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Spanish Second-Tier Cooperative Societies: An Analysis of E-Corporate Social Responsibility

**ADORACIÓN MOZAS-MORAL,¹ RAQUEL PUENTES-POYATOS,²
AND ENRIQUE BERNAL-JURADO³**

Abstract

Nowadays, companies are expected to conform to a socially-committed model that not only creates maximum value for their shareholders or members but also considers the impact of their actions on three fronts: economic, social, and environmental. This is called Corporate Social Responsibility (CSR). It is very much present in cooperative societies and is a source of some of their unique features. The purpose of the present study is to analyze “e-corporate social responsibility” in Spanish second-tier cooperative societies. The focus of this study is the CSR information that these enterprises provide through their web pages. Presenting such information is typically part of a comprehensive CSR strategy and helps an enterprise – cooperative or otherwise – to achieve a higher profile, identify its values, and become more relevant to its stakeholders. The results of this research reveal that second-tier cooperative societies make limited use of the Internet as a means to communicate CSR-related information to their stakeholders.

Keywords: corporate social responsibility, second-tier cooperatives, Internet, information and communications technology, ICT, transparency, websites.

1 Department of Business Organization, Marketing and Sociology, University of Jaén, Jaén, Spain (amozas@ujaen.es).

2 Department of Business Organization, Marketing and Sociology, University of Jaén, Jaén, Spain (rpuentes@ujaen.es).

3 Department Applied Economics, University of Jaén, Jaén, Spain (ebernal@ujaen.es).

Introduction

In recent years (the late 1990s and the beginning of the 21st century) we have witnessed a shift in values in our society, with ethical and corporate responsibility principles and values as the key to new social demands. Development is seen as both a process of economic growth – economic development (Todaro, 2006) and a process of expanding human liberties – social development. In these processes, people must be seen as economic agents who are actively involved in building their own destiny rather than as mere passive recipients of the fruits of ingenious development programs (Sen, 1999). These changing values are linked to economic growth: when the per capita income of a society increases, greater value is placed on matters related to the environment and the quality of life as opposed to material welfare (Inglehart, 2000). Purchasing and consumption habits in the last two decades clearly show that consumers are increasingly concerned about the deterioration of the environment (European Commission, 1999). The supply side has responded to this change in values with an exponential growth of organic farming, which has emerged as one of the most dynamic areas of today's agri-food sector (Willer and Yussefi, 2004).

A number of international organizations, including the UN, OECD, ILO, the European Commission, AccountAbility (Institute of Social and Ethical Accountability), Global Reporting Initiative, and International Organization for Standardization among others, have also emphasized the importance of corporate social responsibility (CSR) and issued voluntary standards, principles, or recommendations to encourage companies to adopt responsible corporate behavior. A number of initiatives have also arisen to support and promote CSR among cooperatives, including CSR.COOP⁴ in Spain, the Co-operative Green Pact, ICA-Americas, the Ethos Institute in Brazil, IARSE in Argentina (Argentine Institute of Corporate Social Responsibility), and the Europe-wide Cooperatives Europe.

These circumstances, combined with the financial scandals of recent years, are leading companies to value an alternative management model instead of the traditional one in which the only social responsibility of companies is to maximize profits or create value for the shareholders within the legal framework

4 The CSR.COOP program was started in Spain in 2004, within the framework of the EU's Equal Initiative, as a pilot program to implement CSR policies and sustainability reports among cooperatives in Catalonia. One of its objectives was to encourage communication of responsible business management among the cooperatives in the program.

and the ethical customs of the country (Friedman, 1962, 1970). The basis for this traditional approach, which many authors call the Shareholders Theory (see, e.g., Freeman et al., 2007; Carson, 2003), is that actions taken responsibly will pursue the profit-maximization objective as otherwise the company will find itself at a cost disadvantage (Anderson, 1989; Argandoña, 2006). A new, opposite approach, the Stakeholders Theory, holds that the purpose of a company cannot be simply to create value for its shareholders but must be directed towards creating value for society as a whole, and particularly for its special interest groups or stakeholders (Freeman, 1984), based on the premise that there is no incompatibility in achieving both economic and social goals. This perspective justifies CSR, which has been defined as “the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large” (WBCSD, 1998).

CSR therefore constitutes a new form of business management that takes the stakeholders into account. However, this socially responsible management model is not new for cooperatives, and the literature identifies it as a model intrinsic to cooperative nature (Vargas and Vaca, 2005; Belhouari et al., 2005; Carrasco, 2007). European Commission (2002) made the socially responsible nature of cooperatives clear:

Cooperatives, mutuals and associations as membership-led organisations have a long tradition in combining economic viability with social responsibility. They ensure this through stakeholder dialogue and participative management and thus can provide an important reference to other organisations.

The examples of cooperative societies presented by the International Co-operative Alliance as exponents of a management model that places CSR at the heart of its daily business activities include the Mondragon Cooperative Corporation in Spain, La Equidad Seguros football club in Colombia, and the Desjardins group of credit unions in Canada (ICA, 2007).

The relationship between CSR and competitive success has been widely studied in the economic literature and CSR is considered an essential business management factor for improving the company’s reputation and creating a source of competitive advantage (Fombrun and Shanley, 1990; Gatewood et al., 1993; Turban and Greening, 1997; Freeman, 2006). An increasing number of companies are recognizing the strategic importance of CSR by integrating it into the company’s mission, vision, and organizational principles as well as its strategic planning. Insofar as “cooperatives have already travelled some distance in the sphere of Corporate Social Responsibility, which places them in a better strategic position” (Collado, 2006:14), they need to take advantage of this situation and convert their socially responsible nature or CSR into a source of competitive advantage.

The importance that CSR has now acquired can help cooperatives to achieve greater recognition, identification of their values, and a more prominent role in the business world (Comín, 2007). Information and communication media, including the Internet and particularly corporate websites, have a key part to play in this process by making all the information on CSR practices accessible to stakeholders, while signaling the organization's working conditions (Turban and Greening, 1997) and value system (Judge and Bretz, 1992). The stakeholders, who include the shareholders or members, employees, customers, suppliers, and society at large, judge the company's actions and, depending on whether or not they accept them, influence its survival and sustainability (Berbel et al., 2007). All this allows stakeholders to make more rational decisions (Wanous, 1992).

The Internet performs an important role as a means of communication, especially since the appearance of the World Wide Web (WWW) in the early 1990s. The Web, with its connectivity and interactivity, has the potential to generate an environment that can develop and intensify relations with stakeholders and thereby gain their trust. In recent years, this potential has been accompanied by the development of a suitable theoretical framework, known as relationship marketing, which offers formulas for gathering and handling user information through the website with the aim of ensuring that the relationship is not sporadic and can be maintained in the long term.

Since the existing literature traces a clear link between CSR and competitive success and also identified CSR as an inherent factor in cooperatives, we hypothesize that cooperatives should exploit CSR as a source of competitive advantage, telling society in general about their CSR in their communications and particularly through their websites, as nowadays the Internet is considered a fundamental communication tool.

The purpose of this article is to analyze "e-corporate social responsibility" in Spanish second-tier cooperatives (STCs).⁵ The reason for taking STCs as our reference framework is purely practical: because of their size, STCs are more likely to have their own websites. We examine both the type of information on CSR that Spanish cooperatives provide on their websites and their CSR information transparency, as measured by an index of website information transparency that we construct. These two aspects also make it possible to analyze

5 A second-tier cooperative can be defined as a group of at least two first-tier cooperatives and public or private legal entities (within the limits established by the laws governing cooperatives) that unite to conduct a particular economic or business activity which enables them to operate more competitively in the market (Puentes et al., 2007).

the similarity or otherwise of the level of CSR information provided by the STCs under study.

This paper has the following structure. After the introduction, we highlight how information and communications technologies (ICT) are an essential tool for distributing information to stakeholders and how important it is for competitive success to communicate the company's CSR. The two sections that follow provide a detailed explanation of our research method and present the results. Conclusions conclude the article.

The Internet, corporate social responsibility, and competitive advantage: The conceptual framework

Among the wide range of available media, the Internet has come increasingly to the fore in recent years. Within this new virtual environment, corporate websites constitute a space in which many of the communication processes between the company and its stakeholders take place and a tool that can be used in public relations or simply as a form of advertising to boost sales. Websites are a medium that can expand the quantity and quality of the information hitherto supplied through other channels, generating value which it would be hard for companies to attain through traditional business methods. This opportunity has not gone unnoticed among companies with an Internet presence and it is now common practice to provide information on the corporate website, mostly regarding the company itself rather than its products.

Websites with a design and content that users value positively can give a company a very important competitive advantage. The website is the first contact that many potential customers, employees, and investors will have with the company and it therefore creates the first impression (Tung, 2001; Chen and Macredie, 2005). For current users (customers, suppliers, shareholders, employees, etc.), the website is a place where they can become more familiar with the company, as it allows them to augment the information that they have already acquired through traditional sales channels on subjects such as the company's origins, location, production methods, environmental commitment, etc. (Yang et al., 2005). The user's decision to engage in a long-term relationship with the company could depend on the ability of its website to influence positively the user's impression of the company (Van der Heijden et al., 2003); this is determined, at least in part, by the ability of the information supplied to compensate for the absence of personal contact between the players and to generate sufficient trust between them (McKinney et al., 2002).

An increasing number of companies use the Internet to report on their corporate responsibility policies and strategies. Sustainability reports are the most frequent way to do this. According to the Global Reporting Initiative (GRI)⁶, as of January 2011 sustainability reports (for 2009) in compliance with GRI3 had been issued by 1,772 companies from 68 countries, of which 2.3% belonged to the non-profit services sector. The countries with the greatest number of companies that make such information public were the USA (178 companies), Spain (156), and Japan (120). In the case of Spain, 1.3% of the companies that published sustainability reports were cooperatives. A recent study by KPMG International (2008) also showed that 80% of the top companies in the world (Global Fortune 250) publish data on environmental, social and governance matters in sustainability reports, compared to the 50% recorded in a previous study dating from 2005. A further finding was that 41% of the cooperatives in the 100 top-earning companies in the 22 countries examined, including Spain, make their CSR strategies public.

These data show the growing importance to companies of communicating social responsibility information. As regards the factors that lead companies to report and communicate their CSR practices, this same study (KPMG International, 2008) highlights that the foremost considerations are financial and are concerned with reputation and image.

Reputation is seen as a bundle of perceptions about the company's ability to satisfy the expectations of all the stakeholders (Fombrun, 1996), which can also be used strategically by the company to signal its attractiveness (Fombrun and Van Riel 1997). A company's reputation is constructed through six dimensions or pillars, and one of them is social responsibility (Fombrun and Gardberg, 2000). It has been shown that corporate social responsibility is becoming more and more important in forming a company's reputation, both as a means of managing risks to its reputation and as a tool for creating customer and employee loyalty and attracting socially responsible investors (Freeman, 2006).

Certain studies suggest that the social performance of companies and, consequently, their CSR, influences potential employees' perception of the companies' attractiveness (Wright et al., 1995; Turban and Greening, 1997; Albinger and Freeman, 2000). Because it is a good tool for attracting employees – and ones of good quality (Turban and Greening, 1997) – it constitutes a source of competitive advantage (Davis, 1973; Fombrun and Shanley, 1990; Greening and Turban, 2000). Other research shows that CSR has a positive influence on consumers (Owen and

6 A non-governmental organization that has developed a common framework for drafting reports known as the Sustainability Reporting Guidelines or GRI3.

Scherer, 1993; Maignan, 2001; Bigné et al., 2004), who prefer the products of companies that invest in actions to protect the environment and behave well towards society (Gildia, 1995; Zaman et al., 1996). Several empirical studies have found evidence of a link between CSR and financial returns (Waddock and Graves, 1997; Balbanis et al., 1998; Orlitzky, 2001), suggesting that when companies accept their social and environmental responsibilities they are rewarded by stakeholders, which enables them to strengthen their market position and generate greater profits (Simpson and Kohers, 2002; Smith, 2003).

A recent report by PricewaterhouseCoopers (2009) on Spanish consumer attitudes towards CSR noted that consumers are prepared to pay somewhat more for the products of socially responsible companies (39% of those interviewed) and punish companies for irresponsible behavior (74% of those interviewed). It also indicated that although consumers prefer to receive the information for their purchase decisions through mass media, such as television and the press, the Internet has begun to stand out, particularly among the younger age group in major cities.

For all these reasons, it is possible to talk of CSR as a key resource for competitive success and a source of competitive advantage (Marín and Rubio, 2008), and one in which communication and information tools such as the Internet play a key role in transmitting the responsible principles and values by which companies are governed, signaling to stakeholders and society in general that the right decisions are being taken. Cooperatives, as exponents of social responsibility, therefore need to use the Internet, and particularly websites, to communicate their CSR with the aim of creating competitive advantage.

Empirical methodology

The empirical methodology involved examining the e-corporate social responsibility of Spanish STCs through their websites.

The first step was to determine the true population of Spanish STCs. Owing to the absence of a single register centralizing Spain-wide information on STCs,⁷ we used the data from Bernal and Mozas (2005) as the starting point for determining the true size of this population. In that study, the data on the actual population of STCs were obtained from the separate censuses of these organizations in each autonomous

7 In Spain, each autonomous region has powers in cooperative matters and keeps its own register of cooperatives. However, second-tier cooperatives are also formed by cooperatives from different autonomous regions, and these are listed in the national registry that comes under the Ministry of Labour and Social Affairs. Consequently, we had to contact all the regional registries and the national registry to construct the census of second-tier cooperatives.

region of Spain. This information was updated to July 2009 by tracing the cooperatives on the Internet, visiting the websites of the autonomous regions and accessing the statistical data they provided on the social economy, analyzing relevant legal information such as the official journals of the autonomous communities, and using the main browsers (Google, Yahoo) to locate the websites of all STCs.

As a result of this research, we found that the number of STCs registered in Spain was 383, although 103 of these had disappeared, were inactive, or had changed their legal status (Table 1). The actual STC population in Spain was thus 280 (as of July 2009). The autonomous regions with the greatest numbers of STCs were Andalusia, Castile & Leon, and the Basque Country. Of all the 280 active STCs, only 87 had their own website and the website was active in 76 cases. The remaining STCs provided corporate information for the purpose of selling through another website, did not have a website at all, or did not appear in the main browsers. This study took into account the 76 STCs with an active website. By type of cooperative, these STCs were classified as follows: 68% farming, 11% services, 10% work-associated, 7% industrial, and 4% supply.

To measure the CSR information these cooperatives provided on the Internet, which we have termed “e-corporate social responsibility” or “e-CSR”, we used 56 indicators grouped into four CSR dimensions:

- social dimension – SD (20 indicators, 35.7% of the 56 indicators),
- environmental dimension – END (12 indicators, 21.4%),
- economic and financial dimension – ECD (7 indicators, 12.5%),
- corporate governance dimension – GD (17 indicators, 30.3%).

The full list of 56 indicators appears in the survey instrument reproduced in the appendix at the end of the article. Our list of 56 indicators was based on the indicators that governmental and non-governmental organizations use to measure the social, environmental, economic, and governance impact of companies. Specifically, we referred to the KLD Social Index (KLD Research and Analytics, 2009), one of the existing monitoring tools for measuring the social, environmental, and governance performance of companies. We also followed the recommendations of the Global Reporting Initiative (GRI, 2006) and the AECA Code of Good Practice for Disclosing Financial Information on the Internet (AECA, 2002). We have specifically examined the CSR indicators for cooperatives drawn up by the Ethos Institute (Brazil) and IARSE (Argentina), and those developed by the CSR.COOP program (Spain). For each indicator, we scored the level of information provided on the cooperative website according to the criteria shown in Table 2.

Table 1: Spanish second-tier cooperatives as of July 2009

Autonomous region	Region	Registered	Active	Cooperatives	Cooperatives
Andalusia	AN	102	65	20	18
Aragon	AR	12	12	3	3
Asturias	AS	4	3	2	1
Balearic Islands	IB	2	2	1	0
Basque Country	PV	38	32	12	11
Canary Islands	IC	1	0	0	0
Cantabria	CAN	1	1	0	0
Castile & La Mancha	CM	26	21	9	7
Castile & Leon	CL	35	37	5	5
Catalonia	CAT	43	21	12	10
Ceuta	CE	0	0	0	0
Extremadura	EX	27	20	9	7
Galicia	GA	17	10	2	2
Madrid	MA	4	3	1	1
Melilla	ME	0	0	0	0
Murcia	MU	1	1	0	0
Navarre	NA	6	4	2	2
Rioja	LR	5	3	0	0
Valencia	VA	30	28	8	7
Spain-wide	ES	29	17	1	1
Total		383	280	87	76

Source: authors' data.

Table 2: CSR indicator performance level

Score	Criterion	Explanation
3	Full information	Information provided is relevant and informative
2	General information	Information is given, but no details are provided; the information is not relevant and not informative
1	Existence mentioned	The subject is mentioned but no information is given
0	No information/Not mentioned	Subject not mentioned and no information is given

Source: own preparation

The data were analyzed by descriptive and inferential methods, including ANOVA and Multidimensional Scaling (MDS). MDS is a multivariate interdependence technique that aims to display similarities between a set of objects or stimuli in a bounded geometrical space and can be used as an alternative to factor analysis and cluster analysis or to complement these techniques (Cox and Cox, 2000). The MDS results made it possible to display the STCs on a two-dimensional chart where the position of each dot shows the similarity or dissimilarity of each company by the 56 indicators analyzed. The STCs located closer together are those with more homogenous information levels than those located further away.

Additionally, we constructed an Index of CSR Information Transparency on the Web (ICSRT) with the 56 indicators mentioned above, which enabled us to quantify the CSR information transparency of the companies studied through the Internet. The quantification method we employed followed Gandía and Andrés (2005).

After measuring the performance by each indicator, we calculated four partial transparency index scores, one for each of the dimensions analyzed: an environmental transparency index (ENI), a social transparency index (SI), an economic transparency index (ECI), and a governance transparency index (GI). These partial indices were calculated from a standard formula, which is illustrated in Eq. (1) for the particular case of the environmental transparency index (ENI):

$$(1) \quad ENI = \frac{\sum \text{Score for each environmental indicator}}{\sum \text{Possible total score for each environmental indicator}} \times 10$$

Each partial index was weighted by 10 to obtain a simple measurement in the 0-10 range. Also each partial index incorporates a different number of indicators (12 for ENI, 7 for ECI, etc., see above), and we weighted them proportionately to the share of their indicators in the total set of 56 indicators before adding up to obtain the total ICSRT index (Index of CSR Information Transparency on the Web). The ICSRT index was thus calculated as follows:

$$(2) \quad \text{ICSRT} = \text{SI} \cdot 0.357 + \text{ENI} \cdot 0.214 + \text{ECI} \cdot 0.125 + \text{GI} \cdot 0.303$$

Empirical results

Descriptive analysis

The statistical analysis pursued three aims. The first aim was to identify the CSR indicators on which the second-tier cooperatives gave the most information on their websites and to observe whether significant differences in the level of information existed by autonomous region and type of cooperative. This was achieved by ANOVA. The second aim, analyzed by MDS, was whether or not the STCs exhibited similar behavior in respect of the level of information provided for each indicator. The third aim was to apply the ICSRT in order to determine the CSR information transparency level of these cooperatives.

The first result was that the cooperatives were very selective in reporting on the indicators. The most information was provided on a subset of just 12 indicators (out of 56):

- Environmental dimension:
 - o Manufacture of goods and provision of services without environmental impact (ecological products) (END07);
 - o Use of clean technology (technological change/renewal) resulting in lower environmental impact (END08);
 - o Environmental management system certification: ISO 14001:2004 (END09).
- Social dimension:
 - o Quality management system certification: ISO 14001:2004 (SD16);
 - o Investments in RDI – Research&Development&Innovation (SD17);
 - o Product labeling: product traceability (SD18);
 - o Prizes and awards for quality production (SD19).
- Economic dimension:
 - o Financial data, such as sales figures, market share, etc. (ECD01)
- Governance dimension:
 - o Management body: Board of Directors or Manager (GD02);

- o Information on main business activities (GD03);
- o Own business news service (GD04);
- o Clear reference to being a cooperative and/or to cooperative principles (GD14).

Not many of the Spanish STCs reported on the indicators selected; if they did, they only mentioned the existence of the indicator without giving more information, whether general or detailed. Out of a maximum score of 10, the mean level of information for the 12 “most informative” indicators ranged from 8.8 to 1.1 (the mean scores are shown in Table 3 in descending order). No other indicator reached a mean score of 1, and 21 out of 56 indicators (37.5%) obtained a score of 0: no information or the indicator not mentioned (see Table 2).

The data in Table 3 show that the Spanish STCs usually provided detailed information on their business activities (GD03) (96% companies), but only 18% (14 companies) gave any economic data (ECD01), in most cases their turnover. Nearly half the STCs (49%, 37 companies) had business news services of their own on their websites (GD04) and 82% (62 companies) stated that they were cooperatives (GD14), although only 56% of the companies specified that they were second-tier cooperatives. On the other hand, only 12 companies (14%) clearly identified their management body (GD02). Consequently, the information they supplied on their economic and governance dimensions was not only scarce but also lacked relevance.

Descriptive analysis of the data also revealed that the STC websites provided CSR information that mainly centered on their responsibility for supplying quality goods or services with no indication of the environmental impact (SD16, SD17, SD18, SD19, END07, END08, END09). They did not give information on the environmental impact of their business as a whole, their responsibilities towards their employees (labor relations), the community, human rights, diversity, etc.; the corresponding indicators scored 0.

Another notable result is that while 19.7% (15 companies) had links to information on their members, only 1 STC had a link to information on corporate social responsibility and only 2 STCs published sustainability reports.

The analysis also showed that the levels of information on the 56 indicators differed according to the autonomous regions and the type of cooperative. We now proceed to discuss these differences

Table 3: Principal indicators of information provided by STCs on their websites

Indicator	Score	Percent of Cooperatives providing information
GD03: Business activities	8.8	96
GD14: Being a cooperative	6.6	82
GD04: News service	4.4	49
SD18: Product traceability	3.3	37
SD16: Quality management systems	3.1	38
SD17: Investments in RDI	2.3	30
END08: Technological change/renewal	2.3	26
END07: Ecological products	2.5	30
SD19: Prizes for product quality	1.5	18
END09: Environmental management systems	1.3	17
ECD01: Economic data on the business	1.1	18
GD02: Management body: Board of Directors or Manager	1.2	14

Source: own preparation

Differences by autonomous region

Some differences were observed when analyzing the data by autonomous region, although the regional differences were statistically significant (at the 5% level) for only three indicators – SD01 (number of employees, broken down by permanent and seasonal), ECD01 (economic data such as turnover, market share, etc.), and GD17 (prizes and awards for socially responsible companies, information transparency, best CSR report, etc.). These differences were as follows:

a) The cooperatives from Galicia and the Basque Country gave more detailed information on the number of employees (SD01), with mean scores of 4.3 out of 10 for the Basque Country STCs and 3.3 out of 10 for those of Galicia; the rest either gave no information or scored under 1, as was the case for Andalusia and Catalonia.

b) Again, it was the Galician and Basque cooperatives that gave more detailed information on economic indicators (ECD01), with the same mean scores of 4.3 out of 10 for the Basque Country and 3.3 out of 10 for Galicia; the rest either gave no information or scored under 2, as was the case for Valencia, Castile & La Mancha, Extremadura, and Catalonia.

c) Lastly, the STCs from Aragon distinguished themselves from those of all the other regions in the information they provided on the governance indicator GD17, with a mean score of 3.3 out of 10. Unfortunately, this relatively high score was due to a single Aragonese STC, which reported on its 2007 award for business excellence. None of the other STCs gave any information at all on this indicator.

The indicators that distinguished Galicia and the Basque Country from the other regions (economic data and number of employees) could be related to the predominance of the industrial sector in these two regions. In the Basque Country, the cooperatives that formed part of the study population are industrial. Specifically, they belong to the Mondragon Group. This major cooperative conglomerate has considerable contacts with large companies and therefore needs to promote its transparency and its financial credibility, hence these results.

Differences by type of cooperative

By type of cooperative, differences significant at the 5% level were observed for nine indicators:

- END01 (use of renewable energy),
- END11 (sponsorship of environment-related activities),
- END12 (environment-related prizes and awards),
- SD02 (occupational risk prevention system),
- SD11 (donations to charity),
- SD16 (quality management system certification),
- SD18 (product labeling: product traceability),
- ECD01 (economic data such as turnover, market share, etc.)
- GD13 (CSR or sustainability report).

These differences were as follows:

a) Industrial STCs supplied a level of information for END01, END11, END12, SD02, SD11, and GD13 that on average gave a score of over 1.5 out of 10 for each of these indicators, while cooperatives of other types gave no information on these issues. These results are foreseeable as industrial cooperatives are typically the greatest polluters and they need to communicate the actions they take to counteract the negative environmental impact. Their actions mirror what other, non-cooperative corporations are doing to improve their image.

b) Industrial STCs also supplied a significantly higher level of information for ECD01, scoring 4.6, while the rest scored less than 2.4 or, as in the case of supply cooperatives and social initiative cooperatives, provided no information at

all on this subject. These results again reflect the greater environmental awareness of industrial cooperatives compared to others.

c) Farming STCs were the only type of cooperatives to pay particular attention to product labeling and traceability, providing a level of information that gave them a mean score of 5 out of 10. Farming cooperatives attempt to tell consumers and society in general that their products are safe and reliable. This result reflects a concern with food safety.

d) Supply STCs stood out with information on quality management system certification (SD16): their mean score on this indicator was 5.6 out of 10, while the rest either scored less than 4.5, as was the case for industrial and farming cooperatives, or provided no information at all on this indicator, as in the case of service and work- associated cooperatives.

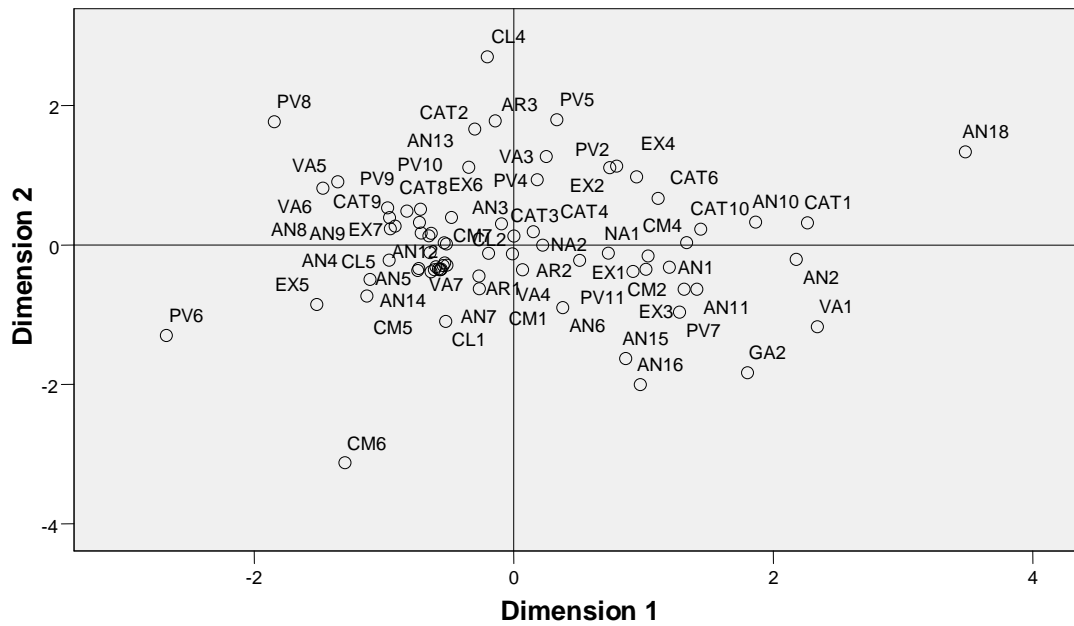
Analysis of homogeneity of behavior

The homogeneity of behavior of the cooperatives in the sample with respect to the level of information provided for the various indicators was investigated by Multidimensional Scaling (MDS).⁸ MDS was applied to the level of information provided by the 76 STCs for each of the 56 indicators. These data were used to construct a proximity matrix (similarities or dissimilarities) of the 76 STCs by all 56 indicators. The proximity matrix was then converted into a distance matrix that provided information on the distances between paired cooperatives based on the level of information reported. Applying MDS to this matrix enabled us to display the 76 STCs on a two-dimensional chart, where the position of each dot shows the similarity or dissimilarity of the STC relative to others based on the 56 indicators analyzed (Figure 1). The STCs that are closest to one another on the chart provide a more similar level of information than those that are further away from one another.

Given the diversity of the indicators analyzed, the information was aggregated into two dimensions based on total and partial transparency indices (see equations (1) and (2) above). On dimension 1 (horizontal axis), the cooperatives farthest to the right were the most transparent and those farthest to the left the least transparent in relation to the economic and governance indicators. Dimension 1 could therefore be interpreted as the dimension of economic and governance responsibility. In the same way, the cooperatives located lower down on dimension 2 (vertical axis) were more transparent by the social and environmental indicators than those higher up. Dimension 2 could therefore be interpreted as the dimension of socio-environmental responsibility.

8 MDS was implemented by the ALSCAL procedure in the SPSS 15.0 statistical software package.

Figure 1: Positions of the 76 sample cooperatives in two dimensions as estimated by MDS. The cooperatives are coded according to the autonomous region (see Table 1). Thus, AN18 is cooperative number 18 in Andalusia. Dimension 1 – economic and governance responsibility; Dimension 2 – socio-environmental responsibility.



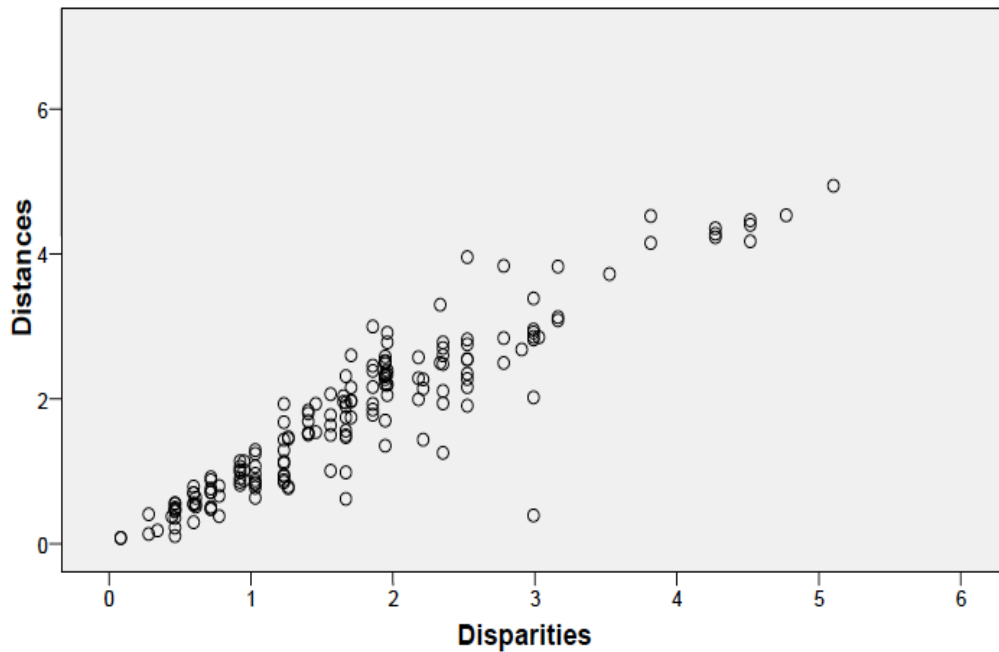
Source: own analysis

To analyze the appropriateness of the resulting representation, we assessed the goodness of fit by the stress index and R^2 . The stress index was 0.2, which according to Kruskal (1964) is middling. R^2 was 0.8, and its closeness to 1 indicates good fit of the MDS model. Additionally, the MDS solution is required to achieve maximum fit between the proximity matrix (original distances) and the distance matrix generated in the process of analysis (disparities), with the results following a straight line. The MDS results are indeed close to a straight line in the distance–disparity plane (Figure 2), which confirms that the analysis is acceptable (Cox and Cox, 2000).

The two-dimensional plot obtained from the MDS model (Figure 1) shows that most of the STCs fall in a dense cloud, exhibiting very similar behavior as regards their e-corporate social responsibility (the level of CSR information supplied on

the Internet). Yet three cooperatives (AN18, CM6, and PV6) fell far from the homogeneous group. We can thus say that the cooperative societies analyzed in this study fall into four groups: on the one hand, there is the large homogeneous group of cooperatives that display similar behavior (73 cooperatives), forming a dense cloud in two dimensions; on the other hand, there are three isolated cooperatives that display heterogeneous behavior and fall far from the homogeneous group. AN18, CM6, and PV6 display heterogeneous behavior in the sense that they provide substantially higher levels of information for the transparency indicators: governance indicators for AN18, environmental indicators for CM6, and social indicators for PV6. This result has been confirmed by cluster analysis, in which AN18, CM6, and PV6 fall outside the clusters created by the other 73 cooperatives.

Figure 2: Linear fit scatterplot of the MDS model. Distances – original distances from the proximity matrix; Disparities – values from the transformed distance matrix



Source: own analysis

Index of CSR information transparency

The above results were compared with the Index of CSR Information Transparency on the Web (ICSRT). **Table 4** shows the main descriptive statistics

of both the partial indices and the total information transparency index of the STCs studied.

These data show that the mean values for each of the partial indices were low. The highest-scoring partial index was the governance transparency index (GI), with a mean score of 1.4 out of 10, while the lowest was the economic transparency index (ECI), with a mean score of 0.2 out of 10.

Based on these partial indices, the total Index of CSR Information Transparency on the Web (ICSRT) was also very low, with mean of 0.8 out of 10. The highest score for the total transparency index was 2.5 and the lowest 0. For 63% of the STCs, the Index of CSR Information Transparency on the Web or e-corporate social responsibility score did not reach 1 out of 10. Thus, the STCs do not appear to actually use the Internet as a medium for reporting on and communicating their CSR practices.

Table 4: Descriptive statistics for index of CSR information transparency on the web

Indicator	n	Mean	SD	Minimum	Maximum
SI	76	0.7	0.6	0.0	2.3
ENI	76	0.6	1.0	0.0	5.2
ECI	76	0.2	0.4	0.0	1.4
GI	76	1.4	0.6	0.0	3.9
ICSRT*	76	0.8*	0.4	0.0	2.5

*For the definition of ICSRT, see Eq. (2).

Source: own analysis

Analysis of the total transparency index for each of the cooperative societies showed that the cooperatives with the highest information transparency index were those that emerged as outliers in the MDS (AN18, CM6, and PV6). AN18, CM6, and PV6 had a total transparency index (ICSRT) significantly higher than that the other cooperatives. For AN18, ICSRT was 2.5 out of 10 (the highest among all cooperatives studied); for CM6, 2.1 out of 10; and for PV6, 1.7 out of 10. These three cooperatives also achieved the highest score by any of the four partial indices. AN18 achieved the highest governance transparency index with a score of 3.9 out of 10, CM6 achieved the highest environmental transparency index with a score of 5.2, and PV6 achieved the highest social transparency index with a score 2.3.

In view of the results, we consider the ICSRT and the four partial indices

innovative ways to measure CSR. These indicators are clear and useful, since the situation of a specific cooperative can be rapidly assessed in comparison to the rest. In addition, ICSRT fits the cooperative model. Cooperatives can use it as a reference for actions and values and for incorporating CSR reporting into their websites, as in many cases these actions and values coincide with the cooperative values and principles.

As noted above and documented in the list of references, the Internet is one of the most effective means of communication today. However, it is not the only one. The main limitation of the ICSRT is that it only measures the presence of the indicators on websites, but companies may carry out CSR activities and communicate them by other means. Technological barriers also may be among the reasons why cooperatives do not use the web. Finally, there may be some underlying causes that are generic to all companies (managers have little training in using the web) or specific to cooperatives (since cooperatives do not rely on the stock market, the incentive to invest in CSR is less immediate).

Conclusions

The purpose of the present study was to analyze e-corporate social responsibility (e-CSR) in Spanish second-tier cooperative societies, focusing on the CSR information that these companies provide through their websites. The fact that research to date reflects a positive relationship between the strength of CSR presence and the productivity of the business suggests that CSR practices should be communicated adequately to the market, sending signals to stakeholders and to society that will influence purchasing, investment, employment, and other decisions.

Our hypothesis in this study was that since the existing literature considered CSR to be a substantial and inherent factor in cooperatives, CSR ought to be an element that second-tier cooperatives use as a source of competitive advantage, telling society in general about it in their communications and particularly through their websites, since today the Internet is a basic communication tool.

In general, the results of our fieldwork show that the STCs make poor use of the Internet as a medium to distribute information about their CSR practices to stakeholders. This behavior is widespread in all the autonomous regions and for all types of cooperatives. It is highly homogeneous among almost all the cooperatives analyzed and extends to each of the four dimensions examined in this study: environmental, social, economic, and governance transparency. Most information is provided by STCs for the governance dimension and the lowest level of information is observed for the economic dimension.

Our empirical results do not support the initial hypothesis. Our analysis of the CSR content presented on the websites of Spanish second-tier cooperatives reveals that these enterprises have not seriously embraced the possibilities of communicating their CSR activities through the Internet. The reasons need further study. Does this weak showing reflect limited appreciation of the Internet's potential for communicating CSR performance or does it reflect a deeper disinterest in conventional CSR activities? Our research highlights the need for further investigation and discussion.

In any event, we argue that cooperative societies, as business companies, must adapt to the changes taking place in society. The Internet is certainly emerging as a clear and distinctive element in communicating CSR information.

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Environmental Dimension	Information given on	NO	Yes			Remarks
Goods and services						
END07	7. Manufacture of goods and provision of services without environmental impact (ecological products)					
END08	8. Use of clean technology (technological change/renewal) resulting in lower environmental impact					
Operations and Management						
END09	9. Environmental management system (EMS) certification: ISO 14001:2004					
END10	10. Provision of a waste collection centre for members					
END11	11. Sponsorship of environment-related activities					
END12	12. Environment-related prizes and awards					

Social Dimension	Information given on	NO	Yes			Remarks
	Indicators	0	1	2	3	
Labour relations						
SD01	1. No. of employees, broken down into permanent and temporary					
SD02	2. Occupational risk prevention system					
SD03	3. Social benefits for employees (lunch, nursery, dividends, etc.)					

Social Dimension	Information given on	NO	Yes			Remarks
SD04	4. Training courses and education for employees					
SD05	5. Work/family reconciliation policies					
SD06	6. Prizes or awards for responsible labour practices (work/family reconciliation, etc.)					
SD07	7. SA8000 (international labour standards) certification					
Diversity						
SD08	8. No. of women on the Board of directors ⁽⁹⁾					
SD09	9. Has a Special Employment Centre					
SD10	10. Prizes or awards for equal opportunities					
Community						
SD11	11. Donations to charity					
SD12	12. Sponsorship of local sporting or cultural activities					
SD13	13. Support for education (vocational training courses, courses for members, members' children, the local community, etc.)					
SD14	14. Volunteer programmes					
SD15	15. Prizes and awards for social action					

(9) This indicator was scored as follows: 0 = No information, 1 = No women, 2 = At least one woman, 3 = Number of women proportional to number of men.

Social Dimension	Information given on	NO	Yes			Remarks
Goods and services						
SD16	16. Quality management system (QMS) certification: ISO 14001:2004					
SD17	17. R&D&I investments					
SD18	18. Product labelling: product traceability					
SD19	19. Prizes and awards for quality goods or services					
Human rights						
SD20	20. Code of conduct in the production chain					

Economic Dimension	Information given on	NO	Yes			Remarks
	Indicators	0	1	2	3	
Economic and financial data						
ECD01	1. Financial data such as sales figures, market share, etc.					
ECD02	2. Access to full company accounts for the last complete financial year					
ECD03	3. Access to full company accounts going back three or more complete financial years					
ECD04	4. Separate access to the auditors' report					
ECD05	5. Access to management report					
ECD06	6. Application of surplus					
ECD07	7. Endowment of the Education and Promotion Fund					

Governance Dimension	Information given on	NO	Yes			Remarks
			0	1	2	
	Indicators	0	1	2	3	
Structure						
GD01	1. Composition of the Board of Directors					
GD02	2. Management body: Board of Directors or Manager					
Transparency						
GD03	3. Information on main business activities					
GD04	4. Own business news service					
GD05	5. Articles of Association					
GD06	6. Code of governance or ethical code					
GD07	7. Cooperative governance report					
GD08	8. Environmental impact policy					
GD09	9. Human resources policy					
GD10	10. R&D&I policy					
GD11	11. Food safety policy					
GD12	12. CSR policies					
GD13	13. Corporate social responsibility or sustainability report					

Governance Dimension	Information given on	NO	Yes			Remarks
Other						
GD14	14. Clear reference to being a cooperative and/or to the cooperative principles					
GD15	15. Ethical and socially responsible management system (SGE21) certification					
GD16	16. Adherence to international declarations and principles such as the Global Compact					
GD17	17. Prizes and awards for business excellence, socially responsible company, information transparency, etc.					