</sub>, H<sub>3</sub> to H<sub>5</sub>) have been rejected, a particular analysis of the variables of each dimension indicates that there are certain variables in which the legal form has an influence when considering CSR. Specifically, there are two variables of the client dimension (Cli<sub>4</sub> and Cli<sub>6</sub>) and one variable of the farmer dimension (Farm<sub>4</sub>) (Table 7).

## 5 | DISCUSSION

There is evidence supported by numerous previous theoretical studies (Belhouari et al., 2005; Carasco, 2007; Server Izquierdo and Capó i Vicedo, 2011; Bollas-Araya et al., 2019; Castilla-Polo and Sánchez-Hernández, 2020) and institutional pronouncements (ILO, 2015; EU, 2017) that parallelism exists between the principles promoted by CSR and cooperative principles. Through the latter, cooperatives put the values of self-help, self-responsibility, democracy, equality, equity, and solidarity into practice, which underpin their identity and close links to CSR. These values imply an intrinsic CSR in this type of organization that is inherent to their existence. Therefore, cooperative societies that comply with the principles and values that govern this type of organization have a CSR advantage. However, there is little empirical evidence of the greater commitment of cooperative societies to CSR derived from this theoretical advantage. This advantageous position does not translate into the leadership of these organizations in CSR (Castilla-Polo et al., 2015).

The findings of this research confirm no significant differences in the CSR orientation of cooperatives concerning the remaining companies in the analyzed sector in any of its dimensions, except for the “employee” dimension. Therefore, none of the proposed hypotheses, except for H<sub>2</sub>, are supported. This result indicates that the intrinsic CSR in cooperatives, derived from their

TABLE 7 Hypothesis testing for variables of CSR—Mann-Whitney U test ( $p = 0.05$ )

Hypothesis	Variables	W- Wilcoxon	p-value	Decision
H <sub>4</sub> —Client dimension	Cli <sub>4</sub> - Complete information is provided	4,833.5	$p = 0.003$	Yes
	Cli <sub>6</sub> - Response to customer complaints and suggestions	4,728.5	$p = 0.030$	
H <sub>3</sub> —Farmer dimension	Farm <sub>4</sub> - Level of cooperation and advice to farmers	4,216.5	$p = 0.016$	Yes

Source. Own elaboration.

business configuration and the application of cooperative principles, may be non-existent. These results suggest the lack of application of the cooperative tenets in these organizations in the agri-food sector, which is in line with the conclusions of previous work (Coté, 2001, 2009; Somerville, 2007; Yanbykh, 2018). In their process to adapt to a context characterized by globalized agri-food markets with high competition and concentration, cooperatives have developed expansion strategies through mergers, acquisitions, or strategic alliances to increase their market share, expand their geographical scope of action, or diversify their activity. These actions also help to reduce costs and increase efficiency and competitiveness (Filippi et al., 2008). This process has generated a distancing of cooperative members from the cooperative (Nilsson et al., 2012), a loss of member loyalty, and less member participation and involvement in cooperative governance (Coté, 2009; Nilsson et al., 2009). This questions the cooperative governance model based on the incentive for member participation (Massera et al., 2020) and the cooperative management model itself, whose objective is to obtain maximum financial performance without renouncing the principles that define the cooperative identity.

The results of this research confirm hypothesis  $H_2$ , suggesting that the commitment of cooperatives in the analyzed sector to their employees is greater than that of other companies. It is expected to find greater coherence between the objectives of the company and the interests of the workers in the case of cooperatives. Certain cooperative values can favor the fulfillment of employees' expectations and, thus, their level of job satisfaction. The principle of equality and equity can be considered contradictory with large wage differentials (Gargallo-Castel, 2008). The principle of solidarity can favor the work environment and cordial social relations (horizontal and vertical), which increases employees' job satisfaction (Leal et al., 1999). The principle of education and training facilitates the qualification of employees and favors their promotion, thus contributing to improving their level of satisfaction. Its objective is to enable employees to perform their duties in the cooperative, professional, and human spheres, thereby encouraging the development of skills, autonomy, and self-responsibility. The application of these principles ultimately favors the professional training of workers and, consequently, their employability and adaptability, key elements of the so-called flexicurity policies (labor flexibility and job security) that enable organizations to manage crises and adapt to market fluctuations (Santos-Larrazabal & Basterretxea, 2022). Likewise, employee satisfaction can increase to the extent that they identify with the cooperative culture and value the possibilities offered by an organization with these characteristics (Gargallo-Castel, 2008).

The rest of the proposed hypotheses ( $H_1$ ,  $H_3$ ,  $H_4$ ,  $H_5$ ) have been rejected. However, a particular analysis of the variables included in each dimension offers significant differences in favor of the cooperatives. This is the case for the dimension of customers and farmers. The customer dimension's differences most likely involve different forms of commercialization of the cooperatives concerning the rest of the companies (the majority of which are limited companies). In the first case, the producers/members directly connect with the target markets, which may justify their more significant concern for information and quality of service to their clients ( $Cl_i_4$  and  $Cl_i_6$ ).

For the dimension "farmer," it is logical to think that there is greater cooperation between cooperative societies and their producers in terms of technical, tax, and labor advisory services, among others, since these producers are members of the cooperative ( $Farm_4$ ).

On the other hand, the application of cluster analysis informs that, a priori, there is a definite but not exclusive pattern depending on the legal form, showing some degree of preference for cluster 2, pro CSR. Also, in this cluster are the majority of cooperatives, and of larger size. Thus, in light of the data collected, the size of the cooperatives has no influence on the

disorientation of their founding principles, which makes them conducive to developing their CSR strategy.

For practical purposes, these results indicate that there is a potential competitive advantage for cooperatives in terms of CSR that is not being exploited. The full integration of CSR policies, measures, and instruments in the cooperative model can be an opportunity to also differentiate itself in the sustainability model.

This study has used the analyzed sector as a reference, so its generalization is conditioned to sectors with similar characteristics to the context studied and to cooperative societies whose operation and regulation are also similar.

## 6 | CONCLUSIONS

In a context of highly concentrated and globalized agri-food markets, we are witnessing a transformation and adaptation process of cooperative societies that is generating, in many cases, a departure from the founding values and principles that underpin their identity and are closely linked to the CSR. This may suggest that the difference between cooperatives and capital companies, forms of enterprise that are antagonistic in their origins, is becoming smaller. Cooperatives are becoming more similar to other forms of business, often becoming true capital companies, even though they operate under the formality of cooperative societies. Their success and survival sometimes depend on their ability to meet the interests of their members better than other forms of organization.

In the employee dimension, disorientation with their founding principles does not occur. Cooperative values such as equality, equity, and solidarity; and principles such as education and training continue to guide the labor relations of cooperative societies and make their commitment to their employees greater than that of other companies.

Cooperatives can be considered essential for the promotion of sustainable economic, social, and environmental development. To prevent this transformational process aimed at adapting to the new context from calling into question the cooperative management model and its advantageous position for the development of CSR, it is necessary to find a balance between the entrepreneurial and cooperative logics operating in cooperatives.

In the field of CSR it should be noted that there are homogenization strategies (they allow comparability with other companies) and differentiation strategies (which allow the identification of competitive advantages based on the social economy model). Cooperatives can incorporate both simultaneously as a consequence of their business model. Homogenization strategies allow them to achieve the appropriate industry standards, and differentiation strategies allow them to project their social business models to their commercial strategy. According to the previous approach, this last strategy is yet to be developed in the case of fruit and vegetable production-commercialization companies.

### ORCID

Antonio Martos-Pedrero  <https://orcid.org/0000-0002-5079-1627>

Luis J. Belmonte-Ureña  <https://orcid.org/0000-0001-5860-5000>

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## A | Questionnaire

### **Employees**

- (Emp1)** Our company implements flexible policies to provide a good balance between work and life for its employees.
- (Emp2)** Our company implements training and personal development programs for employees.
- (Emp3)** In general, our company promotes positive discrimination programs in favor of women and the disabled.
- (Emp4)** Our company promotes stable employment and recognizes its importance to its employees and to society.
- (Emp5)** Our company has a communication channel with its employees and is receptive to their proposals and complaints.
- (Emp6)** Our company evaluates the work climate and the satisfaction of its employees on a regular basis.
- (Emp7)** Our company has internal policies that prevent discrimination against foreign minorities.

### **Partners**

- (Soc1)** Our company always tries to obtain the maximum benefit from its activity.
- (Soc2)** Our company provides its partners/shareholders with clear, complete, and accurate information on its policies, decisions, and activities.
- (Soc3)** Our company has an adequate communication channel with its partners/shareholders and is receptive to their proposals.

### **Customers**

- (Cli1)** Our company has a large capacity to supply its customers throughout the year.
- (Cli2)** Our company has a wide range of products, standardized in quality and price.
- (Cli3)** Our company carries out studies on customer satisfaction.
- (Cli4)** Our company provides complete and accurate information about its products to its customers.
- (Cli5)** Our company establishes prior control procedures to ensure compliance with clients.
- (Cli6)** Our company responds to customer complaints.

### **Farmers**

- (Farm1)** Our company contributes to the growth of farmers/producers and to the maintenance of their farms' profitability.
- (Farm2)** Our company has procedures to control the working conditions and the hiring policy of its suppliers.
- (Farm3)** Our company has a communication channel with its farmers/producers and is receptive to their proposals and complaints.
- (Farm4)** Our company cooperates with its farmers/producers, providing technical advice for the improvement of their products.
- (Farm5)** Our company promotes organic and/or integrated production among its farmers/producers.
- (Farm6)** Our company considers it essential that its farmers/producers have certification of good agricultural practices, food safety certification and environmental certification.

### **Environment**

- (Mam1)** Our company manages waste properly.
- (Mam2)** Our company has an energy saving program.
- (Mam3)** Our company adopts programs for the use of alternative energies.
- (Mam4)** Our company has implemented a program to reduce water consumption.
- (Mam5)** Our company carries out regular environmental audits.

The questionnaire was distributed in Spanish, with a Likert-type question structure and a seven-category scale. The anonymity of the response was guaranteed.