



Dissemination analysis of SDGs in sustainability reports to enhance corporate communication strategy

Análisis del grado de difusión de los ODS en las memorias de sostenibilidad orientado a la estrategia de comunicación corporativa

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ABSTRACT

The Sustainable Development Goals (SDGs) are at the heart of the management of public and private enterprises. Organizations have incorporated the SDGs into their business strategy by developing actions that they disseminate in their reports. In the last decade, academic research has paid special attention to this development, publishing a growing number of studies on the subject with the emergence of a specific line of research in the area of sustainability: sustainability reporting. In this context, this paper aims to show a methodology that serves as a tool to analyze the disclosure of SDGs in the sustainability reports. This methodology has three stages. First, a lexicographic analysis of sustainability reports has been carried out, second, a correspondence analysis, and third, outlining through “guided questions” how the information obtained can be useful to analyze SDG communication strategy. For further illustration the methodology has been applied to a company in the Spanish agri-food sector: Ebro Foods. This work has both academic and professional implications by providing a guideline for SDG dissemination analysis in sustainability reports and, on the other hand, by providing the business world with an analysis tool that serves to improve communication strategies in the field of sustainability.

Keywords: Non-financial Reporting, Sustainability Reports, Sustainable Development Goals (SDGs), Sustainability Monitoring, Communication Strategy, Agri-food Business.

RESUMEN

Los Objetivos de Desarrollo Sostenible (ODS) ocupan un lugar central en la gestión de las empresas públicas y privadas. Las organizaciones han incorporado los ODS en su estrategia de negocio desarrollando acciones que difunden en sus memorias. En la última década, la investigación académica ha prestado especial atención a esta realidad publicándose un creciente número de estudios al respecto y apareciendo una línea de investigación específica en el área de la sostenibilidad: *sustainability reporting*. En este contexto, este trabajo tiene como objetivo presentar una metodología que sirva como herramienta para analizar el grado de difusión de los ODS en las memorias de sostenibilidad. Dicha metodología consta de tres etapas: en primer lugar, un análisis lexicográfico de las memorias de sostenibilidad; en segundo lugar, un análisis de correspondencias y; finalmente, se muestra, en forma de preguntas-guía cómo la información obtenida puede ser de ayuda para la estrategia de comunicación de los ODS. Para ilustrar esta metodología, se ha aplicado en los informes de sostenibilidad del periodo 2016-2021 en una empresa del sector agroalimentario: Ebro Foods. Este trabajo tiene implicaciones tanto de tipo teórico como práctico, al aportar una pauta de análisis de la difusión de los ODS en las memorias de sostenibilidad y, por otra parte, al facilitar al mundo empresarial una herramienta de análisis que sirva para mejorar las estrategias de comunicación en el ámbito de la sostenibilidad.

Palabras clave: Información no financiera; Informes de Sostenibilidad, Objetivos de Desarrollo Sostenible (ODS), Análisis de la Sostenibilidad, Estrategia de Comunicación, Sector Agroalimentario.

1. INTRODUCTION

In September 2015, the United Nations (UN) General Assembly approved the 2030 Agenda for Sustainable Development, defining 17 Sustainable Development Goals (SDGs) and more than 169 targets to be achieved. This resolution urges entities, both public and private, civil society and UN agencies themselves to subscribe and commit to the 2030 Agenda.

As of 2016, the companies most committed to sustainable development, and consequently also to the SDGs, began to incorporate aspects such as notation, classification and the terminology of the 2030 Agenda in their sustainability reports.

Today, the design of a sustainability strategy is no longer a differentiating element in the competitiveness of companies. National and international public bodies require, with their regulations, that companies take the SDGs into account in the design of their strategies. Differentiating features are, on the one hand, the degree of development of the measures associated with these strategies and, on the other hand, their level of influence on efficiency indicators.

For all these reasons, it is logical that a line of research associated with sustainability and the SDGs has emerged relating to the way companies communicate their sustainability strategy. This implies that we find ourselves facing not only a research topic of growing relevance for the academic world, but also a line of knowledge under construction, since, as Grueso-Gala and Camisón Zornoza (2022) point out, “little is known about the structure and extent of research in this academic field” (p. 175). These same authors point out that much of the work on *sustainability reporting* has been published in recent years. Within the topics covered by this field, it is worth highlighting studies that have conducted analyses on sustainability information in the documents prepared by companies (García-Benau et al., 2022), the factors that influence the quality of these reports (García-Sánchez et al., 2019, 2020a), or the role of *stakeholders* as key elements of pressure to promote a communicative strategy (García-Sánchez et al., 2022; Yamane & Kaneko, 2021), among other works.

The general focus of this study seeks to enrich the research line of *sustainability reporting*, emphasizing how sustainability reports enable academics and *practitioners* to analyze how the evolution of the degree of development of each of the SDGs is made visible. Specifically, the aim of the paper is to present a methodology that serves as a tool to analyze the degree of dissemination of the SDGs in sustainability reports. Thus, the contribution of this work is twofold. From an academic point of view, the aim is to enrich the *sustainability reporting* literature by proposing a methodology for analyzing the dissemination of the SDGs in companies. Second, taking the business perspective as a reference, this methodology enables communication managers to find out the level of transmission of SDG activities in such a way that they can be prepared and to learn different exercises which allow them to obtain information relevant for guiding decision-making.

The article is structured as follows. In the next section, this research is framed. This is followed by a description of the methodology proposed for analyzing the degree of dissemination of the SDGs in sustainability reports. Subsequently, the case of Ebro Foods is developed and the results obtained are analyzed. Finally,

the conclusions present the academic and practical implications of the work, as well as future lines of research.

2. RESEARCH CONTEXT AND JUSTIFICATION OF THE STUDY

Traditionally, large companies have disclosed non-financial information (Ortiz & Didychuck, 2021) as its visibility can improve relations with internal and external agents (Maroun, 2017), thereby increasing the company’s credibility (Brammer & Pavelin, 2006). Beattie and Dhanani (2008) analyzed changes in annual reports of English listed companies between 1965 and 2004 noting that financial content had been relegated to a technical appendix, while there had been an “increase —from 10% to 51%— of companies providing a separate section dealing with corporate social responsibility issues —social, environmental or community— related issues” (p. 201).

During this period, the dissemination of non-financial information has been through annual or other independent reports, such as the integrated report (De Villiers & Van Staden, 2011; Ortiz & Didychuck, 2021). The decision to publish non-financial information in the annual report or in the sustainability report is explained by the *stakeholder* theory. This theory, formulated by Freeman (1984), defines *stakeholders* as people who affect the company in achieving its mission and who, in turn, are influenced by said mission. Through the adoption of certain issues of a sustainable nature in their reports, companies seek to obtain legitimacy, which indicates their degree of commitment to meet the expectations of internal and external agents (Sierra-García et al., 2022). As the *Global Reporting Initiative* (GRI) signal in GRI (2020) points out, “sustainability reporting can help organizations of all sizes —in all sectors and anywhere in the world— to better understand and manage their impact on the economy, society and the environment, reducing risks and seizing new opportunities. They not only lay the foundation for transparency and open dialogue on impacts, but also reflect the growing expectations for responsible business practices by many internal and external stakeholders, including investors, policy makers, capital markets and civil society” (p. 4). While annual reports are oriented towards investors, sustainability reports are aimed at a wider audience (Dawkins, 2004).

In any case, as shown in Figure 1, non-financial content does an impact on financial reports and is indeed taken into account by investors. In fact, it is difficult to speak of “non-financial” sustainability data, since environmental or social dimensions have an impact on regulators, employees or investors, among others (Workiva, 2021, p. 4).

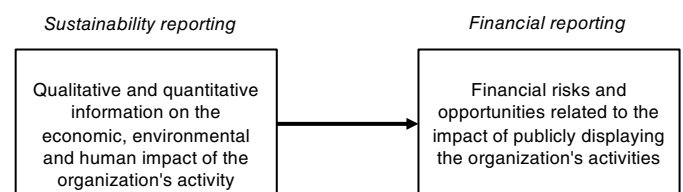


Figure 1

Relationship between *sustainability reporting* and *financial reporting*

Source: Based on GRI (2020, p. 11).

In recent years, non-financial reporting has gained special relevance due to regulatory pressure. Thus, in 2014, the Parliament of the European Union and the Council approved a Directive obliging PIEs (*Public Interest Entities*) with more than 500 employees to disclose non-financial information (European Parliament, 2014), specifically relevant environmental, social, labor, human rights and diversity issues, as well as to fight corruption and bribery. Later in 2017, the European Commission established guidelines on non-financial reporting (European Parliament, 2017).

Subsequently, in June 2022, the Council and the European Parliament reached a political agreement on the Directive on Corporate Sustainability Reporting, which will apply to all large companies and companies listed on regulated markets, and also to listed SMEs (Council of the European Union, 2022). This new regulation will be a step towards making it mandatory for all companies to develop non-financial reports and regulate their content.

The reality is that there has been an exponential growth in non-financial reporting in the last decade. As the bibliometric analysis of Grueso-Gala and Camisón Zornoza (2020) states, “although this research topic emerged in the 1970s, 90% of the articles have been published in the last 10 years, indicating the interest on the part of researchers and the growing importance of this issue in the last decade” (p. 188).

The 2030 Agenda represents an opportunity for progress in sustainability reporting. In fact, in 2018, *United Nations Global Compact* (UNGC) and *Global Reporting Initiative* (GRI) recommended that companies incorporate SDG reporting into their existing processes in order to drive SDG “culture” (UNGC, 2018). In the context of the SDGs, integrated reporting is envisaged as a promising approach to reveal the corporate journey towards achieving the SDGs (Adams, 2017). Rosati and Faria (2019a) define integrated reporting as the practice of publicly disclosing how a company is addressing the SDGs.

In the last decade, as noted above, there has been increasing interest on the part of researchers in studying the dissemination of SDGs in company reporting (Bebbington & Unerman, 2018; Rosati & Faria, 2019b). With the exception of Rosati and Faria (2019b; 2019a), who analyze organizations located in countries outside Europe or the study by Ackers and Eccles (2015) focused on South Africa, empirical works tend to focus on several European countries (Hummel & Szekely, 2022; Martínez-Ferrero & García-Meca, 2020), or on one European country, such as Italy (Izzo et al., 2020; Pizzi et al., 2020), Portugal (Fonseca & Carvalho, 2019), Greece (Tsalis et al., 2020), Central and Eastern Europe (Nichita et al., 2020), Ukraine (Kornieieva, 2020) or Spain (Sierra-García et al., 2022; Vallet-Bellmunt et al., 2022). For their part, various consulting firms have also produced reports in the field of *sustainability reporting*, addressing the contents related to the SDGs. For example, the consulting firm KPMG began to carry out this type of analysis in 1993. In its latest publication, it analyzes information from 5,800 companies in 58 countries, territories and jurisdictions (KPMG, 2022).

Although most companies started reporting on the SDGs in 2016, there is a growing trend to disclose commitment to the SDGs (Izzo et al., 2020).

Moreover, according to Sierra-García et al. (2022), “reporting on the SDGs differs significantly among companies and tends to

emphasize positive contributions, while there is a notable lack of transparency on their negative impacts” (p. 879). Thus a study by KPMG (2022, p. 48) highlighted that 86% of N100 companies and 90% of G250 companies follow a one-sided view in their reporting focused solely on the positive impacts of the SDGs. In turn, according to a report by Oxfam (2018), “communication on how the business world is translating the SDGs into concrete goals, strategies and actions is very patchy” (p. 5), underlining the danger that reporting on the SDGs remains a simple action of communication. In fact, there is talk of an SDGs *washing* effect in the dissemination of the SDGs referring to a more formal than substantive mainstreaming (Adams et al., 2020; Rinaldi et al., 2018). The use of the SDGs as “washing” consists, according to the United Nations Global Compact and the international body *Global Reporting Initiative* (GRI), of “reporting on positive contributions to the Global Goals while ignoring significant negative impacts” (GRI, 2018, p. 7). Despite the fact that in some countries a regulation has been passed that obliges companies to publish non-financial information, according to Ackers and Eccles (2015), this regulation may lead to companies referring to the SDGs with a *tick box approach*, thereby doing the minimum necessary to appear credible. Along these lines, the Oxfam report (2018) presents how “walking the walk” and “talking the talk” on the SDGs are not the same thing, and in fact these two steps may be misaligned. In this sense, Izzo et al. (2020) note shortcomings in that specific indicators to measure compliance are missing.

Despite the shortcomings that reporting may present, the SDGs represent an opportunity for business (López, 2020; PWC, 2019) and achieving SDGs is the challenge of the coming years (Busco et al., 2018). In this process to incorporate and drive the SDGs in companies, a platform called “*Business Reporting on the SDGs*” has been launched (UNGC, 2018). The two organizations that have launched this platform, UNGC and GRI, define reporting as an instrument that engages internal and external stakeholders; supports sustainable decision-making processes at all levels within the company; shapes business strategy; guides innovation and fosters performance and value creation; and attracts investment.

In addition to the guidelines developed by the UNGC and the GRI, numerous organizations have offered guidelines and recommendations to improve the dissemination of the SDGs by companies (Adams, 2017; Adams et al., 2020). These indications thus fill the gap left by the Directive approved by the European Union, which did not specify the format or the report in which non-financial information should be collected (European Parliament, 2014). However, according to a comparative analysis of some of the indicators, the pressing issue is how to collect and structure information on SDGs from organizations and then build the data matrix for the compilation of voluntary national reviews to ensure comparability and consistency at regional, national and intergovernmental levels (Kornieieva, 2020).

It is in this context of the dissemination of the SDGs in company reports that the present research is situated. Our objective is not to analyze compliance with specific standards in the preparation of sustainability reports, but to present a methodology to show the degree of dissemination of the SDGs in sustainability reports. In turn, the methodology we propose aims to address a recommendation made by ACCA (*Association of Chartered Certified Accountants*), IIRC (*International Integrated Reporting Council*) and

WBA (*World Benchmarking Alliance*) to develop guidelines on how organizations can approach the interdependencies between the SDGs, for which it is essential, first of all, to place the SDGs on a map (Adams *et al.*, 2020). Therefore, our research attempts to design a methodology that facilitates a more effective and dynamic control over the degree of dissemination and the weight of the SDGs in sustainability reports in order not only to monitor, but also to align and join efforts in decision-making. For this reason, the research of Hummel and Szekely (2022) has been taken as a starting point to determine the dissemination of SDGs within sustainability reports, and text and correspondence analysis techniques have been used.

Citing the studies in this section allows us to justify that the object of our work represents a contribution to the better analysis of the SDGs in sustainability reports. In short, as has been justified in the previous paragraphs, although there is a real and growing interest in studying the dissemination of the SDGs in corporate reports, there is a gap on how to measure and quantify the SDGs in this type of document. This work is thus situated in a line of research, “the non-financial reporting group”, as it is aimed at the dissemination of the SDGs in sustainability reports, identified by Grueso-Gala and Camisón Zornoza (2022) and Pizzi *et al.* (2020), among other authors.

3. METHODOLOGY

In this section we propose the combination of two techniques, lexicographic and correspondence analysis, to study the degree of dissemination of the SDGs in sustainability reports. In the methodology presented, lexicographic analysis is used in the first stage and then, during a second stage, the correspondence technique is used. Thanks to the information obtained through these two techniques, in the third stage, a series of guiding questions are proposed for decision-making by the company in the context of *sustainability reporting*. In this regard, it should be noted that although there are other works that combine text analysis and correspondence analysis, such as García-Sánchez *et al.* (2021), this third stage represents a contribution that does not appear as such in other works. The sequencing of these three stages gives rise to the methodology linking the qualitative and quantitative techniques used, which is shown graphically in Figure 2.

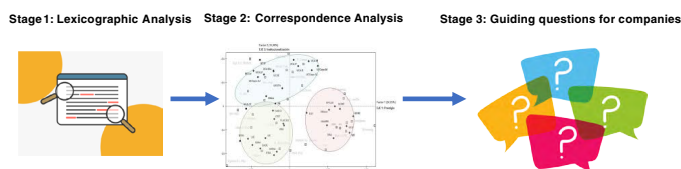


Figure 2

Stages for the analysis of SDG dissemination in sustainability reports

Source: Own elaboration.

3.1. Lexicographic analysis

This stage contains three basic elements: base documents, search criteria and software analysis. Regarding the first element, the analysis is performed on reports published openly by the

companies. In this regard, given the various types of documents available, we consider that sustainability reports may be the most appropriate, although this methodology can be applied to any report or document where it makes sense to analyze the degree of dissemination of the SDGs.

As for the search criteria, we followed the previous work of Hummel and Szekely (2022), taking as a reference the keywords identified by these authors in the academic field to analyze the presence of SDGs in texts. Appendix I shows the table used as a basis for this search. Hummel and Szekely (2022) examine the disclosure of SDGs in the annual reports of companies in the STOXX Europe-400 index. These authors justify the use of these keywords through the study developed in Hoberg and Maksimovic (2015) and applied it in Hummel *et al.* (2022) and Hummel and Rötzel (2019). We consider that this criterion is therefore validated by research works and fits perfectly with the objective of our proposal.

Regarding the software, *NVivo* or *Sketch Engine*, among others, can be used. In this work, *Sketch Engine*, a leading corpus for lexicographic study (Kilgarriff *et al.* 2015), has been used. Although the bibliographic references of this software are from the area of language (Barrs, 2016; Hirata & Hirata, 2019), it is very useful when analyzing the transition of companies towards the incorporation of the communication of the 2030 Agenda and the reconversion of their own objectives within the SDGs. These programs work on the text of selected annual reports and account for each of the keywords referred to in Appendix I.

With this, they perform the analysis by dividing the total number of characters of the text or corpus into K parts. This partition is the result of dividing the number of times a word of interest appears in the text by the number of characters. The division of K parts subsequently leads to calculating a relative measure of how many times the word of interest appears, by the resulting number of parts into which the text has been divided.

3.2. Correspondence analysis

Once the lexicographic analysis has been performed, correspondence analysis, a multivariate descriptive technique of a double-entry information table, is applied. Correspondence factor analysis dates back to 1962. The first oral exposition of this type of technique was made by the mathematician Jean-Paul Benzecri, later published in Benzecri (1980). Although initially designed to study contingency tables, it was later extended to complete disjunctive tables of ordinal data, positive measures, multiple tables and any table of dependence relative to a set of rows and columns on their totals (row profiles and column profiles). There are numerous statistical analysis software programs that provide this analysis, such as SPSS or STATA, to cite two of the most widely used.

Our approach is to carry out a comparative analysis of the evolution over a time horizon of the degree of dissemination of the SDGs through the incorporation of terminology specific to the 2030 Agenda. To this end, we have information on the different SDGs mentioned in the reports and also the year of publication of the report. Using the frequencies of appearance of the key terms, the SDGs are ordered from highest to lowest incidence and also their appearance in the reports thereby allowing a comparison between

them. This comparative analysis was completed by identifying the different reports with the priority lines of action determined by the United Nations, into which the SDGs can be classified (the so-called 5Ps): *People; Prosperity; Planet; Peace and Partnership*.

3.3. Guiding questions for companies

As explained above, various organizations have defined a series of guidelines for companies to integrate the SDGs into corporate processes. Thus, GRI (2019) establishes the following 5 steps: 1st Understand the SDGs; 2nd Define priorities: additional guidelines; 3rd Set targets; 4th Integrate; and 5th Report and communicate. In this last step, effective reporting guidelines are developed from the point of view of communication. Among the points highlighted by GRI (2019, 2020) there are three that have served as a reference to define the areas for improvement that could be enhanced with the information obtained in the methodology presented, these being the following: transparency, alignment and impact. Regarding the first, GRI (2020) aims to show transparency standards in the context of *sustainability reporting*. GRI (2019) highlights that the SDGs encourage transparency and accountability in companies. The methodology presented is in line with this by allowing communication managers to confirm that the degree of dissemination of the SDGs corresponds to what they really wanted to communicate. Regarding alignment, GRI (2019) points out that prioritization in reporting is “to align the company’s strategy, efforts and resource allocation with the SDG targets” (p. 8). The methodolo-

gy proposed in this paper is a first step towards this objective, as will be seen in the case study. Finally, with regard to impact, GRI (2019) addresses the process of prioritizing impacts and identifying SDGs for a company to actively engage and report on, while GRI (2020) focuses on making the impact of the SDGs transparent. We believe that the information gathered in steps 1 and 2 will allow us to answer questions that lead to a better understanding of the impact of the SDGs from a comparative point of view between them over time.

Table 1 shows the usefulness of the information obtained in terms of *outputs* generated in the communication strategy. Following the integrated evaluation framework of the International Association for Measurement and Evaluation of Communication (AMEC, 2023), the term *output* refers to the information that is broadcast and reaches the different audiences, therefore, it basically refers to distribution and exposure, unlike the term *outtakes*, which refers to the change in behaviour or attitude generated in the audiences.

In summary, three key axes are taken into account in the analysis of the *outputs*: transparency, alignment and impact. These are then linked to relevant aspects in the context of *sustainability reporting* in order to finally formulate questions that can help in the dissemination phase. Thus, the questions can guide communication managers to identifying areas for improvement in the dissemination of the SDGs and, therefore, help them in the design of their corporate communication strategy in order to improve the company’s sustainable positioning.

Table 1
Guiding questions for companies

Areas for improvement	Key aspects in the context of <i>sustainability reporting</i>	Questions to be answered that can be supported by the information obtained in Steps 1 and 2
Transparency	Consistency between what is actually made visible and what is intended to be made visible.	Do the sustainability reports show the SDGs that the company has prioritized and worked on?
Transparency	Avoid “saturation” in dissemination. Make sustainability communication as global as possible and not focused on a few SDGs.	Are the SDGs unbalanced from a dissemination point of view?
Transparency	The information obtained makes it possible to justify with indicators the degree of visibility of each SDG.	Do the SDGs have a dissemination in the sustainability reports that can contribute to generate trust in the company among the different <i>stakeholders</i> ?
Alignment	Achieving alignment between business strategy and sustainability strategy.	Is there continuity between the company’s values and the axes around which the SDGs are built in the company and which you have disseminated?
Alignment	It is essential that the sustainability strategy is aligned with the company’s strategy.	Is there consistency between what the sustainability reports reflect about the role of the SDGs in the company and the sustainability strategy?
Alignment	Assist the chief communication officer in “telling a story” to explain the company’s evolution towards sustainability.	Is there continuity with respect to the company’s SDG dissemination in the different fiscal years?
Impact	To help the company position itself within its sector.	Can I create a benchmark with respect to other companies in the industry in the field of SDGs?
Impact	Optimizing communication policy efforts.	Is the company’s work on SDGs maximized in its sustainability report or, on the contrary, does the report underplay the reality?

Source: Own elaboration.

4. ILLUSTRATION OF THE METHODOLOGY AT EBRO FOODS

4.1. Why Ebro Foods?

In 2015, the United Nations Development Program (UNDP) promoted the creation of an Advisory Council to work with the UN as an equal partner in development. For this Council, the UNDP selected thirteen private companies, leaders in different sectors worldwide, with Ebro Foods being one of those chosen. Ebro Foods has therefore been a point of reference for international organizations since the inception of this program, underlining that it is a pioneer in sustainability reporting. Furthermore, we are dealing with a global company, which supplies, manufactures and markets its products all over the world. This makes the scope of its sustainability strategy particularly broad and enriches the study of how to develop the companies corresponding SDGs. According to its website, it is “the first food company in Spain, the first rice company in the world and we have an important global positioning in the premium pasta and fresh pasta categories”. It is not the first time that the case of Ebro Foods has been used in a research journal: De Matías (2016) analyzed the internationalization process based on the sequential theories of the internationalization of companies and for this purpose, developed the case of Ebro Foods as an example of a gradual and intense internationalization process. In addition, the company has been publishing sustainability reports since 2016 providing open access (Ebro Foods, 2016, 2017, 2018, 2019, 2020a, 2021), although since 2018 they have been called “sustainability and social responsibility reports”.

From the point of view of communication, the company has designed a non-financial information policy, drawing up a freely accessible document (Ebro Foods, 2020b), detailing the principles and criteria that should govern financial, non-financial and corporate communication in the company. Ebro Foods is, therefore, a benchmark company in areas such as internationalization, communication policy on the social impact of the company and, of course, from the point of view of size and market share. Therefore, the interest in the results does not only concern the company itself but relevant conclusions can also be drawn by the rest of the sector.

4.2. Application of the methodology to the case of Ebro Foods

A. LEXICOGRAPHIC ANALYSIS

The study has been carried out on the sustainability and social responsibility reports published by Ebro Foods on its website (www.ebrofoods.es) and which, as mentioned above, range from 2016 to 2021. The analysis of these six reports shows the evolution in the degree of prioritization of the SDGs that the company has followed and, on the other hand, due to the extensive length of these reports (about 100 pages) provides a valuable amount of information on which to perform the proposed analyses.

On the website https://www.ebrofoods.es/rse/ods/#nuestro-trabajo the company identifies the seven SDGs that, due to its business activity, it has prioritized and to which it contributes directly, and which are the following: SDG1: “End Poverty”; SDG2:

“Zero Hunger”; SDG8: “Decent Work and Economic Growth”; SDG10: “Reducing Inequalities”; SDG12: “Responsible Production and Consumption”; SDG13: “Climate Action” and SDG17: “Partnerships to Achieve the Goals”. Using the keywords in Appendix I of these seven SDGs as a reference, a search was carried out using the *Sketch Engine* program. This information is the basis for the correspondence analysis in the following stage and provides relevant information to answer the questions in Table 3.

B. CORRESPONDENCE ANALYSIS

From the lexicographic analysis and with the help of the keywords associated with each SDG, we obtained Table 2, which shows the absolute frequency for each SDG in each annual sustainability report (ASR). This table allows us to see the degree of visibility of each SDG. This information is particularly relevant to determine the different degree of importance of each SDG in terms of communication strategy. In this sense, it allows us to detect whether there is a certain degree of over- or under-dissemination of the SDGs. A graphic representation of this information is shown in Figure 3, which, together with Table 2, will help us to answer different questions in Stage 3.

Table 2
Frequency of occurrence of the SDGs in Ebro Foods’ sustainability reports

	Annual sustainability reports						Total
	ASR 16	ASR 17	ASR 18	ASR 19	ASR 20	ASR 21	
SDG1	0	0	0	2	10	104	107
SDG2	2	3	0	12	40	6	81
SDG8	28	33	34	36	30	102	236
SDG10	83	82	205	259	0	74	703
SDG12	27	35	43	94	120	377	586
SDG13	1	2	2	4	30	156	168
SDG17	0	0	0	1	0	105	106
Total	141	153	284	408	230	924	1987

Source: Own elaboration.

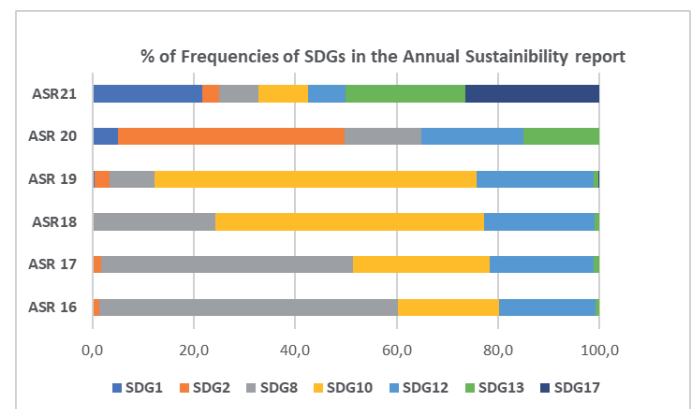


Figure 3
Comparative analysis of the SDGs prioritized by Ebro Foods in each ASR

Source: Own elaboration.

On the other hand, the correspondence analysis makes it possible to order the seven SDGs of direct interest as selected by Ebro Foods in terms of highest to lowest incidence of appearance in the reports. This ranking, according to the degree of transmission, is represented in Figure 4. We can appreciate four clearly differentiated groups that explain, in some way, the evolution of the reports when it comes to disseminating the SDGs. The reports of the first two years, 2016 and 2017, are aligned with SDG8: “Decent work and economic growth”. In the following two years, 2018 and 2019, the reports are aligned with SDG10: “Reducing inequalities”. The year 2020 focused on SDG12: “Responsible production and consumption”, and SDG2: “Zero hunger”. In the 2021 report, the SDGs with the highest degree of dissemination are SDG1: “End Poverty”, SDG13: “Climate Action” and SDG17: “Partnerships to Achieve the Goals”.

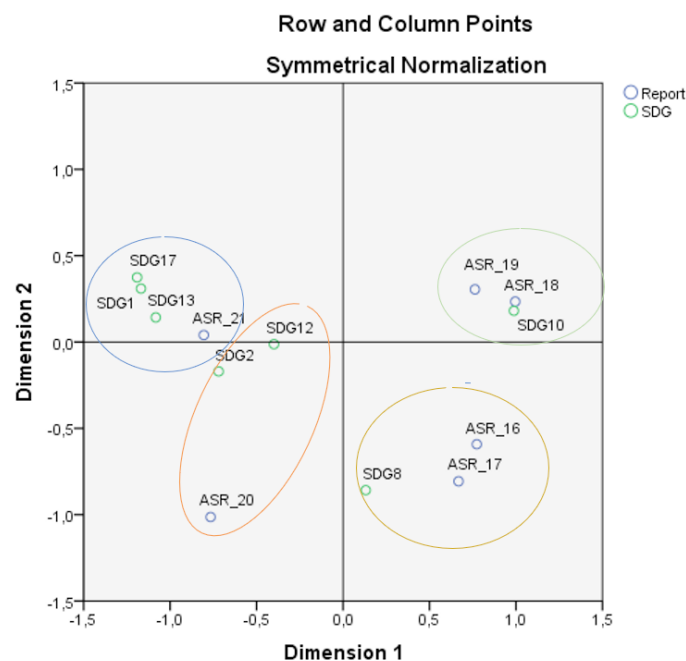


Figure 4

Correspondence analysis between the annual reports (AR) from 2016 to 2021 and the priority SDGs for Ebro Foods

Source: Own elaboration.

The same analysis can be carried out by placing the different SDGs in the priority lines of action defined in the 2030 Agenda, which are: planet, people, prosperity, peace and partnership. Figure 5 shows that the first reports are more aligned through the dissemination of certain SDGs with the prosperity axis, while the 2020 report is aligned with people and the last year’s report is aligned with planet and partnership.

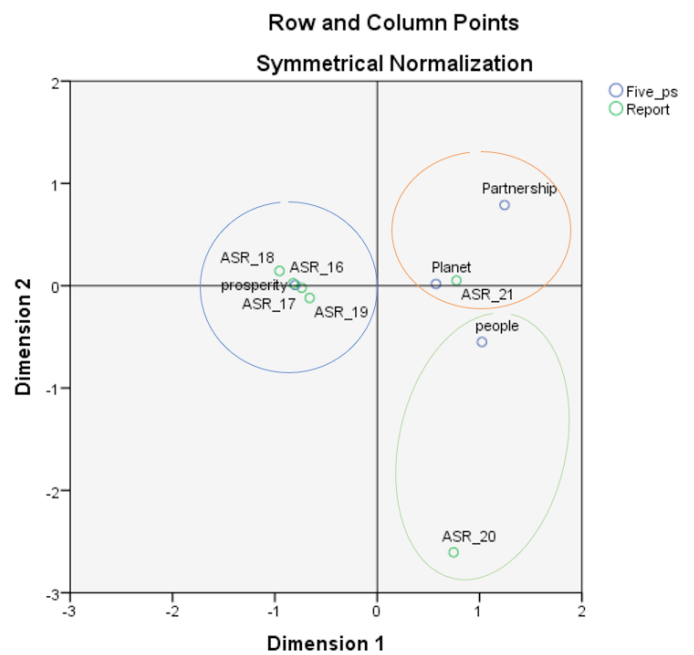


Figure 5

Correspondence analysis between annual reports and priority areas for the case of Ebro Foods

Source: Own elaboration.

C. GUIDING QUESTIONS

As explained in Section 3, this methodology allows the company to reflect on the transmission of its activities related to the SDGs in its sustainability reports, through the formulation of a series of questions. Thus, Table 3 shows the questions defined in Table 1 and the results obtained with respect to the data obtained in Stages 2 and 3.

Table 3 helps the company to analyze the extent to which the company is disseminating information on SDGs. This information would help the communication team to reflect on some key issues to do with transparency, alignment and impact when designing the company’s communication strategy. Specifically, it is observed that the commitment that the company claims to assume in terms of SDGs, selecting specific SDGs, is not always disseminated in the sustainability reports. This fact generates information gaps in some of the reports with respect to some SDGs, therefore, it could be thought (although this is not necessarily the case) that no actions have been carried out in the specific area of the SDG indicated as it does not have an informative presence in the reports. In addition, the amount of information disseminated on some SDGs is disproportionate to others. Therefore, when analyzing the outputs generated in the sustainability reports related to the actions carried out by the company on SDGs, transparency seems to be well resolved in the communication strategy; however, alignment and impact are two clear areas for improvement.

Table 3
 Relevant information for decision making in the case of Ebro Foods

Guiding questions	Results in the case of Ebro Foods
Do the sustainability reports show the SDGs that the company has prioritized and worked on?	There are SDGs that have been prioritized by the company that are not shown in certain reports, as shown in Table 2 and Figure 3. It can be seen that the SDGs may have a low level of dissemination in the report for a specific year, while they may have a greater presence in the report for another year.
Are the SDGs unbalanced from a dissemination point of view?	Figure 4 shows that there is an imbalance in the SDGs. Thus, SDGs 1, 13 and 17 are substantially included in the ASR21, but very scarcely in the remaining years.
Do the SDGs have a dissemination in the sustainability reports that can contribute to generate confidence in the company among the different <i>stakeholders</i> ??	Ebro Foods is a benchmark company in the field of sustainability. The fact that the SDGs have different weights is not an obstacle to generating trust in the company. Nevertheless, this fact must be very well argued in the report so that <i>stakeholders</i> accept it and it does not generate distrust. The information obtained from Figures 4 and 5 shows the grouping of the SDGs around certain years and the 5Ps.
Is there continuity between the company's values and the axes around which the SDGs are built in the company and which you have disseminated?	The first reports (2016 to 2019) are more aligned through disclosure on certain SDGs with the Prosperity axis; while that of 2020 does so with the People axis and that of the last year or 2021 does so with Planet and Partnerships. All of this is shown in Figure 5. Ebro Foods has 13 values (leadership, transparency, honesty, responsibility, integrity, culture of effort, focus on generating value, environmental responsibility, service vocation, people orientation, innovation, long-term sustainability and strict compliance with current legislation). Two of them (culture of effort and orientation to value generation) are aligned with the Prosperity axis. A value defined by Ebro Foods, people orientation, fully coincides with the People axis. And finally, there is a value that is environmental responsibility, which is also identified with the Planet axis. However, there is no value linked to the Alliances axis, as can be seen from the information obtained and analyzed on the SDGs disseminated in the sustainability reports, as shown in Figure 4.
Is there consistency between what the sustainability reports reflect about the role of the SDGs in the company and the sustainability strategy?	Taking the CSR model and the prioritization of some SDGs as a reference for the sustainability strategy, it is not until 2021 that a relevant weight of all the SDGs is observed, something that does not occur in the rest of the years, as shown in Table 2 and Figure 3.
Is there continuity with respect to the company's SDG dissemination in the different fiscal years?	In the first four years, there is continuity in one SDG for two years. Thus, in 2016 and 2017, SDG8: "Decent work and economic growth"; and in 2018 and 2019, SDG10: "Reducing inequalities". However, in the following years, they focus on other SDGs, specifically, in 2020, on SDG12: "Responsible production and consumption" and SDG2: "Zero hunger"; and, finally in 2021, on SDG1: "End poverty", SDG13: "Climate action"; SDG17: "Partnerships to achieve goals". It is worth noting the low frequencies in the ASR in 2020.
Can I create a benchmark for other companies in the industry in the area of SDGs?	The information generated allows the dissemination of the company's SDG-related activities to be audited and offers comparability with other companies in the sector. The company could use this methodology to perform comparative analyses and see how it stands up to its benchmark companies.
Is the company's work on SDGs maximized in its sustainability report or, on the contrary, does the level of dissemination underplay the reality?	The study of the reports shows that in some years no information is disseminated on activities that the company is carrying out in a specific SDG, so that in some years there is an absence of information dissemination. Thus, in the reports of the first three years: 2016, 2017 and 2018, SDG1: "End Poverty" and SDG14: "Partnerships", do not have any dissemination. Therefore, the results show that the dissemination of the SDGs that has been designed with the communication strategy does not always generate the relevant <i>outputs</i> on the activities linked to the SDGs that the company carries out.

Source: Own elaboration.

5. CONCLUSIONS

5.1. Academic contribution

This work presents a methodology for analyzing annual reports on the evolution of the degree of dissemination of the SDGs. In terms of *academic implications*, this work is framed

in the *sustainability reporting* literature, but also in the field of Communication. From the latter perspective, the social and regulatory pressure on companies means that sustainability is no longer a means by which to differentiate themselves from competitors, but must be integrated into a culture of innovation with social impact. In this regard, the literature on this topic is extensive and one of the key elements highlighted is the role of

communication as a transversal element in all stages of innovation (Pfeffermann, 2017). Therefore, assessing how the “way of doing sustainability” is communicated is key to show to what extent sustainability is integrated in the DNA of the company and thus in its relationship with *stakeholders*. In this sense, García-Sánchez *et al.* (2020b) shows that companies that have a commitment to the 2030 Agenda may not make adequate use of information to manage *stakeholder* perceptions. Therefore, this methodology can be a tool to promote a culture of *sustainability reporting* within companies.

This methodology takes a step forward in that it makes it possible to graphically and numerically represent the treatment of the SDGs, as well as the relationship between them, establishing relationships between types of SDGs. This is relevant because it makes the contribution of the SDGs visible not only individually, but globally, and this has a direct impact on seeing the SDGs in a global dimension that can be integrated into the culture and values of the company.

5.2. Practical implications

From the point of view of the *implications for companies*, the results obtained from the analysis are particularly valuable for the communication manager. They allow the company to determine the way in which the achievement of the SDGs is made visible and to decide whether changes should be made in the presentation of sustainability reports to show the results to *stakeholders*. In addition, it fosters reflection on the decisions that can benefit from the information obtained in the three stages of the process in the field not only of communication transparency, but also of the alignment and impact of communication strategies. Moreover, this methodology is easily replicable and enables empirical work based on comparative analysis between companies in the same sector or with similar characteristics. Finally, we believe that the simplicity of this methodology makes it particularly relevant for companies with fewer resources, such as SMEs (especially unlisted companies), which can control the disclosure of information on sustainability and bring it into line with their strategy.

5.3. Future lines

The completion of this work may lead to several future studies. We would like to mention three possibilities. The first one would, given the diversity of report typologies where the practices associated with the SDGs are explained, consist of carrying out a comparative analysis of the results in different types of reports within the same company. Second, based on the conclusions obtained by applying the methodology to the case of Ebro Foods, case studies could be developed to analyze in depth the sustainability communication strategy of a company, conducting interviews/surveys with the communication team that would enable a thorough analysis, among other aspects, of the difficulties and limitations that exist when it comes to disseminating activities linked to the SDGs. A third line would be to carry out a comparative analysis between companies in the same sector or with similar characteristics, in order to determine the degree of dissemination of the SDGs.

6. REFERENCES

- Ackers, B., & Eccles, N.S. (2015). Mandatory corporate social responsibility assurance practices: The case of King III in South Africa. *Accounting, Auditing & Accountability Journal*, 28(4), 515-550. <https://doi.org/10.1108/AAAJ-12-2013-1554>.
- Adams, C. A. (2017). The Sustainable Development Goals, integrated thinking and the integrated report. *Integrated Reporting* (IR), 1-52.
- Adams, C.A., Druckman, P.B., & Picot, R.C. (2020). *Sustainable development goal disclosure (SDGD) recommendations*. ACCA: London, UK.
- Adams, C.A., (2020). *Sustainable development goals disclosure (SDGD) recommendations: feedback on the consultation responses*, ACCA, IIRC, WBA.
- AMEC (2023). Marco de evaluación integrada de AMEC. <https://amec-corg.com/amecframework/es/>
- Barrs, K. (2016). Using the sketch engine corpus query tool for language teaching. *The Language Teaching*, 40(2), 23-26.
- Beattie, V., & Dhanani, A. (2008). Investigating presentational change in UK annual reports. A longitudinal perspective. *Journal of Business Communication*, 45(2), 181-222.
- Bebbington, J., & Unerman, J. (2018). Achieving the United Nations Sustainable Development Goals: An enabling role for accounting research. *Accounting Auditing & Accountability Journal*, 31(1), 2-24. <https://doi.org/10.1108/AAAJ-05-2017-2929>.
- Benzecri, J. P. (1980). *L'Analyse des Données: L'Analyse des Correspondances*. (Tome 2). Dunod, Paris.
- Brammer, S., & Pavelin, S. (2006). Voluntary environmental disclosures by large UK companies. *Journal of Business Finance & Accounting*, 33(7-8), 1168-1188. <https://doi.org/10.1111/j.1468-5957.2006.00598.x>
- Busco, C., Granà, F. & Izzo, M.F. (2018). *Sustainable Development Goals and Integrated Reporting*. Routledge: London, UK.
- Council of European Union (2022). Available at <https://www.consilium.europa.eu/es/press/press-releases/2022/06/21/new-rules-on-sustainability-disclosure-provisional-agreement-between-council-and-european-parliament/> (accessible december 2022).
- Dawkins, J. (2004). Corporate responsibility: the communication challenge. *Journal of Communication management*, 9(2), 108-119. <https://doi.org/10.1108/13632540510621362>
- De Matías, D. (2016). The Food industry internationalization process. The case of Ebro Foods. *Revista de Dirección y Administración de Empresas*, 23, 36-52.
- De Villiers, C., & Van Staden, C.J. (2011). Where firms choose to disclose voluntary environmental information. *Journal of Accounting and Public Policy*, 30(6), 504-525
- Ebro Foods (2016). Informe anual de sostenibilidad del año 2016. Available in https://www.ebrofoods.es/wp-content/uploads/informe_anual/informeanual2016/pdf/2-0-informe-de-sostenibilidad.pdf (accessible December 2022)
- Ebro Foods (2017). Informe anual de sostenibilidad del año 2017. Available in https://www.ebrofoods.es/wp-content/uploads/informe_anual/informeanual2017/pdf/2-0-informe-de-sostenibilidad.pdf (accessible December 2022)
- Ebro Foods (2018). Informe anual de sostenibilidad del año 2018. Available in https://www.ebrofoods.es/wp-content/uploads/informe_anual/informeanual2018/pdf/2-0-informe-de-sostenibilidad.pdf (accessible December 2022)
- Ebro Foods (2019). Informe anual de sostenibilidad del año 2019. Available in https://www.ebrofoods.es/wp-content/uploads/informe_anual/informeanual2019/pdf/2-0-informe-de-sostenibilidad.pdf (accessible December 2022)
- Ebro Foods (2020a). Informe anual de sostenibilidad del año 2020. Available in [Management Letters / Cuadernos de Gestión 24/1 \(2024\) 73-84](https://www.ebrofoods.es/wp-content/uploads/infor-</p>
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- me_anual/informeannual2020/pdf/2-0-informe-de-sostenibilidad.pdf (accessible December 2022)
- Ebro Foods (2020b). Política de comunicación de la compañía. Available in <https://www.ebrofoods.es/wp-content/uploads/2020/12/Politica-de-comunicacio%CC%81n-de-informacio%CC%81n-financiera-no-financiera-y-corporativa-2020.12.pdf> (accessible December 2022)
- Ebro Foods (2021). Informe anual de sostenibilidad del año 2021. Available in https://www.ebrofoods.es/wp-content/uploads/informe_anual/informeannual2021/informe-sostenible.htm (accessible December 2022)
- European Parliament (2014). Directive 2014/95/EU of the European Parliament and of the Council, of 22nd October 2014, amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups. *Official Journal of the European Union*. Available in <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0095&from=EN> (accessible December 2022)
- European Parliament (2017). Communication from the Commission guidelines on non-financial reporting (2017/c215/01). Available in [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0705\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0705(01)&from=EN) (accessible December 2022)
- Fonseca, L., & Carvalho, F. (2019). The Reporting of SDGs by Quality, Environmental, and Occupational Health and Safety-Certified Organizations. *Sustainability*, 11(20). <https://doi.org/10.3390/su11205797>
- Freeman, R.E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- García-Benau, M. A., Bolas-Araya, H. M., & Sierra-García, L. (2022). Non-financial reporting in Spain. The effects of the adoption of the 2014 EU Directive. *Spanish Accounting Review*, 25(1), 3-15. <https://doi.org/10.6018/rcsar.392631>.
- García-Sánchez, I. M., Suárez-Fernández, O., & Martínez-Ferrero, J. (2019). Female directors and impression management in sustainability reporting. *International Business Review*, 28, 359-374. <https://doi.org/10.1002/bse.2485>
- García-Sánchez, I. M., Rodríguez-Ariza, L., Aibar-Guzmán, B., & Aibar-Guzmán, C. (2020a). Do institutional investors drive corporate transparency regarding business contribution to the sustainable development goals? *Business Strategy and the Environment*, 29(5), 2019-2036. <https://doi.org/10.1002/bse.2485>
- García-Sánchez, I. M., Amor-Esteban, V., & Galindo-Alvarez, D. (2020b). Communication strategies for the 2030 agenda commitments: A multivariate approach. *Sustainability*, 12(24), 10554. <https://doi.org/10.3390/su122410554>
- García-Sánchez, I. M., Amor-Esteban, V. & García-Sánchez, A. (2021). Different Leaders in a COVID-19 Scenario: CEO Altruism and Generous Discourse. *Sustainability*, 13, 3841. <https://doi.org/10.3390/su13073841>
- García-Sánchez, I. M., Amor-Esteban, V., Aibar-Guzmán, C., & Aibar-Guzmán, B. (2022). Translating the 2030 Agenda into reality through stakeholder engagement. *Sustainable Development*, 1-18. <https://doi.org/10.1002/sd.2431>
- GRI (2018). Business reporting on the SDGs. Available in <https://www.globalreporting.org/information/SDGs/Pages/Reporting-on-the-SDGs.aspx> (accessible December 2022).
- GRI (2019) *Integrando los ODS en los informes corporativos: una guía práctica*. Available in [\(https://www.globalreporting.org/search/?query=Integrating+the+SDGs:+Practical+Guide:+Integrando+Los+ODS+En+Los+Informes+Corporativos+\(Spanish\)](https://www.globalreporting.org/search/?query=Integrating+the+SDGs:+Practical+Guide:+Integrando+Los+ODS+En+Los+Informes+Corporativos+(Spanish)) (accessible December 2022).
- GRI (2020) Increased momentum for transparency. Available in <https://www.globalreporting.org/about-gri/mission-history/gri-s-own-reports/> (accessible December 2022).
- Grueso-Gala, M., & Camisón Zornoza, C. (2022). A bibliometric analysis of the literature on non-financial information reporting: review of the research and network visualization. *Management Letters/Cuadernos de Gestión*, 22(1), 175-192. <https://doi.org/10.5295/cdg.211545mg>
- Hirata, Y., & Hirata, Y. (2019). Applying 'Sketch Engine for Language Learning' in the Japanese English classroom. *Journal of Computing in Higher Education*, 31, 233-248. <https://doi.org/10.1007/s12528-019-09208-z>.
- Hoberg, G., & Maksimovic, V. (2015). Redefining financial constraints: A text-based analysis. *Review of Financial Studies*, 28(5), 1312-1352. <https://doi.org/10.1093/rfs/hhu089>
- Hummel, K. & Rötzel, P. (2019). Mandating the Sustainability Disclosure in Annual Reports-Evidence from the United Kingdom. *Schmalenbach Business Review*, 71, 205-247. <https://doi.org/10.1007/s41464-019-00069-8>.
- Hummel, K., & Szekely, M. (2022). Disclosure on the sustainable development goals-evidence from Europe. *Accounting in Europe*, 19(1), 152-189. <https://doi.org/10.1080/17449480.2021.1894347>.
- Hummel, K., Mittelbach-Hörmanseder, S., Cho, C.H. & Matten, D. (2022). Corporate social responsibility disclosure: a topic-based approach. *Accounting and Business Research*, 1-38. <https://doi.org/10.1080/00014788.2022.2071199>
- Izzo, M.F., Ciaburri, M., & Tiscini, R. (2020). The challenge of sustainable development goal reporting: the first evidence from Italian listed companies. *Sustainability*, 12(8), 3494-. <https://doi.org/10.3390/su12083494>.
- Kilgarriff, A., Marcowitz, F., Smith, S., & Thomas, J. (2015). Corpora and language learning with the sketch engine and SKELL. *Revue Française de Linguistique Appliquée*, 20(1), 61-80.
- Kornieieva, Y. (2020). Non-financial reporting challenges in monitoring SDG's achievement: investment aspects for transition economy. *International Journal of Economics and Business Administration*, 8(1), 62-71. <https://doi.org/10.35808/ijeba/409>
- KPMG. (2022). Big shifts, small steps. Survey of sustainability reporting 2022. Available in <https://home.kpmg/xx/en/home/insights/2022/09/survey-of-sustainability-reporting-2022.html> (accessible December 2022)
- López, B. (2020). Connecting business and sustainable development goals in Spain. *Marketing Intelligence & Planning*, 39(5), 573-585. <https://doi.org/10.1108/MIP-08-2018-0367>.
- Maroun, W. (2017). Assuring the integrated report: insights and recommendations from auditors and preparers. *The British Accounting Review*, 49(3), 329-346. <https://doi.org/10.1016/j.bar.2017.03.003>.
- Martínez-Ferrero, J., & García-Meca, E. (2020). Internal corporate governance strength as a mechanism for achieving sustainable development goals. *Sustainable Development*, 28(5), 1189-1198. <https://doi.org/10.1002/sd.2068>.
- Nichita, E.M., Nechit, E., Manea C.L., Manea, D., & Irimescu, A.M. (2020). Reporting on Sustainable Development Goals. A score-based approach with company-level evidence from Central-Eastern Europe economies. *Accounting and Management Information Systems*, 19(3), 502-542. <https://doi.org/10.24818/jamis.2020.03004>.
- Ortiz, E., & Didychuck, I. (2021). Non-financial information in IBEX 35: Comparison of voluntary vs compulsory elaboration and assurance. *Intangible Capital*, 17(2), 91-107. <https://doi.org/10.3926/ic.1758>.
- Oxfam. (2018). Walking the talk: Assessing companies' progress from SDG rhetoric to action. <https://oxfamlibrary.openrepository.com/bitstream/handle/10546/620550/dp-walking-the-talk-business-sdgs-240918-en.pdf?sequence=1&isAllowed=y> (accessible December 2022).
- Pfeffermann, N. (2017). What is Innovation Communication? A dynamic capability view. In N. Pfeffermann & J. Gould (Eds), *Strategy and Communication for Innovation. Integrative Perspectives on Innovation in the Digital Economy* (pp. 303-315). Springer International Publishing.

- Pizzi, S., Caputo, C., Corvino, A., & Venturelli, A. (2020). Management research and the UN sustainable development goals (SDGs): A bibliometric investigation and systematic review. *Journal of Cleaner Production*, 276, 1.15. <https://doi.org/10.1016/j.jclepro.2020.1240330959-6526>
- PWC (2019). Creating a strategy for a better world. Accessible December 2022: <https://www.pwc.com/gx/en/sustainability/SDG/sdg-2019.pdf>
- Rinaldi, L., Unerman, J., & De Villiers, C. (2018). Evaluating the integrated reporting journey: insights, gaps and agendas for future research. *Accounting, Auditing & Accountability Journal*, 31(5), 1294-1318. <https://doi.org/10.1108/AAAJ-04-2018-3446>.
- Rosati, F., & Faria, L.G.D. (2019a). Addressing the SDGs in sustainability reports: the relationship with institutional factors. *Journal of Cleaner Production*, 215, 1312-1326. <https://doi.org/10.1016/j.jclepro.2018.12.107>.
- Rosati, F., & Faria, L.G.D. (2019b). Business contribution to the sustainable Development Agenda: Organizational factors related to early adoption of SDG reporting. *Corporate Social Responsibility and Environmental Management*, 26(3), 588-597. <https://doi.org/10.1002/csr.1705>.
- Sierra-García, L., Bolas-Araya, H.M., & García-Benau M.A. (2022). Sustainable development goals and assurance of non-financial information reporting in Spain. *Sustainability Accounting, Management and Policy Journal*, 13(4), 878-898. <https://doi.org/10.1108/SAMPJ-04-2021-0131>.
- Tsalis, T.A., Malamateniou, K.E., Koulouriotis, D., & Nikolaou, I.E. (2020). New challenges for corporate sustainability reporting: United Nations' 2030 Agenda for sustainable development and the sustainable development goals. *Corporate Social Responsibility and Environmental Management*, 27(4), 1617-1629. <https://doi.org/10.1002/csr.1910>.
- UNGC (2018). Reporting on the SDGs –shape the future of corporate reporting on the SDGs. <https://www.unglobalcompact.org/take-action/action/sdg-reporting> (accessible December 2022).
- Vallet-Bellmunt, T., Fuertes-Fuertes, I., & Flor, M. L. (2022). Reporting Sustainable Development Goal 12 in the Spanish food retail industry. An analysis based on Global Reporting Initiative performance indicators. *Corporate Social Responsibility and Environmental Management*, 29, 1-13. <https://doi.org/10.1002/csr.2382>.
- Workiva. (2021). How to manage the ESG reporting: The Ultimate Guide. https://www.workiva.com/uk/resources/how-manage-esg-reporting-ultimate-guide?utm_campaign=ESG-Solutions&utm_segment=&utm_geo=EMEA-UKI&utm_content=ESG-Solutions_sasbguidelines__17294627230_137064759499_{adid}_c&utm_term=sasb%20standards_p&utm_medium=cpc&utm_type=Paid&utm_source=-Google&gclid=Cj0KCQiAm5ycBhCXARIsAPldzoUDzuKGZJVL-MCt-wZrFli1wcq9Pn7gbE7Tmi7HETz83e6ogvYGDMKoaAsEnEALw_wcB (accessible December 2022)
- Yamane, T., & Kaneko, S. (2021). Impact of raising awareness of sustainable development goals: A survey experiment eliciting stakeholder preferences for corporate behavior. *Journal of Cleaner Production*, 285, 125291. <https://doi.org/10.1016/j.jclepro.2020.125291>

APPENDIX

Table A.1.
Keywords that have been searched in the sustainability reports

SDG	Selected key words
SDG1: No poverty	poverty poor social protection system microfinanc* basic income basic provision basic social security
SDG2: Zero hunger	food algricult* hunger farm* *nutrition sustainable farm* pastoralist fisher seed cultivat* domesticate livestock obesity overweight obese "eat*
SDG3: Good health & well-being	health diseas* medicin* mortal* birth* death* vaccine* well-being newborn neonatal mortality epidemics aids tuberculosis malaria narcotic* drug* injur* accident reproductive illness* hygien* life expectancy Doctor Therapy pharma* "Care" Handicap disab*
SDG4: Quality education	educat* vocation* training school literacy illiterate pupil teach* learn
SDG5: Gender equality	Gender Pay Gap Gender Wage Gap equality gender empowerment self-determine* discriminat* trafficking Gender Pay Gap Gender Wage Gap emancipat* Emanz* Frau* Woman Women Girls
SDG6: Clean water & sanitation	WC clean water water usage water scarcity water quality water reuse water recycling water resources sanitation wastewater open defecation freshwater water-related wetland aquifer water efficiency water harvesting desalinat* toilette toilet
SDG7: Affordable & clean energy	clean energy green energy modern energy renewable energy sustainable energy photovoltaic wind turbine solar biogas energy efficiency clean fossil-fuel energy infrastructure energy technology energy storage power supply energy grid power grid
SDG8: Decent work & economic growth	*employ* labor labour economic growth gross domestic product economic productivity job creation sustainable growth job decent work slavery child soldiers sustainable tourism working environment worker
SDG9: Industry, innovation & infrastructure	infrastructure industrialisation industrialization research technology transfer technology support technology development access to internet internet access development spending R&D smart traffic transport digital* IoT internet of things industry 4.0 automat* augmented reality virtual reality driv* vehicle* "Mobility logistic* industry 4 machine learning artificial intelligence
SDG10: Reduced inequalities	inequalit* unequal* income growth inclusion discriminat* equality poor and rich developing countr* migration inclusive refugee Disabilit* Wheelchair
SDG11: Sustainable cities & communities	sustainable cit* sustainable communit* public transport traffic settlement slum sustainable transport affordable transport safe transport accessible transport housing urbanization urbanization public space green space safe space disaster sustainable building building sustainable construction cultural heritage natural heritage city cities communit* electr* "Mobility logistic*
SDG12: Responsible consumption & production	Recycling Recyc* E*waste sustainable production sustainable consumption consumption resource efficiency food waste food loss* post-harvest loss* circular economy circular business recycling waste reuse sustainable procurement sustainable tourism e*waste fair trade sustain* eco-friendly environmentally friendly share sharing organic "bio* ecological
SDG13: Climate action	Emission* climate change climate action climate mitigation climate adaptation CO2 greenhouse gas climate related Emission
SDG14: Life below water	marine ocean* fishing fisheries coastal overfishing aquaculture fish
SDG15: Life on land	Erosion biodiversity forest* desertificat* poach* reforest* terrestrial ecosystem* renaturation* natural habitat* extinction threatened species wildlife invasive species alien species eradicat* non-indigenous species impervious surface
SDG16: Peace, justice & strong institutions	justice peace violence "war" effective institution* accountable institution* inclusive institution* "crime "criminal judici* torture rule of law weapon illicit corrupt* brib* transparent institutions human rights international law kleptocracy participat* Secur*
SDG17: Partnerships for the Goals	development aid development assistance development cooperation foreign aid capacity building north-south "ODA" official development assistance least developed countr* south-south triangular cooperation technology transfer technology facilitation fair trade trade barriers

Source: Hummel and Szekely (2022).