



The cooperative ESG disclosure index: an empirical approach

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Abstract

Growing concern about Environmental, Social, and Governance (ESG) performance is pushing businesses, including social economy enterprises such as cooperatives, to seek solutions for Sustainable Development (SD) challenges. This study explores the current landscape of ESG reporting by Spanish cooperatives, adding to the limited knowledge about their sustainability disclosure practices. We propose a specific framework for these entities based on non-financial indicators as a preliminary step to develop an index for ESG reporting, the Cooperative ESG Reporting Index (COOPESG). In terms of methodology, the first step is to create an ad hoc database of primary data sourced through the analysis of cooperative websites. Then, by reviewing the indicators reported by these companies, these primary data are then used to develop an index. Our findings show that only half of the sampled cooperatives have a specific section on their website for ESG reporting. Regarding formats, Codes of Ethics were the most frequent type of report used, followed by the publication of information on SDGs. In terms of content disclosed, the social and governance blocks stand out, while the least information is disclosed on the economic and environmental blocks. Furthermore, there is evidence of a size and sector effect on the disclosed content. All this provides valuable insights for scholars and practitioners alike. Thus, the main practical contribution of this paper for cooperative managers is that it supports the effective disclosure of ESG in line with prevailing good practice, addressing emerging social regulation in the context of the European Union. Also, for academia this study offers a practical breakthrough in the analysis of this subject, helping to fill the gap on cooperatives found in the ESG reporting literature and setting a new research agenda.

Keywords Cooperatives · ESG · Non-financial reporting · Impact · Index · Indicators

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1 Introduction

Environmental, Social and Governance (ESG) impact is now a mainstream concern for all businesses, including social economy enterprises, such as cooperatives. It is driven by the need to urgently tackle the challenges associated with Sustainable Development (SD) and to find a harmonious balance between economic growth, the environment, and society. Organizations are expected to consider how their operations affect the environment, their employees and local communities. These concerns are linked to various initiatives and actions aimed at achieving SD, as outlined by the United Nations (UN) (2015). The most significant sustainability initiative in recent years was the 2030 Agenda for Sustainable Development (UN, 2015), which was approved by 193 countries and set out 17 Sustainable Development Goals (SDGs) aimed at promoting economic growth, environmental preservation, and social actions, emphasizing the crucial role of organizations in achieving SD. Although progress is uneven across countries and regions (Anselmi et al., 2023; D'Adamo and Gastaldi, 2023), the active participation of organizations plays a vital role in ensuring that their current business practices align with the SDGs (Delmas et al., 2019; KPMG, 2022).

Since stakeholders are making decisions that account for ESG factors, there is a need for clear and consistent ESG reporting among organizations, involving a pragmatic sustainability approach (Ali et al., 2023). While this concern does, as noted, relate to any type of business, cooperatives start with an advantage in terms of their ESG impact (Gallardo-Vazquez et al., 2014). Cooperatives are organizations that possess the following unique characteristics: (i) inclusive membership; (ii) member-driven democracy, as members actively participate in determining policies and making decisions; (iii) fair capital contribution by members, ensuring that members make equitable contributions and have democratic control over the cooperative's capital; and (iv) autonomy and self-sufficiency. Moreover, cooperatives actively promote education and training (Lei et al., 2022) and encourage a collaborative spirit among members (Marcis et al., 2019). However, the UN (2023: para.64) acknowledges that “although Member States have recognized cooperatives as key partners for sustainable development, they continue to play a relatively small part in overall economic and social policies and practice, compared with their huge potential contribution”.

The need for cooperatives to pursue both social and economic goals means they have an innate interest in fulfilling social responsibilities to their employees as well as the community at large (Abarghani et al., 2013; Altman, 2015). Indeed, they are considered socially responsible enterprises in essence. According to the International Labour Organization (ILO) (ILO, 2014:p.13), there is a widely held consensus among many actors, including the UN, ILO and the International Cooperative Alliance (ICA), that the cooperative “is the type of organization that is most suited to addressing all dimensions of reducing poverty and exclusion”. Furthermore, the ICA (2016) notes a growing momentum in sustainability reporting but calls for more evidence-based approaches to demonstrate the contribution that individual cooperatives and the cooperative movement as a whole can make to advancing the sustainability agenda. Cooperatives' contribution to sustainability merits special attention; indeed, the topic has very recently been addressed in some papers (e.g., Duguid & Rixon, 2023; Mozas-Moral et al., 2021; Yakar-Pritchard et al., 2023). In terms of policy-making, the Strategic Plan 2020–2030 of the ICA (2020) includes the following challenges to be addressed: *D.1. Identify indicators for the contribution of cooperatives to the SDGs*

and *D.2. Report on the contribution of cooperatives to the SDGs*. This paper seeks to contribute to addressing these important challenges.

Given that the aim is for the SDGs to be achieved by the year 2030, evidence suggests that many firms are now adopting and optimizing strategies to reach this target. In this regard, cooperatives have the potential to guide progress towards the achievement of the SDGs thanks to their unique attributes, such as solidarity and cooperation, as well as their balanced and integrated approach to economic, environmental, and social issues (Yakar-Pritchard & Çalyurt, 2021). It has been demonstrated that management of innovation and sustainability and the flexibility of business models vis-à-vis the circular economy are fundamental to the successful application of the SDGs by cooperatives (Lafont et al., 2023).

We are at a time of burgeoning regulatory interest and regulatory development in ESG reporting. This is demonstrated by the approval of the Corporate Sustainability Reporting Directive 2022/2464 (CSRD),¹ which requires ESG disclosures from all European Union (EU) listed companies (as well as non-European companies with at least one subsidiary in Europe), with the exception of micro-enterprises. The new legislation amends the Non-Financial Reporting and Diversity Directive 2014/95 (NFRD), which has been analyzed in various previous studies (Aureli et al., 2020; Caputo et al., 2020; Mittelbach-Hörmanseder et al., 2021). The CSRD will affect the reporting of some 50,000 companies, and also applies to cooperatives, which is the main focus of this article. Furthermore, the first set of European Sustainability Reporting Standards (ESRS)² has recently been published. This first set of 12 standards follows the CSRD proposal and encompasses ESG issues. The set includes cross-cutting and thematic standards, and there are plans to publish sector-specific standards and standards for small and medium-sized enterprises (SMEs) in the future.

Regarding the obligation in Spain for social economy enterprises, including cooperatives, to formulate the Non-Financial Information Statement (NFIS) established by the NFRD, we refer to Technical Note no. 2 “Obligatory nature of the Non-Financial Information Statement in Social Economy Enterprises” published by the Spanish Accounting and Business Administration Association (AECA) Commission for Cooperatives and other Social Economy Enterprises (AECA, 2021). Specifically, it addresses how Law 11/2018 (enacted to transpose the NFRD), which refers to corporate enterprises, is applied to social economy enterprises.

According to Gillan et al. (2021), ESG refers to how corporations, other entities, and their stakeholders integrate ESG concerns into their business model considerations. To this end, various stakeholder groups, including investors, employees, communities, environmentalists, and consumers have been considering ESG issues in their decision-making processes. In this paper, ESG reporting is understood as any type of information disclosed by companies (in this case, cooperatives) that goes beyond the financial reporting requirements currently mandatory under accounting legislation. While formal sustainability reports are not yet common among cooperatives, these organizations may be using alternative channels such as the internet, social media and announcements to address these matters, serving as a mechanism to fulfill the expectations of stakeholders.

In recent years, a considerable number of papers have analyzed ESG reporting practices, but the literature is still in an incipient stage when it comes to cooperatives. Indeed, well-

¹Available at: https://www.europarl.europa.eu/doceo/document/TA-9-2022-0380_EN.pdf (Accessed September 2023).

²Available at: https://eur-lex.europa.eu/eli/reg_del/2023/2772/oj (Accessed January 2024).

known studies on this type of reporting, such as the annual report by KPMG (2022) on the sustainability disclosures of Fortune 500 companies and the top 100 firms in each country—Spain included—exclude cooperatives. Likewise, a well-known report on ESG reporting in Spain published by EY (2023) only includes listed companies. Existing literature offers limited insights regarding how cooperatives engage in sustainability reporting, and those studies that do focus specifically on cooperatives tend to center on social and environmental aspects (Fouché & Uys, 2023; Marcis et al., 2019), leaving aside the governance issue. But, in fact, cooperatives have a set of specific characteristics derived from their cooperative principles and values, which affect governance issues, as mentioned above. Indeed, there are three fundamental properties inherent in these companies as “peoples’ organizations: humanism (people-centered approach); joint (distributed) ownership and control, and democracy (self-governance)” (Novkovic & Miner, 2015: p.11).

Recently, several approaches have been proposed to evaluate and measure organizations’ efforts in sustainability disclosure practices (Dočekalová & Kocmanová, 2016). Composite indicators, such as ESG indices, have gained prominence as useful tools for assessing and summarizing organizational sustainability disclosures, thus offering a comprehensive and synthesized evaluation of companies’ ESG performance (Luque-Vílchez et al., 2023). However, the lack of a cooperative-specific ESG index represents a significant barrier to understanding and promoting the particular contributions of these organizations to SD. Moreover, as far as we know, no paper has addressed ESG reporting practices in cooperatives with a specific focus on channels of communication, formats used, and contents disclosed. This research gap presents a unique opportunity to contribute to the field by exploring these aspects related to ESG reporting practices in cooperatives and by constructing an index that reflects the distinctive characteristics and priorities of cooperative enterprises. Therefore, the present study aims to fill this critical gap by exploring the sustainability reporting landscape in Spanish cooperatives and by developing a cooperative ESG reporting index.

There are many studies that propose ESG indexes focused on investor-owned firms; for example, the recent one by Caraveo Gomez Llanos et al. (2023). These authors aim to identify relevant ESG criteria and the most suitable set of key performance indicators in the airline industry after the impact of COVID-19, proposing a comprehensive model for rating the airlines according to their ESG performance. Another related study is the one by Luque-Vílchez et al. (2023), who develop a stakeholder-specific composite indicator for European agri-food companies that accounts for different stakeholder profiles in ESG performance. In the specific context of cooperatives, one of the most relevant studies on measuring sustainability is the paper of Abdul-Aris et al. (2018), who design a set of sustainability indicators specifically tailored to cooperatives in Malaysia.

The need for a better understanding of the sustainability disclosure practices and the key material topics that significantly affect organizations requires evaluation at an organizational level. The metrics of reporting for environmental and social performance, and for organizational attributes such as the governance structure, are parameters that merit more in-depth analysis (Diwan & Sreeraman, 2023). Therefore, aiming to bridge the aforementioned gap, this paper has two main objectives. First, we seek to find out what ESG information Spanish cooperatives are disclosing, beyond the requirements established by the financial reporting framework, which will enable us to conclude on the current state of sustainability reporting. To this end, we review a sample of the Spanish cooperative landscape, comprising the top 100 cooperatives in the latest available ranking compiled by the

Spanish Social Economy Employers' Confederation (CEPES). Specifically, the initial aim is to document and describe the diversity and materiality of the ESG information disclosed by one of the most representative figures of the social economy. Our second objective is to create an index that ranks the different cooperatives according to the extent of their reporting. This index, called the Cooperative ESG Reporting Index (COOPESG), can range from 0 (the cooperative does not disclose information on any of the proposed ESG indicators) to 1 (the cooperative discloses information related to all of them). It captures cooperatives' sustainability performance, providing an overview of their ESG performance. This paper also contributes to the literature by offering a framework for ESG reporting in cooperatives. It encourages the measurement and comparison of this type of reporting through the specific index created, which could be used as a basis for future ESG rankings of such companies.

In this paper, the research method is carried out in three stages: first, drawing on a comprehensive literature review, ESG indicators are selected on the basis of their relevance in the field of sustainability information specifically tailored to cooperatives; second, primary data related to ESG indicators are collected directly from the websites of the sampled cooperatives; and third, the index or composite indicator is formulated for each cooperative. These indexes provide relevant information for stakeholders' decision-making, they can help cooperatives to improve management strategies, and they can be used to rank cooperatives based on the ESG information they disclose. Regarding the cooperatives selected for the study, the sample is made up of the 100 largest Spanish cooperatives, the majority of which belong to the "Agriculture, Forestry and Fishing" sector (77% of the total).

The rest of this paper is structured as follows. The next section reviews the state of research on non-financial reporting for cooperatives. Then, the methodological design is described. The fourth section presents the results, while the fifth section discusses the main contributions to cooperative ESG reporting. The last section is devoted to conclusions, limitations, and future lines of research.

2 Literature review and research questions

In the current corporate reporting debate, there is a prominent focus on ESG issues. These are exciting times in sustainability reporting standards. On the one hand, there is the establishment of the International Sustainability Standards Board (ISSB) and the consolidation in the ISSB of many of the existing sustainability standard-setters. On the other hand, there is the recent approval of the CSRD and the development of the ESRS by the European Financial Reporting Advisory Group (EFRAG), according to the European Commission resolution of 31/7/2023 C(2023) 5303.

Sustainability reporting has also attracted a lot of attention from accounting scholars and accounting research. One conclusion coincides with KPMG's Survey of Sustainability Reporting, which highlights a steady increase in sustainability reports issued by the 100 largest companies by revenue in 52 selected countries and by the world's 250 largest companies by revenue according to the Fortune 500 ranking (KPMG, 2022). However, the vast majority of the studies, including those carried out by policymakers—for example, *Current Non-financial Reporting: Formats and Practices*" (EFRAG, 2021a)—are focused on the largest listed companies. SMEs and non-stock companies, such as cooperatives, are typically "off the radar".

Cooperatives are a type of entity characterized by the dual role of members as capital providers and, depending on cooperative type, as workers, customers, or suppliers (Costa & Carini, 2016; López-Espinosa et al., 2009), as well as by the values (self-help, self-responsibility, democracy, equality, equity, and solidarity) and principles defined by the ICA (ICA, 1995). This duality and underlying principles and values place cooperatives squarely in the field of (Corporate) Social Responsibility (Castilla-Polo & Gallardo-Vázquez, 2014; Mozas-Moral et al., 2014). Similarly, CEPES (2021: p.1) has recently identified overlaps between the principles and values promoted due to companies' social responsibility and those of the business fabric of the social economy, which includes cooperatives. There is a positive relationship between cooperatives' values and their economic, social and environmental sustainability (Rincón-Roldán & López-Cabrales, 2021).

Due to the above-mentioned characteristics, cooperatives are better positioned in terms of their awareness of social and environmental issues, but they are less active on sustainability (ESG) reporting (Bollas-Araya et al., 2019), and therefore do not benefit from the improved transparency and accountability associated with this reporting. There are few academic papers on sustainability reporting that focus on cooperatives. Some examples include Yakar-Pritchard and Çaliyurt (2021), who carried out a study on cooperatives included in the Sustainability Disclosure Database (SDD-GRI); and Bollas-Araya et al. (2019), who studied the sustainability reporting and assurance of the cooperatives included in the World Cooperative Monitor, which lists the 300 largest cooperatives in the world. Similarly, Fouché and Polo-Garrido (2021) examined the cooperatives included in the World Cooperative Monitor, but applied a holistic approach to corporate reporting, considering different types of corporate reports. Cooperatives' reporting on SDGs has attracted academic attention recently (Duguid, 2020; Duguid & Rixon, 2023; Polo-Garrido et al., 2022), but none of the related studies develop an index to measure sustainability in cooperatives, and none account for the Spanish context. Indeed, the only such study focused on Spain is the one by Polo-Garrido and García-Martínez (2020), who analyzed the 37 largest cooperatives included in the ranking of the top 100 cooperatives compiled by CEPES.

Organizations established to represent cooperatives have drawn up proposals on sustainability/non-financial reporting for cooperatives. As far back as 2006, Co-operatives UK (2006) produced the document "Demonstrating Co-operative difference. Key Social & Co-operative Performance Indicators. Guidance Document" which provides a set of 10 social and environmental indicators that account for the cooperative perspective. Likewise, the International Cooperative and Mutual Insurance Federation (ICMIF, 2011) published the guide "Measuring and Reporting Sustainability. A Guide for Mutual and Cooperative Insurers" with the purpose of improving the value that can be generated from sustainability, by measuring and reporting it. Another noteworthy example is the Cooperative Social Balance (BSCoop) proposed by ICA-Americas to measure the social impact of the cooperative in its community, among other more specific objectives, and enable its disclosure (ACI Américas, 2022).

Noteworthy initiatives include those carried out by the ICA (2016) "Sustainability Reporting for Cooperatives: A Guidebook" and by Co-operatives (2017) "Narrative reporting: A Framework and Guidance for Co-operatives". The report prepared by the ICA (2016) has a descriptive purpose and is intended to serve as a stimulus for cooperatives to engage in reporting. It does not make any specific proposals to that end, although it does review the different standards and their monitoring in the cooperative sphere. In contrast, the report

prepared by Co-operatives (2017) promotes a model that cooperatives can use as a “check-list” to aid in their non-financial reporting. The scope of non-financial reporting covers social and corporate governance aspects based on three pillars: member value, member voice and cooperative values. The report establishes these three pillars as recommendations for best practice in this type of reporting for cooperatives. In Spain, another initiative comes from the RSE.COOP project (COCETA, 2023). It is aimed at the implementation of social responsibility in a pilot group of cooperatives and Catalan worker-owned companies. Specifically, it seeks to integrate into each company a series of mechanisms and behaviors that enable social responsibility, through a guide or computer tool.

Special mention should be made of cooperatives’ communication about the SDGs, published in 2015 by the UN as part of its 2030 Agenda. Cooperatives’ efforts in this regard have recently been addressed by initiatives such as the ICA’s Cooperatives for 2030 Platform (<https://www.coopsfor2030.coop/en>), aimed at increasing cooperatives’ knowledge of the SDGs, committing to their achievement, and reporting on their progress.

The “E” in ESG reporting relates to environmental factors such as climate change, resource consumption, or pollution. The “S” pertains to social factors such as employee relations, diversity, and community impact. Lastly, the “G” in ESG reporting refers to corporate governance reporting. In this context, while corporate governance is especially relevant for companies, cooperatives present some particular features because of their democratic governance. Although we did not find any previous literature on specific corporate governance reports for cooperatives, we did find some precedents on governance codes for cooperatives. For example, the Business Council of Cooperatives and Mutuals (BCCM, 2018) published a document that includes nine principles aimed at strengthening the corporate governance of these entities. It is also worth pointing out the specific corporate governance codes for cooperatives that Co-operatives UK has been developing since 1996, the most recent of which is the Co-operative Governance Code of 2019 (Co-operatives UK, 2019).³ This practical guide is a tool to help implement good governance, and is applicable to all cooperatives, regardless of size or sector. In France, there is the Guide of Good Practices of the High Council for Agricultural Cooperation (HCCA, 2021), and in Spain we have the ERKIDE and KONFECOOP Code of Good Governance for Cooperatives (2011). In sum, the main challenge is to develop and implement effective institutional models for corporate governance relationships in cooperatives, introducing new governance regulations, codes of conduct and internal institutional changes (Michaud & Audebrand, 2022).

This paper focuses on the top 100 Spanish cooperatives to analyze their current state of ESG reporting. In addition, it establishes a specific framework for these companies based on non-financial indicators, as a preliminary step to develop an index for ESG reporting. To this end, we raise the following research questions:

RQ1: Where do the analyzed cooperatives disclose ESG information?

RQ2: What formats and standards do cooperatives use for reporting on ESG information, SDGs and certifications?

RQ3: What are the main types of content disclosed?

RQ4: Which cooperatives are in the top positions?

RQ5: Are there differences according to size and sector of activity?

³ Available at: <https://www.uk.coop/resources/co-operative-corporate-governance-code> (Accessed September 2023).

3 Sample description and method

The selection of cooperatives for this research is based on CEPES' Relevant Social Economy Companies Ranking.⁴ Since 2007, it has compiled annual data on the most relevant enterprises in the social economy. In 2021, this report referred to a total of 1,056 Spanish social economy entities across all sectors of the economy and ranging widely in size. Of those, 774 are cooperatives, 115 special employment centers, 54 social integration enterprises, 48 employee-owned companies, 25 mutual societies, 24 foundations and associations, 9 fishermen's guilds and 7 business groups. From among the 774 cooperatives, the 100 largest are selected to make up the sample.

3.1 Sample description

Before explaining the methods used, we describe the sample of cooperatives analyzed (Table 1). In terms of sectors, "Agriculture, Forestry and Fishing" stands out, representing 77% of the cooperatives analyzed. It is followed at some distance by the "Manufacturing" sector (10%). Each of the remaining sectors account for a maximum of 4% of the cooperatives analyzed. The average annual turnover of the dominant sector, "Agriculture, Forestry and Fishing", is 135.6 million euros and the average number of employees is 306. The data on the cooperatives in the "Wholesale and retail trade" sector stand out, with an average turnover of 1.4 billion euros and an average number of employees of 15,468. Based on these results, it can be seen that Spanish cooperatives generally do not have high turnover and number of employees, with medium-sized companies predominating.

⁴ Available at: <https://www.cepes.es/ranking-global&lng=en> (Accessed September 2023).

Table 1 Descriptive data on the sample of cooperatives

National Classification of Economic Activities (CNAE-2009)	Number of cooperatives	Average turnover (millions €)	Average Number of employees
Agriculture, Forestry and Fishing	77	135.6	306.0
Manufacturing	10	352.9	2,480.9
Wholesale and retail trade	4	1,397.3	15,468.3
Education	2	72.9	1,389.5
Electricity, gas, steam and air conditioning supply	2	57.5	51.5
Human health and social work activities	2	89.1	3,119.0
Construction	1	326.0	2,175.0
Other service activities	1	250.0	9,378.0
Transportation and storage	1	56.6	68.0
Total	100		

Source: Own elaboration

3.2 Methods

In order to address the main aim of this paper, i.e., to investigate the sustainability disclosure practices of Spanish cooperatives by delving into the current ESG reporting landscape, we propose a framework specifically tailored to these organizations, employing sustainability indicators and developing an ESG reporting index. Given the need to work with primary data collected directly from the selected cooperatives, the methodology was carried out in three stages: (1) identification of sustainability indicators and validation of the measurement scale; (2) fieldwork, coding and discussion of atypical cases; and (3) development of the Cooperative ESG Reporting Index. The most relevant aspects of each stage are detailed in the following subsections.

3.2.1 Identification of sustainability indicators and validation of the measurement scale

The first stage in the methodology was a review of the specific literature on the different ESG dimensions, as well as the specific characteristics that may be linked to the cooperative legal form. We began with a thorough examination of the existing research on ESG dimensions, focusing specifically on studies of cooperatives, acknowledging their unique structure, values, and potential contributions to sustainability.

Following this review, an initial list of indicators covering the ESG dimensions was proposed for validation. These indicators were aimed at capturing both general and cooperative-specific sustainability aspects. To assess the indicators' relevance and applicability, we conducted a pre-test with 15 cooperatives. Once this pre-test had been carried out, the final list included 49 indicators selected on the basis of their relevance in the field of non-financial information combined with their applicability to cooperatives, and classified into three dimensions of analysis: (i) the communication channel, i.e., the way of communicating sustainability information in each cooperative; (ii) the formats used, i.e., the kind of sustainability reports that are released in each organization (standalone reports related to ESG); (iii) and disclosed content, i.e., the specific aspects that are covered in each ESG dimension.

The indicators used in relation to communication channels and formats are detailed in Appendix 1 and those related to the disclosure of content are detailed in Appendix 2. Most of the indicators used were dichotomous (D), with value 0 = absence and value 1 = presence, although some numerical indicators (N) were included to capture the length of the different formats used and textual indicators (T) to record the name of certain information items of interest for the study.⁵

3.2.2 Description of the fieldwork, coding and discussion of atypical cases

The second stage was the collection of primary data from the corporate websites of the 100 selected cooperatives, as well as the coding of the database and the discussion of atypical cases. The process was carried out during the months of March to June 2021. It should be

⁵ A very preliminary version of this study that reviewed sustainability indicators in cooperatives was published in the Nota Técnica 3 “Prácticas de divulgación de información no financiera en las cooperativas españolas de mayor dimensión: recomendaciones” released by the Commission for Cooperatives and other Social Economy Enterprises (AECA, 2022).

noted that, in order to minimize potential source subjectivity, the research team focused exclusively on reviewing the corporate websites, analyzing information that was available on the official websites of the 100 cooperatives of the sample. No other external channels were examined. A standardized worksheet was prepared to tabulate the data. Each one of the 100 cooperatives analyzed was assigned to a particular researcher, and each assigned researcher independently coded data points for their assigned cooperatives. To mitigate individual biases, the research team collectively addressed any doubts or discrepancies that arose during the coding process, ensuring data integrity and coherence.

3.2.3 The Cooperative ESG (COOPESG) reporting index

Once all the information from the different websites of the 100 cooperatives in the sample had been compiled and reviewed, a statistical analysis was carried out to examine whether there were differences between various groups of cooperatives (classified according to sector and size) in relation to the disclosure of ESG information.

Furthermore, to analyze the information, we developed what we term the Cooperative ESG Reporting Index (COOPESG). The value of this index can range from 0 (the cooperative does not disclose information on any of the 24 indicators related to the disclosed content) to 1 (the cooperative discloses information on all of the 24 selected indicators). We built the COOPESG index following OECD (2008) guidelines, in line with previous analyses of sustainability in firms (e.g., Paredes-Gazquez et al., 2016). There are three main stages in the index construction process: normalization, weighting, and aggregation. The normalization stage involves ensuring all the indicators to be included in the index are expressed in homogeneous units of measurement to allow their comparison. In this study, all the indicators to be included in the index were dichotomous (D), with value 0=absence and value 1=presence, so it was not necessary to apply any normalization technique. Regarding the weighting stage, the aim is to determine the relative importance of the individual indicators (i.e., indicator weights) to be included in the COOPESG index. In this paper, an “equal weighting” method was implemented. That is, to compute the index, each of the blocks was assigned the same weight (20%) and, depending on the number of indicators in each block, the weight of each indicator in each block (local weight) and in the set of indicators (global weight) was calculated. For example, in the case of the indicators in the social block, since there were nine in total, the weight of each one in this block was 11.1%, and the overall weight of each one in the total number of indicators was 0.02% (11.1%× 20%). The overall weights of the 24 indicators as a whole had to add up to 100%. Finally, in the aggregation stage, an additive linear function was employed to aggregate the set of indicators in the COOPESG index:

$$COOPESG_i = \sum_{k=1}^{k=n} W_k \times I_{ki}$$

where $COOPESG_i$ is the value of the index assessing ESG disclosure of cooperative i ; W_k is the weight of indicator k ; and I_{ki} is the normalized value of indicator k for the cooperative i .

4 Results

In this section, we detail the main results relating to the different research questions posed, dedicating a subsection to each one.

4.1 Communication channel for the disclosure of ESG information

Our results show that the corporate website is a widely used means of revealing ESG information, being identified as such in the vast majority of the cooperatives analyzed (94%). It is common practice for businesses to have a specific section on their corporate website to disclose ESG information, but such a section was identified for only 54% of the cooperatives. For those that do have a specific section, the most commonly used titles are “Corporate Social Responsibility” and “Sustainability”, but other terms, such as “Commitment”, are also common. Similar results were obtained for the use of the “News” section on the corporate website to disclose ESG information, which was identified in 52% of the cooperatives analyzed, being a clear sign of low degree of accessibility to this information.

4.2 Formats and standards used for reporting on ESG information, SDGs and certifications

In this subsection, we first present the results relating to the formats the cooperatives use to report ESG information. Second, we describe the findings relating to the information disclosed on the SDGs, as they are a fundamental pillar of environmental and social information disclosure. Third, we detail our findings about the certifications held by cooperatives, highlighting the significant role they play in improving business management.

With regard to the formats used by the studied cooperatives (see Table 2 panel A), only 1 in 4 cooperatives prepare some kind of CSR report. Of those that do, 14 cooperatives (58.3%) issue a non-standardized CSR report, 9 cooperatives (37.5%) use the NFIS,⁶ 5 cooperatives (20.8%) use GRI sustainability reports, and 3 cooperatives (12.5%) use the UNGC Progress Report. Of particular interest among the cooperatives analyzed are corporate governance and ethics initiatives such as the Code of Ethics or Code of Conduct (20 cooperatives, 83.3% of cooperatives issuing any kind of ESG report), which set out the values and principles that govern the cooperatives’ business activity. On the other hand, only 2 cooperatives (8.3%) present Corporate Governance Reports, which are focused on the functioning and structure of their governing bodies. In view of the results, it can be deduced that there are cooperatives that produce more than one type of report. The most common combination is a report that does not follow any known format, accompanied by a Code of Ethics or Code of Conduct, and information on SDGs. In terms of the length of the reports, CSR reports that do not follow any specific standard are the shortest (1–50 pages), which seems logical since these reports usually contain few indications in terms of the quantity and quality of the information presented. In contrast, the NFIS and GRI reports are longer (50–100 pages), partly because the preparation of this type of report following guidelines such as GRI involves the disclosure of standardized, specific and detailed information on the company’s ESG activities (GRI, 2020). Regarding documents related to corporate gov-

⁶The NFIS was established in Law 11/2018, of December 28, on Auditing of Accounts, in matters of non-financial information and diversity (Law 11/2018).

Table 2 Formats of ESG disclosure, SDGs and certifications

Panel A Formats of ESG disclosure

<i>Item</i>	<i>Percentage of the total number of cooperatives</i>	<i>Percentage of cooperatives issuing any kind of ESG report</i>
There is some kind of ESG report	24.0	100.0
CSR report that does not follow any known format	14.0	58.3
Statement of non-financial information (SNFI)	9.0	37.5
Global Reporting Initiative (GRI)	5.0	20.8
UNGC Progress Report	3.0	12.5
Code of Ethics or Conduct	20.0	83.3
Corporate Governance Report	2.0	8.3

Panel B SDGs and certifications

<i>Item</i>	<i>Percentage of the total number of cooperatives</i>
Sustainable Development Goals (SDG) information	19.0
Cooperatives with any certification	70.0
International Featured Standard (IFS)	33.0
ISO 9001	29.0
ISO 14001	27.0
British Retail Consortium (BRC)	23.0
Global G.A.P.	19.0
GRASP	10.0

Source: Own elaboration

ernance and ethics, such as Codes of Ethics and Corporate Governance Reports, these are mostly shorter (50–100 pages) than NFIS and GRI reports, which seems reasonable since these documents deal with very specific aspects.

An important consideration in relation to ESG reports is whether the information presented is assured. Indeed, assurance of ESG reports is paramount, as it serves as a preemptive mechanism to enhance the reliability and quality of the disclosed information. The results of the analysis show that 66.7% of the NFIS reports are assured, while the percentage of companies that prepare their reports following GRI or UNGC and assure it is lower, at 40% and 33.3%, respectively.

The SDGs are a fundamental pillar of social and environmental accounting, and especially of non-financial reporting (Bebbington & Unerman, 2018). The analysis revealed that, in general, cooperatives pay particular attention to these aspects (see Table 3), since a significant proportion of the sampled cooperatives (19%) indicate whether they seek to contribute to any of the SDGs. “Decent work and economic growth” (SDG 8) receives the most attention from cooperatives, followed by SDG 4 “Quality education” and SDG 12 “Responsible production and consumption”, which are related to the social values of cooperatives. On the other hand, less attention is paid to SDG 14 “Life below water”, which seems reasonable, because the cooperatives in the sample may not be related to these types of impacts.

The certifications held by the cooperatives are another important aspect (see Table 2 panel B). Although certifications are not frameworks for ESG information, they encourage progress towards better business management in this area, and seeking certification

Table 3 Disclosure on contribution to Sustainable Development Goals (SDGs)

Sustainable Development Goals (SDG)		Co-operatives (%)
SDG1	No poverty	12
SDG2	Zero hunger	10
SDG3	Good health and well-being	13
SDG4	Quality education	14
SDG5	Gender equality	11
SDG6	Clean water and sanitation	11
SDG7	Affordable and clean energy	10
SDG8	Decent work and economic growth	16
SDG9	Industry, innovation and infrastructure	11
SDG10	Reduced inequalities	11
SDG11	Sustainable cities and communities	11
SDG12	Responsible consumption and production	14
SDG13	Climate action	10
SDG14	Life below water	6
SDG15	Life on land	8
SDG16	Peace, justice and strong institutions	8
SDG17	Partnerships for the goals	12

Source: Own elaboration

is a widespread practice. Results show that, on the one hand, the International Featured Standard (IFS) is the certification that appears most frequently in the analyzed cooperatives (33%). This is to be expected since it is a food safety and quality certification standard (also ensuring ethical practices along the supply chain) used by retailers and manufacturers in the food industry, which is the most represented sector in the sample of cooperatives. Other certifications that appear with high frequency are ISO 9001 for quality management systems (29%) and ISO 14,001 for environmental management systems (27%)—both are commonly used in any type of company. Other widely employed certifications specific to the agricultural sector include BRC (British Retail Consortium), a food safety and quality certification standard; Global G.A.P., a certification focused on promoting sustainable agricultural practices; and GRASP, a social responsibility complement to Global G.A.P. certification (used in 23%, 19% and 10% of the cooperatives, respectively). On the other hand, the certifications that appear least frequently (in less than 5% of the sampled cooperatives) are the FSC sustainability certification, a sustainability certification for forest products, and EFR (*Empresa familiarmente responsable*; family-responsible company), a model for work-life balance and family support. In view of the infrequent use of certifications such as the last one, EFR, it is evident that there is room for improvement in terms of issues such as work-life balance in Spanish cooperatives.

Finally, awards are a recognition of companies' know-how regarding different aspects of business management, such as innovation, sustainability or quality. We therefore reviewed how many awards the cooperatives are disclosing as a reputational signal of their commitment to all their stakeholders. Notably, 34% of the cooperatives disclose at least one award.

4.3 Disclosed content

Table 4 reports the content disclosed by the studied cooperatives, breaking it down into four dimensions: social, environmental, economic, and governance. Regarding the social category, the noteworthy subjects under “Employees” (internal stakeholders), where five indicators were considered, include “Continuous training” (mentioned by 36% of the cooperatives analyzed) and reporting on “Occupational health and safety” (mentioned by 35%). It is important to know whether companies invest in the continuous training of their employees to ensure they have a higher level of competencies, knowledge and skills. Also relevant is the companies’ concern about risk prevention in the workplace to help prevent accidents and develop healthier and safer working conditions. By contrast, the “Balance of work and family life” does not yet seem to have the same reach as the other topics among the cooperatives in the sample, as it is the least frequently reported issue in this category, in line with the low adoption of the EFR certification. This evidence raises concerns about these organiza-

Table 4 ESG performance disclosure

Dimension	Co-operatives (%)
<i>Social</i>	
<i>Actions aimed at employees</i>	
Assistance and social benefits	32
Balance of work and family life	21
Continuous training	36
Equal opportunities	29
Occupational health and safety	35
<i>Actions aimed at the community</i>	
Actions that promote the development of the community	41
Establishment of a foundation	12
Sponsorship and patronage	33
Customer satisfaction	33
<i>Environmental</i>	
Energy efficiency	33
Waste management	37
Environmental policy	33
Sourcing from responsible suppliers	12
Environmental expenditures	3
Reportable incidents	1
<i>Economic</i>	
Value generated and distributed	12
Local suppliers and employees	26
Information on investment in research and development	21
Information on sanctions	5
<i>Corporate governance</i>	
Cooperative values and identity	63
Consideration of stakeholders’ views in decision-making	11
Complaints channel	14
Compliance system	10
Composition of the Governing Board	26

Source: Own elaboration

tions' insufficient support for work-life balance (by offering options such as teleworking), hindering employees' ability to address personal situations, which in turn can affect their professional development.

In relation to the ESG information disclosed by the cooperatives in the "Community" category of the social block (referring to external stakeholders), the information related to "Actions that promote the development of the community" stands out (41% of the cooperatives analyzed), followed by information related to "Sponsorship and patronage" and "Customer satisfaction", with both topics identified in 33% of the cooperatives. Less common is the information on "Existence of foundation", which is mentioned on only 12% of cooperative websites (see Table 4). The indicators included in this category are related to cooperatives' interest in legitimizing their operations through Social Responsibility actions in society, with the idea of giving back some of what they receive. Ultimately, legitimacy allows cooperatives to operate smoothly, attract resources, and gain stakeholders' trust.

The environmental dimension includes the recurring themes in this area, with a total of six indicators identified as the most widespread practices. Notable among these is information on "Waste management" (37% of the analyzed cooperatives), as a way of effectively communicating compliance with current legislation while seeking to minimize environmental impact (protecting the environment, conserving resources—in short, contributing to create a sustainable future). It should be noted that the communication of an "Environmental policy" (reported by 33% of the sampled cooperatives) is an unmistakable sign of the company's interest in the environment, especially if it is accompanied by figures detailing the environmental costs incurred (although it is not the case in our sample, as explained below in relation to the indicator "Environmental expenditures"). Improvements in "Energy efficiency" as another of the business objectives that reduces the ecological footprint is also reported by 33% of the cooperatives. The task of "Sourcing from responsible suppliers", ensuring supply not only under favorable economic conditions but also respecting people and the environment, seems to be a pending issue, with only 12% of the cooperatives reporting on this. Even more discouraging, as previously mentioned, is the situation regarding "Environmental expenditures" (3% of the cooperatives) and "Reportable incidents" (1% of the cooperatives), an indicator that reflects an unwillingness to report bad news. Information on reportable incidents in relation to the environment is a subject that is not often addressed in business practice, mainly due to fear of penalties or reputational damage. However, providing coverage of this issue in the environmental field would help identify not only proactive aspects to improve management, but also any potential repercussions that need to be dealt with.

Within the economic block, four indicators were identified relating to the economic impact generated by cooperatives. The hiring of "Local suppliers and employees" (reported on by 26% of the sampled cooperatives) is a manifestation of the company's interest in strengthening the local economy and achieving sustainable local development. This evidence seems to make sense given that many members are suppliers, as is the case in agri-food cooperatives, or members provide labor services, as would be the case in worker cooperatives. The commitment to innovation, including details of "Information on investment in research and development" (21%) carried out by the organization is also a clear indicator of the company's performance in this area. The "value generated and distributed" is disclosed only by the 12% of the cooperatives. The fact that the standard value generated information does not apply to every cooperative could explain the low rate of disclosure. This indicator refers

to the cooperative's approach to sharing the wealth it creates with its members and other stakeholders. Unlike traditional businesses focused on maximizing profits for shareholders, cooperatives prioritize equitably distributing value among those involved in its success. The low percentage of cooperatives disclosing information about this issue points to an opportunity for improvement. Finally, as in the case of the environmental issue, companies might be expected to report on the sanctions they have had to deal with, complementing the information on positive effects in the economic block with information on negative effects, thereby providing a more comprehensive overview. However, "Information on sanctions" is reported by only 5% of the sampled cooperatives.

Finally, the corporate governance block includes general topics in this field, as well as those specific to the cooperative reality, summarized in five indicators. Reference is made to cooperatives' disclosure about the application of their cooperative principles and values; specifically, information on "Cooperative values and identity of the cooperative" has a significant presence (63% of the cooperatives analyzed). In this sense, cooperative values denote the core principles that guide the cooperative's operations and decision-making, and the identify refers to the distinctive characteristics that set cooperatives apart from other business models. This indicator is followed at some distance by the information on "Composition of the Governing Board" (commented on by 26% of the cooperatives), as the highest-level management and representative body of the cooperative. While it would generally be considered desirable for companies to take into account the opinions of their stakeholders when making decisions, this is not evidenced in our results (11% of the sampled cooperatives report information about this issue). Likewise, the existence of a whistle-blowing channel ("Complaints channel") to anonymously express disagreement with activities or actions carried out by the cooperative is an increasingly requested feature, but we find weak evidence of it in our results (it is reported by only 14% of the cooperatives). A "Compliance system" is another issue being addressed by a growing number of companies in an attempt to ensure compliance with laws or codes of conduct, but also little attention is paid to this aspect in our sample (reported by only 10% of the cooperatives). A possible explanation for these last results may be the relative recency of these types of systems.

4.4 The Cooperative ESG reporting index. Cooperatives in top positions

In the previous section, we presented an analysis of the content disclosed by the cooperatives broken down by types of content. This is complemented by an analysis of the information provided on an aggregate basis, according to the COOPESG index, the composite indicator that has been calculated for this purpose. Table 5 panel A shows the values of this index for those cooperatives with values of more than 0.5 (only 13 of the 100 selected cooperatives), among which Consum and Eroski stand out. In terms of the dimensions (blocks) calculated on a disaggregated basis (environmental, social, governance, and economic dimensions), the social dimension is the one with the highest value among the cooperatives (SocInd). This result is striking, since efforts to promote the disclosure of this type of non-financial information began later than with environmental information, which in general presents lower values than the former. One possible explanation for cooperatives' better performance in terms of social information disclosure is due to the "dual nature of cooperatives", i.e. the unique characteristics of these organizations because they operate in two contrasting domains, both as business enterprises and as member associations. So cooperatives have to

Table 5 COOPESG index and subindices

Panel A Top cooperatives					
<i>Cooperative</i>	<i>SocInd</i>	<i>EnvInd</i>	<i>EcoInd</i>	<i>GovInd</i>	<i>COOPESG</i>
CONSUM	0.89	1.00	1.00	1.00	0.97
EROSKI	1.00	0.83	0.75	1.00	0.90
ORKLI	0.78	0.83	0.75	0.80	0.79
GREDOS	1.00	0.67	0.50	0.80	0.74
SAN DIEGO					
COPISO	0.89	0.67	0.75	0.60	0.73
SORIA					
VICASOL	0.89	0.67	0.50	0.80	0.71
CHAMP-INTER	0.78	0.33	1.00	0.60	0.68
FAGOR	0.89	0.67	0.50	0.60	0.66
EDERLAN					
CIKAUTXO	0.78	0.67	0.75	0.40	0.65
SUARA	0.78	0.67	0.50	0.60	0.64
BATZ	0.89	0.67	0.25	0.60	0.60
ZAMUDIO					
COARVAL	0.89	0.50	0.25	0.60	0.56
COVAP	0.78	0.50	0.50	0.40	0.54
<i>Average</i>	<i>0.86</i>	<i>0.67</i>	<i>0.62</i>	<i>0.68</i>	<i>0.71</i>
Panel B Full sample					
<i>Average</i>	<i>0.29</i>	<i>0.20</i>	<i>0.17</i>	<i>0.25</i>	<i>0.23</i>

Source: Own elaboration

account for their economic performance, but also for their social status and compliance with their specific principles and values.

The values presented by the cooperatives in the other dimensions (EnvInd, for environmental performance; EcoInd, for economic performance; and GovInd, for corporate governance performance) do not show much variability, with some anomalous (negative) cases appearing, such as that of the Champinter cooperative for the environmental dimension. As for the economic dimension, there is a greater range of values attributed to each of the cooperatives, and the same is true for the corporate governance. For the full sample (panel B, Table 5) the COOPESG is significantly lower, as are the values for each specific dimension, but the order is maintained: first social, followed by governance, then environmental, and lastly economic. The differences for the last three are relatively greater in the full sample.

4.5 Differences in the COOPESG index according to size and sector of activity

The most significant differences in relation to the disclosure of social, environmental, economic and corporate governance issues, as well as with respect to the COOPESG, are presented below (see Table 6), differentiating by size and sector of activity.

First, a relevant finding in relation to size⁷ is that the differences identified in the disclosure of social (SocInd), environmental (EnvInd), economic (EcoInd) and corporate governance (GovInd) issues do depend on the size of the cooperative, with very large cooperatives presenting higher values that are statistically significant, while there are no sta-

⁷ In this study, cooperatives considered “very large” are those with a turnover of more than 100 million euros; “large” are those with a turnover of between 50 and 100 million euros, and “medium-sized” are cooperatives with a turnover of between 10 and 50 million euros.

tistically significant differences between large and medium-sized cooperatives.⁸ Second, SocInd registers significantly higher values than the other aforementioned dimensions⁹ (see Table 6). Although company size would be predicted to have a linear and positive influence on ESG disclosure, in our case, there are no significant differences between large and medium-sized cooperatives.

Third, with regard to the different economic sectors of activity, notable differences are identified in the disclosure of social, environmental, economic and corporate governance issues, with the COOPESG reaching significantly higher values for the tertiary sector, followed by the secondary and primary sectors, in that order. A breakdown of this information shows that this trend holds for social, economic and corporate governance disclosure, but not for environmental disclosure, where secondary and tertiary sectors present the same value. COOPESG and all dimensional indexes present statistically significant differences by sector, but the differences between the secondary and tertiary sectors are not statistically significant.¹⁰

5 Discussion

In this section, we explore the primary implications of the findings from Sect. 4, examining their relevance for both academic and practical domains.

Regarding the channel used for ESG reporting—*RQ1: Where do the analyzed cooperatives disclose ESG information?*—the literature generally considers websites to be good channels for communication and disclosure transparency, and thus help build trust with stakeholders (Diwan & Sreeraman, 2023). Nevertheless, websites are not isolated entities; instead, they form a part of an organization's comprehensive communications toolkit and play a vital role in its overarching communications and marketing strategy (Balkan, 2014). In addition, the provision of specific sections for non-financial content is an unequivocal sign of the cooperatives' interest in ESG reporting. However, as noted earlier, only half of the cooperatives analyzed in our study have established such sections. This finding aligns

Table 6 Differences by cooperative size and sector of activity in ESG disclosures and COOPESG values

Size	Number of cooperatives	SocInd	EnvInd	EcoInd	GovInd	COOPESG
<i>Size</i>						
Very large	40	0.49	0.35	0.25	0.35	0.36
Large	46	0.16	0.10	0.11	0.19	0.14
Medium	14	0.25	0.09	0.10	0.16	0.16
<i>Economic sector</i>						
Primary	77	0.21	0.13	0.12	0.20	0.16
Secondary	11	0.56	0.44	0.31	0.33	0.40
Tertiary	12	0.66	0.44	0.32	0.50	0.48

Source: Own elaboration

⁸ Results were analyzed using a one-way ANOVA between-groups design not assuming homogeneity of variances, and a multiple comparison test using the Holm method to adjust p-values.

⁹ We used a t-test to statistically test the null hypothesis that the differences between the mean of IndSoc and the means of EnvInd, EcoInd, and GovInd are zero; in all cases, the null hypothesis was rejected.

¹⁰ Results were analyzed using a one-way ANOVA between-groups design not assuming homogeneity of variances, and a multiple comparison test using the Holm method to adjust p-values.

with observations made about Canadian cooperatives by Balkan (2014), but exceeds the 3% reported by Dughid and Balkan (2016) regarding Canadian cooperatives providing in-depth sustainability information on their websites. In Spanish listed companies, Gutiérrez et al. (2021:121) found “disparate, heterogeneous information that is difficult to access. In some cases, the information can only be obtained by reviewing various website links”. Similarly, in our results, the frequent use of the “News” section by cooperatives as a channel for this type of content is another sign of its low degree of formalization, as the News section is the least standardized channel on the corporate website.

Second, focusing our analysis into the formats and standards used—*RQ2: What formats and standards do cooperatives use for reporting on ESG information, SDGs and certifications?*—our findings indicate that the cooperatives analyzed show minimal interest in classic formats such as GRI sustainability reports (5%) or United Nations Global Compact Progress Reports (3%), two of the initiatives most widely used by investor-owned firms in Spain. It is worth highlighting that the International Cooperative Alliance (ICA) has been a member of the Global Compact since 2014, yet this does not appear to be encouraging its adoption among the analyzed cooperatives. Indicating a similarly low level of implementation, Bolas-Araya et al. (2019) discovered that a mere 8% of the top 300 cooperatives globally produced non-financial reports aligned with the GRI guidelines. This evidence is corroborated by Diwan and Sreeraman (2023: p.28), who, after an exhaustive review of the literature, concluded that “benchmarking of the information reported, still seems to be an issue considering no standard template has been adopted by organizations”. It is a challenge to ensure transparency and comparability in sustainability reporting (Zsóka and Vajkai, 2018), especially in cooperatives (Yakar-Pritchard & Çalıyurt, 2021), and while sustainability standards are a crucial tool for achieving this objective, they do not seem to be a priority.

It is more common for cooperatives to provide information on the SDGs, with 1 out of 5 of the cooperatives in the sample disclosing it. These results are similar to those reported by Campillo-Alhama and Igual-Antón (2021) for Spanish electric cooperatives. Corroborating the findings of Polo-Garrido et al. (2022) for credit cooperatives, we find great variety in terms of the number of SDGs included in the reports. However, our results could suggest an industry-specific effect, similarly to Lafont et al. (2023), who identified strong links between the type of cooperative and the SDGs in a co-citation analysis of the literature on the topic in the period 2015–2022.

Cooperatives play an undeniably critical role in the achievement of the SDGs (ILO, 2014) and implementing the 2030 Agenda, since they represent 10% of global employment across all sectors. Moreover, they have a proven track record of fostering sustainable and inclusive change on a global scale (Committee for the Promotion and Advancement of Cooperatives (COPAC), 2023). However, achieving the SDGs requires integrated governance involving the public and private sectors in promoting SD (D’Adamo et al., 2022). The SDGs have put the issue of sustainability on the business agenda, and cooperatives are no exception. By taking a pragmatic approach (Ali et al., 2023), this work provides a tool that can be used to quantify cooperatives’ contribution and supports the sustainable management of these entities. It thus contributes to the shift from an ideological approach framed in cooperative principles (ILO, 2014) to a pragmatic approach to achieving sustainability based on indicators that allow an assessment of the management of these organizations and their contribution to SD.

Another relevant finding of this paper concerns the role of certifications in ESG disclosures. An industry-specific effect could also be deduced in terms of the predominance of certifications directly related to the agri-food industry, in which a large share of the cooperatives in our sample belong. Corporate certifications in ESG reporting have already been analyzed for Spanish olive oil cooperatives by Castilla-Polo et al. (2016), and also for Costa Rican coffee cooperatives interested in meeting market demands (Snider et al., 2017).

In terms of the content revealed—*RQ3: What are the main types of content disclosed?*—it should be noted that there is significant room for improvement in the information provided by the analyzed cooperatives, which is a crucial finding for cooperative managers. The item “cooperative values and principles” was the most prevalent in corporate governance content, since the essence of cooperatives is grounded in their specific principles and values (Balkan, 2014; Novkovic & Miner, 2015). Fouché and Uys (2023) also stressed the importance for African cooperatives to prioritize robust corporate governance, oversee compliance with cooperative principles, and collect data to assess and enhance their operations, although they found limited presence of such content. Conversely, Parrado et al. (2023) highlighted the governance dimension as being the most developed group of indicators in Spanish financial cooperatives. Our findings are also in line with Campillo-Alhama and Igual-Antón (2021), who reported that all the electric cooperatives they analyzed incorporate social action into cooperative principles and that the item “Actions promoting community development” was the most commonly disclosed, thus demonstrating cooperatives’ degree of commitment to the community. The role of cooperatives in community development has been recognized as they “enable a sustainable, locally anchored and inclusive development process thanks to their specific model based on the cooperative principles, centered on self-help, democratic ownership and concern for the community” (Coops Europe, 2023). Accordingly, its prominence in the discourse of these companies—for the reasons noted above—is not surprising.

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Overall, our sample showed lower levels of disclosure in the economic and environmental blocks, even in leading cooperatives. These findings are corroborated by Yakar-

Pritchard and Çaliyurt (2021), who found that only financial cooperatives tend to make more disclosures in the economic block, although Duguid and Balkan (2016) considered these cooperatives to be leaders in sustainability reporting. However, there are significant differences between our findings on environmental reporting and those of Campillo-Alhama and Igual-Antón (2021), who found that only 11% of environmental plans were reported in the cooperatives they analyzed compared to 33% in our sample. Similarly, Abdul-Aris et al. (2018), in their study of Malaysian cooperatives, concluded that protecting the environment was the least important item.

In all blocks, it is striking that indicators related to “bad news” were the least commonly revealed. This result is corroborated by Gutiérrez et al. (2014) in Spanish companies. Another rarely revealed item found by these authors in ESG reporting is information on human rights and the fight against corruption and bribery, as established in Law 11/2018 which transposes the NFRD.

Based on all the content included in our study—captured by 24 indicators—we can rank the cooperatives according to their COOPESG score, thus providing an answer to *RQ4: Which cooperatives are in the top positions?* At the same time, this index has been used to identify the potential differences raised by *RQ5: Are there differences according to size and sector of activity?* As expected, the larger the size of the cooperative, the higher the COOPESG score. However, according to Yakar-Pritchard and Çaliyurt (2021), it is only for social performance indicators that disclosure levels are higher for large cooperatives than for small and medium-sized cooperatives. On the other hand, the sector or industry effect plays a clear role in our results, as it does in those reported by Bollas-Araya et al. (2019) and Yakar-Pritchard and Çaliyurt (2021) for cooperatives and by Sierra-García et al. (2018) and Gutiérrez et al. (2021) for non-cooperative firms.

6 Conclusions, limitations and future lines of research

Having mapped the ESG reporting situation of the top 100 cooperatives in Spain, this paper contributes to a pragmatic approach to achieving sustainability by aggregating the data to provide useful information to stakeholders. A number of important conclusions can be drawn, which at the same time open up a tentative agenda for future research in this topic.

First, it can be concluded that sustainability reporting in cooperatives has not yet reached the degree of maturity evidenced in large investor-owned firms at both national and international level, despite the fact that social values are part of the DNA of cooperatives. For this reason, this study is timely as it provides descriptive evidence about the status of ESG reporting in Spanish cooperatives. However, the causes and effects of this lower level of maturity merit further study. Qualitative approaches—such as focus group studies, interviews, and so on—examining ESG reporting could add valuable information relating to the reasons behind the situation found.

The second contribution concerns the industry-specific effect found in ESG reporting. This finding may also explain the differences found with respect to previous studies as far as content is concerned. Previous studies have pointed to the type of cooperatives—financial, housing cooperatives, among others—as another variable affecting sustainability reporting. Mapping ESG reporting to align with these variables could serve as a guide to adapt potential ESG frameworks to these companies.

Finally, it is worth noting the role of the members as key stakeholders in cooperatives, as the governance block has a significant impact on the ESG reporting as a whole. This study evidences the need for cooperatives to engage with the demands, requirements and values of its members. Obviously, it is crucial for stakeholders to evaluate the sustainability-related performance of firms, and even more so with cooperatives, which are democratic organizations controlled by their members. ESG reporting is considered a way to reinforce stakeholders' trust, which is crucial for member engagement. In this context, "cooperative values and principles" emerged as the most frequently mentioned item within the governance block, indicating its significance in fostering relationships between members and cooperatives. Again, qualitative approaches could add more detail about how cooperatives use ESG reporting to strengthen relationships with members.

While this study sheds light on the ESG performance of large cooperatives, it does have some limitations, which point to avenues for further exploration. Analyzing the top 100 cooperatives and their practices, which are identified as common rather than optimal, offers valuable insights. However, the authors recognize the critical need to define and advocate for best practices in cooperative ESG reporting. This pursuit will be the cornerstone of their next study, aiming to provide a more comprehensive and action-oriented guide for the sector. Similarly, the intention is to extend the sample by incorporating an international dimension, i.e. introducing the country of origin effect into the analysis of ESG cooperative reporting. Finally, we do not delve into the quality of these disclosures, although the quality of non-financial information is crucial to ensuring the information is not only relevant but also reliable and accurate (Freundlieb et al., 2014).

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Data availability The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Competing interests The authors declare that they have no competing interests.

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