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Measuring social and environmental impact: a case study

Mensuração de impacto socioambiental: um estudo de caso

Medición del impacto social y ambiental: un estudio de caso

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KEYWORDS

Socio-environmental
Impact Business. Socio-
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Indicators.

Abstract: Social Enterprises (SEs) are part of new business models that seek to achieve two concurrent missions: economic and social/environmental. These businesses aim to minimize socio-environmental problems by offering products and services focused on socio-environmental sustainability. The objective of this research was to analyze the impact measurement process by identifying the main impact indicators established by the investigated SE. The applied methodology is qualitative and descriptive, using a single case study. The chosen case was a SE operating in the organic and agroecological food sector in Fortaleza-CE. The results indicate that impact measurement brings advantages throughout the entire supply chain: for the farmers, the main impact is the guarantee of production and, thus, recurring income. For the SE, the indicators allow for better management organization and provide proof of the positive impact generated. For retail customers, the collected information is used to publicize ESG (Environmental, Social, and Governance) practices. Regarding the indicators used to measure the SE activities' impact, it was found that they are aligned with the Sustainable Development Goals (SDGs) established by the UN (United Nations) for 2030, which are: Poverty Eradication (SDG 1), Zero Hunger (SDG 2), Gender Equality (SDG 5), Reduction of Inequalities (SDG 10), Responsible Consumption and Production (SDG 12), and Climate Action (SDG 13).

PALAVRAS-CHAVE

Negócio de Impacto Socioambiental.
Mensuração de Impacto Socioambiental.
Indicadores.

Resumo: Os Negócios de Impacto Socioambiental (NISA) estão inseridos nos novos modelos de negócios que buscam alcançar duas missões concomitantes, a econômica e a social/ambiental. Assim estes negócios buscam minimizar os problemas socioambientais, por meio da oferta de produtos e serviços voltados para a sustentabilidade socioambiental. O objetivo dessa pesquisa foi analisar o processo de mensuração de impacto através da identificação dos principais indicadores de impacto estabelecidas pelo NISA investigado. A metodologia aplicada tem natureza qualitativa, descritiva, através do estudo de caso único. O caso escolhido foi um NISA atuante no setor de produção de alimentos orgânicos e agroecológicos em Fortaleza-CE. Os resultados apontam que a mensuração de impacto traz vantagens ao longo de toda a cadeia: para os agricultores, o principal impacto identificado é a possibilidade de produção garantida, e desta forma, a renda recorrente. Para o NISA, os indicadores possibilitam a melhor organização da gestão e comprovação do impacto positivo gerado. Já para os clientes varejistas, as informações coletadas são usadas na divulgação das práticas de ESG (Environmental, Social and Governance). Com relação aos indicadores utilizados para medir o impacto do NISA, constatou-se que eles estão alinhados com Objetivos do Desenvolvimento Sustentável (ODS) que a ONU (Organização das Nações Unidas) estabeleceu para 2030, sendo são eles: a Erradicação da Pobreza (ODS 1), Fome Zero (ODS 2), a Igualdade de Gênero (ODS 5), a Redução das Desigualdades (ODS 10), Consumo e Produção Responsáveis (ODS 12) e o Combate às Alterações Climáticas (ODS 13).

PALABRAS CLAVE

Negocios del Impacto Socioambiental.
Medición del Impacto Socioambiental.
Indicadores.

Resumen: Las Empresas Sociales (ES) forman parte de nuevos modelos de negocio que buscan alcanzar dos misiones concurrentes: económica y social/ambiental. Estos negocios tienen como objetivo minimizar los problemas socioambientales ofreciendo productos y servicios enfocados en la sostenibilidad socioambiental. El objetivo de esta investigación fue analizar el proceso de medición de impacto mediante la identificación de los principales indicadores de impacto establecidos por la ES investigada. La metodología aplicada es cualitativa y descriptiva, utilizando un estudio de caso único. El caso elegido fue una ES que opera en el sector de alimentos orgánicos y agroecológicos en Fortaleza-CE. Los resultados indican que la medición de impacto aporta ventajas a lo largo de toda la cadena de suministro: para los agricultores, el principal impacto es la garantía de producción y, por lo tanto, ingresos recurrentes. Para la ES, los indicadores permiten una mejor organización de la gestión y proporcionan pruebas del impacto positivo generado. Para los clientes minoristas, la información recopilada se utiliza para divulgar las prácticas de ESG (Environmental, Social, and Governance). En cuanto a los indicadores utilizados para medir el impacto de las actividades de la ES, se encontró que están alineados con los Objetivos de Desarrollo Sostenible (ODS) establecidos por la ONU (Organización de las Naciones Unidas) para 2030, que son: Erradicación de la Pobreza (ODS 1), Hambre Cero (ODS 2), Igualdad de Género (ODS 5), Reducción de las Desigualdades (ODS 10), Consumo y Producción Responsables (ODS 12) y Acción por el Clima (ODS 13).

Introduction

The increase in social inequalities and environmental degradation has led various civil society organizations to pressure governments and private organizations to assume responsibility for addressing these problems and actively seek appropriate solutions (Busse et al., 2017; Hall, Matos, & Silvestre, 2012). This scenario necessitates a shift in business paradigms where the organizational focus should extend beyond profit maximization to include social and environmental performance (Meixell & Luoma, 2015). Alongside traditional organizations adapting their management structures, new business models and innovative methods of production and consumption are emerging, such as Social Enterprises (SEs).

Social Enterprises leverage established market mechanisms to design solutions aimed at resolving or mitigating contemporary socio-environmental problems, thereby generating positive societal impacts (Comini, Barki, & Aguiar, 2013). SEs can contribute to economic development by generating employment and income, particularly for populations with greater social vulnerability (Scherer, 2014). They offer relevant insights into the socio-environmental challenges presented by the traditional market and simultaneously generate economic and social value (Haigh & Hoffman, 2012, 2014). Additionally, SEs embody a more humanistic market vision, promoting ideals of a more inclusive capitalism (Barki, 2014).

However, SEs face significant challenges in measuring the socio-environmental impact they claim to generate. Demonstrating the generation of positive social impact is considered a daunting task, requiring managers and policymakers to discern whether these impacts result from their efforts or other external factors (Duflo, Glennerster, & Kremer, 2007). Lazzarini (2018) emphasizes that measuring socio-environmental impact involves understanding long-term outcomes already achieved, excluding the influence of external activities.

Given the importance of identifying the impact and its beneficiaries, as well as the process of

measuring such impact, this research aims to analyze how the socio-environmental impact measurement process of a Social Enterprise, whose beneficiaries are in the supply chain, takes place. The literature shows that many studies demonstrate the impact measurement applied to SE beneficiaries as service recipients (Silva & Gonçalves-Dias, 2015; Hadad & Gauca, 2014), but few address impact measurement when beneficiaries are suppliers of products or services.

Thus, this research addresses the following question: How is the socio-environmental impact of a Social Enterprise that has family farmers as beneficiaries carried out? To this end, the following specific objectives were outlined: i) to contextualize the SE and its work with family farmers, and ii) to identify the criteria and indicators adopted by the SE in the impact measurement process.

This research is relevant to the academic context, considering that this field is under development and requires further exploration and effort to broaden the debate on the subject and seek a deeper understanding of the socio-environmental impact measurement of this business model.

Theoretical elements of the research

Social Enterprises (SE)

The term "social enterprise" began to be used in Europe in the early 1980s to highlight innovative cooperative actions through service provision aimed at the social inclusion of the most vulnerable populations. By the end of that decade, the term adapted to classify non-profit organizations facing financial difficulties, prompting them to engage in commercial activities to achieve their objectives (Borzaga, Depedri, & Galera, 2012).

Teodósio and Comini (2012) identify three perspectives on social enterprises, that can also be named as social businesses depending on the perspective that is taken in the literature. There is the North American, European, and emerging countries' view. In the North American view, which incorporates market dynamics as capable of

reducing social inequalities, SEs fulfill this role by combining profit objectives with a social mission (Barki, Rodrigues, & Comini, 2020). This perspective emphasizes "social business," highlighting the potential role of multinational companies in mitigating socio-environmental problems through innovative solutions for populations at the base of the pyramid (Pralhad & Hart, 2002).

In the European view, such businesses are termed "social enterprises," focusing on vulnerable populations and functioning as extensions of public services (Petrini, Scherer, & Back, 2016). This perspective promotes community involvement in managing activities to foster economic and social development (Travaglini, Bandini, & Mancinone, 2009).

From the perspective of emerging countries, the concept of social business was popularized by Bangladeshi economist Muhammad Yunus, a Nobel Peace Prize laureate for his work with the Grameen Bank, a microcredit institution lending exclusively to the poor in Bangladesh. Yunus introduced the concept of inclusive social businesses aimed at reducing poverty and promoting social inclusion for the most vulnerable populations (Petrini et al., 2016).

One of the main models adopted in Brazil is related to Social Enterprises (SEs). (In Brazil, Social Enterprises receive the nomenclature of "Negócios de Impacto Socioambiental" which in free translation would refer to Socio-Environmental Impact Businesses. In the English version of the paper, we decided to keep the term Social Enterprises).

SEs in Brazil are characterized by a focus on low-income populations, intentionality, scalability, profitability, social impact related to core activities, and the optional distribution of dividends. Table 1 describes these characteristics in detail.

SEs have been gaining momentum in the country due to the combined efforts of various actors who have been involved with entrepreneurship and impact agendas for decades. In the late 2000s, alongside the emergence of the first SE, several intermediary organizations

focused on SE also came into existence.

Table 1
Characteristics of SEs in Brazil

Features	Description
Focus on low income	These are businesses aimed at meeting the needs and characteristics of the low-income population.
Intentionality	They have an explicit mission to cause social-environmental impact and are managed by social entrepreneurs following ethical and responsible principles.
Potential for scale	They can expand their reach by either growing their business into new regions or by sharing their unique business elements with other entrepreneurs.
Profitability	They have a robust model that does not depend on donations and ensures the profitability of the business.
Socio-environmental impact related to the main activity	The existence of the business is justified by the solution to a real socio-environmental problem, which is the main activity of the enterprise.
Distribution or not of dividends	A business may or may not distribute dividends to shareholders.

Source: Adapted from Pipe Social (2019).

The Institute of Corporate Citizenship (ICE), established in 1999, aimed to bring together entrepreneurs and investors focused on social innovations to leverage their personal philanthropic foundations and/or corporate investments to promote social inclusion and alleviate poverty in the country. Throughout its history, ICE has worked on agendas based on the following premises: articulation and engagement of transformative leaders, cooperative and collaborative work, systematic production, and dissemination of knowledge (ICE & Aliança, 2022). ICE has been a key player in supporting the ecosystem of impact investments and businesses.

The Alliance for Impact, conceived and operated by ICE, is an initiative to promote impact businesses by connecting organizations active in this field in Brazil. Created in 2014, it aims to produce and disseminate content, promote and articulate with strategic actors, foster innovative initiatives, and implement projects/prototypes and communication strategies.

SEs play a fundamental role in delivering

informed social transformation to their stakeholders. To achieve this, it is necessary to understand the reality they aim to transform and identify indicators that demonstrate the change. Thus, committing to the impact measurement process is essential, as it can provide SEs with the credibility needed to attract investors. However, numerous challenges exist in making this commitment viable. The first challenge is defining impact, which involves understanding the transformation and measurable improvement of socio-environmental problems. Another challenge is the technical aspect of measurement, including knowledge of the methodology applied in the process and the importance of integrating measurement into business management (Barki, Comini, & Torres, 2019).

In the following section, we will address the issue of impact measurement, its importance, and the challenges faced by SEs in its implementation.

Socio-environmental impact measurement

As mentioned earlier, the primary difference between SEs and conventional businesses is that SEs aim to generate positive impacts as the essence of their actions. According to Silva, Gasparini, Alquezar, Gongra, and Ribeiro (2017), the process called "impact measurement" involves analyzing the business's intention to impact, identifying target audiences, and evaluating the impact. This includes defining metrics for analyzing actions, systematically collecting information, and communicating results to stakeholders.

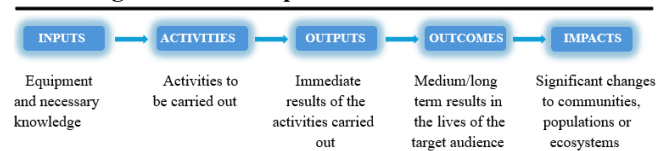
For socio-environmental performance measurement to be effective, various actors must be involved and share responsibilities (Silva & Gonçalves-Dias, 2015). According to Barki, Comini, Cunliffe, Hart, and Rai (2015), measuring socio-environmental impact is complex as it includes evaluating long-term impacts, not just immediate ones. Ávila, Rocha, Arigony, Dill, and Mazza (2016) state that in a context of challenges in measuring socio-environmental impacts, standardized instruments are necessary to support the comparability of business performance with

similar initiatives, providing investors with the necessary tools to evaluate this field of business.

Impact measurement can be done by various methods, applied according to the context, business models, and expected objectives. One widely used model in this field is the logical model, which has its roots in program and project evaluation and was initially developed for the United States Agency for International Development (USAID) in the late 1960s.

Figure 1 shows the main components of the basic logic model – inputs, activities, outputs, outcomes, and impacts. Through their adoption and dissemination by experts in program evaluation, logic models have emerged as the primary means by which social sector organizations identify impacts and other performance metrics (Ebrahim & Rangan, 2014). Inputs refer to the resources needed to carry out interventions aimed at achieving transformation. Properly conducted activities generate products (outputs), which can benefit the target audience and consolidate as results achieved for a set of organizations and communities (Brandão et al., 2015).

Figure 1
Basic Logic Model Components



Source: Adapted from Ebrahim and Rangan (2014)

Based on the logical model, the Theory of Change is another widespread model that helps in the impact measurement process. The Theory of Change integrates the analysis of the SE's context and its vision of impact, expected short, medium, and long-term results, the process that will generate these changes, and the definition of partner actors involved in this process (Brandão, Cruz, & Arida, 2015).

For SEs, the Theory of Change represents a tool capable of outlining all activities inherent to the business, from the necessary financial resources to the changes needed to achieve the required social impact, thus reflecting the

business's commitment to social change (Sales, 2022).

Among the most advanced methodologies to measure impact is the Randomized Control Trials (RCT), which compares the performance between two groups: the treatment group and the control group. This methodology defines the impact of an intervention by asking the central question: what would have happened if the business did not exist? Brandão (2013) notes that until 2013, RCT was the only method capable of measuring socio-environmental impact by evaluating the isolated contribution of an action on social outcomes over time. However, its implementation is costly due to the methodological robustness required (Brandão et al., 2015).

Additionally, there are tools such as IRIS (Impact Reporting and Investment Standards), GIIRS (Global Impact Investing Rating System), and B Corp Certification, which provide indicators for monitoring intended impact (Lazzarini, Cabral, Pongeluppe, Ferreira, & Rotondaro, 2014). IRIS offers a library of indicators that standardize terms and report on economic, social, and environmental performance. GIIRS uses the IRIS taxonomy on an online platform, allowing businesses to monitor performance and inform on the evolution of their operations, consolidating products (outputs) for social change (Brandão et al., 2015). B Corp Certification evaluates businesses across five pillars: governance, workers, community, environment, and customers (Rawhouser, Cummings, & Newbert, 2019).

Lazzarini, Pongeluppe, Yoong, and Ito (2015) proposed the additionality approach, evaluating how measured performance evolves over time compared to groups not receiving the interventions.

Given the context outlined in this section, the complexity of the measurement process is evident, along with its importance and the need to analyze how this process is applied in practice. The next section presents the methodological procedures of the research.

Methodological elements of the research

The present study employs a qualitative (Lakatos & Marconi, 2011) and descriptive (Gil, 2017) approach. The case study method was adopted to understand a specific and real phenomenon in greater depth, utilizing various data sources to gain knowledge for future applications (Yin, 2018).

Therefore, a single case study was applied toward a social enterprise (SE) and we have analyzed the process of measuring socio-environmental impact by collecting secondary and primary data. The SE operates in the organic food sector in the Northeast region of Brazil (specifically in the Ceará state). The SE was established in 2016 by aiming to connect small and family farmers to retail markets and to enable consumers to have access to organic food at affordable prices.

The case study method is appropriate because SEs are typically small and medium-sized enterprises with innovation at their core, often presenting limited clarity in the studies of their supply chain operations.

Data collection involved bibliographic research for secondary data and interviews with employees, suppliers, and customers to collect primary data. Semi-structured interviews were conducted in both synchronous and asynchronous online formats. We first had a round of 5 synchronous online interviews: 4 with business representatives (CEO, technical staff as the agronomist and his assistant and the operations manager), and 1 with a customer that represents one of the main retail chains in Fortaleza city, capital of Ceará state.

We have also applied 4 asynchronous interviews with suppliers. We aimed to understand their participation in the company's impact assessment and how it occurs, as well as to investigate whether the suppliers' lives improved after engaging with the SE.

Following the interviews, all audio recordings were fully transcribed to ensure the transparency and consistency of the transcriptions, a procedure

authorized by all participants at the time of the interview.

The research also utilized documents provided by the company, such as the socioeconomic form used in the analysis of producers and the certification model that contains the indicators evaluated in the qualification process of farmers that will become SE suppliers. We also verified SE information on its social networks and in scientific articles that had referenced the company.

Research data were organized, processed, and coded through category analysis in an Excel spreadsheet to evaluate the interview material, from which deductive categories derived from the analyzed literature were identified (De Andrade Martins, 2006).

In the following section, the study's results will be presented, addressing the proposed objectives.

Results presentation and discussion

The SE is a startup that connects organic and agroecological food farmers to retail companies. The company has established agile and transparent supply chains, aiming to a) deliver higher-quality food to consumers within a 12-hour window, b) minimize food waste in logistics routes, c) ensure quality in services provided to retail customers, and d) promote social justice to farmers through fair payments (higher than conventional markets) and training programs.

The motivation behind the creation of this business lies in the founder and manager's history of working with NGOs supporting family farmers. They observed labor exploitation in the sector, financial devaluation of the products sold by farmers, and the inability of many to improve their technical and financial conditions in agricultural and commercial activities.

Between 2016 and 2018, the SE operated in street-market fairs throughout the city of Fortaleza. In 2019, the SE adapted its business model to work with retail, boosting sales and consequently benefiting the sector of organic food in Ceará state. In 2022, the company underwent another significant change: it expanded its operations to

São Paulo, starting to connect family farmers to retail chains in that region.

The case addressed in this study is configured among the SE characteristics which are: focus on low income, potential for scale, intentionality, profitability, social impact related to the main activity, and the distribution or not of dividends. Similarly, the ICE (2019) states that the primary differences between SEs and other social initiatives are related to the explicit generation of socio-environmental impact in its objectives, constant impact measurement, revenue generation, and a governance model involving all parties. Supporting this assertion, Cruz, Quitério, and Scretas (2019) state that such businesses differ from others by providing goods or services aligned with a commitment to socio-environmental transformation.

The SE investigated focuses primarily on small producers with low purchasing power, which aligns with the first characteristic listed in the literature. Regarding the other characteristics it is observed that the potential for scale is presented. Recognizing that focusing solely on organic farmers was a limited niche, therefore the enterprise expanded to include conventional producers who meet the SE's required sustainability criteria. The SE adopted a training model for these farmers to guide them on various aspects of sustainability practices. This expansion and growth illustrate the potential for scale recommended in the literature.

Another characteristic fulfilled by the SE concerns profitability. The comprehensive framework mentioned above expands the SE's access to various investments, ensuring the business's autonomy from donations. This aligns with the literature, which states that the business must ensure profitability without relying on donations. Silva et al. (2017) emphasize the importance of understanding the promotion of positive social impact by a SE. The studied case demonstrates these characteristics in its business model.

Table 2 below presents the SE's business model referring its characteristics to what is referred

in the literature.

Table 2

SE Business Model

Features	NIS Business Model
Focus on low income	Business aimed at small family farmers.
Intentionality	Seeks to cause social and environmental impact to farmers and customers
Potential for scale	Expansion of the business to the State of São Paulo, where the market is more mature.
Profitability	A profitable business that does not depend on donations to ensure profitability.
Social impact related to the main activity	The company emphasizes that its main objective is to generate a positive social impact by productively integrating farmers and a positive environmental impact by reducing waste in the food supply chains of retail clients.

Source: Research results.

Socio-environmental impact measurement and impact indicators

Since 2019, the SE has started to establish indicators for monitoring the activities performed in its business model. Initially, in constructing these indicators, the SE sought methodologies aimed at sustainable agriculture. As a reference, they used the French methodology called IDEA (Indicateurs de Durabilité des Exploitations Agricoles), or "Indicators of Sustainability of Agricultural Holdings," which assesses the sustainability of agroecological production units (Melo & Cândido, 2013).

To develop the socioeconomic indices to evaluate the activity's impact, the SE leveraged the CEO's expertise gained from years of working in NGOs focused on impact assessment. This knowledge was combined with the IDEA method to create the socioeconomic indices used by the company. According to Lazzarini et al. (2014), it is important to consider approaches that use specific indicators for each type of project as an alternative to the commonly applied models.

Part of the development of an indicator matrix used to measure the activity's impact is aligned with the UN 2030 Sustainable Development Goals (SDGs). These include Poverty Eradication (SDG 1), Zero Hunger (SDG 2), Gender Equality (SDG

5), Reduction of Inequalities (SDG 10), Responsible Consumption and Production (SDG 12), and Climate Action (SDG 13), which are key points for the positive environmental and social impact that the SE seeks.

Therefore, the process starts with data collection by sending a link to farmers to fill out a questionnaire related to impact metrics. These questions are repeated every quarter to assess what changes have occurred since the farmer became a SE supplier.

Challenges in obtaining data, due to the extensive nine-page form, are addressed through close monitoring of any difficulties farmers encounter and by offering support when they are unable to fully complete the questionnaire. SE's representatives contact farmers via phone or WhatsApp video to assist them in answering the remaining questions.

Ávila et al. (2016) state that for the challenges in measuring social and environmental impacts, it is necessary to develop standardized instruments that support the comparability of business performance with similar initiatives, thereby equipping investors interested in this field. In this way, the company seeks to develop user-friendly tools for small producers to ensure they complete the questionnaires accurately. This enables the company to determine if they are generating a positive impact along their supply chain, and observing growth in these indicators at the end of the month allows the company to infer positive outcomes.

Currently, the SE has developed a set of 15 indicators distributed across Environmental, Social, and Governance (ESG) dimensions. In the Environmental dimension, the indicators are: a) Reduction in chemical usage; b) Logistics CO2 emissions c) Reforested areas; d) Areas with sustainable food production; e) Plastic usage reduction. In the Social dimension, the indicators include: a) Farmers' income increase; b) Farmers' recurring income; c) Farmers' average income generated; d) Percentage of certified farmers; e) technical assistance hours offered. In the Governance dimension, the indicators are: a)

number of signed contracts; b) Gender equity; c) Number of signed contracts with female suppliers; d) Declaration of signed image use; e) Guarantee of child exploitation prevention. In addition to these impact indicators, the SE conducts rigorous quality monitoring, primarily focused on reducing food waste during transportation from the farmers' field to the retailer.

The investigation revealed that the SE prioritizes establishing indicators to achieve recurring income for farmers through a settled partnership. However, it was noted that many indicators are utilized to ensure stability in both production and financial aspects for the farmers' families. Based on this premise, the company aims to increase this income and uses it as a gauge to measure the impact on the farmers' lives.

The measurement of socio-environmental impacts is conducted by monitoring all indicators. Barki et al. (2019) highlight the importance of the company understanding the methodology applied in the measurement process, while Murad, Cappelle, and Andrade (2020) note that there is no consensus on how the measurement activity should be executed.

By monitoring these data, the company can draw conclusions and measure the impact based on daily interactions between the agronomist and the farmers, which are recorded in spreadsheets. Every three months, a professional is responsible for compiling all the collected information from each indicator. Impact measurement for supplying supermarkets is based on the sale of a specific number of items over a given period, allowing them to account for and measure the use of chemical inputs relative to CO2 emissions and their reduction.

The results presented are based on evidence from documents and interviews. Below, we present Table 3, which includes excerpts from interviewees' statements on the topics discussed here.

Table 3
Empirical Evidence

Context	Interviewees' Speech
Construction of indicators	"So I took a lot of my knowledge of impact analysis, I worked for many years in an NGO focused on impact analysis, defining criteria, I want the producer to achieve this, so what is the step by step, what do I need to know for him to achieve this? Then we gathered a little of IDEA and a little of this knowledge and set up this economic partner of ours" (CEO). [...] There are many indicators that are taken along with the growth of recurring income. It is in fact an impact directly on the protagonist of everything that is the farmer. We are managing to take this income to the farmer so that he has stability in production, so that he can have financial stability for his family. So I think it's the main indicator (Operations Manager). [...] When the producer is with us, he can grow both in this social, environmental and economic part, than that producer who is no longer with us. Then we are generating this impact... That's what we try to see, what we are generating in the life of that producer. And it finds a match in the life of that retailer[...] (Agronomist). [...] We deliver 15 indicators to the supermarket for free that are based on these evaluations that we do and these 15 indicators the supermarket is using as (ESG)... (CEO).
Measurement of social and environmental impact	[...] The retailer has access to how much average income he is providing to the farmer for buying him, how much legal reserve and he is achieving from the supply, reduction of carbon dioxide, reduction of water use. So there are several impact indices that we can provide to the retailer who has access to be able to use it with the customer's green marketing or also for the investor that ESG is an important requirement for the investor (Operations Manager). [...] So our main difficulty is not getting information to evaluate these indicators, the producers themselves understanding this whole process and answering in what fact how it has to be answered. So some of them, when they don't answer, it's very difficult for us to have this answer (Agronomist).
Measurement difficulties	[...] So our main difficulty is not getting information to evaluate these indicators, the producers themselves understanding this whole process and answering in what fact how it has to be answered. So some of them, when they don't answer, it's very difficult for us to have this answer (Agronomist).

Source: Prepared by the authors.

Final considerations

This study aimed to understand the impact measurement process of a SE operating in the organic and agroecological food production sector. We analyzed and identified the main impact indicators established by the SE.

Regarding the impact indicators adopted by the SE, we found that they are developed through a combination of the IDEA method, a commonly

used methodology in agroecological production units to assess sustainability (Melo & Cândido, 2013), and the impact analysis expertise acquired over the years by the SE's CEO through work with NGOs focused on impact assessment. The construction of these indicators is also aligned with several SDG goals, including Poverty eradication (SDG 1), Zero hunger (SDG 2), Gender equality (SDG 5), Inequalities reduction (SDG 10), Responsible consumption and production (SDG 12), and Climate action (SDG 13).

Thus, it was possible to elucidate that the SE investigated uses the logical model to measure the social and environmental impact on its stakeholders, meeting the requirements of its customers, suppliers, and investors. The logical model developed by Ebrahim and Rangan (2014) comprises inputs, referring to the resources needed for interventions aimed at the target audience, and with proper management of activities, generates outputs that can promote benefits for the target audience (Brandão et al., 2015).

The present study contributes to the academic field by fostering the debate on the importance of measuring SEs' socio-environmental impact. As this is an emerging field, deepening the discussion can provide relevant information for future studies and offer insights for further research on the subject.

The study also helps SEs to understand the importance of measuring the socio-environmental impact of their activities. The literature review presented various concepts on the topic and highlighted alternatives for comparing the current method used to measure the business impact with other existing tools. This way, the company can find the most efficient methodology to measure the socio-environmental impact of its business and, most importantly, communicate to all stakeholders the necessity of meeting the sustainability tripod over purely financial objectives. Consequently, the company could serve as a model for other businesses, emphasizing the importance of impact measurement.

As a suggestion for improvement on the investigated case, we have recommended

enhancing the process of obtaining socioeconomic data from farmers. As noted, the company uses an extensive form to collect information, which can confuse farmers, leading to incomplete or inaccurate responses. This can result in data that does not accurately reflect the real situation, preventing correct measurement of the socio-environmental impact. Adopting a simpler tool and incorporating more technology would help ensure the accuracy of the impact results.

Another improvement point for the company concerns how it communicates the perception of socio-environmental impact results to stakeholders. Recognizing that investors, farmers, and supermarkets are often more focused on financial issues rather than socio-environmental aspects, it would be beneficial for the SE to raise awareness about the importance of achieving the sustainability tripod (social, environmental, and economic). The key differentiator of an SE is its hybrid mission, balancing these elements.

Regarding managerial contributions, the study provides managers with insights on how the impact measurement process for an SE unfolds, offering support for decision-making related to investments, sustainability guidelines, and socio-environmental impact analysis. Additionally, the study presents a case that can serve as an example for other SEs in development, demonstrating how the socio-environmental impact measurement process is implemented.

For future research, it is suggested to conduct multiple case studies to ensure comparability SEs in the same sector.

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