

The facets of the sustainability paradox

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Abstract

Purpose – This paper aims to examine why the sustainability paradox exists and how it unfolds by focusing on intraorganizational dynamics. It explores how organizational actors perceive and make sense of sustainability and thereby contribute to the sustainability paradox.

Design/methodology/approach – In a case study on IREN, an Italian listed multi-utility with considerable engagements with sustainability, data collection through interviews, e-mails and document analysis revealed contradictions raised by directors and middle managers. Findings were analyzed by iterating with the literature used to frame this study, which combines organizational sensemaking, paradoxes and management control.

Findings – The sustainability paradox comprises various facets. Directors and middle managers interpret sustainability differently depending on their role within the organization and their perceptions of the concept itself. Different interpretations thus occur within and across organizational levels and functions, impacting how sustainability is implemented and monitored. The use of parallel management control systems (MCSs) reflects multiple and fragmented sensemaking, which explains the facets of the sustainability paradox.

Research limitations/implications – Although this work illuminates the role played by individuals at top- and middle-management organizational levels and MCSs in relation to the sustainability paradox, more research is needed on how individuals make sense of sustainability at the lowest organizational levels.

Practical implications – Organizations claiming commitment to sustainability must establish communication forms on the practicalities of sustainability throughout the organization to stimulate shared sensemaking and the design and use of inclusive MCSs.

Originality/value – This paper explains why and how organizations unconsciously enact various facets of the sustainability paradox.

Keywords Directors, Managers, Integration, Management Control, Paradox, Sensemaking, Sustainability

Paper type Research paper



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1. Introduction

Sustainability-oriented organizations try to balance the achievement of good financial results with the environmental and social impacts of their activities (Carroll, 2010). One of the biggest sustainability challenges is to simultaneously achieve effective social, environmental and financial goals (Epstein *et al.*, 2010). That is, sustainable organizations seek to “reduce negative and improve positive impacts of activities, restore natural capital, enhance human and maintain ethical capitals” (Winnard *et al.*, 2018, p. 1599).

Stakeholders expect organizations to be transparent and accountable about multiple dimensions of their performance, such as the economic, social and environmental dimensions (Aras and Crowther, 2008; Testa *et al.*, 2018). An increasing number of organizations regularly publish reports to communicate their sustainability engagements and achievements to external and internal stakeholders (Unerman *et al.*, 2018; Lai and Stacchezzini, 2021; Onkila *et al.*, 2018). Organizations also interact with their stakeholders by disclosing information in social media (She and Michelon, 2019). However, the true purpose of these forms of communication has been questioned, given the persistent and significant gap between organizations’ sustainability discourse and their practices (Cho *et al.*, 2015; Higgins *et al.*, 2020; Busco *et al.*, 2018). Organizations’ disclosures may serve to maintain (or reconstruct an eroded) legitimacy instead of reflecting their true contribution to increasing sustainability (Milne and Gray, 2013; She and Michelon, 2019).

These critiques indicate a need for more studies on the intraorganizational dynamics of sustainability (Milne and Grubnic, 2011; Onkila *et al.*, 2018). It has been recognized that many organizations struggle to match their sustainability commitment with strong internal actions (Ozanne *et al.*, 2016; Paolone *et al.*, 2021). Organizational functions work in silos, without sustainability being a common and integrative organizational feature (Unerman *et al.*, 2018; Argento *et al.*, 2019). In addition, accounting practices do not fully encourage sustainable behavior due to their inability to fully resonate with societal expectations (Lawrence *et al.*, 2013). Management control systems (MCSs) supporting sustainability within organizations can be helpful when sustainability-related activities are incorporated into organizational strategic plans and objectives (Gond *et al.*, 2012; Laguir *et al.*, 2019; Posch and Speckbacher, 2017). It would be logical for organizations that promote a socially responsible image and undertake related activities to translate such engagement into MCSs with a systematic focus on the monitoring of corporate social responsibility (CSR) (Durden, 2008). However, approaches that ensure the integration of sustainability into organizations’ culture and strategy (the organizations’ so-called “DNA”) are still unknown (Lindgreen and Swaen, 2010); similarly, the role of accounting and MCSs in organizational sustainability integration remains to be understood (Riccaboni and Leone, 2010; Baker and Schaltegger, 2015).

Durden (2008) recognizes the existence of a “sustainability paradox” in organizations that have a sustainability orientation but rely on MCSs that are mostly oriented toward monitoring and rewarding financial results, thereby marginalizing the other two dimensions of sustainability (i.e. social and environmental). The sustainability paradox is related to how the internal dynamics of sustainability unfold – that is, how sustainability is understood, implemented and practiced by individuals within their organizations. Organizational actors can attribute different meanings to the concept of sustainability and have different expectations (Aras and Crowther, 2008; Bebbington, 2001). Sensemaking takes place at different levels of the organization and is not necessarily shared among organizational actors (Brown *et al.*, 2015). Fragmented sensemaking combined with MCSs that only loosely relate to sustainability might be the cause of the sustainability paradox.

Based on the discussion above, it seems that sustainability strategies enacted by top managers are insufficient to ensure the integration of sustainability into organizations’

DNA. Middle managers can affect the effective implementation of sustainability, as they can align the strategic intentions communicated by top managers with plans and activities at lower management and operational levels (Posch and Speckbacher, 2017). However, the effectiveness of the typical top-down communication of sustainability policies has been questioned (Onkila *et al.*, 2018). Employees at lower levels of an organization might not be fully interested or understand that organization's sustainability engagement, which is counterproductive, given that employee engagement can improve sustainability performance (Rae *et al.*, 2015).

Therefore, the process of sustainability integration within organizations involves various actors and requires further exploration (Contrafatto, 2011, 2014; O'Dwyer and Unerman, 2016; Rossi and Luque-Vilchez, 2020; Busco *et al.*, 2018). Studying the internal dynamics of sustainability by focusing on organizational actors is a relevant research avenue to better understand why the sustainability paradox exists and how it unfolds. Therefore, this paper aims to explore how organizational actors perceive and make sense of sustainability and thereby contribute to the sustainability paradox. More specifically, it addresses two research questions. Given the importance of top and middle managers in the implementation of sustainability, the first question asks: how do top managers and middle managers make sense of sustainability? The second question asks: what roles do MCSs play in the sustainability paradox?

To answer these research questions, a case study (Yin, 1994) was prepared by focusing on IREN, an Italian listed multi-utility with considerable engagements with sustainability. Data was collected through a combination of methods, including interviews, e-mail exchanges and document analysis. The analysis was executed by iterating findings with the literature used to frame this study, which combines organizational sensemaking (Weick, 1995) and paradoxes (Smith and Lewis, 2011) with management control (Burrit and Schaltegger, 2010; Gond *et al.*, 2012). Using the theoretical lens of sensemaking is useful because it makes it possible to focus on the internal dynamics of sustainability and to better understand the features of the sustainability paradox. The paradox lens aids sensemaking (Lüscher and Lewis, 2008) because it considers the inherent tensions of organizations attempting to manage sustainability (Ozanne *et al.*, 2016). These two theoretical lenses also help in explaining how MCSs may (or may not) support the integration of sustainability within organizational practices.

The findings reveal that latent tensions exist among directors (i.e. the members of the Board of Directors or BoD), among middle managers and between these two categories of actors. Contradictions in how sustainability is perceived and implemented reflect multiple and fragmented sensemaking, which occurs when directors and managers are mostly unaware of inconsistencies and continue to perform their daily work in line with their own agendas, thereby perpetuating the sustainability paradox. Based on the interplay between sensemaking and MCSs, this paper contributes to the discussion by providing an explanation of the facets of the sustainability paradox and offering guidance to managers who wish to manage – if not try to resolve – the sustainability paradox.

The remainder of this paper is structured as follows. The next section presents the theoretical framework, followed by the research method used to conduct the empirical study. Afterwards, the findings are presented and discussed. The paper ends with concluding reflections and suggestions for future research.

2. Theoretical framework

As sustainability becomes increasingly relevant, organizations have implemented alternative paradigms to financial profit maximization and have made efforts to integrate economic, social and environmental performance (Unerman *et al.*, 2018; Carroll, 2010; Gond

et al., 2012). Organizations also disclose information about sustainability-related processes and outcomes, thereby enabling both internal and external stakeholders to understand the organizations' sustainability position (Massa *et al.*, 2015). Therefore, disclosures can be used to create a dialogue about how organizations meet the demands and expectations they face (Higgins *et al.*, 2020). However, these forms of communication are not without flaws.

2.1 Sustainability paradox

Despite organizations' apparently good intentions to meet external accountability demands and competing expectations, their disclosures on their sustainability activities and performance may serve legitimacy purposes rather than actually contributing to sustainable development (Milne and Gray, 2013; She and Michelon, 2019; Cho *et al.*, 2015; Higgins *et al.*, 2020; Busco *et al.*, 2018; Testa *et al.*, 2018). Onkila *et al.* (2018) argue that the disclosures organizations provide to external stakeholders do not discuss everyday sustainability within the organizations – that is, the disclosures are detached from actual sustainability practices. Internal sustainability work requires more concrete actions in organizations than publishing a report or communicating on social media (Cho *et al.*, 2015; She and Michelon, 2019).

Organizations struggle to match their sustainability orientation with concrete internal actions (Ozanne *et al.*, 2016; Paolone *et al.*, 2021). This mismatch leads to a paradox consisting of two contradictory yet interrelated elements (Smith and Lewis, 2011; Bloodgood and Chae, 2010), namely, the sustainability paradox, which is characterized by a continued primary focus on financial performance, on the one hand, and a claimed sustainability orientation, on the other (Durden, 2008). This paradox is generated because true long-term sustainability requires continuous efforts to meet multiple and competing demands (Smith and Lewis, 2011). To actually achieve sustainability, organizations must deal with intertemporal inconsistencies among the three performance dimensions of sustainability (i.e. economic, social and environmental), the clash between organizational goals and societal responsibility and the diverging demands of shareholders versus other stakeholders (Ozanne *et al.*, 2016).

Managing the three dimensions of sustainability is complex, and the real challenge consists of integrating sustainability into operational decision-making processes (Epstein *et al.*, 2015; Unerman *et al.*, 2018). It is known that sustainability strategies often remain stuck at the top management level (Posch and Speckbacher, 2017). This is problematic because middle managers also play an important role in integrating sustainability by acting as intermediaries between top management and the front line (Lüscher and Lewis, 2008). Internal communication must rely on formats and media that foster effective dialogue within and across the various levels and departments of an organization (Onkila *et al.*, 2018). Yet, dialogues among internal actors are not always easy, and internal processes related to sustainability work may be affected by this criticality (Lai *et al.*, 2017). Therefore, sustainability leads to situations characterized by a lack of clarity and by ambiguity, which trigger organizational sensemaking (Onkila *et al.*, 2018).

2.2 Sensemaking within and across organizational levels

Sensemaking involves how people construct their own reality by giving meaning to relevant experiences (Weick, 1995). Sensemaking occurs in unclear situations, which entail the need to engage in a process of joint identity construction and crafting a shared intent (Das and Kumar, 2010). That is, in an unclear situation, interdependent people search for meaning, settle for plausibility and then move on (Weick *et al.*, 2005). Sensemaking is about creating a common picture through data collection, action, experience and conversation (Egan, 2019)

involving actors operating on different levels within an organization. The construction of a common meaning around the concept of sustainability is one of the most important aspects in the integration of sustainability within organizations (Contrafatto, 2014). Yet shared sensemaking does not necessarily take place (Brown *et al.*, 2015). Hence, the sustainability paradox may exist because of the different meanings and expectations that internal organizational actors have about the concept of sustainability and related goals (Aras and Crowther, 2008; Bebbington, 2001).

An organization's BoD and managers play an important role in addressing sustainability by simultaneously considering the organization's financial, environmental and social dimensions (Aras and Crowther, 2008). Directors' background, seniority on the BoD and nationality can influence their personal engagement with sustainability practices (Barka and Dardour, 2015). The culture and commitment of directors can thus support or hinder the successful management of the compromises that affect managers' daily sustainability-related decisions (Epstein *et al.*, 2010). On the one hand, directors can act as collaborators or as coaches that guide managers in achieving organizational sustainability-related goals. On the other hand, directors can be controllers whose main aim is to monitor managers' actions and performance (Michaud, 2014) in relation to sustainability.

Sustainability projects and related goals that have been decided on by directors are often cascaded down to middle managers, who must in turn operationalize the change initiatives and align their subordinates with the sustainability mandates. Middle managers act as intermediaries between directors and their subordinates (Lüscher and Lewis, 2008). The recruitment of middle managers with sustainability-related virtues and values is important to achieve an alignment between the directors' strategy and middle managers' actual intentions (Posch and Speckbacher, 2017). Middle managers' sensemaking leads to interpreting, communicating and implementing sustainability in a way that influences the subordinates' interpretations (Lüscher and Lewis, 2008). Therefore, discourse and communication across and between levels are important features in achieving shared organizational sensemaking (Brown *et al.*, 2015).

2.3 Role of management control systems

Sensemaking is also related to how organizations design and implement a control system for accomplishing sustainability agendas (Burrit and Schaltegger, 2010). Given that MCSs influence employees toward the achievement of organizational goals (Merchant and Van der Stede, 2017), MCSs can be used to integrate sustainability within organizational daily practices (Durden, 2008). Inclusive MCSs can support the integration of sustainability into operational decision-making processes and the alignment of communication between directors and middle managers (Riccaboni and Leone, 2010; Baker and Schaltegger, 2015; Posch and Speckbacher, 2017).

However, MCSs can also hinder sustainability work. Gond *et al.* (2012) argue that the integration of sustainability within organizations' DNA entails three dimensions, namely, technical, organizational and cognitive dimensions. *Technical integration* occurs when regular MCSs are integrated with sustainability control systems that have been implemented outside of the management control function. Although there are methodological links between these two control systems, such as a common infrastructure to gather information, the two systems run parallel. Gond *et al.* (2012) continue by arguing that *organizational integration* occurs when management accountants and sustainability managers interact and cooperate with each other, even when they do not belong to the same department of the organization and do not operate through the same system. Such integration implies a horizontal alignment between the managers representing different

organizational functions (Painter *et al.*, 2019). Finally, Gond *et al.* (2012) discuss *cognitive integration*, which takes place when people have a dialogue to exchange knowledge, reach an understanding about sustainability and overcome cognitive boundaries. Cognitive integration is especially important for facilitating a supportive culture throughout an organization (George *et al.*, 2016) and achieving alignment between organizational functions (Painter *et al.*, 2019).

For cognitive integration to exist, it can be argued that a vertical alignment is required between actors at different organizational levels (i.e. BoD, middle managers and front line), in addition to horizontal alignment. Laguir *et al.* (2019) and George *et al.* (2016) highlight the importance of using both formal and informal control mechanisms. The “results control” aimed at monitoring various performance dimensions of sustainability must be complemented with “personnel” and “cultural controls” that focus more on the values, virtues and commitment of people and groups within the organization (Merchant and Van der Stede, 2017; Posch and Speckbacher, 2017).

2.4 Summary of theoretical framework

Organizations may consciously or unconsciously enact a sustainability paradox because of interrelated contradictions connected to organizing (i.e. how structures and practices are designed to achieve organizational goals), performing (i.e. which performance measures are used to monitor the three dimensions of sustainability), belonging (i.e. how the values of organizational functions or groups relate to the organizational culture as a whole) and learning (i.e. how to cope with the challenges posed by sustainability work in the short and long term) (Smith and Lewis, 2011; Lüscher and Lewis, 2008; Ozanne *et al.*, 2016).

In sum, sensemaking and MCSs can facilitate or hinder the integration of sustainability in organizational practices. When sensemaking is not shared or uniform across organizational functions and at different levels (i.e. BoD and middle managers), and when MCSs are not inclusive due to a lack of the technical, organizational and cognitive integration highlighted by Gond *et al.* (2012), the sustainability paradox is generated and eventually perpetuated.

3. Research method

To achieve the purpose of this paper, a qualitative in-depth case study (Yin, 1994) was conducted in 2018–2019 by focusing on IREN, a major Italian multi-utility (Moliterni *et al.*, 2017). The case study method was deemed to be relevant to gain an in-depth understanding of how internal dynamics related to organizational actors’ perception and sensemaking of sustainability contribute to the sustainability paradox.

3.1 IREN

IREN has more than 7,000 employees and operates in the electricity, gas, district heating, water and waste sectors. It also provides other services (public lighting, traffic lights and facility management) for a multiregional catchment area with over seven million inhabitants in the Piedmont, Liguria and Emilia-Romagna regions (IREN website, 2019). IREN engages with sustainability and develops several projects linked to renewable resources: 86% of the electricity IREN produces is eco-protection friendly (IREN, 2019).

IREN was established in 2010 with the strategic intent of entering the market to resist multinational giants (Di Giulio and Moro, 2016; Galanti and Moro, 2014). IREN is a holding with operative organizations in charge of different services (i.e. electricity, gas, district heating, water and waste), and local committees aimed at enhancing the dialogue between

IREN and local stakeholders. The 93 associations and institutions that participate in the local committees are the main stakeholders of IREN (IREN, 2019).

IREN is listed on the Italian Stock Exchange. On June 30, 2019, IREN's shareholders included the municipalities of Turin, Genoa, Reggio Emilia, Parma and Piacenza, as well as free floating and treasury shares (IREN website, 2019). IREN's financial performance has been consistently positive in the period from 2015 to 2019, with good results in terms of revenues, earning before interest, taxes, depreciation and amortization, net profit, return on investment and return on equity (IREN website, 2020).

Besides publishing compulsory annual financial reports, IREN has regularly published an annual standalone Sustainability Report since 2010, which is prepared in accordance with the Global Reporting Initiative standards. Hence, IREN complies with the expectations of Italian law (i.e. Legislative Decree 2016/254), which, following the prescription of the European Union Non-Financial Reporting Directive (Directive 2014/95/EU), obliges public interest entities with more than 500 employees to disclose nonfinancial information related to environmental, social and personnel matters, respect for human rights, anti-corruption and board diversity issues in their annual financial reports or in separate standalone documents.

3.2 Data collection and analysis

Data was collected from multiple sources, including interviews, e-mail exchanges and documents. A total of 13 interviews were conducted (in 2018–2019) with selected members of IREN's BoD and middle managers. The empirical research was conducted at IREN's corporate level to obtain a holistic overview. The number of interviews and methodological steps are in line with other qualitative studies (Lai *et al.*, 2017). At an initial stage, two preliminary unstructured interviews, respectively, lasting 45 and 33 min, were conducted with a director of IREN; one interview occurred via telephone and the other through Skype. In addition, two e-mail exchanges were held with the Strategic Planning Manager of IREN. These interviews and e-mail exchanges were aimed at receiving information about IREN and its sustainability work, presenting the research project and identifying suitable respondents for future interviews. Handwritten notes were made of these two interviews.

In the second stage, 11 face-to-face interviews were conducted with five directors and five middle managers. The selection of respondents followed a snowballing approach, starting with the respondent that was suggested by the director interviewed in the first stage. More specifically, the 10 respondents comprised two independent directors (Directors 1 and 4), the Deputy Chairman of IREN (Director 2), the Chairman of the Risk and Sustainability Committee (Director 3), the Chairman of the BoD (Director 5), the Strategic Planning Manager (Manager 1), the CSR Manager (Manager 2), the CSR and Local Committees Manager (Manager 3) and two Communication Managers (Managers 4 and 5). Most of the respondents were male; only two respondents were female. Their background was varied, with four respondents having graduated in economics, three in engineering, one in the humanities and one in law. This variety was considered to be beneficial for this study, given that managers' background can influence their sustainability sensemaking.

Nine semi-structured interviews were carried out, each lasting between 40 and 122 min. An additional two interviews were unstructured and shorter in time. The respondents were asked questions concerning IREN and sustainability, with a focus on how they defined and perceived sustainability, the integration of sustainability in IREN's organizational processes, sustainability performance measurement and responsibilities and sustainability-related communication tools. As the study progressed and findings related to the sustainability paradox emerged, additional iterations were necessary with specific

respondents, so some respondents were interviewed twice. [Appendix](#) presents the main themes discussed in the interviews (see [Appendix](#)).

To increase procedural reliability ([Ryan et al., 2002](#)), eight semi-structured interviews (out of nine) were recorded and transcribed. One semi-structured interview (out of nine) could not be recorded, but a written summary was prepared and subsequently approved by the respondent. Written notes on the two unstructured interviews were also prepared. Measures were taken to address contextual validity issues ([Ryan et al., 2002](#)). First, the respondents were selected due to their direct or indirect involvement in sustainability activities. Second, the respondents were intentionally asked similar questions to detect possible inconsistencies and bias. Finally, each interview transcript was analyzed by focusing on the respondents' statements and comparing them with the aim of finding potential contradictions or distortions. All transcripts were read and analyzed separately by two of the authors. The perspective of the directors and middle managers emerged through this process, and the sustainability paradox was clearly identified. Afterwards, the three authors jointly identified three themes related to the sensemaking of sustainability and the sustainability paradox, namely, the meaning of the concept of sustainability, the integration of sustainability with organizational practices and sustainability performance measurement and incentive systems. This approach allowed for a valid identification of different meanings and perceptions of sustainability, as well as for a deeper understanding of why the sustainability paradox exists in IREN and how it unfolds there.

In addition, a document analysis was performed by collecting valuable information from IREN's Sustainability Reports from 2010 to 2018, which were downloaded from IREN's website; as well as other documents received during a visit to the office in Turin, such as a report on the local committees' experience with sustainability and stakeholder engagement ([IREN, 2018a](#)), IREN's Industrial Plan ([IREN, 2017a](#)), IREN's CSR goals ([IREN, 2017b](#)), the proceedings of three workshops organized by IREN to enhance the dialogue among managers and experts in different fields ([IREN, 2017c](#)) and a report on IREN's project named "Water in Mind: Learn, Experiment and Play," which aimed to sensitize primary school children to the sustainable use of water ([IREN, 2016](#)).

Finally, the researchers involved in this study continually compared and discussed their interpretations of the collected evidence when writing the case study. Without the ambition to make generalizable claims, the evidence sheds light on the facets of the sustainability paradox and therefore supports managers of organizations who are operating in different sectors and countries in becoming aware of latent tensions that may hamper sustainability work. The findings presented in the next section highlight the fragmented sensemaking of sustainability within IREN – as emphasized by the contradictions raised by IREN's directors and middle managers – which contributes to IREN's sustainability paradox.

4. Findings

An analysis of IREN's Sustainability Reports from 2010 to 2018 revealed that the organization is engaged in sustainability projects and has received various national and international recognitions ([Table 1](#)).

IREN has sustainability-related targets for the efficiency of its organizational processes, customers and other stakeholders and employees. The organization has achieved good sustainability-related results that are grouped into seven dimensions:

- (1) business values (e.g. revenues, added value and green bond emissions);
- (2) environmental results (e.g. tonnes of CO₂ avoided and % of electricity produced by environmentally friendly sources);

Table 1.
Recognitions of corporate social and environmental responsibility

Recognition	IREN's ranking	Relevance	Prize description	Year
Top 25 energy subsector honorees	One of the 25 best multi-utility companies	International (worldwide)	Thomson Reuters identifies the world leaders in the energy sector	2018
Integrated Governance Index	Fourth place	National (Italy)	Measures the degree of sustainability integration within the company strategies of the top 100 Italian listed companies	2017 and 2018
Lundquist CSR Online Awards	Third place	European	Presence and communication of CSR on social networks	2017
CSR Piemonte	One of the 20 most interesting companies operating in the Piedmont region	Regional (Piedmont)	Awards companies that have adopted sustainability practices within their business strategies, showing the best-performing companies	2017
Engage awards	Nomination for the "best use of social channels"	European	Recognizes the organizational excellence of companies and people that have achieved important results within customer and employee engagement	2017
Top employer	Top position	National (Italy)	Top Employers Institute prizes companies that offer excellent working conditions, train and develop talent and seek to improve and optimize their best practices in the field of human resources	2018
Top Utility Analysis	Finalist in the "Technology, Research and Innovation" award	National (Italy)	This award focuses on public utility companies to select Italian excellence	2018
CFO Award	CFO awarded for the category of companies listed on the Italian Equities Market, for the commitment to optimize the financial, environmental and social sustainability of IREN Group	National (Italy)	Recognition of administrative and/or financial directors who have distinguished themselves for quality, intuition and professionalism	2018

Note: CFO = Chief financial officer
Source: Authors' own elaboration from IREN's Sustainability Reports 2017 and 2018

- (3) people (e.g. % of employees attending training courses and number of women on the Board);
- (4) customers (e.g. number of customers per business activity – energy, water, environmental services and district heating, and customer satisfaction);
- (5) suppliers (e.g. % of local suppliers, number of suppliers involved in the survey on environmental and corporate responsibility);
- (6) community (e.g. number of projects for local community development and resources devoted to supporting communities affected by disasters); and
- (7) institutions (e.g. number of trade unions and employee training on corruption prevention) (IREN, 2018b; 2019).

IREN is a leading example in Italy of a multi-utility that is oriented to the provision of services and the creation of infrastructures to enrich and enhance the territory, while respecting the environment and citizens (Borsa Italiana, 2018). In 2018, IREN invested 447m euros to develop its various business units with the aim of improving the quality of services provided and ensuring important contributions to local communities. In addition, IREN is the first local multi-utility that has issued two green bonds, for a total value of 1bn euros (IREN, 2019).

Reading IREN's strategic plans (IREN, 2017a, 2017b) and listening to some respondents revealed that sustainability is embedded in the values of the organization, as "It is a cultural issue that involves everyone, from the last employee to the chief executive officer (CEO)" (Director 3). Sustainability seems to be well integrated in the organization: one director even argued that: "Sustainability is the qualifying element of IREN's mission; it permeates all the decisional and operating processes" (Director 4). Engagement with stakeholders was remarked by another director, who claimed that: "[...] IREN cares for the territory and aims at ensuring the social peace of the territory and the local community [...] Concerning sustainability, all the variables are detailed and monitored" (Director 1).

In terms of its organizational structure, IREN has a specific department devoted to sustainability and CSR: the CSR Department. Furthermore, local committees – led by the CSR and Local Committees Manager and coordinated by the CSR Manager – have been established to enhance the dialogue between IREN and the local community. These local committees include middle management who work with topics related to sustainability and their impact on stakeholders (IREN, 2018a). The local committees engage stakeholders and select the most valuable projects proposed by local entities and associations. Execution of the selected projects is financed by IREN, which also organizes events for the territory to sensitize the citizens (e.g. at primary schools) to sustainability topics (IREN, 2016).

An apparent engagement with sustainability is supported by the BoD, which considers sustainability to be integrated into IREN's mission and strategy, and by the middle management, due to the existence of an organizational function (i.e. the CSR Department) that is both devoted to and formally responsible for sustainability matters. Sustainability-related performance indicators are also established and operative within IREN.

4.1 Making sense of sustainability, integration and management control: perceptions of directors and middle managers

The findings on how the two groups of respondents (i.e. the directors and the middle managers) make sense of sustainability and contribute to the sustainability paradox led to the identification of three main themes:

- (1) the meaning and perception of the concept of sustainability;

- (2) the extent to which sustainability is integrated in IREN's operational practices; and
- (3) the sustainability performance measurement and incentive system.

Regarding the *meaning and perception given to the concept of sustainability*, the findings revealed that sensemaking around the concept of sustainability is not uniform within IREN. In reference to the BoD, two directors stated that there is an integrated vision of sustainability within IREN. One of the directors claimed: "sustainability is an organizational glue in IREN" (Director 2), thereby implying that sustainability is fully integrated within IREN's daily practices and organizational processes. IREN's sustainability policy is focused on both the personnel recruitment system (internal focus) and the link that has been established between IREN and the surrounding territory (external focus). Some directors emphasized the value of the local committees, which are considered to be "a relevant means of communication that enhances the dialogue between the organization and the stakeholders of the local territory in order to implement sustainability projects" (Director 5). This way of reasoning about sustainability indicates that sustainability is a true organizational value for IREN.

However, from another director's point of view, IREN's concept of sustainability mainly focuses on the external environment. Director 2 specifically stated: "IREN needs a better interpretation of sustainability, one that goes beyond the environmental aspects to become really integrated within the organization, also towards long-lasting results." This quote shows that IREN does not fully achieve the ability to focus on long-term results, which is implicit in the definition of sustainability. This disagreement on IREN's internal versus external sustainability focus shows that the directors' opinions are not aligned, even though they believe that sustainability is a value that is taken for granted within IREN.

The analysis of the middle managers' opinions revealed a different picture; it was found that sustainability has a different degree of relevance to individuals depending on their position on different organizational levels. One respondent remarked: "Usually, directors pay attention to sustainability, while middle managers, who must act on a daily basis, unfortunately, in some cases, consider sustainability to be fluff" (Manager 3). This quote emphasizes how sustainability may not be equally important to all middle managers and may even become a burden for middle managers handling their daily work. It was also found that the concept of sustainability becomes vaguer at lower organizational levels. As Manager 4 commented:

The organizational chain is very long, from the CEO [at the top] to the ecological operator [at the bottom]. Therefore, what is understood by the lowest levels is not always clear or better; it is clear that little comes to them.

This revelation indicates that the communication and information channels on sustainability may not always be effective, despite the ambitions of the BoD. Finally, in relation to the local committees, it seems that, while middle managers believe in these arrangements and see them as a valuable tool to support the territory and external stakeholders, some environmental associations consider these initiatives to be mere facades. Manager 3 admitted: "We have been challenged [by people saying] that the local committees are only facade initiatives. Obviously, what the local committees do is a drop in the ocean," thereby indicating that middle managers' efforts to establish a dialogue with the local communities and support potentially valuable projects are far from enough.

In regard to the *degree of integration of sustainability with operational practices*, one director highlighted a critical issue, namely, the difficulty of engaging the lower levels of the organization in sustainability issues. Apparently, this issue is due to training problems. The

BoD attempted to address this issue by communicating the strategic plan to various organizational levels through so-called “sustainability pills,” which were short videos in IREN’s intranet that explained how to act in a sustainable way and how IREN contributes to the sustainable development of the local territory and the local community. However, although the directors may have been satisfied with the “sustainability pills” initiative, the middle managers expressed some doubts. Initiatives such as the sustainability pills are insufficient to create engagement, as:

[...] in organizations characterized by hierarchical structures [like IREN], it should be necessary to redesign organizational schemes or wait for the ascent to the throne of a manager with CSR background (Manager 3) in order to have a strong impact.

These findings are interesting; while the directors think that training can be a solution to spread sustainability strategies throughout the organization, some middle managers ask for more concrete actions to increase awareness and engagement with sustainability at the lower levels of IREN. In this context, the directors’ capacity to guide the middle managers seems minimal. Compared with the directors’ opinions, the middle managers’ opinions on the integration of sustainability within IREN’s practices and processes are less optimistic. One middle manager explicitly claimed: “Apart from the strategic plan communication, there are no additional initiatives on sustainability goals at various levels” (Manager 3). This quote reveals that sustainability remains anchored to the upper organizational levels without effectively cascading down. In addition:

[...] during the definition of the strategic goals of IREN, the CSR Manager is involved only when the strategic planning function requires an opinion about sustainability [i.e. environmental and social] matters, while Local Committees Managers are only consulted on local issues (Manager 1).

This assertion by Manager 1 shows the divide between the three dimensions of sustainability (i.e. the economic, social and environmental dimensions) within IREN. Financial sustainability in IREN is a matter of the strategic planning function, while environmental and social sustainability are dealt with by the CSR function. No formal or informal procedures are aimed at fully integrating these two organizational functions in sustainability-related decision-making. As Manager 2 argued:

[...] the CSR function closely works with the strategic planning function, identifying long-term sustainability-oriented goals and metrics that are then discussed with the business units. Behind these targets, there are numbers that become part of the annual budget.

Here, Manager 2 meant that the CSR and strategic planning functions work in parallel and only “meet” when the CSR-related goals and targets must be agreed upon and included in IREN’s budget. Manager 1 confirmed:

[...] full integration between the CSR and strategic planning functions is still lacking, activities are separated, [and] the CSR function is viewed as support staff with only an on-demand advisory role.

In regard to *sustainability performance measurement and incentive systems*, the responding directors emphasized that sustainability key performance indicators (KPIs) are present. However, the directors are aware that the KPIs are not constantly monitored, nor are they fully connected to the main incentive and remuneration system. As one director stated: “In IREN, sustainability is not a goal that drives all actions, but we should get there” (Director 2). This statement corroborates the fact that the sustainability KPIs are not fully integrated into the main incentive and remuneration system. The sustainability control system runs parallel to the main MCS.

Regarding the reward system, two middle managers stated that the CEO is the only member of the BoD that holds responsibility for the achievement of sustainability goals. The remuneration of the CEO is variable and is connected to the social and environmental dimensions of sustainability, even if “more weight is given to stakeholders’ engagement than to environmental results” (Director 5). However, according to the Chairman of the BoD, during the last quarter of 2018, the remuneration of 80 managers was linked to the achievement of sustainability goals. These findings reveal an inconsistent understanding within IREN of the remuneration system related to sustainability goals.

4.2 Contradictions of sustainability paradox

The findings reveal contradictions within the three themes presented above. Some of these contradictions involve the misalignment of the sustainability concept among individuals within and across the two organizational levels considered in this study (i.e. directors and middle managers), while others refer to how sustainability is integrated with IREN’s organizational practices and included in its performance measurement and incentive systems.

The directors’ sensemaking of sustainability within IREN shows that individual interpretation problems can be an obstacle. The directors admit that the various organizational functions interpret sustainability in different ways; however, they simultaneously deem sustainability to be well integrated in IREN’s business processes. Some directors consider sustainability to be an implicit element that characterizes IREN’s core business, while others state that strong efforts are still required to implement an overarching concept of sustainability within the organization.

Contradictions were visible in the responses of the middle managers as well. Some middle managers are truly engaged in sustainability and consider sustainability to be IREN’s ability to give parts of the value created back to the territory. Unfortunately, as remarked by the CSR and Local Committees Manager, some middle and even operating managers consider sustainability to be “fluff.” Manager 1 could not recall whether sustainability-related KPIs were included in the strategic plan, claiming: “I am not aware of the presence of sustainability indicators. The elements to be monitored are linked to economic and financial aspects, which in the end impact sustainability.” This quote corroborates the idea that financial sustainability is dominant among the dimensions of sustainability.

From the directors’ point of view, sustainability is relevant for the local community and the environment, while from the middle managers’ perspective, sustainability is important because it is required by the market. Both definitions have a major external focus, but their underlying reasons are different. In addition, according to the BoD, it is difficult to sensitize the lower organizational level to sustainability issues due to a lack of training programs on this topic. Furthermore, some middle managers think that there is an increased awareness of sustainability at the lowest level of the organization, while others state that there are no initiatives to increase sustainability awareness at the lower organizational level and claim that more efforts are needed.

The directors stated that many sustainability indicators are being monitored. According to some middle managers, sustainability indicators are indeed being monitored, while others claim that the indicators being monitored – and linked to the remuneration system – are mostly related to financial issues. Sustainability is not fully integrated within the organization, given that parallel MCSs exist. To achieve effective sustainability orientation and implementation, it is necessary to measure, monitor and integrate sustainability within all organizational practices. Achieving a more comprehensive degree of sustainability

monitoring calls for an inclusive performance measurement system that simultaneously monitors the three dimensions of sustainability performance. Such an integration has not yet been achieved in IREN, and the various actors are not fully aware of its lack. Table 2 summarizes the contradictions of the sustainability paradox that were revealed in the interviews with IREN's directors and middle managers.

In sum, a closer analysis of the contradictions found within the interviews reveals the following. First, while the relevance of sustainability for IREN, which operates in the utilities sector, is recognized, its internal integration of sustainability has deficiencies, especially because the organization lacks a shared sensemaking of sustainability within and across the different organizational levels. Second, the role of the CSR Manager is quite marginal, making the integration of sustainability more difficult. The CSR Department is important yet functions in parallel to the organization's other departments. Third, profitability goals still prevail over other sustainability goals, meaning that the social and environmental dimensions of sustainability performance within IREN, while important, are still marginal and subordinated to the financial one. Fourth, although sustainability indicators are present, they are not linked to the existing strategic planning systems. Monitoring activity within IREN is mostly focused on financial indicators because sustainability indicators are monitored separately and are not included in the main MCS.

5. Discussion

Although sustainability is referred to in many of IREN's documents and is claimed to be a priority for the organization, the findings reveal how the multiple meanings of sustainability held within the organization influence the implementation and monitoring of sustainability. The organizational actors in this case study interpret sustainability differently, depending on their role and position within the organization, as well as (probably) based on personal preferences and background (Bebbington, 2001; Barka and Dardour, 2015; Epstein *et al.*, 2010). Different interpretations of the concept of sustainability reflect a fragmented sensemaking and explain the existence of the sustainability paradox within IREN. The literature claims that paradoxes consist of two contradictory yet interrelated and coexisting elements (Smith and Lewis, 2011; Bloodgood and Chae, 2010). The two elements of the sustainability paradox are the undeniable sustainability orientation that is pursued by the organization, on the one hand, and the adoption of an MCS that is mostly oriented toward monitoring and rewarding financial results, on the other hand (Durden, 2008).

Even though the market recognizes and rewards organizations for being highly oriented toward sustainability, internal contradictions and multiple expectations present an obstacle to the full integration of sustainability within organizational practices. In line with the arguments of the theoretical framework, the findings revealed contradictions connected to learning, belonging, organizing and performing (Smith and Lewis, 2011; Lüscher and Lewis, 2008; Ozanne *et al.*, 2016), which reflect how sensemaking takes place (Weick, 1995; Weick *et al.*, 2005; Brown *et al.*, 2015) and how MCSs are designed (Gond *et al.*, 2012; Posch and Speckbacher, 2017; Laguir *et al.*, 2019; George *et al.*, 2016).

Implementing a sustainability strategy leads to *contradictions of learning* because an organization must cope with the challenges posed by sustainability work in both the short and long term. The perceptions of sustainability held by the directors and middle managers – and the meanings given to their roles in connection to sustainability – were not fully aligned in this case. In contrast to the potentially important role of BoD and middle managers in implementing sustainability strategy (Aras and Crowther, 2008; Lüscher and Lewis, 2008; Posch and Speckbacher, 2017), the findings showed that sensemaking took place in isolation

Sustainability theme	Opinions of directors	Opinions of middle managers
Meaning and perception of the concept	<p>Sustainability is:</p> <ul style="list-style-type: none"> • an organizational glue, implicit in the core business • the antidote to many business risks • an expression of stakeholders' needs • focused on both local community and environmental aspects • something that requires strong efforts and long-term vision 	<p>Sustainability is:</p> <ul style="list-style-type: none"> • focused on working with the lowest environmental impact and giving part of the value created back to the territory • not secondary to profitability • related to stakeholders' economic, environmental and social expectations • important because the market requires it • fluff
Degree of integration with organizational practices	<p>Sustainability is:</p> <ul style="list-style-type: none"> • integrated as embedded within business processes • subject to much attention, compatible with profitability • the result of individual, not fully aligned, interpretations • not a priority at the lower organizational levels • not fully integrated due to lack of training 	<p>Sustainability is:</p> <ul style="list-style-type: none"> • discussed, but not integrated in all business processes • indirectly communicated via the strategic plan • not specifically promoted through initiatives aimed at increasing awareness (apart from the "sustainability pills") • marginalized because the CSR function is involved only on some occasions, to support management control activities and to prepare Sustainability Report
Performance measurement and incentive systems	<p>Sustainability indicators:</p> <ul style="list-style-type: none"> • are well structured and part of the information that is published, although mainly quantitative • are fundamental elements in monitoring environmental and financial issues <p>About the incentive system:</p> <ul style="list-style-type: none"> • part of CEO's salary is linked to the achievement of sustainability goals, with great emphasis on stakeholders' engagement • managers at different levels are evaluated and rewarded on sustainability performances 	<p>Sustainability indicators:</p> <ul style="list-style-type: none"> • are mainly related to the financial dimension, while environmental and social components are not particularly monitored • are not systematically included in the strategic planning system <p>About the incentive system:</p> <ul style="list-style-type: none"> • the CEO is the only top manager with responsibility for social and environmental goals • the CSR Manager is not rewarded for sustainability results • the management remuneration system is based on profitability and financial sustainability indicators

Table 2.
Contradictions of the sustainability paradox

without engaging in the process of joint identity construction (Das and Kumar, 2010; Egan, 2019).

The absence of a shared sensemaking (Weick, 1995; Brown *et al.*, 2015; Onkila *et al.*, 2018) of sustainability among the BoD and middle managers is related to *contradictions of belonging*, which relate in turn to the silo characteristics of different organizational functions (Argento *et al.*, 2019) and across organizational levels (i.e. the BoD and middle managers). A lack of horizontal alignment among functions and of vertical alignment across levels is due to the incapability (or unwillingness) to share vocabularies (Painter *et al.*, 2019) related to sustainability. Even though the BoD is persuaded that IREN's sustainability-related efforts are considerable, their communication is ineffective due to frictions at the middle management level, where each organizational function "speaks its own language" (Painter *et al.*, 2019). When the directors' role is dispersed (i.e. they are neither coaches nor controllers, in Michaud's (2014) terms), they may invest their energy in ensuring that sustainability orientation claims are communicated to shareholders and outwards. The directors are unaware of the need for (or incapable of) more coordinated efforts to integrate sustainability within the taken-for-granted financial goals of the MCS. In such a situation, middle managers work in different directions, according to the agendas and tasks of their department, and may be unaware of the need for (or be incapable of) bringing the sustainability cause further to their subordinates (Lüscher and Lewis, 2008). As a result, the middle managers' capacity to act as intermediaries (Lüscher and Lewis, 2008; Posch and Speckbacher, 2017) between the BoD and the front line is limited and, so far, ineffective.

Contradictions of organizing are reflected in the fragmented sensemaking that takes place due to the weak one-way communication of sustainability goals from the top to lower levels, followed by a lack of action toward the lowest organizational levels. Middle managers execute the tasks that belong to their department and function in parallel to each other. The findings show how the main MCS is disconnected from the sustainability control systems, even though the organization does not question its sustainability orientation. In line with the findings of George *et al.* (2016), when an internal dialogue among key actors is missing, sustainability is difficult to integrate in organizational practices. The findings therefore corroborate the work of Laguir *et al.* (2019), who promote the implementation of informal control mechanisms, such as fostering common values, beliefs and traditions throughout an organization.

Contradictions of performing are evident in the findings. In terms of the classification proposed by Gond *et al.* (2012), the organization studied here has some degree of *technical and organizational integration*, whereas *cognitive integration* is absent both within and across organizational levels. Sustainability indicators seem to be limited (or lacking) within the main MCS. This result shows that the potential of the MCS to create alignment (Riccaboni and Leone, 2010; Baker and Schaltegger, 2015) is not exploited when integration is partial, and designing an inclusive MCS is therefore paramount (Posch and Speckbacher, 2017).

In sum, using the sensemaking and paradox lenses to analyze the findings made it possible to understand why the sustainability paradox exists in organizations such as IREN. Importantly, these contradictions were latent, not outspoken (Smith and Lewis, 2011), leaving the actors unaware of the sustainability paradox. Hence, it can be argued that the sustainability paradox unfolds by displaying various facets, which are depicted in the following matrix (Figure 1).

The ideal situation for any organization with a sustainability orientation, as shown in quadrant A in Figure 1, occurs when its sustainability strategy and goals are subject to shared sensemaking, including within the BoD, between directors and middle managers and among middle managers (i.e. both across and between organizational levels). In addition, such an organization has a functioning and inclusive MCS, which integrates sustainability

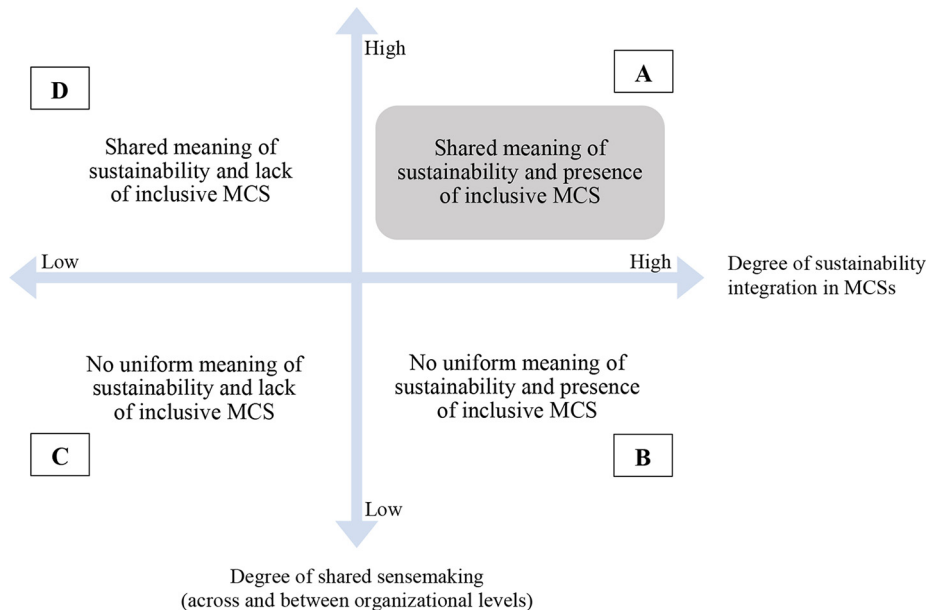


Figure 1.
Facets of the
sustainability
paradox

KPIs with traditional financial ones (quadrant A). The common sensemaking of the sustainability concept enables the actors at various organizational levels to pursue and monitor the achievement of multidimensional sustainability performance. In such a situation, the sustainability paradox is either nonexistent or minimal.

The other three quadrants in the matrix are less desirable. When an organization's sustainability strategy and goals are not shared across and between various organizational levels in the presence of a well-designed, inclusive MCS (quadrant B), the achievement of multidimensional sustainability performance – which would be implicit in a sustainability-oriented organization – can be hampered by the (individual) agendas of the actors operating at various organizational levels, who may try to steer how the inclusive MCS is used in practice. That is, a well-designed control tool may be useless in such a situation.

When an organization's sustainability strategy and goals are not subject to uniform sensemaking and when a traditional MCS, focused on financial KPIs, exists (quadrant C), the achievement of a multidimensional sustainability performance is weak and may not even be considered relevant by the actors operating at various organizational levels, despite the existence of an overall sustainability orientation. This was the case with the organization studied in this paper.

When the sustainability strategy and goals are subject to shared sensemaking but the organization lacks an inclusive MCS (quadrant D), despite the common meaning of the sustainability concept, the achievement of multidimensional sustainability performance is biased by the persistent relevance of financial KPIs. That is, sustainability becomes difficult, even if intentions for action exist.

The matrix presented in Figure 1 can serve as a benchmark allowing the managers of different organizations to become aware of the latent tensions that may be hampering the full integration of sustainability within their organizations and informing them how to act to

reach the quadrant that best suits their ambitions and organizational goals. Thus, the proposed matrix can serve the learning function envisaged by [Bloodgood and Chae \(2010\)](#).

6. Conclusions

This paper contributes to the literature on the internal dynamics of sustainability ([Gond et al., 2012](#); [Onkila et al., 2018](#); [Lindgreen and Swaen, 2010](#); [Contrafatto, 2011](#); [Rossi and Luque-Vilchez, 2020](#)) by exploring how organizational actors can contribute to the sustainability paradox ([Durden, 2008](#)). To achieve the aim of this paper, an illustrative case study ([Yin, 1994](#)) was prepared by focusing on IREN, an Italian listed multi-utility with a well-known tradition of working with sustainability. Two research questions were addressed. The first research question asked: how do top managers and middle managers make sense of sustainability? By drawing upon the theoretical lenses of organizational sensemaking ([Weick, 1995](#); [Onkila et al., 2018](#); [Brown et al., 2015](#); [Das and Kumar, 2010](#)) and paradoxes ([Lüscher and Lewis, 2008](#); [Smith and Lewis, 2011](#); [Ozanne et al., 2016](#)), this paper shows that, even if an organization claims to have a strong sustainability orientation, its internal dynamics may contribute to the unconscious perpetuation of the sustainability paradox.

The second research question asked: what roles do MCSs play in the sustainability paradox? In line with the management control literature ([Gond et al., 2012](#); [Baker and Schaltegger, 2015](#); [Posch and Speckbacher, 2017](#)), this paper shows how important it is for MCSs to be inclusive instead of functioning as split (i.e. parallel) systems that focus on either the financial aspect or the social and environmental aspects. Yet the design of a sustainable MCS that includes the three dimensions of sustainability is not sufficient. The use of such a system by actors who share a common understanding and have shared expectations of sustainability is paramount. Therefore, taking multi-sensemaking processes into account reveals the potential role that MCSs can play in resolving the sustainability paradox.

As a main contribution, this paper relies on an eclectic theoretical framework to dig deeper into the sustainability paradox by explaining why it exists and how it unfolds. The different opinions and perceptions of sustainability that are reported herein show how sensemaking is a multifaceted process whose effects are amplified by the many actors that engage with it across and between organizational levels ([Weick et al., 2005](#); [Brown et al., 2015](#)). Regarding theoretical implications, this paper adds to the depiction of the sustainability paradox in the literature ([Durden, 2008](#)). The facets of the sustainability paradox are explained by the proposed matrix ([Figure 1](#)), which presents two dimensions, namely, the extent to which sustainability is subject to a shared sensemaking across and between organizational levels; and the degree of sustainability integration in MCSs that are intended to steer individuals and departments toward sustainability.

As a practical implication, the proposed matrix representing the facets of the sustainability paradox can be useful for organizations that are interested in learning about the latent tensions inherent in the sustainability paradox. Recognizing the existence and management of paradoxes can lead to organizational learning ([Bloodgood and Chae, 2010](#)) about how sustainability can be dynamically implemented and integrated at various organizational levels. Thus, it is important for organizations' BoD and middle managers to become aware of potential inconsistencies and to develop an internal focus by fostering a continuous and coordinated dialogue with employees. Employees at all organizational levels may make the difference in contributing to a full integration of sustainability ([Onkila et al., 2018](#); [Rae et al., 2015](#)). A more homogeneous sensemaking can also trigger a better capacity for action on the part of middle managers by reducing the confusion and stress that could impede their work with subordinates ([Lüscher and Lewis, 2008](#)).

Although it sheds light on the roles played by individuals at different organizational levels in relation to the sustainability paradox, this paper provides a limited understanding of how individuals make sense of sustainability at the lowest organizational levels. Future studies could gain a deeper understanding of how individuals contribute to the integration (or non-integration) of sustainability and their role in the sustainability paradox on all organizational levels. In addition to understanding the role of internal stakeholders, external stakeholders could be included in future studies; organizations that do not operate in the utility sector, which is implicitly oriented toward sustainability, could also come under study. Finally, further research could gain a deeper understanding of the role of MCSs in resolving or accentuating the sustainability paradox in other jurisdictions and operational settings.

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Appendix. Interview guide

- (1) Introduction:
 - position and role in IREN
 - tasks and activities
 - years in IREN
 - previous work experience
 - education degree
- (2) IREN strategy and organization:
 - strategic goals
 - performance management system
 - relationship with local community
- (3) IREN and sustainability:
 - meaning and operationalization of sustainability
 - sustainability goals
 - indicators and managerial incentives
 - integration within operational processes
 - awareness-raising activities on sustainability issues
- (4) Tensions:
 - different sustainability interpretations and obstacles
 - conflicts among business areas
 - local committees features
 - areas for improvement
- (5) Conclusions:
 - final remarks

About the authors

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