Revealing the corporate contribution to sustainable development goals through integrated reporting: a worldwide perspective

Giuseppe Nicolò, Gianluca Zanellato, Adriana Tiron-Tudor and Paolo Tartaglia Polcini

Abstract

Purpose – *This study aims to contribute to the existing literature by presenting new knowledge about sustainable development goals' (SDGs) reporting practices through integrated reporting (IR). This paper's ultimate goal is to dig to light companies' main approaches to incorporating SDG disclosures into IRs.*

Design/methodology/approach – *This study puts forward both deductive content analysis and an inductive thematic analysis on a sample of worldwide leading IR adopters to assess what SDGs they disclose and how they integrate SDGs into the reports. Meaningful narratives and graphical illustrations are selected, categorised and discussed from a symbolic/substantive legitimacy perspective.*

Findings – *The results of this study highlighted that although a fair number of leading IR adopters addressed SDG issues, their pathways to disclosure were not uniform. In some cases, SDGs inspired substantive changes to internal management and process, communicated through an integrated approach. However, there was a persistent trend of using SDGs as camouflage and symbolic tool to enhance company's reputation and obtain a licence to operate.*

Originality/value – *To the best of the authors' knowledge, this was the first study that performed a deductive/inductive thematic analysis to engender insight into the most meaningful patterns followed by leading IR reporters worldwide to disclose their contributions to SDGs and address their legitimacy.*

Keywords *Sustainable development, Sustainable development goals, Integrated reporting, Content analysis, Legitimacy theory, Corporate social responsibility*

Paper type *Research paper*

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Received 3 September 2021
Revised 18 January 2022
24 March 2022
2 May 2022
Accepted 2 May 2022

1. Introduction

Businesses play a pivotal role in driving the achievement of the 17 sustainable development goals (SDGs). They manage raw materials, use human resources and undertake activities that greatly impact health and safety, social wellness and environmental resources consumption (Gunawan *et al.*, 2020; van der Waal and Thijssens, 2020; Izzo *et al.*, 2020a). However, their concrete contribution in attaining SDGs cannot be assumed. Firms should embark on a radical shift in their commercial and business priorities, incorporating SDGs into their long-term goals and strategies (OXFAM *et al.*, 2018; Santos and Silva Bastos, 2020). In addition, corporate business models should be aligned with the multiple layers of SDGs in terms of environmental, social and human rights ambitions (Izzo *et al.*, 2020a). This process correlates with the need to expand the magnitude of businesses' reporting practices by including relevant information that demonstrates to stakeholders a concrete commitment to SDGs and outlines a comprehensive portrait of their social and environmental performance (Rosati and Faria, 2019a; Garcia-Meca and Martinez-Ferrero, 2021).

However, recent studies (PwC, 2018; KPMG International, 2018; OXFAM, 2018;Yu *et al.*, 2020) have raised many concerns regarding the ability of companies to concretely include SDGs in their strategies and business models. These have also underlined that businesses fail to demonstrate straightforward methods for translating commitments to SDGs into tangible business actions. Moreover, SDG information is often disconnected from other corporate dimensions reported in sustainability reports (SRs), resulting in a siloed approach.

In recent years, integrated reporting (IR) has accomplished a groundbreaking step in advancing corporate reporting practices (de Villiers *et al.*, 2014; Wachira *et al.*, 2020). IR assumes a multi-dimensional, cohesive corporate perspective, providing information in an interconnected, progressive way on financial and non-financial drivers of a firm's value creation (Kılıç and Kuzey, 2018; Ackers and Grobbelaar, 2021). In this way, IR stimulates the investors and other stakeholders to shift their focus from achieving short-term economic and financial goals to developing long-term corporate strategies that ensure commitment to a sustainable society (Robertson and Samy, 2015, 2019; Wachira *et al.*, 2020). Thus, IR has been hailed as a useful communication tool for supporting companies in aligning their business approaches and long-term value creation processes with environmental and societal prosperity and SDG challenges [Chartered Global Management Accountant (CGMA), 2018; Izzo *et al.*, 2020b; Robertson and Samy, 2019; Nicolò *et al.*, 2019, 2021; Manes-Rossi *et al.*, 2021].

However, although the journey of businesses towards SDGs is developing, evidence regarding how firms are embracing SDGs in their corporate reporting systems remains scant (Bebbington and Unerman, 2018; Pizzi *et al.*, 2020, 2021; Mio *et al.*, 2020).

Therefore, this study aimed to respond to the call made by Bebbington and Unerman (2018) for more accounting research on SDGs. According to Bebbington and Unerman (2018, pp. 6–9), SDGs "are likely to open up new avenues for accounting research [...] and there is scope for collection and analysis of much deeper empirical evidence on these matters – including problematising how SDG have been embraced by the business world and the accounting profession".

This study attempts to provide a novel contribution to the existing literature, presenting fresh knowledge about SDGs reporting practices through IR. It investigates a sample of worldwide leading IR adopters to assess what SDGs they address in their integrated reports. Moreover, in keeping with the call of Manes-Rossi *et al.* (2021, p. 25) for a more "in-depth investigation into patterns of including SDGs in IR" this study also examines how SDGs are incorporated within the reports. To this end, an inductive thematic analysis was conducted on a sample of 20 companies classified as SDG IR adopters to enhance the understanding of their most meaningful SDG contribution disclosure patterns. The most significant narratives and graphical illustrations were inductively extracted from the reports, categorised and analysed using the theoretical framework of symbolic and substantive legitimacy.

This study highlighted that although a fair number of leading IR adopters addressed SDG issues, their pathways to disclosure have remained barely uniform. In some cases, the SDGs have inspired substantive changes to the internal managerial processes that have been communicated through an integrated thinking (IT) approach. However, it is worth noticing that a trend persists in using SDGs as a camouflage, symbolic tool to enhance company's reputation and obtain a licence to operate.

This paper contributes to the existing literature as – to the best of the authors' knowledge – this is the first study that performs a deductive/inductive thematic analysis to engender insight about the most meaningful patterns followed by worldwide leading IR adopters to disclose their contributions to the SDGs. Our results may also represent a helpful baseline to understand what could be the impact of the imminent regulation on corporate sustainability reporting on IR adopters.

The remainder of this paper is organised as follows: Section 2 will present the theoretical background and a literature review on SDGs, also discussing the potential of the IR in fostering the SDGs disclosure. Section 3 will exhibit the adopted methodology, presenting the sample collection and research method. Next, Section 4 will discuss the results obtained. Finally, Section 5 will summarise the conclusions, theoretical, practical implications and limitations and suggest directions for future studies.

2. Literature review

2.1 Theoretical background

This study drew upon the assumptions of legitimacy and stakeholder theories to explain the reasons and incentives underpinning the leading IR adopters' choice to engage in voluntary, non-financial disclosures of SDGs and shed light on the different patterns they followed to report their contributions to SDGs (Deegan and Blomquist, 2006; Hahn and Lülfs, 2014; Nicolò *et al.*, 2019; Manes-Rossi *et al.*, 2021; Silva, 2021). Legitimacy and stakeholder theories represent two overlapping perspectives of the broader political economy theory framework. They focus on corporate disclosure as a mechanism to manage the organisation's relationships with society, individuals and stakeholder groups (Gray *et al.*, 1996; Deegan and Blomquist, 2006; Yongvanich and Guthrie, 2007; Hahn and Lülfs, 2014).

Legitimacy theory postulates the existence of a virtual social contract between an organisation and the social system in which it operates and from which it cannot be separated (Suchman, 1995; O'Dwyer, 2002; Holder-Webb *et al.*, 2009). From this perspective, no organisation has an inherent right to conduct activities, as this depends on its ability to obtain social legitimacy (Yongvanich and Guthrie, 2007; Hahn and Lülfs, 2014). Legitimacy can be defined as a "generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, p. 574). Accordingly, each company is called upon to adopt socially responsible behaviours and conform to the batch of codes established by society to gain or maintain legitimacy, i.e. the licence to operate (Milne and Patten, 2002; de Villiers and Van Staden, 2006). Therefore, perceived legitimacy is a conferred status necessary to give an organisation the public approval to continue accessing the capital and human resources required to perform its activities and value creation processes (O'Dwyer, 2002; Holder-Webb *et al.*, 2009). It follows that corporate managers should assume a proactive role in recognising any deviation of the organisation's conduct from the social contract. Accordingly, they should implement the necessary remedial strategies to fill possible legitimacy gaps that may hamper the organisation's existence (O'Dwyer, 2002).

Voluntary disclosure is the main instrument that managers may exploit to demonstrate congruence between corporate operations and the package of socially accepted norms to fulfil public expectations (O'Dwyer, 2002; Setia *et al.*, 2015; Manes-Rossi *et al.*, 2021). Without proper disclosure, an organisation may incur legitimacy gaps even when it complies with society's norms and expectations (de Villiers and van Staden, 2006). As such, voluntary disclosure is a strategic means that managers may use when corporate legitimacy is threatened. In doing so, managers reduce the possibility that the company incurs adverse normative restrictions and boycotts that could hamper its continued viability (Milne and Patten, 2002; de Villiers and Van Staden, 2006; Setia *et al.*, 2015). In short, voluntary disclosure is a pivotal strategic tactic to educate, inform, manipulate or change the "relevant public perceptions and expectations about corporate activities" (Lindblom, 1994, pp. 8–12). These tactics increase the likelihood that an organisation correctly responds to and accommodates the legitimate interests of crucial society's constituents (O'Dwyer, 2002; Setia *et al.*, 2015; Romero *et al.*, 2019).

While legitimacy theory considers the relationship between the organisation and society as a whole, the stakeholder theory complements such arguments by moving the standpoint on the need to fulfil particular stakeholders' claims and expectations (Deegan and Blomquist, 2006). According to Deegan and Blomquist (2006, p. 350), "there will be various social contracts 'negotiated' with different stakeholder groups, rather than one contract with society in general". The organisations' stakeholders include shareholders, creditors, customers, employees, suppliers, governmental bodies and public interest groups (Roberts, 1992). Accordingly, from the stakeholder theory's perspective, the organisation's survival depends on its managers' ability to define plans and strategies that create sufficient value for shareholders and each stakeholder group (Clarkson, 1995). Similarly, the stakeholder theory links organisation's success to compliance with the expectations of its social constituents (Deegan and Blomquist, 2006). However, in this case, the focus is narrowed to specific stakeholder groups that provide crucial resources and support for corporate operations and performance (Deegan and Blomquist, 2006; Guthrie *et al.*, 2020; Manes-Rossi *et al.*, 2021). Therefore, disclosure, including financial to non-financial information, serves as a strategic means to demonstrate to stakeholders that the organisation incorporates their instances within its operations (Roberts, 1992; Deegan and Blomquist, 2006).

Legitimacy and stakeholder theories should be seen as evolving concepts whose boundaries change as social expectations and perceptions change (de Villiers and Van Staden, 2006). The recent introduction of SDGs has dramatically challenged the status quo of corporations and their legitimacy boundaries, globally pressuring businesses to take a leading role in societal progress towards sustainable development (PwC, 2018; Pizzi *et al.*, 2020). SDGs are intended to stimulate responsible business models, practices and policies [Global Reporting Initiative (GRI), 2015]. They provide firms with a comprehensive framework to rethink their business strategies and models and develop innovative, sustainable solutions that enable the creation of long-term value for stakeholders and society at large (Fonseca and Carvalho, 2019; Izzo *et al.*, 2020a, 2020b) (Figure 1).

The concrete operationalisation of SDGs in business strategies and models cannot be decoupled from their substantive incorporation into corporate reporting practices

Figure 1 The 17 sustainable development goals (SDGs)

(Fonseca and Carvalho, 2019; Gunawan *et al.*, 2020; Garcia-Meca and Martinez-Ferrero, 2021). The organisations' quest for legitimacy requires an active effort to reshape their reporting practices, including non-financial information demonstrating their active commitments towards achieving SDGs (KPMG International, 2018; PwC, 2018; Fonseca and Carvalho, 2019; Tsalis *et al.*, 2020). This is pivotal to meeting new consumer and social expectations and obtaining the licence to operate (Rosati and Faria, 2019a; Fonseca and Carvalho, 2019; Heras-Saizarbitoria *et al.*, 2021).

2.2 Symbolic versus substantive approach to sustainable development goal reporting: the role of integrated reporting

Traditional corporate reports have been criticised mainly for their backwards-looking perspectives and predominant focus on financial issues (Robertson and Samy, 2015; Kılıç and Kuzey, 2018). Likewise, stand-alone SRs focused on social and environmental issues have been accused of neglecting the interconnections between the financial dimension and organisation strategy. This has resulted in a non-integrated silo approach to corporate reporting, often affected by information overload, artificial manipulation and complexity drawbacks (de Villiers *et al.*, 2014; Robertson and Samy, 2015; Wachira *et al.*, 2020; Ackers and Grobbelaar, 2021).

In particular, several scholars have raised concerns about the risk of using SR as "window dressing" (OXFAM, 2018, p. 14), flaunting an impressive, fashionable commitment towards SDGs to create consensus among stakeholders (Bebbington and Unerman, 2018; OXFAM, 2018; Izzo *et al.*, 2020a). This approach is consistent with the symbolic legitimacy strategy. It confers to the voluntary disclosure the strategic role of positively influencing public perceptions to transmit the impression that the organisation is consistent with social expectations and values (Yongvanich and Guthrie, 2007; Tashman *et al.*, 2019). This approach does not entail any real change in corporate activities or strategies (Ashforth and Gibbs, 1990) but rather discloses elementary information linking the organisation with well-established symbols, such as SDGs with high legitimate recognition (Yongvanich and Guthrie, 2007; Tashman *et al.*, 2019). The symbolic approach is associated with impression management or bluewashing rationales, a "smokescreen of practices used for purposes of public relations" (Heras-Saizarbitoria *et al.*, 2021, p. 2). Here, the emphasis is on projecting an artificial company's image that persuades the outside parties and generates favourable impressions about its SDG performance (Hahn and Lülfs, 2014; Romero *et al.*, 2019; Garcia-Meca and Martinez-Ferrero, 2021). As Bebbington and Unerman (2018, p. 10) noted, "While the SDGs appear to be accelerating, motivating and focusing the sustainability related efforts of many of these businesses, they could also be being used (by some organisations, to some extent) to camouflage business-as-usual by disguising it using SDG-related sustainability rhetoric." In particular, several scholars demonstrated how many companies struggle to reconcile SDG concerns with the primary corporate objective of maximising shareholder value (van der Waal and Thijssens, 2020; Garcia-Meca and Martinez-Ferrero, 2021). The win–win proposition underpinning SDGs remains unclear for many companies (van der Waal and Thijssens, 2020; Garcia-Meca and Martinez-Ferrero, 2021). However, growing stakeholder and society pressures provide sufficient incentives for companies to engage in symbolic SDG disclosure behaviours to highlight "ceremonial conformity" with social expectations, "leaving essential machinery of the organisation intact" (Ashforth & Gibbs, 1990, p. 181). A recurrent example of SDG symbolic behaviours is to declare the commitment to one or more SDGs in the early sections of the reports. Such commitment is often made using coloured infographics and "fancy icons" (Heras-Saizarbitoria *et al.*, 2021, p. 10), which are not followed by an explanation of how SDGs have been operationalised or integrated into corporate strategies and goals.

Contrary to the symbolic legitimacy strategy, the substantive disclosure approach consists of voluntary disclosing information reflecting concrete and material changes implemented in corporate operations, practices, strategies and business models (Ashforth and Gibbs, 1990; Michelon and Parbonetti, 2012). It involves disclosing detailed qualitative and quantitative information crucial for the external audience to "know much more about whether those changes in strategy also changed in action" (Hopwood, 2009, p. 437). Such an approach goes beyond the rhetoric and smokiness of the symbolic strategy. It involves disclosing information that enhances the understanding of changes in corporate objectives and actions undertaken in response to external pressures (Ashforth and Gibbs, 1990). In keeping with this approach, companies should be able to demonstrate how they operationalise SDGs within their business and integrate them within their strategies, business models and value creation processes (OXFAM, 2018; Silva, 2021). Substantive SDG disclosure should reflect how SDGs have enabled changes to the internal processes (Ashforth and Gibbs, 1990; Romero *et al.*, 2019; van der Waal and Thijssens, 2020; Heras-Saizarbitoria *et al.*, 2021).

IR may represent a valid communication tool for companies to implement substantive SDG disclosure strategies from this perspective. IR is a new, multi-dimensional reporting tool created to resolve the shortcomings of SRs and traditional financial reports (Robertson and Samy, 2015, 2019; Ackers and Grobbelaar, 2021). IR demonstrates how an organisation can create value in the short, medium and long term, considering the interconnections between strategy, corporate governance, intangible value drivers and social and environmental context (de Villiers *et al.*, 2014; Robertson and Samy, 2015, 2019; Kılıç and Kuzey, 2018). IR has created space for a new sustainability discourse, recognising that long-term business growth is strictly connected to an organisation's ability to address growing social, environmental and economic challenges (Setia *et al.*, 2015; Wachira *et al.*, 2020). Several scholars have expressed that IR may represent a valid tool for supporting companies' efforts to provide stakeholders with meaningful information about the actions and progress made towards the achievement of SDGs (CGMA, 2018; Izzo *et al.*, 2020b; Di Vaio *et al.*, 2020). Specifically, IR is based on a framework (IIRC, 2013) that proposes a multi-capital perspective to report information, recognising the existence of six forms of capital: financial, manufactured, intellectual, human, social and relationship and natural (Ackers and Grobbelaar, 2021). These represent the dimensions through which a company can create value over different periods for its stakeholders (Di Vaio *et al.*, 2020). Accordingly, IR offers companies the ability to align their business models, strategies and value creation processes with SDGs, providing a holistic perspective of the impact that SDGs exert on the increases, decreases and transformation of various financial and non-financial capitals (Adams, 2017; CGMA, 2018; Di Vaio *et al.*, 2020). Moreover, IR is based on the "IT" concept [International Integrated Reporting Council (IIRC), 2013], intended to be the "active consideration by an organisation of the relationships between its various operating and functional units and the capitals that the organisation uses or affects" [International Integrated Reporting Council (IIRC), 2013, p. 2]. IT involves the steady consideration of all the interconnections and interdependencies between various factors that impact the organisation's value creation ability (de Villiers *et al.*, 2014; Robertson and Samy, 2015, 2019). The internalisation of the IT concept across strategy, business model creation, decision-making and information provision enables an organisation to better understand and explain its contribution to SDGs to the public [Chartered Global Management Accountant (CGMA), 2018; Di Vaio *et al.*, 2020]. This, in turn, helps companies adopt substantive approaches to seeking legitimacy based on providing detailed qualitative and quantitative information that reflects a "real, material change in organisational goals, structures, and processes or socially institutionalised practices" (Ashforth and Gibbs, 1990, p. 178). More specifically, IR supports companies when undertaking a significant transformation in culture, strategies, values, business models or reporting practices to fulfil SDGs' environmental, social and human rights priorities (Di Vaio *et al.*, 2020; Manes-Rossi *et al.*, 2021). This integrated approach is conducive to greater transparency and accountability to stakeholders, improving "organisations' licence to continue to operate in the ecosystem" (Manes-Rossi *et al.*, 2021, p. 5).

2.3 Prior research on sustainable development goal reporting

The first surveys conducted by professional accountancy organisations on SDGs reporting (e.g. PwC, 2018; KPMG International, 2018; OXFAM, 2018) showed discouraging results. They highlighted that although organisations have begun mentioning SDGs in their corporate annual reports or SRs, they failed to demonstrate the integration of SDGs in their business and sustainability practices or prioritisation of SDGs. In particular, companies revealed a trend towards symbolic SDG disclosure based on "cherry-picking only the SDGs that fall within their comfort zones" (OXFAM, 2018, p. 5). Therefore, the introduction of SDGs has not substantially changed corporate approaches to sustainability (OXFAM, 2018). A tendency towards disclosing positive rather than negative impacts of their activities on SDGs has also emerged (KPMG International, 2018).

In addition, the debate over SDG accounting and reporting has raised similar concerns among academics. Several scholars (e.g. Rosati and Faria, 2019a, 2019b; Subramaniam *et al.*, 2019; van der Waal and Thijssens, 2020; Erin and Bamigboye, 2021; Pizzi *et al.*, 2021) noted little or no concern among firms regarding reporting SDG activities. Although companies are demonstrating a growing interest in shaping their reporting practices to include SDGs (Izzo *et al.*, 2020a; Yu *et al.*, 2020), the quality of this disclosure remains low (Tsalis *et al.*, 2020; van der Waal and Thijssens, 2020; Diaz-Sarachaga, 2021; Hummel and Szekely, 2021; Heras-Saizarbitoria *et al.*, 2021).

In general, the most frequently addressed SDGs are SDG 8, decent work and economic growth (Fonseca and Carvalho, 2019; Subramaniam *et al.*, 2019; Izzo *et al.*, 2020a; Tsalis *et al.*, 2020; Gunawan *et al.*, 2020; Yu *et al.*, 2020; Curtò-Pages *et al.*, 2021; Diaz-Sarachaga, 2021; Heras-Saizarbitoria *et al.*, 2021); SDG 13, climate action (Fonseca and Carvalho, 2019; Subramaniam *et al.*, 2019; Izzo *et al.*, 2020a; Tsalis *et al.*, 2020; Curtò-Pages *et al.*, 2021); SDG 12, responsible consumption and production (Fonseca and Carvalho, 2019; Subramaniam *et al.*, 2019; Izzo *et al.*, 2020a; Gunawan *et al.*, 2020); SDG 7, renewable energy (Tsalis *et al.*, 2020; Yu *et al.*, 2020; Izzo *et al.*, 2020a); and SDG 4, quality education (Izzo *et al.*, 2020a; Pizzi *et al.*, 2020; Yu *et al.*, 2020; Gunawan *et al.*, 2020). Conversely, less commonly disclosed goals were SDG 1, no poverty; SDG 2, zero hunger; and SDG 16, peace and justice (Fonseca and Carvalho, 2019; Gunawan *et al.*, 2020; Subramaniam *et al.*, 2019; Pizzi *et al.*, 2020; Yu *et al.*, 2020; Izzo *et al.*, 2020a; Curtò-Pages *et al.*, 2021).

Overall, a corporate tendency has emerged to use SDG disclosure to manage legitimacy symbolically by presenting the organisation in a more favourable light. They focus on improving external reputation rather than implementing substantial changes to internal managerial processes or strategies (Silva, 2021). Studies conducted in Italy (Izzo *et al.*, 2020a) and China (Yu *et al.*, 2020) noted that organisations tend to simply mention a corporate commitment to one or more SDGs without concretely illustrating the interconnections between SDGs and strategic objectives, business models or quantitative key performance indicators (KPIs). Focusing on 30 worldwide organisations, Van der Waal and Thijssens (2020) demonstrated that SDG reporting was superficial and mainly driven by impression management rationales. Organisations symbolically describe their SDG commitment in broad terms, while remaining silent on the specific actions undertaken to achieve, measure or operationalise SDGs (Van der Waal and Thijssens, 2020). Furthermore, Silva (2021) examined 100 reports on sustainability performance drafted by 67 multi-national enterprises listed on the Financial Times Stock

Exchange and observed symbolic rather than substantive changes to SDG disclosure in response to external stakeholder pressure. Similar findings were reported by Heras-Saizarbitoria *et al.* (2021) and Garcia-Meca and Martinez-Ferrero (2021). Specifically, after analysing the SRs published by 1,370 worldwide organisations, Heras-Saizarbitoria *et al.* (2021, p. 10) observed that in most cases, SDGs were opportunistically cherry-picked by companies to “add color and fancy icons to reports”. They did not explain how SDGs were operationalised or integrated into corporate strategies and goals (Heras-Saizarbitoria *et al.*, 2021, p. 9). Such “SDG-washing” practices were used to symbolically enhance social legitimacy and meet current stakeholders’ expectations (Heras-Saizarbitoria *et al.*, 2021). Likewise, Garcia-Meca and Martinez-Ferrero (2021) examined SRs drafted by a sample of 523 European firms and revealed that firms exploited SDG reporting as a camouflaging strategy by providing symbolic information to stakeholders to obtain consensus and licence to operate. In particular, they observed a performance effect of SDG reporting only in controversial and environmentally sensitive sectors (Garcia-Meca and Martinez-Ferrero, 2021). This was in line with Santos and Silva Bastos (2020), who reported that companies in Portugal that generate a heavy impact on the surrounding environment are more prone to integrate SDGs into their business activities.

Nevertheless, companies dealing with SDGs and accounting for their impact on value creation processes are still unclear (Subramaniam *et al.*, 2019). Companies from various countries and industrial sectors have been adopting various approaches to report their contributions towards achieving SDGs. Therefore, while the “appetite for embracing the SDGs” (PwC, 2018, p. 8) has been growing, organisations seem to fail to adopt an integrated approach to communicating their value creation on an SDG basis. They mainly follow a “tick the box” approach and tend to merely display a symbolic commitment towards one or more SDGs to positively influence stakeholders’ perceptions and enhance their corporate images and reputations (OXFAM, 2018; Yu *et al.*, 2020; Izzo *et al.*, 2020a).

Thus, more empirical evidence is necessary to better understand the patterns that international firms follow regarding SDG disclosure. Mio *et al.* (2020, p. 23) argued that, with some exceptions, “literature review on SDG disclosure is almost inexistent”, contending that “the investigation of SDGs disclosures is crucial”. Attuned, other scholars (Van der Waal and Thijssens, 2020; Heras-Saizarbitoria *et al.*, 2021) shed light on the lack of empirical knowledge regarding the role played by private organisations in addressing SDGs and the impact of SDG introduction on corporate non-financial reporting practices. Therefore, corporate SDG reporting represents an “undiscovered terrain” (Van der Waal and Thijssens, 2020, p. 2).

Accordingly, in an attempt to fill the existing gaps, this study aimed to expand the understanding of SDG disclosure practices in the context of global IR adopters. Except for Izzo *et al.* (2020b), who have investigated the extent to which European IR leaders disclose SDG information, prior research has adopted the lens of SR or annual reports to investigate SDG disclosure practices. Therefore, this paper aimed to broaden the scope of previous studies’ actions, presenting new knowledge on SDG reporting practices through IR from an international perspective. Hence, in addition to detecting *what* SDGs have been disclosed within IR, this study examined *how* leading IR adopters disclose their contributions to the SDGs.

The following research questions were posed:

- *RQ1.* What are the most disclosed SDGs in the context of worldwide IR adopters?
- *RQ2.* What are the main approaches worldwide IR adopters follow in disclosing SDGs contributions?

3. Research methodology

3.1 Sample selection

The sampling process started with consulting the official IIRC database. It contains "examples of emerging practice in Integrated Reporting that illustrate how organisations are currently reporting concise information about how their strategy, governance, performance and prospects, in the context of their external environment, lead to the creation of value over the short, medium and long term" (IIRC, official database). This database groups the reporters into four categories:

- leading practices;
- recognised reports;
- view by organisations; and
- IR reporters.

This study focused on leading practices, as they include the highest quality IR revised by the IIRC's Secretariat. They are considered superior in applying the guiding principles, content elements and fundamental concepts settled within the International Integrated Reporting Framework (IIRF), including IT and a multi-capitals approach [International Integrated Reporting Council (IIRC), 2013]. As these are leading IR reporters, greater attention to disclosing the different dimensions of the corporate value creation processes and SDGs was expected.

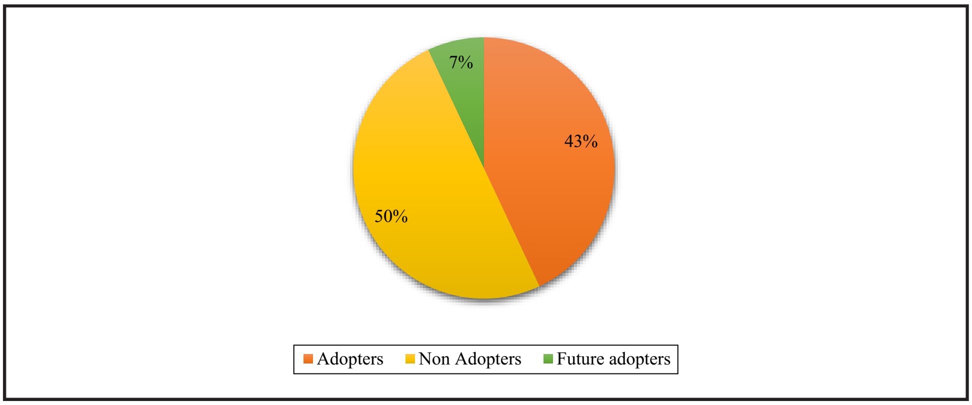
Accordingly, a sample of 46 organisations considered to be leading IR practice examples for 2017 was identified. The financial year 2017 was selected as a reference because it was the most recent year that allowed the retrieval of the largest number of IRs and represented the first year in which companies started concretely dealing with SDG. This facilitated obtaining the highest number of observations (46). The sampled companies were from various countries worldwide: South Africa (19), the UK (12), Australia (2), The Netherlands (2), New Zealand (2), Singapore (2), Sri Lanka (2) and Brazil, Mexico, Italy, Germany, Russia and Japan (1). In addition, they belonged to various industrial sectors: basic materials (7), consumer goods (4), consumer services (6), financial services (10), health care (2), industrials (3), oil and gas (2), professional services (1), public sector (1), real estate (2), technology (1), telecommunications (3) and utilities (4).

3.2 Research method

After identifying the initial sample, a qualitative analysis (Braun and Clarke, 2006; Hahn and Lülfs, 2014; Van der Waal and Thijssens, 2020; Silva, 2021) was conducted to determine *what* SDGs were disclosed and *how* they were incorporated within IR by the sampled companies. This included a combination of deductive content analysis and inductive thematic analysis methods developed along a multi-step process (Boyatzis, 1998; Braun and Clarke, 2006; Fereday and Muir-Cochrane, 2006; Hahn and Lülfs, 2014; Silva, 2021).

Firstly, a deductive content analysis was performed. It consisted of a preliminary step in which we manually inspected all selected IRs to identify those that included references to SDGs. Following Van der Waal and Thijssens (2020), this step assessed whether any keywords referable to SDGs, such as "SDG/s" or "Sustainable Development goal/s", appeared within the reports. Accordingly, 20 companies (43% of the total sample) that reference one or more SDGs within their IRs were identified and classified as "SDG IR adopters". Three companies (7%) were categorised as "future adopters", as they only mentioned a future intention to address SDGs (Figure 2).

Figure 2 SDGs IR adopters



The following step of the deductive content analysis focused on SDG IR adopters to assess what SDG they address within the reports. It involved using a disclosure checklist composed of all 17 SDGs as a guideline (Gunawan *et al.*, 2020; Izzo *et al.*, 2020a, 2020b; Yu *et al.*, 2020). Only explicit references to one or more SDGs were considered. This allowed us to capture only specific SDGs disclosures by avoiding generic sustainability disclosures (Curtò-Pages *et al.*, 2021; Heras-Saizarbitoria *et al.*, 2021). Accordingly, for each report of the companies classified as SDG IR adopters, a dichotomous approach was followed based on checking for the presence or absence of information related to each of the 17 SDGs (Gunawan *et al.*, 2020; Pizzi *et al.*, 2020). This approach confers the same relevance to all items and overcomes potential subjectivity shortcomings (Setia *et al.*, 2015; Kılıç and Kuzey, 2018; Manes-Rossi *et al.*, 2021).

The second step consisted of an inductive thematic analysis aimed at examining *how* "SDG IR adopters" disclosed their contributions to SDGs (Boyatzis, 1998; Braun and Clarke, 2006; Braun *et al.*, 2019; Silva, 2021). According to Braun and Clarke (2006, p. 79), "Thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail." A theme consists of a specific sense pattern retrieved from the analysed data, including explicit or implicit content (Joffe, 2012).

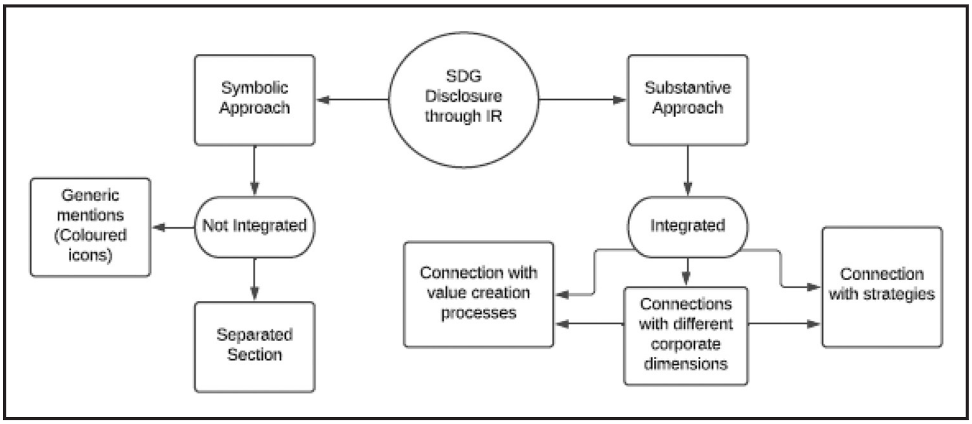
The inductive thematic analysis unfolds along a six-step recursive and iterative process (Braun and Clarke, 2006; Braun *et al.*, 2019; Silva, 2021). The first step was *familiarisation with the data*. In this study, two researchers reviewed IRs of leading adopters to check for references to one or more SDGs and generate initial ideas about the prevalent patterns followed in incorporating SDGs within reports. This step coincided with deductive content analysis in which researchers identified 20 SDG IR adopters, and assessed the number of SDGs they disclosed. To ensure reliability, the two researchers independently coded ten IRs. Then, they met to discuss inconsistencies, solve grey areas and clarify coding rules. Subsequently, they examined the other ten IRs and had a de-briefing to share their insights. Following the de-briefing, each researcher examined IRs previously examined by the other researcher. A final check confirmed a high degree of similarity between their results.

The second step, *generating initial codes*, involved extracting initial codes from the reports. The codes represent "the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon" (Boyatzis, 1998, p. 63). In this phase, the two researchers adopted an inductive approach to re-examine the 20 SDG adopters' reports and identify recurring meaningful patterns to be coded. For instance, in this phase, it was evident that while some companies simply provided generic mentions of their commitment to SDGs, mainly relying upon thematic maps and infographics, others were involved in more in-depth SDGs disclosure. In addition, while some companies connected SDGs to several corporate dimensions (e.g. strategy, business model, performance and value creation process), others did not make such associations. Therefore, by capturing these aspects, the two researchers involved generated an initial range of codes about SDGs disclosure to be further examined and revised to generate themes in the following step. Thus, each researcher independently identified data extracts on the reports corresponding to the codes. They transcribed and collated each code in a separate Excel file and associated them with specific labels. To test the reliability of the coding process, they conducted a de-briefing to discuss and compare their results (Fereday and Muir-Cochrane, 2006; Nowell *et al.*, 2017). Accordingly, some codes were eliminated, whereas some labels were modified. After reaching a sufficient degree of agreement, a single list of codes was generated.

The third step involved *constructing themes*. The themes result from a single or a combination of significant codes that depict meaningful patterns of the data set (Braun and Clarke, 2006; Nowell *et al.*, 2017; Braun *et al.*, 2019). Once all data had been coded and collated, codes were thoroughly examined to identify overarching themes and sub-themes. Two main approaches to corporate SDGs disclosure – configuring two different themes – emerged at this stage. The first group of companies disclosed SDGs without connecting them with the rest of the reports. In this group, a number of companies devoted a specific stand-alone section of their report to provide general information on their engagement towards achieving one or more SDGs, whereas others only claimed their contribution towards the 2030 agenda. In contrast, the second group of companies incorporated SDGs disclosure in different sections of IR in a more interconnected way. This group included various approaches with specific sub-themes for SDG incorporation, depending on the company type of links between SDGs and various corporate dimensions (e.g. strategy, value creation process, business model and capitals). These themes were associated with symbolic and substantive strategies that differentiated disclosure approaches followed by SDG IR adopters to legitimise their corporate contributions to SDGs. Specifically, the first theme was associated with manifestations of symbolic legitimacy strategy. In this case, the introduction of SDGs had a limited impact on corporate sustainability and related reporting practices. No substantial changes to corporate strategies, value creation process or other corporate dimensions driven by SDGs commitment were communicated. The second theme was associated with manifestations of substantive legitimacy strategies, which demonstrated how SDG introduction inspired concrete changes reflected in corporate strategies, value creation processes or business models. Rather than simply mapping generic efforts to achieve one or more SDGs, companies included in this group have adopted an IT approach (IIRC, 2013) to communicate how SDG internalisation produced substantive transformations in their way of conducting the business. At this stage, the two researchers worked together. They had some meetings to analyse the codes generated to derive meaningful themes. Accordingly, they decided together which codes may form main themes and which may form sub-themes. The other two research team members chaired the last meeting and validated these initial themes.

The fourth step consisted of *reviewing themes*. All themes were refined and reviewed during this phase to ensure that they form significant and coherent patterns (Braun and Clarke, 2006; Nowell *et al.*, 2017). In particular, the two researchers compiled all coded data for each candidate theme during this analytical step. In doing so, they reviewed them in depth to ensure that the data were coherent and that the themes referred to central organising concepts, i.e. the legitimacy strategies. At this stage, the other two research team members and an external expert were involved to ensure the rigour and confer impartiality to the analysis. Therefore, after several meetings, a thematic map was developed (Figure 3). The thematic map illustrated how the symbolic and substantive legitimacy strategies constitute the main disclosure patterns associated with two main themes and five

Figure 3 Thematic map



sub-themes. One sub-theme generated in the previous step, which concerned SDG disclosures linked to the six IR capitals, was removed. It did not incorporate sufficient data to be significant stand-alone. Therefore, it was included in another sub-theme (value-creation).

The fifth step focused on *defining and naming themes*. At this point, the themes and sub-themes were finally defined and named clearly to reflect best the data and the included meaning patterns (Braun and Clarke, 2006; Silva, 2021). The final classification was based on two legitimation strategies (symbolic and substantive), two main themes (not integrated and integrated) and five sub-themes (separate section, mention, comprehensive, strategy and value creation).

Table 1 presents the themes and sub-themes linked to the legitimation strategies and brief indicative examples of disclosure approaches followed by SDG IR adopters.

Several meetings were held between an external expert and all the research team members. They served to discuss personal insights and ensure that all the aspects of the data set were examined and captured into coherent themes. The final themes were supervised and cross-validated by all authors.

The sixth step consisted of *producing the report*. A final analysis was made across the themes identified and the corresponding legitimacy strategy patterns (Nowell *et al.*, 2017). In this step, it is crucial to select good examples of codes included within the themes to make the analysis reliable and significant (Nowell *et al.*, 2017; Silva, 2021). According to Nowell *et al.* (2017, p. 11), “Short quotes may be included to aid in the understanding of specific points of interpretation and demonstrate the prevalence of the themes.” Therefore, we selected meaningful visual and textual representations of SDGs disclosures. In doing so, we provided a meaningful picture of the different legitimacy strategies adopted by IR SDG adopters, which constitute a manifestation of the themes and sub-themes inductively identified during the analysis.

4. Results and discussion

4.1 Sustainable development goals disclosure

Table 2 shows that among the 20 companies classified as SDG IR adopters, SDG disclosure ranged from a maximum of 17 SDGs reported to a minimum of three. On average, each of these organisations disclosed approximately nine SDGs through IR (53%).

From the legitimacy theory standpoint, the fact that more than half of SDGs were reported in IR demonstrated that the awareness of the urgency to address SDGs was growing. In

Table 1 Legitimation strategies for disclosing SDGs information of leading IR adopters

Symbolic legitimacy *Not integrated*		*Main themes*	*Substantive legitimacy* *Integrated*	
Companies provide only generic references to the SDGs without links with other corporate dimensions. Lack of information about changes in corporate strategies, business models or value creation processes produced by the SDGs' introduction			Companies incorporated SDGs disclosure in different sections of the IR by providing links and interconnections with the other corporate dimensions. Organisations disclose how their strategies, business models or value creation processes have been aligned to the SDGs and showcase how SDGs have produced changes in their way of operating	
		Sub-themes		
Separate section	Companies disclose SDGs in a stand-alone section without connecting them to other contents or report elements *Indicative example* In the first part of its report, Company E includes a section that briefly describes how it intends to contribute to SDG 1, 2, 5, 9, 10 and 12. The disclosure is generic and emphasised by the use of classic coloured icons There are no links with other sections of the reports where the company concretely explains how it has engaged with the SDGs or how the mentioned SDGs have been operationalised within corporate processes and operations.		*Comprehensive*	Companies disclosed their contribution to the SDGs thorough the report in correspondence of the different issues covered (e.g. strategy; business models; value creation, capitals and performance) *Indicative example* Company N clearly declares the commitment to achieving SDG 7 and 13 as the core part of its core business in the CEO's letter. SDG 7 and 13 are constantly recalled across the different report's sections: "stakeholders", "value generation", "retail", "markets", to demonstrate how SDG are integrated in the value creation process, commercial and retail strategy, stakeholder engagement and operations.
Mention	Organisations only mention their commitment to the SDGs, often in the report's first section, without providing significant supporting evidence about the strategies implemented or actions tackled to achieve them. Frequent is the use of colourful infographics and fancy icons *Indicative example* Company P provides a colourful infographic showing the 17 SDGs to emphasise its devotion to achieving all of them without providing any information that could inform the users about how it intends to fulfil them		*Strategy*	Organisations mainly disclose information on SDGs within the section devoted to explaining the corporate strategy to outline how they have modified or developed a novel strategy to contribute to one or more prioritised SDGs. Frequent is the use of graphs and tables to evidence the links between strategy and selected SDGs also supported by quantitative targets and KPIs *Indicative example* In the first report's section, "about this report", Company L states "this report presents the main SDGs impacted by our business and the way they are related to our priority strategies" Then, within the section "Priority strategies", Company L, describes – also with the support of an explicative infographic – how the six corporate priority strategies impact the six capitals and are aligned with the relevant SDGs
			Value creation	Organisations focus on illustrating the impacts of the SDGs on their value creation processes. Their attention is mainly devoted to disclosing the actions and policies planned to address the SDGs that will impact the value creation process Indicative example In the section "How we create value", Company S describes its value creation process, evidencing how the different outcomes directly impact the achievement of SDGs 3, 4, 8, 9, 12 and 14

particular, SDGs became part of the consolidated set of norms, values and expectations that mould the modern virtual social contract between business and society (Price Waterhouse Coopers, 2018; Izzo *et al.*, 2020b; Yu *et al.*, 2020; Manes-Rossi *et al.*, 2021). The stakeholder theory arguments complement these considerations (Deegan and Blomquist, 2006; Manes-Rossi *et al.*, 2021). In addition, to consider the general society's

Table 2 SDGs disclosure among SDGs IR adopters

SDGs	*No.*	*(%)*
1. No poverty	8	40
2. Zero hunger	6	30
3. Good health and well-being	12	60
4. Quality education	11	55
5. Gender equality	13	65
6. Clean water and sanitation	10	50
7. Affordable and clean energy	13	65
8. Decent work and economic growth	16	80
9. Industry, innovation and infrastructure	14	70
10. Reduced inequalities	9	45
11. Sustainable cities and communities	9	45
12. Responsible consumption and production	14	70
13. Climate action	17	85
14. Life below water	6	30
15. Life on land	8	40
16. Peace, justice and strong institutions	4	20
17. Partnerships for the goals	10	50
Average SDGs disclosed per organisation	9	53
Maximum number of SDGs disclosed per organisation	17	100
Minimum number of SDGs disclosed per organisation	3	18

interest, the organisations are called to pay pivotal attention to the bundle of social contracts negotiated with various stakeholder groups interested in its operations (Deegan and Blomquist, 2006; Manes-Rossi *et al.*, 2021). This makes it necessary to satisfy their consolidated and emergent information needs. Accordingly, our results showed that SDGs were becoming an integral part of the dialogue between the companies and stakeholders (Diaz-Sarachaga, 2021; Pizzi *et al.*, 2021). Therefore, although the IIRF conceived IR to primary respond to the financial capital providers' interests, IR may enable the companies to align their value creation processes with SDGs, and, in turn, demonstrate to stakeholders how they are embedding SDGs ambition within their decision-making (Adams, 2017).

However, companies' actions cannot impact all SDGs, and neither should organisations be expected to report information on all SDGs. The relevance and magnitude of SDGs may vary according to the specific business.

Therefore, in line with previous studies (Fonseca and Carvalho, 2019; Subramaniam *et al.*, 2019; Izzo *et al.*, 2020a; Tsalis *et al.*, 2020; Gunawan *et al.*, 2020; Yu *et al.*, 2020), the most addressed SDGs were SDG 13, climate action (85%); SDG 8, decent work and economic growth (80%); SDG 12, responsible consumption and production (70%); and SDG 9, industry, innovation and infrastructure (70%).

These results arose because climate change has gained pivotal relevance among the many issues related to sustainable development, becoming a top issue for policymakers and public and private companies (O'Dwyer and Unerman, 2020). Thus, companies have increasingly focused on SDG 13 reporting, showing actions that mitigate climate change, such as reducing greenhouse gas (GHG) emissions and environmental footprints. This has become necessary for companies to enhance their investors' decision-making processes and comply with current societal expectations drawn by the 2015 Paris Agreement on Climate Change and the Intergovernmental Panel on Climate Change [Chartered Global Management Accountant (CGMA), 2018; O'Dwyer and Unerman, 2020].

Unsurprisingly, in addition to the extensive attention devoted to SDG 13, a focus on the disclosure of SDG 12 and SDG 9 was detected. This resulted from the inclusive, sustainable industrialisation claimed by SDG 9 and the sustainable consumption and production patterns promoted by SDG 12, which can be considered two sides of the same climate change reduction (SDG 13). Specifically, many companies include information in their IR regarding investments made to develop technological innovations and green-friendly infrastructure (SDG 9). These are identified as a means to reduce the impact of climate change on the environment and address climate change issues (SDG 13). Likewise, disclosures were made regarding adopting sustainable production models to more efficiently use natural resources and reduce the amounts of raw materials extracted and waste released (SDG 12). These signalled clear corporate willingness to contribute to preserving the environment by fighting against climate change. In this way, some companies provided quantitative information on percentages of renewable energy used and reductions in energy and water consumption (SDG 12), in keeping with adopting environmental management systems such as ISO 14001. In addition, efforts to reduce carbon footprints and GHG emissions were reported through quantitative indicators to create a sense of concrete commitment to reducing climate change and improving organisational legitimacy. The use of quantitative KPIs is crucial to increasing trust among stakeholders regarding the negative externalities generated by companies. In this case, the multi-dimensional nature of IR based on the multi-capitals perspective and the IT promoted by the IIRF facilitated organisations in adopting a holistic pattern of disclosing SDGs 13, 12 and 9.

Lastly, according to previous studies, SDG 1, no poverty (40%); SDG 2, zero hunger (30%); SDG 14, life below water (30%); and SDG 16, peace and justice (20%), were the least disclosed SDGs. This could be because these objectives, particularly SDG 16, have a more macroeconomic nature, and companies could tangibly and directly impact this only in rare cases.

4.2 Integrating sustainable development goals within integrated reporting: symbolic versus substantive approaches

To respond to the second research question, this section presents visual and textual references providing glimpses into the different approaches followed by the companies classified as SDG IR adopters in disclosing information about SDGs.

Table 3 shows that nine sampled SDG IR adopters followed a symbolic legitimation strategy to disclose their contribution to SDGs. In this case, companies were silent regarding their SDG integration in their strategies, business models or operations. This result echoed previous studies (OXFAM, 2018; PWC, CGMA, IIRC, 2018; Yu *et al.*, 2020; Izzo *et al.*, 2020b; Heras-Saizarbitoria *et al.*, 2021; Silva, 2021). Such disclosure behaviours revealed the tendency of embracing SDGs to merely fulfil emerging social expectations and convey a positive image to the outside world might lead to adopting symbolic reporting practices. No fundamental changes in corporate processes, strategies or activities were disclosed. Rather, symbolic claims of compliance to demonstrate an alignment with emerging social expectations regarding the 2030 agenda emerged from these reports (de Villiers and Van Staden, 2006; Romero *et al.*, 2019). In line with previous studies (van der Waal and Thijssens, 2020; Heras-Saizarbitoria *et al.*, 2021; Silva, 2021), these results confirmed the existence of SDG-washing practices aimed at obtaining corporate legitimacy and increasing external reputation and image.

For instance, Company Q, which operates in the energy sector headquartered in South Africa, included in its report a section mentioning five SDGs (4, 6, 8, 12 and 13) without providing any information regarding how it concretely intended to address these goals or integrate them into its strategies or business models (Figure 4).

This can be seen as a classic symbolic approach to organisational legitimation to positively influence stakeholder perceptions and convey the image of a socially and environmentally committed organisation (Milne and Patten, 2002; Setia *et al.*, 2015; Silva, 2021).

Table 3 Patterns of SDG reporting through IR

	Symbolic legitimacy			*Substantive legitimacy*	
	Not integrated			*Integrated*	
Company	*Separate section*	*Mention*	*Comprehensive*	*Strategy*	*Value creation*
Company A					✓
Company B	✓				
Company C	✓				
Company D		✓			
Company E	✓				
Company F			✓		
Company G	✓				
Company H					✓
Company I				✓	
Company J	✓				
Company K			✓		
Company L				✓	
Company M				✓	
Company N			✓		
Company O					✓
Company P		✓			
Company Q		✓			
Company R				✓	
Company S					✓
Company T		✓			
Total	5	4	3	4	4

Figure 4 Company Q SDGs disclosure approach

Sustainable Development Goals (SDG)

SDG 4: Ensure inclusive and quality education for all and promote lifelong learning
SDG 6: Ensure access to water and sanitation for all
SDG 8: Promote inclusive and sustainable economic growth, employment and decent work for all
SDG 12: Ensure sustainable consumption and production patterns
SDG 13: Take urgent action to combat climate change and its impacts

Source: Company Q, p. 93

Likewise, company P provided a colourful infographic showing the 17 SDGs to display its devotion to achieving all of the goals without providing any information on how it intended to fulfil them (Figure 5).

This approach confirmed the trend of "SDG icon-picking" observed by Heras-Saizarbitoria *et al.* (2021), consisting of adding "colour and fancy icons" to the reports without concretely explaining how the company engaged with SDGs or how they were operationalised within corporate processes and operations.

Furthermore, a symbolic approach to organisational legitimation was identified in organisations that devoted a specific section to disclosing SDGs without providing connections with the other corporate dimensions thorough the reports. As shown in Figure 6, Company E, an advertising organisation headquartered in Japan, disclosed its contribution to SDGs in a separate section included in the report (Figure 6).

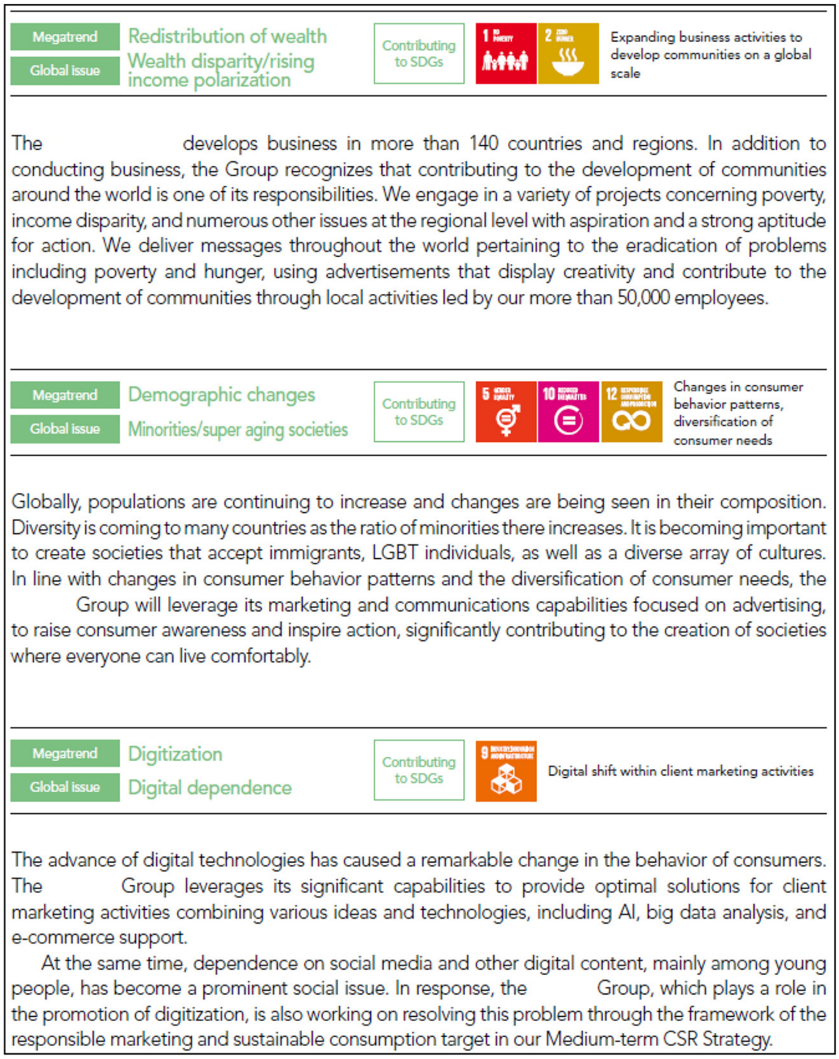
Figure 5 Company P SDGs disclosure approach

Source: Company P, p. 4

The draft of a separate section focused on SDGs can be considered a positive signal of corporate progress towards SDG implementation. However, a lack of integration with the other report sections emerged. The organisation failed to explain in the other sections how SDGs are incorporated into the business strategies or business models, undermining the credibility and usefulness of SDGs disclosure. This creates a decoupling between internal managerial practices and what the company reports regarding its SDG contributions (Tashman *et al.*, 2019; Silva, 2021). Although Company E made a specific reference to six SDGs (1, 2, 5, 9, 10 and 12), the level of disclosure regarding the actions tackled to reaching them was rather vague and superficial. Its approach to SDG disclosure remains functionalistic, which was in line with previous studies (van der Waal and Thijssens, 2020; Heras-Saizarbitoria *et al.*, 2021; Silva, 2021).

On the contrary, as shown in Table 3, ten SDG IR adopters followed a substantive legitimation approach to SDG disclosure. In this case, the transformative power of SDGs emerged. Companies demonstrated how SDGs shaped their approach to sustainable value creation, imposing changes to their way of thinking and operating (Ashforth and Gibbs, 1990; Romero *et al.*, 2019; van der Waal and Thijssens, 2020; Silva, 2021). The approach to

Figure 6 Company E SDGs disclosure approach


Megatrend Redistribution of wealth
Global Issue Wealth disparity/rising income polarization
Contributing to SDGs
Expanding business activities to develop communities on a global scale

The develops business in more than 140 countries and regions. In addition to conducting business, the Group recognizes that contributing to the development of communities around the world is one of its responsibilities. We engage in a variety of projects concerning poverty, income disparity, and numerous other issues at the regional level with aspiration and a strong aptitude for action. We deliver messages throughout the world pertaining to the eradication of problems including poverty and hunger, using advertisements that display creativity and contribute to the development of communities through local activities led by our more than 50,000 employees.

Megatrend Demographic changes
Global Issue Minorities/super aging societies
Contributing to SDGs
Changes in consumer behavior patterns, diversification of consumer needs

Globally, populations are continuing to increase and changes are being seen in their composition. Diversity is coming to many countries as the ratio of minorities there increases. It is becoming important to create societies that accept immigrants, LGBT individuals, as well as a diverse array of cultures. In line with changes in consumer behavior patterns and the diversification of consumer needs, the Group will leverage its marketing and communications capabilities focused on advertising, to raise consumer awareness and inspire action, significantly contributing to the creation of societies where everyone can live comfortably.

Megatrend Digitization
Global Issue Digital dependence
Contributing to SDGs
Digital shift within client marketing activities

The advance of digital technologies has caused a remarkable change in the behavior of consumers. The Group leverages its significant capabilities to provide optimal solutions for client marketing activities combining various ideas and technologies, including AI, big data analysis, and e-commerce support.

At the same time, dependence on social media and other digital content, mainly among young people, has become a prominent social issue. In response, the Group, which plays a role in the promotion of digitization, is also working on resolving this problem through the framework of the responsible marketing and sustainable consumption target in our Medium-term CSR Strategy.

Source: Company E, p. 59

SDGs disclosure shifted from superficial narratives and coloured infographics aimed at generating favourable impressions to more detailed information aimed at communicating a more powerful message to corporate stakeholders.

Companies in this category were grouped into three sub-themes according to the three main substantive-based approaches implemented to connect SDG information within IR. The first sub-category of Companies (F, K and N) followed a “comprehensive approach”, including SDGs in different report sections according to the corporate dimensions interested in the same goals. For instance, Company F operates in the automotive sector, headquartered in Sri Lanka.

Figure 7 was extracted from IR prepared by Company F for 2017. At the end of the report, Company F included an infographic summarising the main actions undertaken to address the 17 SDGs. In addition, it provided quantitative information allowing users to assess corporate performance in terms of SDG achievement. For instance, regarding SDG 13, Company F (p. 115) reported:

Figure 7 Company F SDGs disclosure approach

Goal	Our contribution	Page Reference
1 – No Poverty	3.7% of value distributed to employees are distributed in provinces with high poverty headcount index	Page 118
	During the year we sold 2,086 Batta vehicles which is a well-known affordable small commercial vehicle that has been a means to producing many entrepreneurs.	Page 119
2 – Zero Hunger	We have invested Rs. 68 million in a 29 acres land in Dambulla to carry out Agriculture research work related to agriculture inputs, seed production and high tech agriculture demonstration that will eventually help to have better crops.	
3 – Good health and well-being	By bringing world renowned medical technology to Sri Lanka and ensuring their continuous availability through our competent engineering team, we play a vital role in towards a healthier population.	Page 119
4 – Quality education	The Automobile Training School has been providing opportunities for Sri Lankan youth on technical training free of charge for more than 25 years. Over 500 students have graduated from these training schools.	Page 128
	A voluntary donation of school books, bags etc. was conducted for the 7th consecutive year covering more than 140 students.	Page 130
5 – Gender equality	Our sustainability performance objectives require us to maintain ratio of female to male employees (excluding workshops and field sales) of more than 15%. As at 31st March 2018 this ratio was calculated to be 18.3%	Page 39
6 – Clean water and sanitation	Our fluid management solutions that provide drinkable water contribute to improve the availability of clean water to Sri Lankans.	Page 119
	"රන්දිය" a voluntary initiative provided safe drinking water to more than 1000 villagers in Nagasthanna in Polonnaruwa.	Page 130
7 – Affordable and clean energy	is a Certified Energy Auditor as certified by the Sustainable Energy Authority of Sri Lanka. The Company carries out energy audits for clients, which will eventually lead to more efficient use of power.	Page 89
	During the year, we secured a tender for a one megawatt solar power plant to supply power to the CEB under a power purchase agreement. This is considered as our first step in contributing to the renewable energy supply in Sri Lanka.	
8 – Decent work and economic growth	Our Social Accountability Management System (SAMS) based on SA 8000 standard ensures that all employees including indirect employees are treated in a responsible manner.	Page 127

Source: Company F, p. 114

The Group recorded a 3.08% reduction in its Carbon footprint emissions during the year [. . .] promoting LED-based lighting solutions and delivering them to help conserve energy. This contributes towards improving energy efficiency and reducing burning of fossil fuels.

Beyond this, the infographic references the pages of the report in which the company provided information on SDGs in the context of corporate strategies, business model and social and environmental performance. Using this "comprehensive" approach, Company F implemented a substantive integration of SDGs in its IR (Garcia-Meca and Martinez-Ferrero, 2021; Silva, 2021). According to previous studies, this approach demonstrates that IR supports organisations in undertaking metamorphosis in culture, strategies, values, business models and reporting practices (Di Vaio *et al.*, 2020; Manes-Rossi *et al.*, 2021). This allows them to holistically fulfil SDGs' environmental, social and human rights priorities. For instance, in the "Management of value chain" section, Company F aligned its value chain, business activities, capital inputs, risks and opportunities – related to its various industry segments – with the relevant SDGs it intended to address. This integration was also supported by graphs and KPIs, such as those describing the trend in reducing carbon emissions and carbon footprint, illustrating the company's progress towards achieving SDGs. Setting and reporting targets for each SDG priority facilitates the decision-making processes of corporate managers and improves the organisation's accountability to stakeholders and investors. This helps them make more informed decisions and enhances the legitimacy of organisational operations in a substantive way (Romero *et al.*, 2019; Tashman *et al.*, 2019; Silva, 2021).

The second sub-category of companies (I, L, M and R) followed a "strategy" approach, devoting primary attention to evidencing how they aligned their business strategies with SDGs. According to Adams (2017, p. 27), "Organisations should set out their strategic objectives and strategies to support relevant and significant SDGs through their business model". Hence, one of the most meaningful examples of this perspective was offered by Company I, an entrepreneurial development bank operating in various countries with the primary mission of improving local prosperity in territories where this is needed most. This is a prominent case of a company that prioritised SDGs most relevant to its business, integrating them into its core strategies. In a letter from the chief executive officer (CEO), which typically opens IR and has a pivotal role in outlining an organisation's direction and long-term strategies, Company I (p. 10) communicated its clear orientation towards certain relevant SDGs. In particular, the CEO claimed:

> *In our strategy for the period up to 2025, we will steer on our contribution to SDGs in general, and three in particular: Decent Work and Economic Growth (SDG 8), Reduced Inequalities (SDG 10), and Climate Action (SDG 13). These are the areas where we feel we can have the biggest impact in the countries where we can make the biggest difference. concretely integrates SDGs in its core strategy.*

Company I included an impressive infographic (Figure 8) in the section devoted to corporate strategies, displaying how it had put certain relevant SDGs at the forefront of its business strategies.

A comprehensive table followed this infographic, which showed how Company I aligned its strategic objectives with the external environment and the material aspects for stakeholders from an SDGs perspective, including KPIs, targets and performance. For instance, the strategic objective "Investing in local prosperity" is related to SDG 10, reduced inequalities. For this objective, Company I settled a KPI – the investments to reduce inequalities, defined a target (ten inclusive gender investments) and highlighted the related performance achieved in 2017 (41 inclusive and gender equality investments). In addition, beyond linking the business strategies with the relevant SDGs, Company I defined the target and evidenced the performance achieved for each SDG relevant to its business. This conferred more consistency and substance on the sustainability message conveyed by the organisation to the outside environment (Romero *et al.*, 2019). Furthermore, this created a broader sense of transparency. This result was also relevant, as previous studies (Subramaniam *et al.*, 2019; van der Waal and Thijssens, 2020; Erin and Bamigboye, 2021) highlighted the difficulties and reluctance of companies in using specific KPIs and targets for assessing, monitoring and communicating progress on their contributions to SDGs.

The last sub-category of companies (A, H, O and S) followed a "value creation approach", focusing on disentangling the links between SDGs and the value creation processes. Risk and opportunities stemming from SDGs could impact the corporate value creation processes and quality and availability of capital (Adams, 2017). Accordingly, the multi-capital approach promoted by the IIRF should be implemented by companies to align relevant SDGs with long-term value creation and the transformation of multiple forms of capital (Adams *et al.*, 2020).

Company O, a South African operator in digital communication, offered an example of the value creation approach in integrating SDGs into IR. In the section devoted to illustrating the value creation process, "How we create value", Company O recognised the strict interconnection between business strategy, value creation, SDGs and capitals:

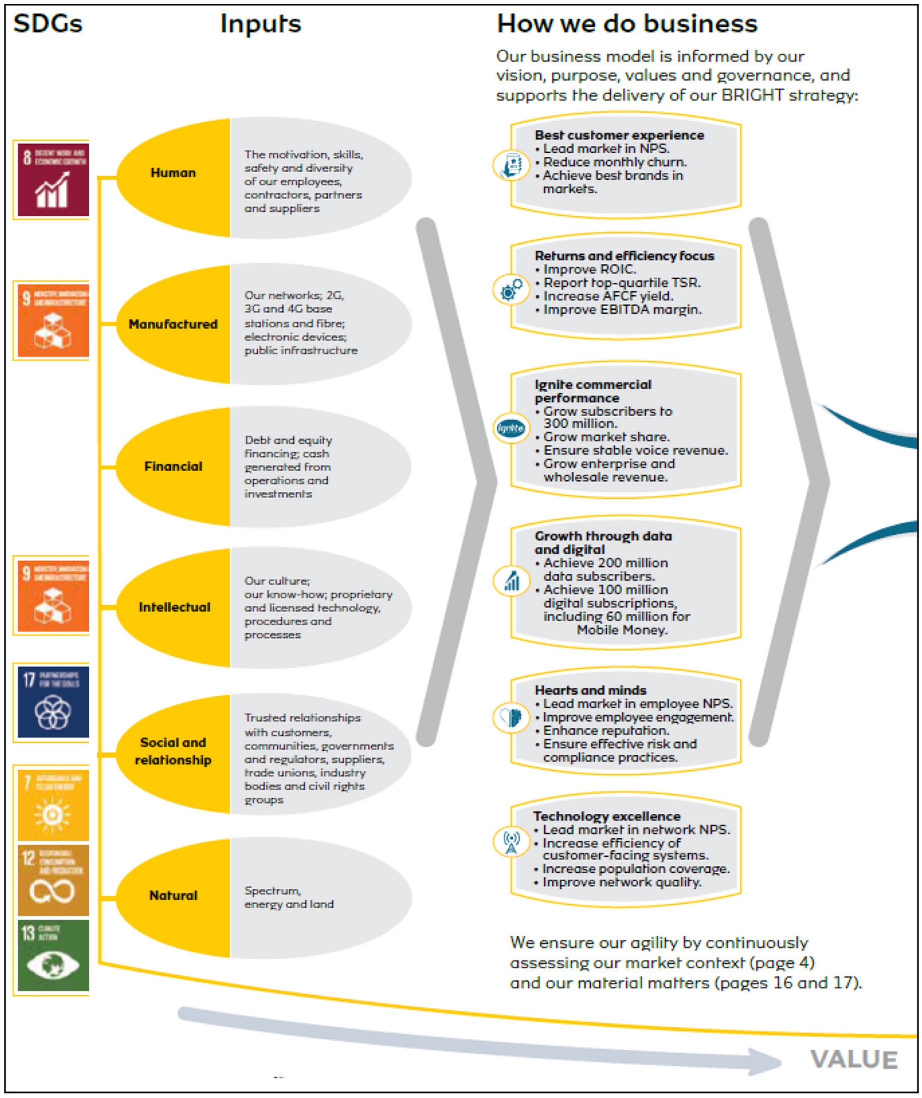
Figure 8 Company I SDGs disclosure approach

Source: Company I, p. 16

> *We require inputs of each capital to deliver on our strategy, advance some of the UN Sustainable Development Goals (SDGs) and generate value for all stakeholders. When making decisions on allocating capital, we consider the trade-offs between the capitals, and seek to maximise positive outcomes and curb negative impacts.* (Company O, p. 13)

In the same section, Company O reported an infographic (Figure 9) showing how the prioritised SDGs (8, 9, 17, 7, 12 and 3) were aligned with its business model and the six forms of capital. Attuned, it provided a detailed table with data on capital inputs, outcomes and related SDGs. For instance, for the Natural Capital, which is linked to SDGs 13, 12 and 7, the company reported its input (gigajoules of energy used) and outcomes (carbon emissions, GHG emissions avoided, number of new alternative energy sites and E-waste recycled). This example showed how Company O embraced a substantive rather than symbolic approach to SDG reporting (Romero *et al.*, 2019; Di Vaio *et al.*, 2020). In this case, SDGs were interconnected with the value creation process and business model. In addition, both qualitative and quantitative information, including KPIs and performance metrics, were provided to demonstrate how the company concretely engaged with SDGs. According to Silva (2021), this behaviour demonstrated the transformative power of SDGs and their pivotal role in enabling material changes to businesses' approach to sustainability challenges. This revealed how SDGs were adopted as a guiding framework for informing corporate sustainability strategy and business model, transforming abstract ambitions into concrete plans and strategies to meaningfully address the 2030 agenda.

Figure 9 Company O SDG disclosure approach



Source: Company O, p. 12

5. Conclusions

This study added to the growing international debate on SDGs, offering novel insights on the potential of IR as a vehicle to provide accountability from a holistic perspective on the strategies, actions and progress attained by organisations towards the achievement of SDGs. In so doing, this study responded to the calls of scholars (Bebbington and Unerman, 2018; Manes-Rossi *et al.*, 2021) for more accounting research on SDGs and more in-depth analysis of patterns followed by IR adopters to incorporate SDGs and align them with their strategies and business models.

Therefore, this study provided a dual contribution to the existing literature.

This study conducted deductive content analysis and inductive thematic analysis on a sample of leading IR adopters worldwide for the year 2017 to assess *what* SDGs they disclosed and *how* they integrated SDGs into the reports. In particular, this study engendered insight into the most meaningful patterns followed by global leading IR reporters to disclose their contributions to SDGs. To this end, the most significant narratives and graphical illustrations were inductively extracted from the reports, categorised and analysed according to the symbolic and substantive legitimacy's theoretical framework. Previous research on SDG reporting mainly focused on GRI-based sustainability reports. To the best of the authors' knowledge, this was the first study that adopts an inductive approach to analyse the strategies implemented by leading IR adopters worldwide to address their legitimacy in contributing to SDGs.

The findings demonstrated that leading IR adopters began to embrace SDGs to address the most crucial sustainability challenges and fulfil emerging social expectations. Pivotal attention was devoted to SDGs 13, 12 and 9 in response to growing concerns about climate change and the efficient use of natural resources underlined by several initiatives. In some cases, SDGs inspired substantive changes to internal management and process communicated through an IT approach. However, a trend of using SDGs as a camouflage and a symbolic tool to enhance company's reputation and obtain a licence to operate persisted.

5.1 Theoretical implications

The study's findings offer useful insight regarding both legitimacy and stakeholder theories from a theoretical perspective.

The inductive thematic analysis conducted to identify and analyse textual and visual disclosures extracted from the reports generated insight that provides implications from a symbolic and substantive legitimacy theory's perspective. In particular, this study supported the findings of previous studies (van der Waal and Thijssens, 2020; Heras-Saizarbitoria *et al*., 2021; Silva, 2021) regarding the risk of using SDG disclosure as a camouflage tool. These behaviours imply merely ticking another box to obtain legitimacy by convincing social constituents that their expectations regarding the 2030 Agenda were respected. Symbolic gestures such as these included mentioning a commitment to SDGs in the early sections of the reports, using "fancy icons" and coloured infographics without explanations about SDGs operationalisation or drafting a specific section where SDG disclosure was siloed without interconnections with other corporate dimensions.

However, in contrast with previous research, this study also provided evidence of substantive approaches to corporate SDGs disclosure. More than half of the SDG IR adopters provided information demonstrating a concrete alignment of corporate strategies, business models and value creation processes with selected SDGs. To this end, they exploited the potential of the IIRF to highlight the transformative power of SDGs and their pivotal role in enabling substantial changes to businesses' approach to sustainability challenges. However, in some cases, SDGs were more pervasive within the reports, representing a *trait d'union* of the different sections devoted to various corporate dimensions, such as strategy, performance, capitals and governance. In other cases, companies preferred to focus on the links between prioritised SDGs and business strategies or illustrate the impact that SDGs exerted on the value creation processes, also illustrating the implications from a six capitals' perspective.

5.2 Practical implications

This study also has practical implications for academics, policymakers and standard setters.

First, future studies can replicate this research for other categories of IR adopters included in the official IIRC database to gain further insights regarding the usefulness of IR in disclosing information on SDGs from a holistic perspective. In this way, they could also capture different patterns implemented to integrate SDGs into reports.

Second, SDG target 12.6 encourages companies to integrate sustainability information into their reporting cycle. Recently, the GRI and the United Nations Global Compact have joined an initiative aimed at enabling companies to “incorporate SDG reporting into their existing processes, empowering them to act and make the achievements of the SDGs a reality” (Global Reporting Initiative and United Nations Global Compact, 2018). Furthermore, a table was developed to link SDGs to the relevant indicators and disclosures in the GRI Standards and Sector Disclosures (SDG Compass) [Global Reporting Initiative (GRI), 2015]. From this perspective, the present results may serve as a stimulus for policymakers, standard setters and regulators to reflect on the possibility of developing a common global framework allowing organisations to provide meaningful, reliable information about SDGs from an integrated perspective. Moreover, as the disclosure of SDG information may be supported by graphical and visual representations, guidelines regulating the use of images in reports could encourage organisations to increase these figures’ realism and significance. This would be desirable to avoid the risk of a symbolic approach towards organisational legitimacy.

Third, it is worth noting that on 21 April 2021, the European Union (EU) Commission (EC) released a proposal for a new Corporate Sustainability Reporting Directive (CSRD) (EU Commission, 2021), which shall supersede the previous 95/2014 EU Directive on non-financial reporting. The EC mandated the European Financial Reporting Advisory Group’s European Lab to implement preparatory work to realise possible EU non-financial reporting standards in the context of the CSRD (European Lab, 2021). The CSRD and the European Sustainability Reporting Standards consider SDGs a global priority and highlight the need for companies to report their contributions to SDGs (European Lab, 2021). In addition, the Task Force established within the European Lab posited the connectivity of financial and sustainability information as one of the six underlying concepts of the future European Sustainability Reporting Standards (European Lab, 2021). Accordingly, the present results may represent a useful baseline to understand the potential impact of the imminent regulation on IR adopters in terms of integrated disclosure of SDGs. As the enactment of European Reporting Standards will follow a multi-year step-by-step approach, regulators are also called to pay careful attention to drafting advanced standards that specifically consider one or more pivotal SDGs, such as 8 and 13.

Fourth, the present results highlighted the need for regulatory authorities and public institutions to implement verification tools to check for the credibility and usefulness of SDGs disclosure provided by companies. Although external auditors increasingly verify IRs, various studies have seriously questioned the correctness and rigour of these verifications. The gap between substantive changes required by the adoption of SDGs and the symbolic approaches followed by several companies observed in this study illuminated the need to implement additional verification mechanisms undertaken by qualified auditors on SDGs disclosure.

Fifth, these findings emphasised the need for firms to restructure their internal management accounting and control systems to ensure more consistent integration of SDGs into corporate strategies, business models and, in turn, reporting practices. From this perspective, it would be desirable to create an *ad hoc* SDGs committee or designate a specific office with experts who help organisations define priority SDGs on which to mould corporate strategy and specific activities. Furthermore, an SDG committee would be a valid solution to enhance company’s abilities to measure SDG performance and incorporate this information within the reporting systems to benefit investors and other stakeholders.

5.3 Limitations and future research

This study has some limitations. First, the sample was restricted to the category of leading IR adopters. Therefore, future studies could consider expanding the research to explore other categories included in the IIRC official database. Second, this study focused on only the 2017 fiscal year to capture more observations. Future studies could conduct longitudinal analyses, covering additional years as the journey towards realising SDGs continues. Lastly, as this study examined the presence of information regarding individual SDGs, future research could investigate the quality of SDG disclosures.

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