

## Article

# Study of Corporate Sustainability Dimensions in the Cooperatives of Ecuador

Iliana Loor Alcívar <sup>1</sup>, Francisco González Santa Cruz <sup>2,\*</sup>, Nelly Moreira Mero <sup>1</sup> and Amalia Hidalgo-Fernández <sup>2</sup>

<sup>1</sup> Faculty of Accounting and Auditing, University Eloy Alfaro of Manabí, Manta 130802, Ecuador; maria.loor@uleam.edu.ec (I.L.A.); nelly.moreira@uleam.edu.ec (N.M.M.)

<sup>2</sup> Department of Business Organization, Agrifood Campus of International Excellence, ceiA3, University of Córdoba, 14071 Córdoba, Spain; eslhifea@uco.es

\* Correspondence: td1gosaf@uco.es; Tel.: +34-957218837

Received: 8 December 2019; Accepted: 7 January 2020; Published: 8 January 2020



**Abstract:** This research has the aim of analysing corporate sustainability dimensions in the cooperativism of a developing country such as Ecuador by means of a valid and reliable measuring scale. These institutions, as part of the social economy, should be focused on a balance among the economic, social and environmental aspects, which are the central axis of corporate sustainability. The literature review and analysis led to the development of a research questionnaire that was applied to 2042 people, among them managers, employees and members of the Ecuadorian cooperatives. In order to validate the dimensional structure and consistency of the scale, an exploratory factorial analysis was performed, followed by a confirmatory analysis using structural equations. The results show a consistent measuring scale based on the traditional dimensions of corporate sustainability (economic, social and environmental) and also presenting a new dimension of corporate identity.

**Keywords:** corporate sustainability; cooperatives; measuring scale; Ecuador

## 1. Introduction

Currently, corporations are a very important source of innovation. Hence, they have a relevant social responsibility to make contributions related to sustainability [1]. Organisations might cause some of the problems that society suffers, mainly due to their economic, social and environmental impact. It is also true that they are compelled to be fundamental agents in the solution of the said problems by adopting sustainability measures [2,3]. Hence, on a global level, there are many businesses that aim for an ethical vision of business as a way of ensuring economic growth, social equality and the preservation of the environment [4], looking to satisfy current needs without compromising future resources [5].

Even though there is currently a growing interest in businesses towards the management and publication of sustainability reports [6], its main aim does not appear to be clear [1]. Due to this, historically, researchers have shared these worries by carrying out theoretical studies [7–10] and have developed indicators for the measurement of sustainability [11,12]. However, to achieve real sustainability, it should go beyond the change of management or technology [13]. Not only are modifications required in the processes and products, but also in corporate culture and the attitudes of workers and officers so that results are orientated towards the long term [9]. With this vision, [14] emphasizes the need to propose a renewed economic growth model of organisations which considers social and environmental responsibility in their strategic management. All this should encourage their intellectual capital, further strengthen the relationship with clients and, especially, improve the level of organisational commitment as well as giving a sense of belonging to their human resources.

Corporate sustainability is presented as a wide and multi-dimensional construct [15], leaving behind the traditional concept of corporate development based on financial capital [16]. In any case, the study of corporate sustainability has mainly focused on the understanding and the adoption of sustainable practices [17], given that the businesses are expected to be socially and environmentally responsible in the face of phenomena such as the destruction of natural resources, climate change, workers' and human rights [18]. However, the measurement of global performance in terms of corporate sustainability has not been studied in such depth, despite its importance in the business environment [19]. Literature regarding corporate sustainability places emphasis on the stakeholders influencing the sustainable behaviour of businesses [20,21], socially and environmentally. The community has gone from being a passive agent in business activities to becoming a more demanding and active stakeholder [22]. Hence, this research has taken as a starting point the perception of leaders, workers and partners in the cooperative ambit. Many of the said individuals are themselves the users and suppliers of these corporations.

As we have seen before, this research considers the analysis of corporate sustainability in Ecuadorian corporations due to the growing need to investigate the said practices in the area of a solidary and popular economy [23]. The denomination of "solidary and popular economy" is commonly used in Latin American countries. It is a way of organizing that stands out for economic management with a very social character, globally better known as a "social economy". Among the institutions that make up this sector, we find cooperatives, savings banks and mutual insurance companies (as well as many others) [24]. Cooperatives can be considered powerful sources of sustainable development [23], given that their principles lead to a balance of financial, human and environmental capital, to satisfy the needs of their global stakeholders [25] based on universally-recognised principles and values [26]. This leads us to analysing if the practices of corporate sustainability of the cooperatives in Ecuador are assessed in accordance with a reliable and appropriate scale.

The main aim of this research is to analyse the possible dimensions that compose corporate sustainability. This will be done through the validation of an instrument that would allow us to measure the practices of sustainability in cooperativism in Ecuador. To reach the said aim, we surveyed cooperatives' stakeholders and a questionnaire was adapted from theoretical models from Chow and Chen [11], Lee and Saen [27] and Simões and Sebastiani [28]. This research is made up of five sections, including this introduction. First comes the literature review; here we find the main theoretical contributions towards building the foundations of this research. Secondly, the research methodology, which describes the realisation of the fieldwork and the scale in which we will be measuring. Then comes the results and discussion, and finally, we have the conclusions where we highlight the main contributions of this study as well as its practical implications and future lines of research.

## 2. Literature Review

The global concept of sustainable development was first developed in 1987 in the Brundtland report [15], which considered the appropriate management of natural resources, justice, equity and ethics as the central axis for the preservation of the planet and long-term subsistence [5]. However, it was some years later when it appeared in academic literature as an equitable process which requires the integration of social, economic and ecological systems whose aim is focused on human development [29]. The first attempts to put these concepts into practice emerged a decade later [30], by which many of the business organisations included aspects for sustainable development in their operations, related to environmental and social concerns. However, for Fergus and Rowney [31], the application of these aspects was not carried out in all the levels of the organisation.

Based on these initial ideas, the conceptual origin of the sustainable development of businesses as a multi-dimensional construction based on economic prosperity, social equity and the integrity of the environment [7,32], giving origin to the construct of corporate sustainability [33], is presented as a substantial and complementary part of sustainability development [31] to which an additional component related to the concept of management of the stakeholders is incorporated [5,21]. In general,

this vision of business management defends the idea that organisations face diverse demands from the stakeholders to achieve their goals [34] and requires them to include activities of an ethical and philanthropic nature in its mission as an organisation and consider them key factors in this process [35]. In this context, sustainability development and corporate sustainability are different and complementary concepts but loosely connected [36], given that they share the viewpoint of long-term growth and their ecological approach [15].

For Van Marrewijk and Werre [37], corporate sustainability is seen as an approach of corporate social responsibility and refers to the interaction between people and organisations. Popescu and Popescu [38] argue that corporate social responsibility helps organisations to be sustainable, gives them financial security and, at the same time, reduces negative environmental impacts. This relationship between both constructs directly affects the ability of businesses to subsist and create long-term profits [5]. The initiatives of sustainability and the search for corporate responsibility on behalf of the organisations that are connected to create economic growth play a leading role in the protection of the environment and the development of society [22,39].

Although corporate sustainability has been widely studied and it has developed different instruments for its measurement [12,40–42], these proposals show weaknesses in their approaches given that the multi-dimensionality of the construct has not been considered; designing the scales in terms of segmented, and not relational, visions [6,11]. This is how various authors have focused solely on the economic results and long-term profitability [20,42,43]; others have only focused on ethical aspects [35] or exclusively on environmental aspects [44].

Reference [45] examines the different indicators to measure social and sustainable practices. Among all the models, one stands out in measuring the performance of corporate sustainability; it is called the Financial Times Stock Exchange (FTSE), where we find the FTSE4Good. It contains a series of indicators used to measure the performance of corporations in the stock market and match the standards of corporate social responsibility. These are found in social practices, corporate governing and transparent management. Other studies suggest the use of performance indicators such as the Global Reporting Initiative (GRI). This one is based on a model for information divulgation related to strategies of sustainability and corporate social responsibility, including elements like institutional philosophy, mission and vision as well as the three main axes of sustainability—economic, social and environmental. However, the research done by Hopkins [46] concludes that the instrument contains incoherencies among the indicators and corporate management. Hence, it is deemed deficient to control sustainability and corporate social responsibility. Another group of researchers has more recently created their own scales of measurement based on the tri-dimensional model of corporate sustainability, among others [11,27]. These quantitative studies have adapted and been validated through structural equations. They allow an adequate measurement of the perception of stakeholders related to the sustainable management of corporations and businesses.

This study follows the model offered by the research of Lee and Saen [27] and Chow and Chen [11] in which the traditional dimensions of corporate sustainability (economic, social and environmental) are studied, and to which a new dimension known as corporate identity [5,28] has been added, given that it is presented as a relevant factor for building profitable relationships with stakeholders and for the interaction of sustainability strategies and practices [47]. Thus the scale considered in this paper is composed of four dimensions: corporate identity, economic, social and environmental. It looks to identify the adaptability of the measure for companies operating within the social economy, specifically cooperatives. Some research considers the social and solidary economy as society's response towards a state of wellbeing, social justice and inclusion, which differentiates them from purely mercantilism-based businesses [48].

Specifically, the dimension of corporate identity refers to the creation of identity which directs the organisation's "way of being" and is summarised by the mission, vision, values and beliefs [44]. Simões and Sebastiani [28] determine that corporate identity is what makes corporations different from each other, even if they have similar characteristics [49]. Hence, the correct management of

corporate identity will have a positive impact in a short term and will help to improve the corporation's longer-term image [50].

The economic dimension is defined as the creation of competitive value and advantage, given that the businesses are considered a source of material wealth, which allows them to subsist with the passing of time [27,51]. Even though the cooperatives' final goal is not to obtain financial profit, they must be economically sustainable to achieve the principle of equal distribution of surplus [24].

In turn, the social dimension addresses the management of a business in relation to the reduction of social inequality, tending to improve the quality of life of all its stakeholders [38]. It also has to be taken into account which social issues can be included in the commercial strategy of the organisation, which translates to a positive image towards the community [51,52].

Finally, the environmental dimension includes the initiatives of a business for managing operations in such a way that they reduce the environmental impacts derived from their production process [10]. To encourage this dimension, it is fundamental for corporations to work with green marketing strategies; this way it is guaranteed that their prices, products and processes will contribute to generate natural capital [38].

### 3. Materials and Methods

#### 3.1. Survey Design

The objective of this research is to develop and validate a scale that offers a measure of corporate sustainability in Ecuadorian cooperatives. To achieve this, field research was undertaken using a research questionnaire validated by Chow and Chen [11] for an Asian context (particularly China) but adapted to the cooperativism of this Latin-American country. This tool seeks to measure the perception of stakeholders about the strategies of corporate sustainability these social economy institutions have.

The design and adaption of this research questionnaire was developed with the collaboration of a group of Ecuadorian experts in the area of social economy. As the next step, a pre-test was applied to 30 stakeholders of the cooperatives with the aim of determining if the research instrument was presented in a clear and understandable way for those it was aimed at. As such, conditioning questions which could have guided the respondents towards the expectations of the study were discarded. By these means, we were able to detect mistakes and inconsistencies in the scale proposed. Additionally, these suggestions were applied to improve the final version of the questionnaire.

#### 3.2. Data Collection

The fieldwork was done between the months of February and March 2018 by surveyors from Lay University Eloy Alfaro of Manabí in Ecuador. Initially, a pre-selection of surveyors was conducted. Then they were trained regarding the strategies to be applied and the criteria for the validity of the information received. Afterwards, the knowledge taught was validated by means of an assessment test to determine if the potential researchers had achieved the standard necessary for the successful implementation of the survey process. The research instrument was presented in Spanish and, in order to get the answers, coordinated visits to the cooperatives were conducted with our surveyors identified as such with badges. Firstly, the target of the research was explained to people who filled in the survey; we requested their collaboration and provided twenty minutes to fill in the questions. The surveys were then completed by the selected stakeholders themselves. The surveyors were always available to answer questions about the research or the survey itself. Aiming to have a greater representation in the study, we worked with a stratified sampling proportionate in relation to the percentages to the segments of the financial cooperatives and the areas of activity in non-financial cooperatives (Table 1). The grouping presented by the Superintendence of Popular and Solidary Economy (the institution in charge of the regulation of the activities of these corporations and others from the social economy sector) was used for this purpose. The surveys we collected were 2137 in total. Ninety-five of them

were not considered for their analysis due to incomplete data. The rejection rate was low (4.4%) and was not significant in any variable.

**Table 1.** Stratification of the Sample.

<b>Non-Financial Cooperatives</b>	<b>N Cooperatives</b>	<b>%</b>	<b>N Stakeholders</b>
Consumption	16	1%	7
Production	492	18%	210
Services	1943	73%	828
Housing	216	8%	92
<b>Total</b>	<b>2667</b>	<b>100%</b>	<b>1137</b>
<b>Financial Cooperatives</b>	<b>N Cooperatives</b>	<b>%</b>	<b>N Stakeholders</b>
Segment 1	31	5%	50
Segment 2	38	6%	60
Segment 3	82	12%	120
Segment 4	176	26%	260
Segment 5	326	49%	490
Without segment	12	2%	20
<b>Total</b>	<b>665</b>	<b>100%</b>	<b>1000</b>

Source: own elaboration.

### 3.3. Sample and Sampling Error

This research revolves around the perceptions of the stakeholders: the officers, the employees and the members (many of these are also clients/users and/or suppliers as well) of the cooperatives of Ecuador, for which the target population was made up of 6,509,311 people (data from 31 December 2017, according to the Superintendence for Popular and Solidary Economy), which corresponds to the members registered in their database who, in turn, in these institutions, have multiple roles (members, officers and/or workers). Valid surveys were filled in by 2042 people (714 women and 1328 men), with an average age of 37.7, of which 726 are members and 1316 held various roles within the cooperatives. Considering this data, a sampling error of 2.2% for a confidence level of 95% was determined.

### 3.4. Data Analysis

Once the fieldwork had finished, it was possible to proceed with the refinement of the questionnaires, removing those questions which had mistakes or absent values in any item. Later, the tabulation and statistical treatment of the data was done, using SPSS v 23 software, as well as Amos Graphics v 23, where the statistic values were determined to evaluate if the survey was consistent and reliable. For this evaluation, we followed two procedures: firstly, the exploratory factorial analyses to determine how many dimensions compose the items in the questionnaire, and secondly, a confirmatory factorial analysis with structural equations to confirm the appropriateness of the proposed model.

## 4. Results

### 4.1. Design of the Measuring Scale

This study proposes a measuring tool that looks to analyse, when appropriate, the adaptation of corporate sustainability dimensions to the reality of Ecuadoran cooperativism. The literature review of this construct allowed for the establishment of the items which contribute appropriately to obtaining the information required. The research questionnaire was proposed in relation to two ideas: a socio-demographic situation and the approach of the survey, based on the scale of corporate sustainability. The first idea, related to the socio-demographic data, featured total questions (answer: yes or no) and open-answer questions or partial questions (like age and years working in the same company). This allowed us to discern the actors of corporate sustainability (members, employees and officers). We also asked about any other additional role (costumer/user or supplier) and the data of the

position, where it may be distinguished (e.g., type of contract, workday, department, level of authority, income range). The second global axis of the survey constitutes the foundation of this research due to it being focused on the dimensions of corporate sustainability; we worked with the methodological proposal from [53], used by [24] for the elaboration and validation of the research instruments. This can be summarised in seven steps.

Firstly, we did a literature review that allowed us to specify the domain of the construct and thus select the theoretical models we started from for this research. In this phase, we identified four dimensions of corporate sustainability: (1) corporate identity, (2) economic, (3) social and (4) environmental. They derive from the models of Chow and Chen [11], Lee and Sen [27] and Simões and Sebastiani [28].

Secondly, we worked to generate a sample of items; for this purpose, we posed twenty items derived by models selected from the first step, which were analysed by three experts (two academic experts and one from the social economy sector). As a product of this revision, we deleted five items because they were deemed inadequate for the cooperative sector.

The following steps consist of collecting data and purifying measures; for this, we did a pre-test on 30 stakeholders of the different cooperatives to obtain suggestions and determine if the language used was adequate for the people surveyed. These steps are considered of great importance since they allow us to detect incorrect or inconsistent data in the definitive scale study.

As a result, the definitive measuring scale proposed is composed of fifteen items. Its options are framed in a Likert scale (5-points scale, being 1 “I totally disagree” and 5 “I totally agree”). Our main aim is to measure and modulate the perceptions of stakeholders towards the initiatives of corporate sustainability in Ecuadorian cooperativism.

Finally, we did the fieldwork, applying the survey to the selected sample. Thanks to this, we were able to use advanced statistical techniques, doing an exploratory factorial analysis which enabled us to determine the adequate grouping of the items according to the four dimensions we proposed. These statistics studies concluded with the application of a confirmatory factorial analysis to assess the reliability and validity of the scale used.

#### 4.2. Validation of the Measuring Scale

Once the tabulation of data was completed, and the lack of valid studies of the construct through the scales considered, we began a statistical study with the exploratory factorial analysis. For this, we worked with the method of maximum likelihood and main components with Varimax rotation to establish the number of factors that were common and hence determine if the suggested variables were the optimal ones (Table 2). To determine if the factorial analysis was viable, we elaborated a matrix of correlations (85.7% with a value greater than 0.3); the measures of sampling adequacy (MSA), Kaiser Meyer–Olkin (KMO), the result of which was 0.944; and Bartlett’s sphericity test, where the result showed that the variables were dependent ( $\chi^2(105) = 9.269,08, p < 0.001$ ).

Through the Cauchy root test (factors with autovalues higher than 1), we determined that the number of factors generated matched the four dimensions previously identified in the literature review and explained 63.32% of the total variance (Table 2). The first factor explains 20.89% of the total variance and has positive correlations with the first three items, leading us to refer to it as “corporate identity” (Cid); the second factor explains 18.70% of the total variance and has positive correlations with items 4–6, which leads us to call this factor “economic” (Eco); the third factor explains 14.50% of the total variance and has high correlations with items 7–10, so this factor will be known as “social” (Soc); and, finally, the fourth factor explains 9.23% of the total variance and has positive correlations with items 11–15, for which it is named “environmental” (Env).

The internal consistency of the measuring scale was determined through confirmatory factorial analysis, with structural equations conducted through the maximum likelihood method, where we could confirm the adequacy of the obtained model, structuring it by four dimensions and fifteen items. The estimations were statistically significant ( $p < 0.05$ ) and the factorial charges were superior to 0.5,

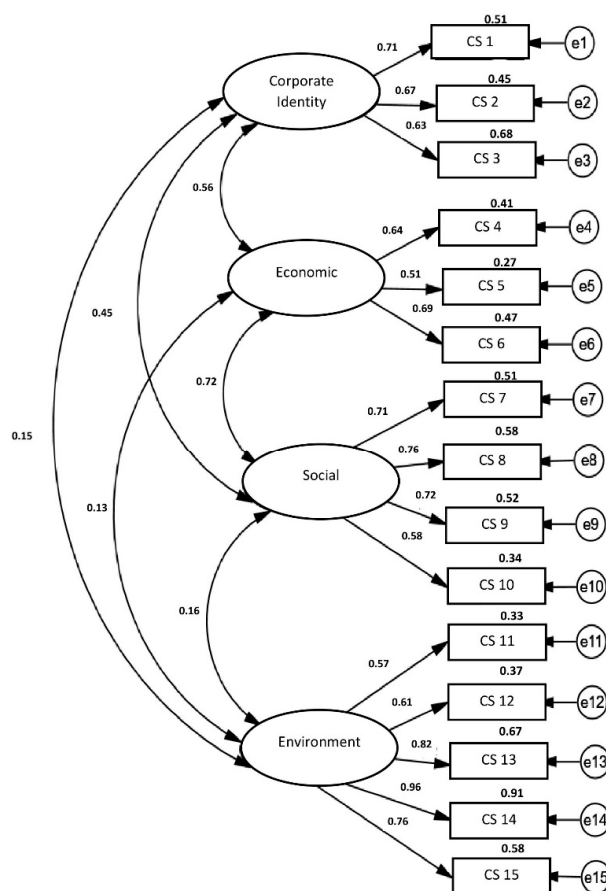


which means that all of the indicators are saturate in a satisfactory manner with each one of the latent variables. Considering the covariance in between factors was not above 0.5, it can be identified that a suggested model did not present multicollinearity problems, which, additionally, suggests evidence of discriminant validity (Figure 1).

**Table 2.** Exploratory factor analysis: questionnaire of corporate sustainability.

Ítems	Factor			
	Cid.	Eco.	Soc.	Env.
CS1. Vision and Mission	0.574			
CS2. Institutional Values	0.719			
CS3. Identification	0.687			
CS4. Economic Reports		0.676		
CS5. Budgeted		0.876		
CS6. Leadership		0.593		
CS7. Stakeholders			0.768	
CS8. Equal Opportunities			0.792	
CS9. Suggestions			0.772	
CS10. Business purpose			0.645	
CS11. Recycling programs				0.596
CS12. Nonrenewable resources				0.755
CS13. Environmental certificates				0.822
CS14. Environmental impacts				0.902
CS15. Green providers				0.797
Eigenvalues	3.76	2.59	1.24	1.08

Source: own elaboration.



**Figure 1.** Estimation of the structural model: corporate sustainability. Note: e being the margin of error we considered for each item regarding corporate sustainability. Source: own elaboration.

The goodness of fit of the model was determined with the simultaneous assessment of various indexes: goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), normed fit index (NFI), the Tucker Lewis index (TLI) and root mean square error of approximation (RMSEA). As can be confirmed in Table 3, the fit of the scale of the beginning theoretical model is high. To finish, the internal consistency of the dimensions through Cronbach's alpha coefficient ( $\alpha_{\text{Corporate Identity}} = 0.818$ ;  $\alpha_{\text{Economic}} = 0.903$ ;  $\alpha_{\text{Social}} = 0.821$ ;  $\alpha_{\text{Environmental}} = 0.807$ ), which indicates a very high reliability in the model suggested.

**Table 3.** Goodness of fit statistics of corporate sustainability.

	$\chi^2$ (g.l.)	$p$	$\chi^2/\text{gl}$	GFI	AGFI	CFI	NFI	TLI	RMSEA
<b>Total</b>	388.87 (84)	<0.001	4.62	0.96	0.97	0.97	0.96	0.96	0.049
<b>Subsample 1</b>	294.55 (84)	<0.001	3.51	0.94	0.96	0.95	0.95	0.95	0.054
<b>Subsample 2</b>	299.17 (84)	<0.001	3.56	0.95	0.95	0.96	0.95	0.94	0.055

Source: Own elaboration.

## 5. Discussion

The corporate management of organisations has been the subject of various studies in recent years [4,9,17,42]; within these, corporate sustainability is presented as a key factor for adding value, creating competitive advantages [4] or the fundamental part of corporate social responsibility [37]. However, these studies are limited to presenting theoretical and qualitative aspects of the construct.

The specific area of this research is focused on the cooperativism of Ecuador, whose management and study has traditionally been directed towards economic, financial or production matters without considering the activities intended to improve the life quality of stakeholders in a sustainable way [23,25]. Due to this, the preparation of tools which allow the measurement of this construct is key, and, additionally, these tools must meet the specific characteristics of the context where they are going to be applied [39]. Hence, the analysis of the construct was developed using a measuring scale that is derived from a theoretical study and empirical work focused on the traditional corporate sustainability dimensions (economic, social and environmental [11,27]), including a new dimension, corporate identity [28], which has been added to the traditional model.

The main contribution of this research is to contribute with a parsimonious instrument composed of 15 items. The explanatory factorial analysis determined that all of them had factorial charges greater than 0.5. The confirmatory factorial analysis also proved that all items were correlated with the four dimensions (Figure 1). The scale we developed in this research is relevant progress in the scientific knowledge of corporate sustainability, different from the preceding studies which present a tri-dimensional approach [1,5,44], adding, as has been said, the dimension known as corporate identity. This dimension is utterly important, given that it is considered as the reason that leads the way of an organisation [28]. This is confirmed using an empirical analysis carried out through the perceptions of the cooperatives' stakeholders [21], where the structure of the scale is consistent, as demonstrated by the confirmatory analysis (using a model of structural equations). As such, it provides a better understanding of the strategic applications of the corporate sustainability dimensions, with the goal of promoting the complete development of Ecuadoran cooperatives.

## 6. Conclusions

Corporate sustainability is presented as a wide and multi-dimensional construct related to the capacity of businesses to survive and generate profits with a long-term vision, promoting their economic, social and environmental development, which, in turn, causes the consolidation of its corporate identity. In developing countries, specifically Ecuador, quantitative studies are required for the assessment of these business activities. One of the main contributions of this research work is providing a valid and trustworthy measuring tool to measure corporate sustainability in the cooperativism of this Latin American country.



Accordingly, the main characteristics of the corporate movement and the social economy have been taken into consideration, which tends to balance financial, human and environmental capital. As such, we can confirm, from this point of view, that the cooperatives are organisations that actively contribute to sustainability. This makes it imperative to determine the level of corporate sustainability implementation in these organisations of popular and solidary economy. In any case, the Ecuadoran cooperatives inform their stakeholders about the socially responsible management and sustainability practices through “cooperative social balance”, implemented by the Superintendency of Popular and Solidary Economy as a mechanism of accountability. However, this document presents limitations, given that the information it contains reflects qualitative indicators of social management from the point of view of each cooperative, without the perceptions of the stakeholders being considered, which are determining factors of corporate sustainability.

This research offers a new measuring approach to one of the strategic sectors in the social economy of Ecuador. Moreover, the empirical evidence which emanates from this article shows that corporate sustainability can be measured through the fifteen items classified in four dimensions: corporate identity, economic, social and environmental. For this, the scale we propose can be used as a measuring instrument by the Social and Solidary Economy Superintendency. This would allow the institution to compare information related to what cooperatives report and what the employees, partners and stakeholders perceive. Additionally, the instrument we propose allows us to differentiate the corporate sustainability strategies between different cooperatives, giving us a better understanding of their strategic applications and evaluating their input. This tool also allows us to detect problems related to ethics, environment and society. In addition, given that the cooperative sector provides financial and non-financial activities (production, services, consumption, housing, among others), we suggest this measuring scale as a tool that can be adapted to any business sector.

This study is not exempt of limitations; the main one appeared in the phase of determining the study population, given that the Superintendence of Popular and Solidary Economy of Ecuador does not have a database regarding the number of employees of the cooperative; as such, it worked with the number of members reported by each cooperative to this control institution, given that in a popular and solidary economy, the members hold multiple roles (employee, administrator, customer/user and/or supplier). To finish, for future lines of research, the application of this scale to purely mercantilism-based businesses (to reaffirm their adaptability) is proposed in addition to determining the relationship that could exist among corporate sustainability and other strategic variables such as corporate social responsibility.

**Author Contributions:** F.G.S.C.; I.L.A.; N.M.M. and A.H.-F. Conceptualized the work and reviewed the literature, interpreted and curated the data and wrote the manuscript. The authors read and revised the manuscript several times. All authors have read and agree to the published version of the manuscript.

**Funding:** This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. Voegtlin, C.; Scherer, A.G. Responsible innovation and the innovation of responsibility: Governing sustainable development in a globalized world. *J. Bus. Ethics* **2017**, *143*, 227–243. [[CrossRef](#)]
2. Scherer, A.G.; Palazzo, G. Toward a political conception of corporate social responsibility: Business and society seen from a Habermasian perspective. *Acad. Manag. Rev.* **2007**, *32*, 1096–1120. [[CrossRef](#)]
3. Smith, W.K.; Tracey, P. Institutional complexity and paradox theory: Complementarities of competing demands. *Strat. Organ.* **2016**, *14*, 455–466. [[CrossRef](#)]
4. Epstein, M.J.; Buhovac, A.R.; Yuthas, K. Managing social, environmental and financial performance simultaneously. *Long Range Plan.* **2015**, *48*, 35–45. [[CrossRef](#)]
5. Baumgartner, R. Managing Corporate Sustainability and CSR: A conceptual framework combining values, strategies, and instruments contributing to sustainable development. *Corp. Soc. Responsib. Environ. Mang.* **2014**, *21*, 258–271. [[CrossRef](#)]

6. Baumgartner, R.J.; Ebner, D. Corporate sustainability strategies: Sustainability profiles and maturity levels. *Sustain. Dev.* **2010**, *18*, 76–89. [\[CrossRef\]](#)
7. Bansal, P. Evolving Sustainably: A Longitudinal Study of Corporate Sustainable Development. *Strateg. Manag. J.* **2005**, *26*, 197–218. [\[CrossRef\]](#)
8. Perez-Batres, L.A.; Miller, V.V.; Pisani, M.J. CSR, sustainability and the meaning of global reporting for Latin American corporations. *J. Bus. Ethics* **2010**, *91*, 193–209. [\[CrossRef\]](#)
9. Amini, M.; Bienstock, C.C. Corporate sustainability: An integrative definition and framework to evaluate corporate practice and guide academic research. *J. Clean. Prod.* **2014**, *76*, 12–19. [\[CrossRef\]](#)
10. Lozano, R. A holistic perspective on corporate sustainability drivers. *Corp. Soc. Responsib. Environ. Mang.* **2015**, *22*, 32–44. [\[CrossRef\]](#)
11. Chow, W.S.; Chen, Y. Corporate sustainable development: Testing a new scale based on the mainland Chinese context. *J. Bus. Ethics* **2012**, *105*, 519–533. [\[CrossRef\]](#)
12. Engida, T.G.; Rao, X.; Berentsen, P.B.; Lansink, A.G. Measuring corporate sustainability performance—the case of European food and beverage companies. *J. Clean. Prod.* **2018**, *195*, 734–743. [\[CrossRef\]](#)
13. Baumgartner, R.J.; Zielowski, C. Analyzing zero emission strategies regarding impact on organizational culture and contribution to sustainable development. *J. Clean. Prod.* **2007**, *15*, 1321–1327. [\[CrossRef\]](#)
14. Popescu, C.R.G. Addressing Intellectual Capital in the Context of Integrated Strategy and Performance: Emphasizing the Role of Companies' Unique Value Creation Mechanism, While Targeting Better Organizational Reporting in Romania: The Case of Green Marketing and Green Marketing Strategies. *J. Mark. Res Case Stud.* **2019**, *12*, 162. [\[CrossRef\]](#)
15. Montiel, I.; Delgado-Ceballos, J. Defining and measuring corporate sustainability. *Organ. Environ.* **2014**, *27*, 113–139. [\[CrossRef\]](#)
16. Hart, S.L.; Milstein, M.B. Creating sustainable value. *Acad. Manag. Perspect.* **2003**, *17*, 56–67. [\[CrossRef\]](#)
17. Antolín-López, R.; Delgado-Ceballos, J.; Montiel, I. Deconstructing corporate sustainability: A comparison of different stakeholder metrics. *J. Clean. Prod.* **2016**, *136*, 5–17. [\[CrossRef\]](#)
18. Auld, G.; Bernstein, S.; Cashore, B. The new corporate social responsibility. *Ann. Rev. Env. Resour.* **2008**, *33*, 413–435. [\[CrossRef\]](#)
19. Maas, K.; Schaltegger, S.; Crutzen, N. Advancing the integration of corporate sustainability measurement, management and reporting. *J. Clean. Prod.* **2016**, *133*, 859–862. [\[CrossRef\]](#)
20. Barnett, M.; Salomon, R. Does it pay to be really good? Addressing the shape of the relationship between social and financial performance. *Strateg. Manag. J.* **2012**, *33*, 1304–1320. [\[CrossRef\]](#)
21. Gil-Lafuente, A.M.; Barcellos Paula, L. Algorithm applied in the identification of stakeholders. *Kybernetes* **2013**, *42*, 674–685. [\[CrossRef\]](#)
22. Bodhanwala, S.; Bodhanwala, R. Does corporate sustainability impact firm profitability? Evidence from India. *Manag. Decis.* **2018**, *56*, 1734–1747. [\[CrossRef\]](#)
23. Fernández, A.; Hernández, A.; Hernández, M.; Chicaiza, O. Savings and credit Cooperatives in Pichincha, Ecuador: Is this a sustainable social management case? *J. Secur. Sustain. Issues* **2018**, *7*, 549–558. [\[CrossRef\]](#)
24. González Santa Cruz, F.; Llor Alcívar, I.; Moreira Mero, N.; Hidalgo-Fernández, A. Analysis of the Dimensions of Corporate Social Responsibility: Study Applied to Co-operativism in Ecuador. *Soc. Indic. Res.* **2019**, 1–18. [\[CrossRef\]](#)
25. Alfonso, J.; Rivera, C. Improvement of the Social Management Model in cooperative companies in the province of Pinar del Río. *Advances* **2013**, *15*, 40–53.
26. Challita, S.; Sentis, P.; Aurier, P. Do Cooperatives perform better than investor owner firms-The impact of governance or financial structure and performance. In *Le pouvoir d'innover des coopératives: Textes choisis de l'appel international d'articles scientifiques, Proceedings of the Sommet International des Coopératives 2014, Quebec, QC, Canada, 6–9 October 2014*; Sommet International des Coopératives: Quebec, QC, Canada, 2014; pp. 503–519.
27. Lee, K.H.; Saen, R.F. Measuring corporate sustainability management: A data envelopment analysis approach. *Int. J. Prod. Econ.* **2012**, *140*, 219–226. [\[CrossRef\]](#)
28. Simões, C.; Sebastiani, R. The nature of the relationship between corporate identity and corporate sustainability: Evidence from the retail industry. *Bus. Ethics Quart.* **2017**, *27*, 423–453. [\[CrossRef\]](#)
29. Gladwin, T.N.; Kennelly, J.J.; Krause, T.S. Shifting paradigms for sustainable development: Implications for management theory and research. *Acad. Manag. Rev.* **1995**, *20*, 874–907. [\[CrossRef\]](#)

30. Oskarsson, K.; Von Malmberg, F. Integrated management systems as a corporate response to sustainable development. *Corp. Soc. Responsib. Environ. Mang.* **2005**, *12*, 121–128. [\[CrossRef\]](#)
31. Fergus, A.H.; Rowney, J.I. Sustainable development: Lost meaning and opportunity? *J. Bus. Ethics* **2005**, *60*, 17–27. [\[CrossRef\]](#)
32. Svensson, G.; Ferro, C.; Høgevold, N.; Padin, C.; Varela, J.C.; Sarstedt, M. Framing the triple bottom line approach: Direct and mediation effects between economic, social and environmental elements. *J. Clean. Prod.* **2018**, *197*, 972–991. [\[CrossRef\]](#)
33. Székely, F.; Knirsch, M. Responsible leadership and corporate social responsibility: Metrics for sustainable performance. *Eur. Manag. J.* **2005**, *23*, 628–647. [\[CrossRef\]](#)
34. Bansal, P. The corporate challenges of sustainable development. *Acad. Manag. Perspect.* **2002**, *16*, 122–131. [\[CrossRef\]](#)
35. Schaltegger, S.; Burritt, R. Business cases and corporate engagement with sustainability: Differentiating ethical motivations. *J. Bus. Ethics* **2018**, *147*, 241–259. [\[CrossRef\]](#)
36. Pérez, S.; Fernández-Salineró, S.; Topa, G. Sustainability in Organizations: Perceptions of Corporate Social Responsibility and Spanish Employees' Attitudes and Behaviors. *Sustainability* **2018**, *10*, 3423. [\[CrossRef\]](#)
37. Van Marrewijk, M.; Werre, M. Multiple levels of corporate sustainability. *J. Bus. Ethics* **2003**, *44*, 107–119. [\[CrossRef\]](#)
38. Popescu, C.R.G.; Popescu, G.N. An Exploratory Study Based on a Questionnaire Concerning Green and Sustainable Finance, Corporate Social Responsibility, and Performance: Evidence from the Romanian Business Environment. *J. Risk. Financ. Manag.* **2019**, *12*, 162. [\[CrossRef\]](#)
39. Fernández, A.; Calero, S.; Parra, H.; Fernández, R. Corporate social responsibility and the transformation of the productive matrix for Ecuador sustainability. *J. Secur. Sustain. Issues* **2017**, *6*, 575–584. [\[CrossRef\]](#)
40. Erol, I.; Cakar, N.; Erel, D.; Sari, R. Sustainability in the Turkish retailing industry. *Sustain. Dev.* **2009**, *17*, 49–67. [\[CrossRef\]](#)
41. Rahdari, A.H.; Rostamy, A.A. Designing a general set of sustainability indicators at the corporate level. *J. Clean. Prod.* **2015**, *108*, 757–771. [\[CrossRef\]](#)
42. Sroufe, R. Integration and organizational change towards sustainability. *J. Clean. Prod.* **2017**, *162*, 315–329. [\[CrossRef\]](#)
43. Peteraf, M.A. The cornerstones of competitive advantage: A resource-based view. *Strateg. Manag. J.* **1993**, *14*, 179–191. [\[CrossRef\]](#)
44. Dočekalová, M.P.; Kocmanova, A. Composite indicator for measuring corporate sustainability. *Ecol. Indic.* **2016**, *61*, 612–623. [\[CrossRef\]](#)
45. Sun, M.; Nagata, K.; Onoda, H. The Investigation of the Current Status of Socially Responsible Investment Indices. *J. Econom. Int. Fin.* **2011**, *3*, 676–684.
46. Hopkins, M. Measurement of corporate social responsibility. *Int. J. Manag. Decis. Mark.* **2005**, *6*, 213–230. [\[CrossRef\]](#)
47. Balmer, J.M.; Powell, S.M.; Greyser, S.A. Explicating ethical corporate marketing. Insights from the BP Deepwater Horizon catastrophe: The ethical brand that exploded and then imploded. *J. Bus. Ethics* **2011**, *102*, 1–14. [\[CrossRef\]](#)
48. Amin, A.; Cameron, A.; Hudson, R.; Cameron, A. *Placing the Social Economy*; Routledge: London, UK, 2002.
49. Balmer, J.M.; Fukukawa, K.; Gray, E.R. The nature and management of ethical corporate identity: A commentary on corporate identity, corporate social responsibility and ethics. *J. Bus. Ethics* **2007**, *76*, 7–15. [\[CrossRef\]](#)
50. Michaels, A.; Grüning, M. The impact of corporate identity on corporate social responsibility disclosure. *Int. J. Corp. Soc. Responsib.* **2018**, *3*, 3. [\[CrossRef\]](#)
51. Sidhoum, A.; Serra, T. Corporate sustainable development. Revisiting the relationship between corporate social responsibility dimensions. *Sust. Dev. J.* **2018**, *26*, 365–378. [\[CrossRef\]](#)

52. Quinn, J. The Sustainable Corporate Objective: Rethinking Directors' Duties. *Sustainability* **2019**, *11*, 6734. [[CrossRef](#)]
53. Churchill, G.A. A paradigm for developing better measures of marketing constructs. *J. Market Res.* **1979**, *16*, 64–73. [[CrossRef](#)]



© 2020 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).