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Sustainability Reporting in Cooperatives

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Abstract: The aim of the present study is to examine the sustainability reports of cooperatives, which may play an important role in achieving the sustainable development goals and help to identify which economic, environmental, and social sustainability indicators cooperatives are currently reporting. For this purpose, a total of 168 sustainability reports were examined for cooperatives that use the Global Reporting Initiative (GRI) G4 reporting, and that are included in the Sustainability Disclosure Database (SDD-GRI). As a result of this study, it was determined that the economic performance indicator disclosure levels of cooperatives that are active in the financial services sector are higher compared with those of cooperatives that are active in other sectors. In addition, it was also observed that the labor practices and decent work sub-category indicator disclosure levels of cooperatives active in the agriculture sector are lower compared to those of cooperatives that are active in the healthcare services and financial services sectors. Another outcome of this study was the finding that the social performance indicator disclosure levels for large-scale cooperatives are greater than those of small- and medium-sized (SME) cooperatives.

Keywords: cooperative; sustainability reporting; global reporting initiative

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1. Introduction

Changing values to achieve a desired future or a better world for developed and developing countries has become an important objective to attain moral development, social restructuring, and change (Gladwin et al. 1995). However, the "zero-sum" thinking that is prevalent today encourages the maximization of profits for those at the top, while further deepening societal inequalities (Laliberté 2013). This situation can pose a threat to achieving the sustainable development goals (SDGs). However, cooperatives have the potential to guide us towards the solution to many existing and future problems thanks to their unique attributes, such as solidarity and cooperation, as well as their display of a balanced and integrated approach to economic, environmental, and social issues.

Cooperative entrepreneurship is a dynamically evolving field (Laliberté 2013). The top 300 cooperatives worldwide have a combined turnover of more than USD 1.9 trillion (ILO 2013). Cooperatives have also shown that they have the resiliency to weather economic crises. Cooperative banks and credit unions performed well during the economic crisis in 2008. Rabobank's member institutions saw a 20% increase in deposits during the 2008–2009 financial year (ICA 2013). This is evidence that cooperatives contribute to achieving a more stable financial sector. In particular, SMEs are more financially limited than large companies and more dependent on obtaining bank financing for their needs (Hasan et al. 2021). Commercial lenders were less likely to approve loan applications from SMEs than large companies (Riding et al. 2012). Cooperative banks tend to lend relatively more than commercial banks in such crises, due to the difference in their business objectives and the likelihood of continuing their lending activity at lower profit margins (Hasan et al. 2021).

It has been observed over the years that an increasing number of establishments have started implementing sustainability reporting activities (Battaglia et al. 2015). The fact that cooperatives with fundamental attributes such as transparency and accountability carry out reporting activities for social and environmental subjects is in keeping with their principle of "social responsibility", thus indicating that the sustainability of cooperatives is related to the social, economic, and environmental aspects of sustainability (Dale et al. 2013; ICA 2016). The International Co-operative Alliance (ICA) (ICA 2013) published a report entitled "Blueprint", in which it was indicated that cooperatives have a positive impact on sustainability with regard to social-, environmental-, and economy-related factors.

Sustainability reporting is an important tool used to convey the nature and unique structure of a cooperative and its principles, humanistic values, and contributions to sustainability to their respective shareholders (Herbert 2015). However, cooperatives' capacity to accomplish this is subject to their ability to adapt to changing conditions as well as their flexibility (Simmons et al. 2015). Cooperatives may use the SDGs as a general framework to shape their strategies, goals, and activities in changing conditions. For this reason, sustainability reporting may provide an effective mechanism for the simultaneous reporting of both commitment to cooperative principles and sustainable development applications (ICA 2016).

Cooperative activists strongly believe that cooperatives have a very different set of drivers related to sustainability than investor-owned corporations do (Brown Leslie et al. 2015; ICA 2016). Until now, the majority of studies have examined the sustainability practices that companies have reported. There is a clear gap in the literature regarding how cooperatives engage in sustainability reporting. The purpose of this study is to identify the sustainability indicators currently reported by cooperatives that publish a sustainability report in accordance with the GRI G4 Guideline. We also investigate the differences in disclosures in these sustainability reports according to sector, firm size, and the year the report was published.

2. Literature Review

2.1. The Concept of Cooperative Values and Principles

There are many definitions for the term "cooperative" in the literature. Holyoake (1908) defines cooperative as the fair distribution of earnings in a common enterprise between the employer, investor, and consumer. Filley (1929) defined cooperative as an organization of individuals who voluntarily work together to provide savings in actualizing production, marketing, and other services based on the principle of equality, without public support (Rehber 2011). Furthermore, today, many public organizations such as schools and hospitals have shown a considerable interest in cooperative purchasing as a modern form of cooperatives (Schotanus and Telgen 2007). The ICA (1995) states that "a cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations, through a jointly owned and democratically controlled enterprise".

Barton (1989) outlines three elements that are described in the vast majority of theoretical definitions of cooperatives. The first is the principle of user ownership: the ownership and financing of a cooperative is the responsibility of its users. The second is the user control principle: the cooperative is controlled by its users. The third is the user benefits principle: the cooperative shares its benefits with its members according to their level of use (Nilsson 1996).

Cooperatives are enterprises in which all members may take part in decision-making and governance processes. Cooperative members believe in ethical values such as honesty, openness, social responsibility, and caring for others (Battaglia et al. 2015; Stocki and Hough 2016). Cooperative values can be indicated as the best humane values comprised of norms in the minds of cooperative partners (Nilsson 1996). The values that cooperatives are based on are "self-help, self-responsibility, democracy, equality, equity, and solidarity" (ICA 2015). These values form the starting point of cooperative principles.

The cooperative principles identified by the ICA in 1995 include (1) voluntary and open membership, (2) democratic member control, (3) member economic participation, (4) autonomy and independence, (5) education, training, and information, (6) cooperation among cooperatives, and (7) concern for the community.

The first four principles state that cooperatives are owned by, controlled by, and benefit their members, and these are widely understood to be the main identifying features of cooperatives (Birchall and Simmons 2009). The principle of education, training, and information is essential in order for members to be able to contribute effectively to the development and daily operation of cooperatives. Principle six states that cooperatives should work with other cooperatives at the local, regional, national, and international levels to serve their members and strengthen the cooperative movement (ICA 2015; Birchall and Simmons 2009). The last principle, concern for community, specifies that "cooperatives work for the sustainable development of their communities through policies approved by their members" (ICA 1995).

Cooperatives have the potential to guide us in times of social, economic, environmental, and political difficulties, and should fully embrace their identities in order to do so (Herbert 2015). Seguí-Mas et al. (2016) indicated that cooperative ideology and values (transparency, trust) comprise the primary source of motivation in a cooperative for publishing a corporate social responsibility report. It has been illustrated that such policies contribute to developing reliability among stakeholders as well as stakeholder participation. Sustainability reporting is important for both commitments to cooperative principles as well as the provision of information related to the implementation of sustainable development (ICA 2016).

2.2. Sustainability Reporting and the Global Reporting Initiative Framework

Sustainability reporting has emerged as an outcome of the increasing demands of stakeholders regarding transparency and accountability in environmental and social subjects (Seguí-Mas et al. 2015). "Social reports" started to be published for the first time during the 1970s as an addendum to financial reports, giving way to environmental reports with the development of the concept of sustainable development during the 1990–2000s, as well as the observable increase in the environmental impacts of production (Hąbek and Wolniak 2016; Etzion and Ferraro 2010; Kolk 2010). Meanwhile, integrated reporting emerged during the 2000s, which involves enterprises presenting their environmental, social, and economic performances simultaneously (Jenkins and Yakovleva 2006).

Sustainability reports are tools of communication that provide integrated information to both internal and external stakeholders regarding the economic, environmental, and social outcomes of the activities of the enterprise as well as the results obtained (Hąbek and Wolniak 2016; Daub 2007). Sustainability reporting is the periodical and voluntary assessment and public disclosure of sustainability information in order to present the enterprise's economic, environmental, and social efforts and advancements to its stakeholders as well as to evaluate the advancement of the sustainability of the enterprise (Lu Yalin et al. 2019).

GRI is an independent standardization institution that helps enterprises and governments to report environmental, social, and economic effects, and is created by the most effective definitions of sustainability reporting (Steinhöfel et al. 2019). According to this definition, "Sustainability reporting can help organizations to measure, understand, and communicate their economic, environmental, social, and governance performance. A sustainability report is a report published by a company or organization about the economic, environmental, and social impacts (positive or negative) caused by its everyday activities" (GRI 2013).

The information contained in sustainability reports decreases information asymmetry while enabling investors to make more efficient and less risky decisions. For this reason, investors take into consideration sustainability reports in their decision-making processes (Carnevale and Mazzuca 2014).

A series of guidelines and frameworks have been developed on topics involving how enterprises will report their sustainability practices, how they will strengthen confidence in the presented data by attaining reporting transparency and integrity, and how they can ensure standardization in the reports presented (Jenkins and Yakovleva 2006). The GRI Guideline was initially published in 2000. The GRI Guideline is one of the best-known and most widely used sustainability reporting frameworks and is valid for almost all sectors (Yadav et al. 2017). The objective is to support companies in preparing sustainability reports that present their social, environmental, and economic impacts in an integrated manner (Isaksson and Steimle 2009).

According to Kolk (2010), the sustainability reporting principles set forth by the GRI are among the most important factors that have had an impact on sustainability reporting. KPMG's survey of "Corporate Responsibility Reporting" reviewed the reporting practices for the world's top 250 companies from among the largest 500 companies, based on the Fortune 500 ranking published annually in Fortune magazine (G250), and the top 100 multinational companies active in 49 countries (N100) (KPMG 2017). As a result of the survey study encompassing 4900 companies worldwide, it was identified that around two thirds of the reports analyzed apply the GRI Guideline (Steinhöfel et al. 2019). The most commonly used framework is the GRI Guideline, which is applied to 63% of the N100 reports and 75% of the G250 reports (KPMG 2017). These findings become even more important when it is taken into consideration that GRI is the first organization listing the standard reporting principles (Haffar and Searcy 2018).

Vormedal and Ruud (2009) have identified GRI as the "most important drivers" in fueling the growth and development of sustainability reporting (Hahn and Kühnen 2013). The fifth version of the GRI, known as GRI Standards, was launched in July 2018. The present study focuses on the fourth version of the GRI, known as GRI G4, launched in 2013.

3. Methodology and Data

3.1. Research Question

Today, sustainability has become an important subject for many establishments, but the majority of studies concerning the reporting of activities related to sustainability have focused on companies. It can be understood when a literature review is conducted on the subject that the number of studies on sustainability reporting practices in cooperatives is not sufficient. It is known that cooperatives which may play a critical role in meeting the sustainable development goals act not only in a profit-oriented manner but also in accordance with a wider range of principles and values in line with their nature. For this reason, it is highly important to present a properly prepared sustainability report to the public as well as the partners and stakeholders of the cooperative in order to provide accurate information on economic, environmental, and social subjects for cooperatives focused on achieving economic goals as well as social goals.

The aim of the present study is to examine which economic, environmental, and social indicators are reported by cooperatives that publish sustainability reports in accordance with the GRI G4 Guideline. The research question was identified as "What sustainability indicators are currently being reported in the cooperatives?"

3.2. Methodology of the Study

A secondary data acquisition method was used in this study. Secondary data are those that are collected from an already-existing source (Collis and Hussey 2014). The data were obtained from the sustainability reports published by the cooperatives included in the study. The primary method used in the present study was content analysis. Content analysis is frequently used in the analysis of studies conducted in the fields of "corporate social responsibility" (Jenkins and Yakovleva 2006; Lee and Carroll 2011; Dahlsrud 2008) and "sustainability reporting" (Steinhöfel et al. 2019; Lu Yalin et al. 2019; Haffar and Searcy 2018; Fonseca et al. 2014; Joseph and Taplin 2011; Joseph 2010; Al-Tuwaijri et al. 2004; Milne and Adler 1999). It is the most widely used research method for the assessment of the social and environmental disclosures of establishments (Milne and Adler 1999).

Content analysis is a research method that is used to extract repeatable and valid results from data (Krippendorff 2013). A set of rules are used to extract valid results from the text (Weber 1990) in this method, which involves both qualitative and quantitative research strategies. Quantitative content analysis presents the results as frequencies and generally answers the question of "how many or how many times". Meanwhile, qualitative content analysis presents the data in the form of categories that enable the interpretation of the text (Moldavska and Welo 2017).

The main assumption underlying sustainability reporting content analysis studies is that the frequency of disclosure for the explanations in the reports and content abundance (number of pages, lines, words, and sentences, etc.) indicate the relative importance of the subject for the reporting establishment (Joseph and Taplin 2011). Moreover, the use of other methods does not take into consideration the disclosure volume for each explained indicator but rather utilizes the number of indicators explained in the checklist (Joseph and Taplin 2011). In the content analysis of reports using this approach, a numerical value of 1 (one) is assigned if there is an explanation for each indicator, and a value of 0 (zero) is assigned if there is no explanation. This allows one to determine whether the indicators have been explained in the report or not, thus completing the scoring of the report. Subjects may be assigned equal weights in the disclosure indices or a weighting system can be utilized in cases where the factors have variable significance levels (Al-Tuwaijri et al. 2004). The quantitative content analysis method was used in the present study in order to calculate the reporting frequencies for the economic, environmental, and social performance indicators. A score of 1 (one) was given to each indicator in a sustainability report if a disclosure was reported and a score of 0 (zero) was given if not. It was assumed that each disclosed indicator had an equal weight with regard to importance.

Table 1 shows the GRI-G4 specific standard disclosures (SD) used in this study. Specific SDs have been classified into economic, environmental, and social categories. According to the GRI-G4 Guideline, there are 9 indicators in the economic category, which include economic performance (G4-EC1–G4-EC4), market presence (G4-EC5–G4-EC6), indirect economic impacts (G4-EC7–G4-EC8), and procurement practices (G4-EC9). There are 34 indicators in the environmental category, including materials (G4-EN1–G4-EN2), energy (G4-EN3–G4-EN7), water (G4-EN8–G4-EN10), bio-diversity (G4-EN11–G4-EN14), emissions (G4-EN15–G4-EN21), effluents and waste (G4- EN22–G4-EN26), products and services (G4-EN27–G4-EN28), compliance (G4-EN29), transport (G4-EN30), overall (G4-EN31), supplier environmental assessment (G4-EN32–G4-EN33), and environmental grievance mechanisms (G4-34). Social indicators have been divided into sub-categories. There are 48 indicators in the social category, which is divided into the sub-categories labor practices and decent work (G4-LA1–G4-LA16), human rights (G4-HR1–G4-HR12), society (G4-SO1–G4-SO11), and product responsibility (G4-PR1–G4-PR9) (Steinhöfel et al. 2019).

Table 1. GRI-G4 specific standard disclosures.

GRI-G4 Indicators	Number of Indicators
Economic (EC)	9
Environmental (EN)	34
Social	-
-Sub-Category: Labor Practices and Decent Work (LA)	16
-Sub-Category: Human Rights (HR)	12
-Sub-Category: Society (SO)	11
-Sub-Category: Product Responsibility (PR)	9
Total	91

3.3. Sample of the Study

The study population included the establishments in the SDD-GRI database which employ GRI-G4 reporting. A total of 38 sectors presented by the SDD-GRI database (including the "other" category) were selected during the analysis, while GRI-G4 was

selected as the report type and the dates of 2013–2019 were chosen as the report years (GRI Sustainability Disclosure Database 2016). Afterwards, these activities were grouped into 5 sectors (wholesale and retail trade, agriculture, healthcare services, financial services, and other) in accordance with their NACE codes (Nomenclature of Economic Activities) (NACE 2008). A total of 11,771 reports were identified for 5171 organizations. A total of 84 establishments were identified as cooperatives among these organizations. In addition, the SDD-GRI database was used to search for the words "co-op", "cooperative", and "cooperativa". As a result of this, 5 more cooperatives were included in the sample group which were not identified as cooperatives but which were determined to be cooperatives as a result of a web search and a literature review. A total of 183 GRI-G4 sustainability reports were determined for these 89 cooperatives. The reports were accessed from 24 May 2019 to 28 October 2019 from the SDD-GRI database and the websites of the cooperatives. Four of these reports could not be accessed. Following the preliminary examination of the other reports, it was observed that 7 reports did not include the GRI index, that 1 report did not contain specific standard disclosures in the GRI index, and that the GRI index was not compatible with G4 in 3 reports; as a result of this, these reports were excluded from the scope of the study. The final sample group of the study includes 168 GRI-G4-compatible sustainability reports for cooperatives.

Table 2 shows that, of the cooperatives included in the study, 69.0% were large-scale, 16.7% were MNEs (multinational enterprises), and 14.3% were SMEs. It was identified that, of these cooperatives, 22.6% were involved in wholesale and retail trade, 7.7% in agriculture, 19.6% in healthcare services, 33.3% in financial services, and 16.8% in other sectors. It can be observed that 8.9% of the cooperatives published their sustainability reports in 2014, 22.0% in 2015, 29.2% in 2016, 30.4% in 2017, and 9.5% in 2018. It was indicated that 67.9% of the published sustainability reports were subject to assurance, while 32.1% were not subject to assurance. It was observed that 49.4% of the sustainability reports were 100 pages and below, while 50.6% were 101 pages and above.

Table 2. Characteristics of the sample.

Criteria	Characteristics of Sample	Frequency	Percent
Size	Large	116	69.0
	MNE	28	16.7
	SME	24	14.3
	Total	168	100.0
Sector	Wholesale and Retail Trade	38	22.6
	Agriculture	13	7.7
	Healthcare Services	33	19.6
	Financial Services	56	33.3
	Other	28	16.8
	Total	168	100.0
Assurance	Unapplied	114	67.9
	Applied	54	32.1
	Total	168	100.0
Report Year	2014	15	8.9
	2015	37	22.0
	2016	49	29.2
	2017	51	30.4
	2018	16	9.5
	Total	168	100.00
Report Page	100 page or less	83	49.4
	101 pages or more	85	50.6
	Total	168	100.0

Table 3 shows that, of the cooperatives that publish a sustainability report, 21.4% were from Brazil, 9.5% from Spain, 7.1% from Canada, 6.5% from the Netherlands, and 6.0% from Finland and Switzerland. A total of 49.6% of the sustainability reports belong to cooperatives in European countries, where policy often mandates a high level of sustainability reporting (Bollas-Araya and Seguí-Mas 2014). Regulations such as the European Union's Carbon Dioxide Emissions Trading Plan have encouraged international decision-makers to carefully consider sustainability initiatives (Tajbakhsh and Shamsi 2019).

Table 3. Cooperative sustainability reports per country.

Country	Frequency	Percent
Argentina	6	3.6
Austria	3	1.8
Belgium	3	1.8
Brazil	36	21.4
Canada	12	7.1
Chile	2	1.2
China	2	1.2
Colombia	4	2.4
Croatia	2	1.2
Ecuador	4	2.4
Egypt	1	0.6
Finland	10	6.0
France	1	0.6
Germany	8	4.8
India	3	1.8
Indonesia	1	.6
Italy	7	4.2
Malaysia	3	1.8
Morocco	2	1.2
Netherlands	11	6.5
Norway	3	1.8
Pakistan	1	0.6
Peru	1	0.6
South Korea	1	0.6
Spain	16	9.5
Sweden	7	4.2
Switzerland	10	6.0
Taiwan	3	1.8
UK	2	1.2
USA	1	0.6
Vietnam	2	1.2
Total	168	100.0

4. Results

The purpose of sustainability reporting is the disclosure of the economic, environmental, and social impacts of organizations' activities to their stakeholders. In this research, the reporting of these impacts is analyzed using the specific SD of GRI-G4.

It was identified upon examining Table 4 that the indicators that are most frequently reported in the economic performance category are (87.5%) EC1 and (51.2%) EC8.

It can be observed from Table 5 that the most frequently reported indicators in the environmental performance category are (81.5%) EN3, (66.7%) EN16, and (63.1%) EN23.

Table 4. Economic performance indicator disclosures.

Economic Performance Indicators	Unreported		Reported	
	Frequency	Percent	Frequency	Percent
EC1	21	12.5	147	87.5
EC2	103	61.3	65	38.7
EC3	93	55.4	75	44.6
EC4	120	71.4	48	28.6
EC5	104	61.9	64	38.1
EC6	118	70.2	50	29.8
EC7	100	59.5	68	40.5
EC8	82	48.8	86	51.2
EC9	85	50.6	83	49.4

Table 5. Environmental performance indicator disclosures.

Environmental Performance Indicators	Unreported		Reported		Environmental Performance Indicators	Unreported		Reported	
	Frequency	Percent	Frequency	Percent		Frequency	Percent	Frequency	Percent
EN1	89	53.0	79	47.0	EN18	89	53.0	79	47.0
EN2	107	63.7	61	36.3	EN19	87	51.8	81	48.2
EN3	31	18.5	137	81.5	EN20	138	82.1	30	17.9
EN4	109	64.9	59	35.1	EN21	130	77.4	38	22.6
EN5	91	54.2	77	45.8	EN22	128	76.2	40	23.8
EN6	71	42.3	97	57.7	EN23	62	36.9	106	63.1
EN7	115	68.5	53	31.5	EN24	149	88.7	19	11.3
EN8	78	46.4	90	53.6	EN25	140	83.3	28	16.7
EN9	139	82.7	29	17.3	EN26	148	88.1	20	11.9
EN10	139	82.7	29	17.3	EN27	101	60.1	67	39.9
EN11	157	93.5	11	6.5	EN28	143	85.1	25	14.9
EN12	151	89.9	17	10.1	EN29	96	57.1	72	42.9
EN13	150	89.3	18	10.7	EN30	103	61.3	65	38.7
EN14	160	95.2	8	4.8	EN31	119	70.8	49	29.2
EN15	44	26.2	124	73.8	EN32	110	65.5	58	34.5
EN16	56	33.3	112	66.7	EN33	122	72.6	46	27.4
EN17	83	49.4	85	50.6	EN34	144	85.7	24	14.3

It was concluded upon examination of Table 6 that the most frequently reported indicators were (81.5%) LA1 and (76.2%) LA12 in the labor practices and decent work performance sub-category, (38.7%) HR3 and (32.7%) HR2 in the human rights sub-category, (64.3%) SO1 and (54.2%) SO4 in the society sub-category, and (72.0%) PR5 and (51.8%) PR8 in the product responsibility sub-category. The most frequently reported indicators were in the economic and social performance categories and the lowest were in the environmental performance categories. These results are in line with the findings of Marcis et al. (2019), who highlighted economic performance indicators as standing out in relation to other categories. This may be due to cooperatives using already-existing financial reporting and the increase in the number of financial reporting rules and standards, leading to the increase in the quantity of economic indicators reported. The fact that the lowest disclosure was in the environmental performance indicators may be due to the cost and complexity involved in their measurement and reporting (Sahin and Cankaya 2018).

According to Table 7, social performance indicators display a statistically significant difference subject to cooperative size. Large-scale cooperatives have higher society category disclosure levels compared with SMEs. The main reasons why sustainability reporting cannot be implemented sufficiently in small- and medium-sized cooperatives are the complexity of sustainability reporting, its high cost, and the limited resources of small- and medium-sized cooperatives (Steinhöfel et al. 2019). However, the results of sustainability

reporting surveys show that the long-term benefits of sustainability reporting still outweigh the costs (Turley-McIntyre et al. 2016).

Table 6. Social performance indicator disclosures.

Labor Practices and Decent Work (LA)	Unreported		Reported		Labor Practices and Decent Work (LA)	Unreported		Reported	
	Frequency	Percent	Frequency	Percent		Frequency	Percent	Frequency	Percent
LA1	31	18.5	137	81.5	LA9	44	26.2	124	73.8
LA2	63	37.5	105	62.5	LA10	66	39.3	102	60.7
LA3	103	61.3	65	38.7	LA11	75	44.6	93	55.4
LA4	110	65.5	58	34.5	LA12	40	23.8	128	76.2
LA5	90	53.6	78	46.4	LA13	87	51.8	81	48.2
LA6	45	26.8	123	73.2	LA14	113	67.3	55	32.7
LA7	118	70.2	50	29.8	LA15	125	74.4	42	25.0
LA8	114	67.9	54	32.1	LA16	115	68.5	53	31.5
Human Rights (HR)	**Unreported**		**Reported**		**Human Rights (HR)**	**Unreported**		**Reported**	
	Frequency	**Percent**	**Frequency**	**Percent**		**Frequency**	**Percent**	**Frequency**	**Percent**
HR1	124	73.8	44	26.2	HR7	143	85.1	25	14.9
HR2	113	67.3	55	32.7	HR8	156	92.9	12	7.1
HR3	103	61.3	65	38.7	HR9	153	91.1	15	8.9
HR4	138	82.1	30	17.9	HR10	115	68.5	53	31.5
HR5	129	76.8	39	23.2	HR11	134	79.8	34	20.2
HR6	136	81.0	32	19.0	HR12	133	79.2	35	20.8
Society (SO)	**Unreported**		**Reported**		**Society (SO)**	**Unreported**		**Reported**	
	Frequency	**Percent**	**Frequency**	**Percent**		**Frequency**	**Percent**	**Frequency**	**Percent**
SO1	60	35.7	108	64.3	SO7	126	75.0	42	25.0
SO2	127	75.6	41	24.4	SO8	91	54.2	77	45.8
SO3	113	67.3	55	32.7	SO9	126	75.0	42	25.0
SO4	77	45.8	91	54.2	SO10	145	86.3	22	13.1
SO5	109	64.9	59	35.1	SO11	144	85.7	24	14.3
SO6	129	76.8	39	23.2	-	-	-	-	-
Product Responsibility (PR)	**Unreported**		**Reported**		**Product Responsibility (PR)**	**Unreported**		**Reported**	
	Frequency	**Percent**	**Frequency**	**Percent**		**Frequency**	**Percent**	**Frequency**	**Percent**
PR1	89	53.0	79	47.0	PR6	113	67.3	55	32.7
PR2	104	61.9	64	38.1	PR7	94	56.0	74	44.0
PR3	108	64.3	60	35.7	PR8	81	48.2	87	51.8
PR4	95	56.5	73	43.5	PR9	87	51.8	81	48.2
PR5	47	28.0	121	72.0	-	-	-	-	-

Table 8 shows that cooperatives that are active in the financial services sector have higher economic performance indicator disclosure levels compared with cooperatives active in the wholesale and retail, agriculture, and healthcare services sectors. In addition, the cooperatives active in the agriculture sector have lower labor practices and decent work sub-category indicator disclosure levels compared with the cooperatives active in the healthcare services and financial services sectors. The society sub-category indicator disclosure levels were lower for the cooperatives active in the wholesale and retail trade sectors compared with the cooperatives active in the healthcare and financial services sectors. Meanwhile, the social performance general levels were higher for the cooperatives active in the financial services sector compared with the cooperatives active in the wholesale and retail trade and agriculture sectors. Bollas-Araya and Seguí-Mas (2014) argued that cooperative banks provide greater social information in their sustainability reporting. Kumar and Prakash (2019) suggested that organizations in the financial services sector are

more inclined to disclose information about social indicators. Our research results support the view that the financial sector is the leading sector in sustainability reporting, especially regarding disclosures about social indicators.

Table 7. Analysis of variance (ANOVA) test results for the comparison of the economic, environmental, and social performance indicator disclosures subject to cooperative size.

Scale	Size of Co-op	n	Mean	SD	F	*p*
Economic Performance	Large	116	3.97	2.77	0.873	0.419
	MNE	28	4.68	2.29		
	SME	24	3.92	2.15		
Environmental Performance	Large	116	12.13	7.81	1.558	0.214
	MNE	28	10.78	7.62		
	SME	24	9.29	6.10		
Labor Practices and Decent Work	Large	116	8.06	4.30	0.486	0.616
	MNE	28	8.46	3.39		
	SME	24	7.33	4.44		
Human Rights	Large	116	2.68	2.95	2.637	0.075
	MNE	28	3.32	3.49		
	SME	24	1.46	2.36		
Society	Large	116	3.91	3.09	3.589	**0.030** *
	MNE	28	3.32	2.02		
	SME	24	2.25	2.03		
Product Responsibility	Large	116	4.41	2.81	2.924	0.057
	MNE	28	4.00	2.67		
	SME	24	2.92	2.75		
Social Performance (Overall)	Large	116	19.06	11.75	2.137	0.121
	MNE	28	19.11	9.83		
	SME	24	13.96	9.94		

* $p < 0.05$.

Table 8. ANOVA test results for the comparison of the economic, environmental, and social performance indicator disclosures subject to sectors.

Scale	Sector	n	Mean	SD	F	*p*
Economic Performance	Wholesale and Retail Trade	38	3.63	2.78	3.045	**0.019** *
	Agriculture	13	2.92	2.18		
	Healthcare Services	33	3.52	2.49		
	Financial Services	56	4.96	2.55		
	Other	28	4.14	2.46		
Environmental Performance	Wholesale and Retail Trade	38	13.66	5.64	1.140	0.340
	Agriculture	13	11.08	8.00		
	Healthcare Services	33	11.12	9.38		
	Financial Services	56	11.18	7.19		
	Other	28	9.89	8.08		
Labor Practices and Decent Work	Wholesale and Retail Trade	38	7.74	3.74	2.734	**0.031** *
	Agriculture	13	5.15	4.34		
	Healthcare Services	33	8.94	3.68		
	Financial Services	56	8.73	4.53		
	Other	28	7.25	3.93		
Human Rights	Wholesale and Retail Trade	38	2.53	2.90	1.331	0.261
	Agriculture	13	1.31	2.21		
	Healthcare Services	33	3.15	3.42		
	Financial Services	56	2.95	3.27		
	Other	28	2.04	2.13		

Table 8. *Cont.*

Scale	Sector	n	Mean	SD	F	*p*
Society	Wholesale and Retail Trade	38	2.37	1.99	4.171	**0.003** *
	Agriculture	13	3.00	3.83		
	Healthcare Services	33	3.79	2.97		
	Financial Services	56	4.61	3.01		
	Other	28	3.14	2.17		
Product Responsibility	Wholesale and Retail Trade	38	3.74	2.70	2.116	0.081
	Agriculture	13	2.77	2.83		
	Healthcare Services	33	4.64	2.79		
	Financial Services	56	4.70	2.62		
	Other	28	3.57	3.11		
Social Performance (Overall)	Wholesale and Retail Trade	38	16.37	9.63	2.723	**0.031** *
	Agriculture	13	12.23	12.44		
	Healthcare Services	33	20.52	11.41		
	Financial Services	56	20.98	11.87		
	Other	28	16.00	10.10		

* $p < 0.05$.

Table 9 illustrates that the economic, environmental, and social performance indicator disclosures have not been shown to have statistically significant differences according to the report publication year ($p > 0.05$).

Table 9. ANOVA test results for the comparison of the economic, environmental, and social performance indicator disclosures subject to the report publication year.

Scale	Year Report Published	n	Mean	SD	F	*p*
Economic Performance	2014	15	3.67	2.41	0.504	0.733
	2015	37	4.30	2.73		
	2016	49	4.27	2.63		
	2017	51	4.10	2.59		
	2018	16	3.38	2.73		
Environmental Performance	2014	15	12.33	7.93	0.251	0.909
	2015	37	11.32	8.11		
	2016	49	11.49	7.02		
	2017	51	11.90	7.65		
	2018	16	9.94	8.28		
Labor Practices and Decent Work	2014	15	7.53	4.81	0.222	0.926
	2015	37	8.30	4.14		
	2016	49	8.18	4.22		
	2017	51	8.04	4.19		
	2018	16	7.31	3.81		
Human Rights	2014	15	2.27	2.37	0.433	0.785
	2015	37	3.14	3.26		
	2016	49	2.47	2.61		
	2017	51	2.61	3.11		
	2018	16	2.19	3.82		
Society	2014	15	3.67	3.02	0.357	0.839
	2015	37	3.89	3.03		
	2016	49	3.57	2.74		
	2017	51	3.53	2.74		
	2018	16	2.88	3.16		

Table 9. *Cont.*

Scale	Year Report Published	n	Mean	SD	F	*p*
Product Responsibility	2014	15	3.67	2.77	0.552	0.698
	2015	37	4.54	2.74		
	2016	49	4.22	2.82		
	2017	51	4.10	2.82		
	2018	16	3.44	3.12		
Social Performance (Overall)	2014	15	17.13	11.62	0.408	0.803
	2015	37	19.86	11.65		
	2016	49	18.45	10.53		
	2017	51	18.27	11.26		
	2018	16	15.81	13.28		

The correlation analysis results presented in Table 10 show that there is a positive and high-level correlation between the economic, environmental, and social performance of the cooperatives. An increase in the economic performance levels of the cooperatives indicates that an increase may take place in their environmental and social performance levels as well. Similarly, an increase in the environmental performance level points to an increase in the social performance level.

Table 10. Correlation between the economic, environmental, and social performance indicator disclosures.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Economic	1	0.654 *	0.786 *	0.590 *	0.699 *	0.783 *	0.818 *
Environmental		1	0.700 *	0.625 *	0.644 *	0.634 *	0.745 *
Labor Practices and Decent Work			1	0.656 *	0.698 *	0.736 *	0.903 *
Human Rights				1	0.750 *	0.636 *	0.856 *
Society					1	0.698 *	0.884 *
Product Responsibility						1	0.866 *
Social (Overall)							1

* $p < 0.05$.

5. Discussion and Conclusions

In 2015, the United Nations (UN) declared the SDGs in order to eliminate poverty, protect the planet, and ensure that all people live in peace and wellbeing. These goals, which are aimed to be reached by the year 2030, were created with the aim to end poverty and hunger everywhere, remove inequalities between countries, attain peace and justice, protect human rights, ensure gender equality, improve rights for women and girls, and permanently protect the planet and its natural resources. In addition, goals were also created regarding comprehensive and sustainable economic growth in order to create sustainable conditions, encourage wealth sharing, and provide decent work opportunities (UN 2015).

Cooperatives play an important role in reducing poverty and promoting gender equality, education quality, equal education opportunities, health and welfare, food safety, access to clean water, employment, sustainable energy, and the sustainable management of natural resources for posterity, in addition to making a significant contribution to sustainable growth (ILO and ICA 2014). Cooperative ideology and values (such as transparency and trust) are the main motivation for publishing a sustainability report in a cooperative (Seguí-Mas et al. 2016).

Bollas-Araya and Seguí-Mas (2014) examined the sustainability reports in the GRI database and those published by European cooperative banks. It was reported as a result of the study that cooperative banks allocate more space to social indicator disclosures

compared with economic and environmental indicator disclosures. Kumar and Prakash (2019) suggested that organizations in the financial services sector are more inclined to disclose information about social indicators.

The results of the present study indicate that the economic and social performance indicator disclosure levels of cooperatives active in the financial services sector are higher than those of cooperatives active in other sectors. In addition, it was also reported that the labor practices and decent work category indicator disclosure levels of cooperatives active in the agriculture sector are lower than those of cooperatives active in the healthcare services and financial services sectors. Another finding of the study is that 69% of the cooperatives applying the GRI-G4 framework are large-scale enterprises, and only 14.3% are SMEs, as well as that the indicator disclosure levels of large-scale cooperatives are higher than those of SMEs. This shows that most small- and medium-sized cooperatives have yet to engage with sustainability reporting. These results are in line with the findings of Steinhöfel et al. (2019).

Considering the unique nature of cooperatives, it will be an important step to develop an effective sustainability reporting framework specific to cooperatives, where both commitment to cooperative principles and sustainable development practices are reported at the same time, instead of using the GRI-G4 framework, which is very complex and costly to implement. It is believed that this study might assist in the development of a sustainability reporting framework specific to cooperatives, which play an important role in achieving the sustainable development goals.

This study is subject to certain limitations. The present study does not examine why cooperatives disclose or withhold information regarding sustainability practices. In this study, we only looked at what sustainability performance indicators are currently being reported by cooperatives. Additionally, the analyzed reports use the GRI-G4 framework, which was recently replaced by a newer version known as the GRI Standards. Further studies should bear these limitations in mind when developing sustainability reporting frameworks for cooperatives.

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