Received: 17 September 2022 | Revised: 8 December 2022 | Accepted: 27 December 2022

DOI: 10.1002/sd.2488

RESEARCH ARTICLE

Sustainable Development

WILEY

Deconstructing corporate environmental, social, and governance performance: Heterogeneous stakeholder preferences in the food industry

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Abstract

Environmental, social, and governance (ESG) performance assessment has emerged as a way to analyze corporate sustainability. However, the literature suggests that stakeholders are not satisfied with advisory firms' current assessment approaches since they do not consider stakeholders' sustainability preferences. Adopting the stakeholder perspective, this study proposes a new approach to assess ESG performance by developing a stakeholder-specific composite indicator that considers different stakeholder profiles. The proposed approach is empirically implemented to assess the ESG performance of European food firms, as the food industry plays an essential role in achieving the Sustainable Development Goals. The results provide evidence of differences in individual stakeholders' preferences regarding ESG assessment, even within the same stakeholder group (e.g., investors, consumers, or non-governmental organizations). However, the results reveal that almost all the stakeholders sampled showed individual firm rankings similar to generic rankings provided by advisory firms. In any case, this evidence suggests the need to reconsider how ESG composite indicators are constructed, underlining the value of enhanced transparency and communication with stakeholders to provide more valuable and reliable composite indicators.

KEYWORDS
composite indicator, ESG performance, firm rating, food industry, stakeholders, sustainable development

1 | INTRODUCTION

Around the world, there is growing recognition of the importance of sustainable development as a growth path that makes it possible to meet "the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 41). Initiatives such as the United Nations 2030 Agenda for Sustainable Development reflect the increasing interest in sustainability (Bebbington & Unerman, 2018). As pointed out by academics (e.g., Delmas et al., 2019) and industrial observers (e.g., KPMG, 2020), firms' involvement is crucial in aligning current business practices with Sustainable Development Goals (SDGs). The 2030 Agenda explicitly

seeks to "encourage businesses, especially large and transnational corporations, to adopt sustainable practices and integrate sustainability information into their reporting cycle" (SDG 12.6). Against this background, environmental, social, and governance (ESG) performance[1] assessment becomes an opportunity for companies to demonstrate their efforts to achieve the SDGs and tackle the challenges raised by the SDGs (Folqué et al., 2021).

Many ESG practices are voluntary and driven by external (market demands, societal desires, or regulatory requirements) and/or internal (managerial attitudes toward sustainability) factors (Whitehead, 2017). These practices can impact firms' economic success, providing long-term benefits (Senadheera et al., 2021). At the same time, the assessment of these practices can be used to monitor companies' ethical behavior (Freeman, 2010), thus offering relevant information to stakeholders (Raimo et al., 2021; Searcy, 2012). This is why investors and consumers, among other stakeholders, are increasingly interested in corporate ESG practices (Arvidsson & Dumay, 2022). Consequently, ESG performance information has become increasingly important in guiding stakeholders' decision-making (e.g., decisions on investments) (SEC Investor Advisory Committee, 2020). Due to stakeholders rewarding or penalizing corporations based on their ESG performance, managers are increasingly striving to improve corporate ESG performance (Antolín-López et al., 2016).

The need to consider ESG aspects has been reinforced by the growing number of independent advisory firms dedicated to assessing firms' ESG performance for public consultation (e.g., Refinitiv Eikon, MSCI/KLD, Sustainalytics, or Bloomberg). For example, Refinitiv produces the Refinitiv Eikon database, which collects information to evaluate firms' management systems, practices, and policies related to ESG issues. This information is used to construct a composite indicator (CI) or index, called the *Refinitiv ESG Score*, as a measure that summarizes the wide-ranging information provided by multiple ESG indicators into a synthesized assessment of firms' ESG performance. Although these rating systems have primarily been designed to support investment decisions (e.g., Berg et al., 2020 report that major asset managers use them, such as BlackRock), other stakeholders such as consumers, governments, or non-governmental organizations (NGOs) also use them (Larcker et al., 2022). Academia has also revealed a growing interest in corporate ESG assessment, as reflected in new proposals for CIs measuring corporate ESG performance (e.g., Dočekalová & Kocmanová, 2016; Engida et al., 2018).

However, authors such as Silva et al. (2019, p. 204) have highlighted that despite the emergence of initiatives aimed at assessing and measuring firms' ESG performance, there is a "dissatisfaction of stakeholders" with current assessment approaches. In line with other studies (e.g., Searcy, 2012; van den Brink & van der Woerd, 2004), these authors explain that a potential reason for that dissatisfaction is the insufficient integration of the plurality of stakeholders' preferences in the existing initiatives aimed at developing ESG CIs. In fact, stakeholders are generally not involved in the process of designing and implementing these ESG CIs, and their opinions regarding what is (or is not) 'material' (i.e., relevant) information are ignored (Ngu & Amran, 2018; Velte, 2022). Thus, the ESG CIs do not fully meet the principle of materiality as it relates to stakeholders and usually fail to adequately support stakeholders in their efforts to better understand organizations' performance (Puroila & Mäkelä, 2019). On the contrary, the vast majority of the existing ESG assessment proposals rely solely on statistical methods (i.e., positivistic or data-based approaches) to build composite ESG measures (see Büyüközkan & Karabulut, 2018 for a review of the question). Only a few of these proposals consider stakeholders' preferences (Escrig-Olmedo et al., 2017; Raj & Srivastava, 2018; Zhou et al., 2012), but they provide a general 'score' or 'ranking' aiming at balancing different stakeholders' perceptions of sustainability. The latter approach results in single ESG measures supposedly useful for all the potential stakeholders interested in this information; however, individual stakeholders actually have different informational needs. Thus, choosing suitable and accurate assessment approaches to satisfy these needs is essential for "individuating the most correct metrics to measure the phenomena under consideration" (Costa & Pesci, 2016, p. 108). These ideas are in line with what precursors of sustainability accounting highlighted more than 20 years ago, when pointing out that sustainability "means different things to different people in different contexts" (Bebbington, 2001, p. 129). Thus, this calls for a consideration of the different stakeholders' concerns when measuring corporate ESG performance (Silva et al., 2019).

Aiming to bridge the aforementioned gap and taking into account that different perceptions of sustainability exist, this paper proposes an approach to evaluate corporate ESG performance through the lens of the stakeholder theory (Freeman, 2010). In doing so, we consider the recommendations from previous literature regarding the inclusion of stakeholders' opinions when assessing corporate ESG performance (Büyüközkan & Karabulut, 2018; Grewatsch & Kleindienst, 2017).

Adopting the stakeholder perspective responds to the idea that corporate ESG performance is not a generic, absolute concept but should instead be assessed in reference to the various stakeholder profiles, accounting for their expectations or preferences (Escrig-Olmedo et al., 2017; Searcy, 2012; Silva et al., 2019), which may stem from different and even conflicting interests (Jadoon et al., 2021). In particular, this paper aims to propose a new approach to assess corporate ESG performance by developing stakeholder-specific CIs that provide relevant information for stakeholders' decision-making according to their different profiles and preferences. This paper also shows how the proposed CI can be used to rank firms based on their ESG performance. This stakeholder-specific assessment approach can help firms to improve management strategies targeted at key stakeholders' profiles.

In sum, the ESG performance assessment proposed in this paper contributes to the existing literature by providing a corporate ESG measure that accounts for different stakeholders' profiles and preferences. By incorporating the heterogeneous preferences of users of ESG ratings (Berg et al., 2020), our proposal aims to advance the field of corporate ESG performance measurement.

Since ESG aspects may vary widely across industrial sectors and world regions (Amor-Esteban et al., 2018; Büyüközkan & Karabulut, 2018), we have focused our empirical study on the European food industry, but the proposed approach could be adapted to different sectorial contexts. Our choice is justified by the fact that the sustainability

of this industry is considered critical in social and policy terms (European Commission, 2019) and its non-financial dimensions are seen as increasingly important (Bock et al., 2022). This paper supports the need to advance in measuring and monitoring ESG performance to facilitate the contribution of food firms toward sustainable development (Büyüközkan & Karabulut, 2018; Escrig-Olmedo et al., 2017; Ferrero-Ferrero et al., 2021). In fact, the results of this study can help food firms to better tailor their strategies to meet societal expectations, by taking into account stakeholder management approaches.

2 | THEORETICAL BACKGROUND AND HYPOTHESIS FORMULATION

2.1 | Stakeholder theory and ESG performance

The definition of sustainable development provided by the WCED (1987) requires the discussion of key questions regarding "what is to be sustained, for whom, how, and who decides" (Brown & Dillard, 2014, p. 1124). The way this term is understood to apply to business activities has evolved to encompass a broad range of ESG issues. In fact, ESG practices by companies can be considered their contribution to sustainable development and the achievement of the SDGs. Stakeholders use the assessment of firms' ESG performance to monitor their management strategies. This encourages companies to interact and communicate with all stakeholders in order to meet their expectations and needs (Onat et al., 2017; Silva et al., 2019).

The issue of sustainable development as it relates to firms has sparked academic debates that center around certain theories, such as the stakeholder theory (Freeman, 2010) and its business implications (Hörisch et al., 2020). In this sense, it is widely accepted that firms' decision-making regarding sustainability and ESG practices is closely related to stakeholder demands. Thus, ESG performance can be understood through the lens of the stakeholder theory, which holds that companies should strive to meet stakeholders' needs (Lokuwaduge & Heenetigala, 2017), with stakeholders referring to the individuals or groups of individuals who can affect, or are affected by, a firm's accomplishment of its objectives. This theory has been extensively used in corporate sustainability research examining how stakeholders, both managerial (shareholders, employees, and agents operating in the same value-chain, that is suppliers and customers) and non-managerial (e.g., NGOs or governmental agencies), press managers to clarify the responsibilities that have been assumed by a firm (Belal & Roberts, 2010). Both types of stakeholders are becoming more demanding, making increasingly loud calls for firms to take on responsibilities beyond the creation of private economic profits (Carroll & Brown, 2018) and pay more attention to sustainability issues such as reducing emissions, improving workforce gender diversity, or tackling litigation related problems. These actors may have a different interpretation of sustainability, and thus ESG practices, depending on their personal preferences and background and their role and position regarding the firm (Bebbington, 2001; Ben Barka & Dardour, 2015).

2.2 | Frameworks for measuring corporate ESG performance

The concept of corporate sustainability encompasses various complex components from different scientific fields (Panayiotou et al., 2009). There is a wide variety of conceptual sustainability frameworks, which can be grouped into two categories: (a) frameworks that discuss the concept of sustainable corporate performance in a broad sense (Carroll, 1979; Wood, 1991); and (b) frameworks that discuss the concept of sustainable corporate performance in a narrower sense, focusing on how the outcomes and impacts of companies' performance affect society as a whole (e.g., Clarkson, 1995; Dommerholt, 2012; Escrig-Olmedo et al., 2014). In turn, the latter can be divided into those centered on identifying specific problems for particular stakeholders (Clarkson, 1995) and those focused on identifying different issues of sustainability performance (e.g., Dommerholt, 2012; Escrig-Olmedo et al., 2014).

Specifically, within corporate sustainability assessment frameworks, we find three kinds of approaches (Dočekalová & Kocmanová, 2016). First, the approaches that involve assessing firms' sustainability performance based on a list of indicators. This is the option adopted by some international institutions dealing with corporate sustainability, such as the Global Reporting Initiative (GRI) or the United Nations Conference on Trade and Development. Second, the Sustainability Balanced Scorecard framework, where sustainability indicators are tied to firms' strategy and operational processes. Third, approaches that simultaneously evaluate different aspects of sustainability through the development of CIs (e.g., ESG CIs) that provide an integrated score for corporate performance measurement. These CIs help firms to assess their sustainability performance in relation to their peers and identify issues for improvement. CIs are easier to interpret than a set of individual indicators and facilitate communication with the stakeholders and the general public (Engida et al., 2018). These advantages explain the recent interest, both from academia and advisory firms, in developing CIs to measure corporate ESG performance.

In this paper, following Escrig-Olmedo et al. (2017), the construction of the proposed ESG CI, which we apply to the food industry, is based on the internationally accepted framework developed by the GRI, both in its general guidelines (GRI, 2020) and its specific tools and protocols for the agri-food sector (GRI, 2014). More information regarding the selection of ESG indicators is provided in Section 3.2.1.

2.3 | Hypothesis formulation

Within the abovementioned framework, this study is aimed at testing three hypotheses. First, that different groups of stakeholders have different opinions and preferences concerning corporate ESG practices. Second, that individual stakeholders, even within the same group, have different opinions and preferences regarding corporate ESG practices. Third, that differences in opinions and preferences about ESG practices between groups of stakeholders lead to heterogeneous assessments of firms' performance (i.e., firms' ranking) between these groups.

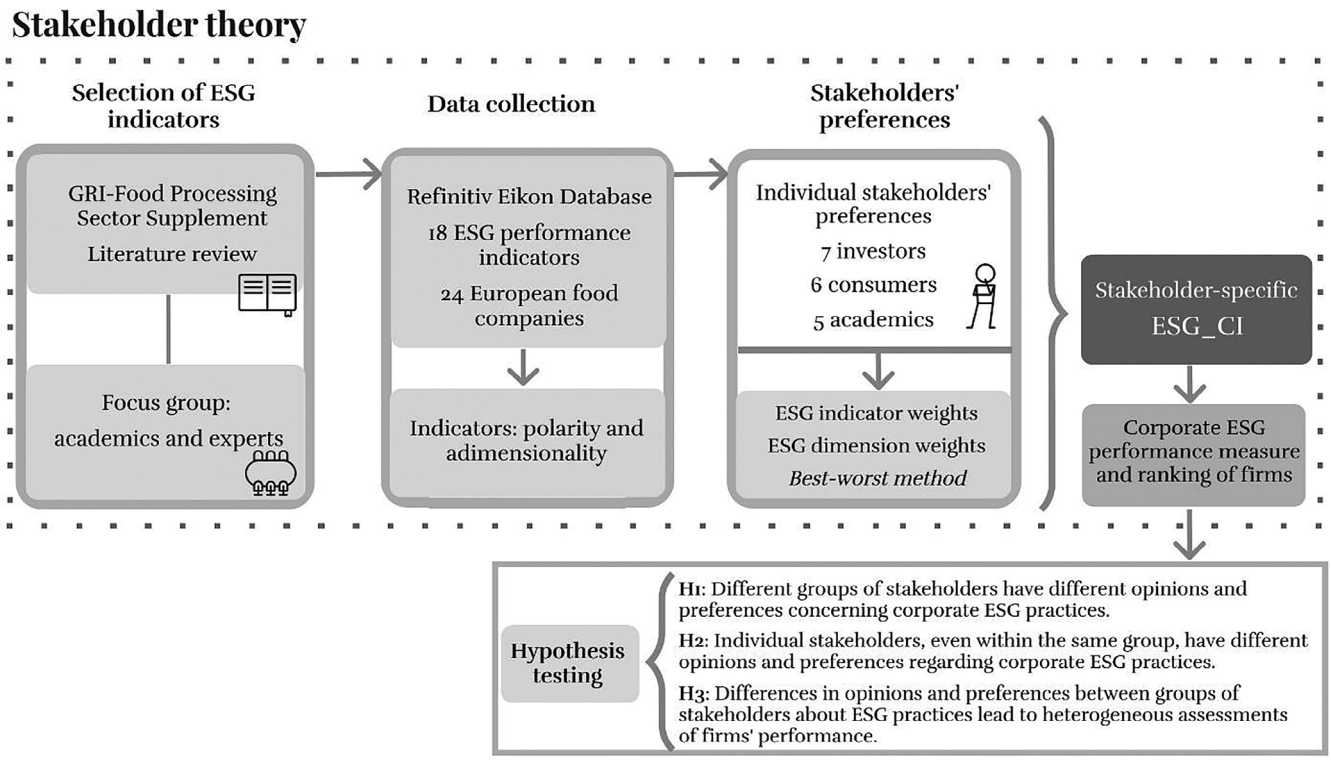

FIGURE 1 Research design for developing stakeholder-specific environmental, social, and governance (ESG) composite indicator

In order to test these hypotheses, the research design includes different stages, as illustrated in Figure 1. The next sections of the paper explain the methodological approach followed for the empirical analysis.

3 | RATING CORPORATE ESG PERFORMANCE IN THE FOOD INDUSTRY

3.1 | The European food industry

In the European Union (EU), the food and drink industry is a leader in the manufacturing sector with an aggregated annual turnover of €1093 billion, contributing 1.9% of the EU gross value-added and employing 4.5 million people (FoodDrink Europe, 2021). In addition, it is worth noting that the food industry is intensive in its use of natural resources (e.g., soil, water, and energy), generating considerable environmental impacts. Thus, this industry plays an essential role in achieving the SDGs. Accordingly, the *Farm to Fork Strategy* (European Commission, 2020) was published in May 2020, which, in line with the *European Green Deal* (European Commission, 2019), encourages the whole food system to become more sustainable and resilient in the long term. To that end, this strategy requires the food industry to integrate sustainability into corporate strategies.

The abovementioned objective and the increase in stakeholders' sustainability requirements mean this industry's firms face particular challenges linked to ESG issues. By way of illustration, the production of food and drink consumes a large amount of natural resources (Raimo et al., 2021) and negatively impacts the environment in terms of CO_2 emissions (Cameron et al., 2021) and water pollution (Agliardi et al., 2017). This sector also has critical social challenges, for example, when it comes to maintaining adequate social conditions along the entire value chain, as well as the healthiness, safety, and quality of the final food products (Engida et al., 2018; Raimo et al., 2021). Moreover, several examples of public scandals underscore the importance of governance in this sector. For instance, in 2013, the largest seafood processing company in the EU, Pescanova, was forced into bankruptcy after an accounting fraud (Jouffray et al., 2019). All of the above confirms the relevance of measuring and monitoring corporate sustainability in the food industry, considering all three dimensions of the concept relating to the environment, society, and governance (i.e., ESG). Moreover, this analysis is particularly opportune considering that corporate sustainability evaluation needs to be further developed in this sector. Indeed, there is a lack of research focusing on ESG performance in the food industry, with the only exceptions being Engida et al. (2018) and Escrig-Olmedo et al. (2017).

3.2 | ESG data

3.2.1 | Selection of ESG indicators in the food industry

Data for this study have been collected from the Refinitiv Eikon database, the most commonly used source in previous research on

corporate sustainability (e.g., Escrig-Olmedo et al., 2017; Song & Rimmel, 2021). The Refinitiv Eikon database is considered one of the six major rating systems in the field of sustainability, together with Calvert, DJSI, FTSE4Good, Innovest, and MSCI/KLD (Antolín-López et al., 2016). This database collects corporate ESG information based on verifiable reported data in the public domain, such as annual reports, CSR reports, or stock exchange filings (Refinitiv, 2021). It includes an ESG performance measurement framework that integrates a large set of measurement indicators in the three core dimensions of sustainability (ESG). The results reported by Refinitiv are qualitatively similar to those of other ratings such as MSCI/KLD or Bloomberg (Dorfleitner et al., 2015).

In order to develop the new approach proposed, we first chose the most suitable sustainability indicators to assess ESG performance in the food industry. An appropriate selection of indicators is crucial for the construction of meaningful CIs. In this sense, indicators should be as precise as possible and be descriptive in terms of inputs, outputs, or processes, providing balanced information on the three dimensions of ESG performance. Moreover, the selection of indicators should be based on analytical soundness and measurability criteria (OECD, 2008).

For this purpose, a two-step process was followed. In the first step, we relied on the framework proposed by GRI (2014, 2020) and a comprehensive review of the literature focused on assessing corporate ESG performance in the food industry. This review allowed us to identify appropriate indicators to use to assess each dimension of ESG performance in this economic sector. Moreover, we checked that the Refinitiv Eikon database collects information (corporate data availability) regarding all the ESG indicators identified.

After that, the second step was to choose the most relevant ESG indicators in the food industry. For this purpose, the entire set of ESG indicators identified in the first step of the process was discussed by a focus group created ad hoc. The focus group was made up of five academics with expertise in ESG performance and five food industry managers with expertise in sustainability management and reporting. Of this panel of experts, six were men and four were women, and in terms of age, four were under 50 years old, while the rest were between 50 and 65 years old. The debates leading to the selection of ESG indicators for the empirical analysis were conducted in the form of focus group discussions (Krueger & Casey, 2015).

The focus group agreed on the initial set of indicators needed to assess food firms' ESG performance, selecting 24 indicators. However, some of these indicators had to be discarded because of double-counting problems; that is, indicators capturing the same feature of firms' ESG performance. As a result, the final selection resulted in a set of 18 ESG performance indicators with no significant correlations between them: five for the environmental dimension, six for the social dimension, and seven for the governance dimension.

3.2.2 | Indicators assessing the environmental dimension

Regarding the environmental dimension of sustainability, the selected indicators are aimed at measuring companies' impact on the environment caused by their production processes (see Table 2). Thus, the use of environmental criteria to source (or eliminate) materials for the production process (for instance, choosing inputs individually certified as environmentally friendly) (indicator E_ECS) is considered in the assessment of corporate ESG performance. As pointed out in the literature (e.g., del Borghi et al., 2014), adopting lifecycle assessment, eco-design management, or eco-innovation processes reveals the organization's commitment to sustainable resource use, positively contributing to environmental sustainability. The consumption of water (E_TWC) is also a relevant aspect worth taking into account when assessing the use of natural resources, as is the use of recycled water (E_WRR). As this industry is heavily dependent on fossil fuels such as natural gas and petroleum (Ladha-Sabur et al., 2019), it is also necessary to include an indicator related to CO_2 emissions (E_TCE). Finally, due to the importance of waste generation and management in this industry (Garre et al., 2020), an indicator reflecting the percentage of waste recycled (E_WRW) was chosen to be one of the environmental indicators. This set of five indicators provides information needed to properly assess food firms' environmental performance.

3.2.3 | Indicators assessing the social dimension

For an assessment of firms' performance in the social dimension, the indicators selected deal with labor practices, human rights issues, and

TABLE 1 Environmental indicators for the food industry

Indicator name (ACRONYM)	Calculation	Measurement unit	Polarity
Use of environmental criteria to source or eliminate materials (E_ECS)	Does the company use environmental criteria (e.g., life cycle assessment) to source or eliminate materials?	Binary (No = 0, Yes = 1)	Positive
Total water consumed per revenue (E_TWC)	Water consumed in cubic meters/Revenue in USD	m^3/USD	Negative
Water recycled or reused to total water (E_WRR)	Amount of water recycled or reused in cubic meters/(Amount of water recycled in cubic meters + Amount of water withdrawn in cubic meters)	Dimensionless (percentage)	Positive
Total CO_2 equivalent emissions per revenue (E_TCE)	Total CO_2 equivalent emissions/Revenue in USD	t/USD	Negative
Waste recycled to total waste (E_WRW)	Waste recycled in tons/Total waste in tons	Dimensionless (percentage)	Positive

TABLE 2 Social indicators in the food industry

Indicator name (ACRONYM)	Calculation	Measurement unit	Polarity
Salary gap between CEO and company average (S_SGC)	CEO's total salary/Average salaries and benefits	Dimensionless (percentage)	Negative
Women employees (S_WE)	Number of women employees/total number of employees	Dimensionless (percentage)	Positive
Women managers (S_WM)	Number of women managers/total number of managers	Dimensionless (percentage)	Positive
Employment growth over the last 5 years (S_EGL)	Average employment growth over the last 5 years	Dimensionless (percentage)	Positive
Consideration of human rights criteria in the selection or monitoring of suppliers (S_HRC)	Does the company use human rights criteria in the selection or monitoring of its suppliers or sourcing partners?	Binary (No = 0, Yes = 1)	Positive
Total donations (S_TD)	Total donations/revenue in USD	Dimensionless (percentage)	Positive

TABLE 3 Governance indicators in the food industry

Indicator name (ACRONYM)	Calculation	Measurement unit	Polarity
Board gender diversity (G_BGD)	Number of women on the board/Total number of board members	Dimensionless (percentage)	Positive
Board tenure (G_BT)	Average number of years each board member has been on the board	Years	Positive
Non-executive board members (G_NEB)	Number of non-executive board members/Total number of board members	Dimensionless (percentage)	Positive
Board independence (G_BI)	Number of independent board members/Total number of board members	Dimensionless (percentage)	Positive
CEO-chairman separation (G_CCS)	Has the chairman held the CEO position in the company prior to becoming the chairman?	Binary (No = 0, Yes = 1)	Negative
Compensation paid to senior executives (G_CPS)	Total compensation paid to senior executives/Revenue in USD	Dimensionless (percentage)	Negative
Non-audit to audit fees (G_NAF)	Non-audit fees/non-audit and audit-related fees paid to the group auditor	Dimensionless (percentage)	Negative

other social concerns relevant to stakeholders (see Table 2). In this regard, the CEO's salary relative to the firm's average salary (S_SGC) is an important aspect to take into account in the assessment of corporate social performance (e.g., Paredes-Gazquez et al., 2016). Organizations with a high degree of disparity in workers' remuneration usually face a greater risk of reputational damage and legal disputes related to discrimination, which can affect performance (e.g., Dočekalová & Kocmanová, 2016). Gender considerations are also relevant in the valuation of corporate social performance (Küçükbay & Sürücü, 2019; Paredes-Gazquez et al., 2016). Organizations with more gender diversity usually achieve better business performance and have better customer insights (Krivkovich & Nadeau, 2017). For this reason, the indicators measuring the number of women among the total number of employees (S_WE) and the number of women among the total number of managers (S_WM) have also been selected for the empirical analysis. In terms of labor practices, employment growth over the last 5 years (S_ EGL) is also significant in the assessment of corporate social performance (Poponi et al., 2022). Concerning human rights, the fact that supply chain activities in the food industry are long, complex, and intensive in the use of human resources (Zhao et al., 2021) makes it pertinent to include indicators related to the use of human rights criteria in the process of selecting or monitoring suppliers or sourcing partners (S_HRC). Finally, voluntary activities such as donations (S_TD) are an important way of showing the type of proactive community engagement needed to achieve a social license to operate (Paredes-Gazquez et al., 2016). The combined information provided by these six indicators allows stakeholders to assess the social performance of food companies.

3.2.4 | Indicators assessing the governance dimension

Lastly, regarding the governance dimension, the indicators chosen for the empirical analysis deal with corporate governance rules, processes, and laws regulating and controlling business activities (see Table 3). Independence in corporate management is an important predictor of corporate governance quality (Fu & Wedge, 2011). Another significant board attribute when assessing corporate governance is diversity. For example, the literature points out that gender diversity

in supervisory bodies leads not only to more innovative ideas in the company (increasing competitiveness), but also to better corporate governance (e.g., Dočekalová & Kocmanová, 2016). The indicators G_BGD, G_NEB, G_BI, and G_CCS are related to the abovementioned issues (independence and diversity of the board). The remuneration of senior executives (G_CPS) and board tenure (G_BT) are also important to account for in such an assessment (Randari & Rostamy, 2015). Another relevant criterion for the assessment of the governance dimension of sustainability is the amount paid in non-audit fees to the auditor company, measured through the non-audit to audit fees ratio (G_NAF). This ratio is usually adopted as a proxy of the level of independence of the auditor company in its clients' assessment. It is crucial for corporate transparency because high levels of non-audit fees can jeopardize auditors' independence (ICAEW, 2021). These seven indicators can portray the governance performance of the food companies.

3.2.5 | The measurement and the polarity of indicators

Tables 3, 4, and 5 list the 18 indicators selected, showing how they have been calculated and the units of measurement used in each case. All the indicators selected for the empirical analysis were calculated based on the information provided by the Refinitiv Eikon database.

As pointed out above, this set of indicators was selected based on analytical soundness and measurability criteria. All the indicators considered have a clear polarity (see the last columns in Tables 1, 2, and 3), which means that the effect of a change in an indicator's value on companies' overall ESG performance is a priori known. Thus, for indicators with positive (negative) polarity, the higher (lower) the indicator's value, the better (worse) the ESG performance of the firm.

Most of the indicators were measured using dimensionless variables or ratios where the denominator accounted for the firms' size (e.g., revenue or the number of employees). The rest of the indicators were binary variables (No = 0, Yes = 1) capturing the implementation of ESG practices. This way of measuring the ESG indicators allows comparisons between firms regardless of their size.

3.2.6 | The sample of firms

To empirically analyze the ESG performance of the European food industry, we have considered a sample of firms operating in this sector. This sample has been drawn considering comparability and data availability criteria. For this purpose, we relied on the Refinitiv Eikon database, as commented above, which provides comparable data for 299 food firms in Europe. However, complete data for the proposed assessment of corporate ESG performance (i.e., the information needed to calculate all the indicators selected) are available for 24 food firms. These companies are listed in Table 4.

Considering the small size of the sample used, the analysis performed should be viewed as a pilot study to check the suitability of the assessment proposed. Similar to other studies that use small samples,[2] the empirical results should be treated with caution as they cannot be considered representative of the whole population of European food firms.

3.3 | Stakeholders' preferences

To carry out the empirical ESG performance assessment, a panel of stakeholders representing investors, consumers, and academics was involved in the study. Based on the theoretical background outlined above, which recognizes the existence of different stakeholder profiles and preferences in terms of ESG assessment, it is expected that even within each of the stakeholder categories considered, there are differences in their points of view when assessing firms' sustainability. In this sense, Zwergel et al. (2019) have revealed the heterogeneity in investors' approaches toward sustainability, identifying the existence of several groups of investors according to the level of importance they assign to ethical and ecological features of alternative investments. Likewise, the literature has also highlighted a variety of consumer preferences and views regarding ESG (e.g., Christensen et al., 2021), referring to aspects such as individuals' values as factors explaining the potential variations. ESG academics' preferences and views were also considered due to their wide range of research experience in this field.

Specifically, the empirical ESG performance assessment carried out relies on a sample of 18 stakeholders with expertise in the European food industry, selected using a judgmental sampling method (Purvis et al., 2009). This panel was composed of seven investors (STK_I1-STK_I7), six consumers (STK_C1-STK_C6), and five academics (STK_A1-STK_A5), mostly recruited from among the participants of the European Business Ethics Network congress held in Córdoba (Spain) in 2021. Of the panel members, 11 were men and 7 were women. In terms of age, 10 panel members were under 50 years old, and the rest were between 50 and 65 years old.

These stakeholders were interviewed one-to-one using a semi-structured questionnaire to collect the data needed to calculate the weights of the indicators and ESG dimensions (for more details, see Section 4.1) and the value for the compensation parameter λ (for more details, see Section 4.2) for each stakeholder. To deal with ethical issues, we provided them with information explaining the purpose of the study performed and the procedure followed. Moreover, we asked permission to record the interviews and data confidentiality was assured (Berg & Lune, 2017). Each stakeholder was interviewed at their place of work or online, by two research team members. One of the team members acted as the interviewer and the other as an observer to ensure consistent interviews. The interviews were conducted in March 2022, and lasted ~40 min each.

The interview process, the technical nature of the questions asked, and the stakeholders' expertise in the topic analyzed generated a suitable environment for data gathering. This suggests that the information obtained is reliable and bias-free.

TABLE 4 Firms comprising the sample

Firms' name	Firms' acronym	Headquarter location	Annual revenue (2020) (million euros)	Total employees (2020)
AAK AB	AAK	Sweden	3400	3982
Agrana Beteiligungs AG	AGB	Austria	2735	9342
Associated British Food PLC	ABF	UK	17,830	138,097
Austevoll Seafood ASA	AUSS	Norway	2615	6342
Barry Callebaut AG	BARN	Switzerland	7629	12,335
Bell Food Group AG	BELL	Switzerland	4541	12,043
Bonduelle SA	BOND	France	3206	14,617
Chr Hansen Holding A/S	CHRH	Denmark	1158	3984
Cloetta AB	CLOE	Sweden	693	2917
Cranswick PLC	CWK	UK	2077	11,800
Danone SA	DANO	France	28,847	101,911
Ebro Foods SA	EBRO	Spain	3539	7824
Greencore Group PLC	GNC	Ireland	1612	12,200
Greenyard NV	GREEN	Belgium	4479	9000
JDE Peets NV	JDEP	The Netherlands	8123	19,331
La Doria SpA	LDO	Italy	1036	863
Leroy Seafood Group ASA	LSG	Norway	2327	4693
Mowi ASA	MOWI	Norway	4592	14,645
Nestle SA	NESN	Switzerland	95,292	268,350
Orkla ASA	ORK	Norway	5495	18,109
Premier Foods PLC	PFD	UK	1055	4151
Scandi Standard AB	SCST	Sweden	1210	3220
Suedzucker AG	SZU	Germany	7354	19,988
Treatt PLC	TET	UK	141	367

4 | BUILDING A STAKEHOLDER-SPECIFIC ESG COMPOSITE INDICATOR

We followed the guidelines included in OECD (2008) to build a CI measuring firms' ESG performance, in line with previous literature in the corporate sustainability field (e.g., Paredes-Gazquez et al., 2016). In this respect, there are three key stages in the construction process of the ESG CI that merit further explanation: normalization, weighting, and aggregation.

Normalization is a prerequisite for any aggregation of indicators, since they are usually calculated using different units of measurement. Thus, they must be expressed in homogeneous units to allow their comparison and to be able to perform arithmetic operations. In this work, from among the various normalization techniques available (Pollesch & Dale, 2016), we chose to apply the min-max or re-scaling normalization. After normalization, indicator scores vary within a dimensionless range [0,1], where 0 corresponds to the worst possible value of the indicator (i.e., the worst ESG performance) and 1 to the best (i.e., the best ESG performance).

Indicators also need to be weighted and aggregated. The alternatives chosen for these two stages of CI construction are explained in the following sections.

4.1 | Weighting method

Weighting methods enable the determination of the relative importance of the individual indicators (i.e., indicator weights) included in the CI to be built. In our case study, a "subjective" weighting method, the best-worst method (BWM), was implemented to account for individual stakeholders' preferences regarding corporate ESG performance. Contrary to "equal weighting" methods, where all the indicators are considered equally important, with subjective techniques weights are determined exogenously by relying on value judgments or opinions expressed by experts or decision-makers (DMs).

For firms' ESG assessment, the use of subjective techniques is recommended for deriving indicator weights. The suitability of these weighting methods for our research purpose lies in the fact that they allow us to account for heterogeneity in individual stakeholders' preferences. Examples of studies using subjective methods in this field include Dočekalová and Kocmanová (2016) and Escrig-Olmedo et al. (2017). We chose the BWM as the subjective technique for deriving both indicator and ESG dimension weights. BWM is a multi-criteria decision-making technique (Rezaei, 2015) that has already been applied to building CIs (e.g., Wang & Fu, 2020) and to assessing firms' ESG performance (e.g., Raj & Srivastava, 2018).

Using the BWM to weight the indicators involves five stages. First, the problem is structured as a tree-based hierarchy. In our case study, ESG performance is assessed considering the three dimensions (E, S, and G), with each dimension being assessed according to a set of individual indicators (see Figure 2). Second, the DM (a stakeholder in our case study) identifies the "best" (i.e., the most important) indicator and the "worst" (i.e., the least important) indicator of the set of indicators in each ESG dimension. Third, the DM indicates a preference for the 'best' indicator over all the other indicators using a scale from 1 (equally important) to 9 (far more important). All the DM's preferences are then used to generate the "Best-to-Others" vector: $A_B = (a_{B1}, ..., a_{Bk}, ..., a_{BK})$, where a_{Bk} shows the preference for the 'best' indicator B over indicator k, and $a_{BB} = 1$. Fourth, the preferences for all the indicators over the "worst" indicator are determined by the DM, also using a scale from 1 to 9, as in the previous step. With this information, it is possible to construct the 'Others-to-Worst' vector: $A_W = (a_{1W}, ..., a_{kW}, ..., a_{KW})^T$, where a_{kW} shows the preference for the indicator k over the worst indicator W, and $a_{WW} = 1$. And fifth, the optimal local weights of indicators $(w_1^*, w_2^*, ..., w_K^*)$ are determined by solving the following linear programming model:

$$\begin{gathered} \min \xi, \text{ s.t.} \\ |w_B - a_{Bk} w_k| \le \xi, \text{ for all } k \\ |w_k - a_{kW} w_W| \le \xi, \text{ for all } k \\ \sum_k w_k = 1,\ w_k \ge 0, \text{ for all } k, \end{gathered} \tag{1}$$

where, ξ is a measure of the consistency of responses given by the DM, which can be used to calculate a consistency ratio (CR); to validate the suitability of the weights obtained, said ratio must not be higher than 0.25.

A similar procedure to the one explained above is followed to obtain the ESG dimensions weights for each stakeholder.

Finally, "global" weights of indicators (W_k) are calculated for every stakeholder by multiplying each indicator's "local" weight (w_K^*) by the relative importance assigned to the associated dimension (see Figure 2).

4.2 | Aggregation method

Selecting a functional method for aggregating indicators is a key methodological choice, since it influences the marginal rate of substitution among indicators, which may assume the possibility of total, partial, or zero compensation among indicators (Gómez-Limón & Sanchez-Fernandez, 2010). This decision is closely related to the meaning of corporate sustainability to be considered (i.e., "weak" and "strong" corporate sustainability, as explained by Nikolaou et al. (2019)). For instance, if the algebraic expression employed in the aggregation process is an additive linear function, total compensability among indicators is assumed, thus accounting for 'weak' corporate sustainability. On the contrary, using a non-compensatory function prevents any compensation from taking place (i.e., non-compensability), thus considering a 'strong' corporate sustainability assessment. Intermediate options allowing partial compensation (e.g., multiplicative and geometric functions) are also possible.

In order to minimize the degree of subjectivity regarding the method employed to build the CI measuring corporate ESG performance, we have followed Díaz-Balteiro and Romero (2004), who developed a multicriteria function based on the distance to the ideal point measured by different metrics (i.e., different degrees of compensability). This function is defined in our case as follows:

$$ESG\_CI_i = (1-\lambda) \cdot \left[\underset{k}{Min} (W_k \cdot I_{ki}) \right] + \lambda \cdot \sum_{k=1}^{k=n} W_k \cdot I_{ki}, \tag{2}$$

where, ESG_CI_i is the value of the CI assessing ESG performance of firm i; λ is the compensation parameter ranging from 0 to 1 that

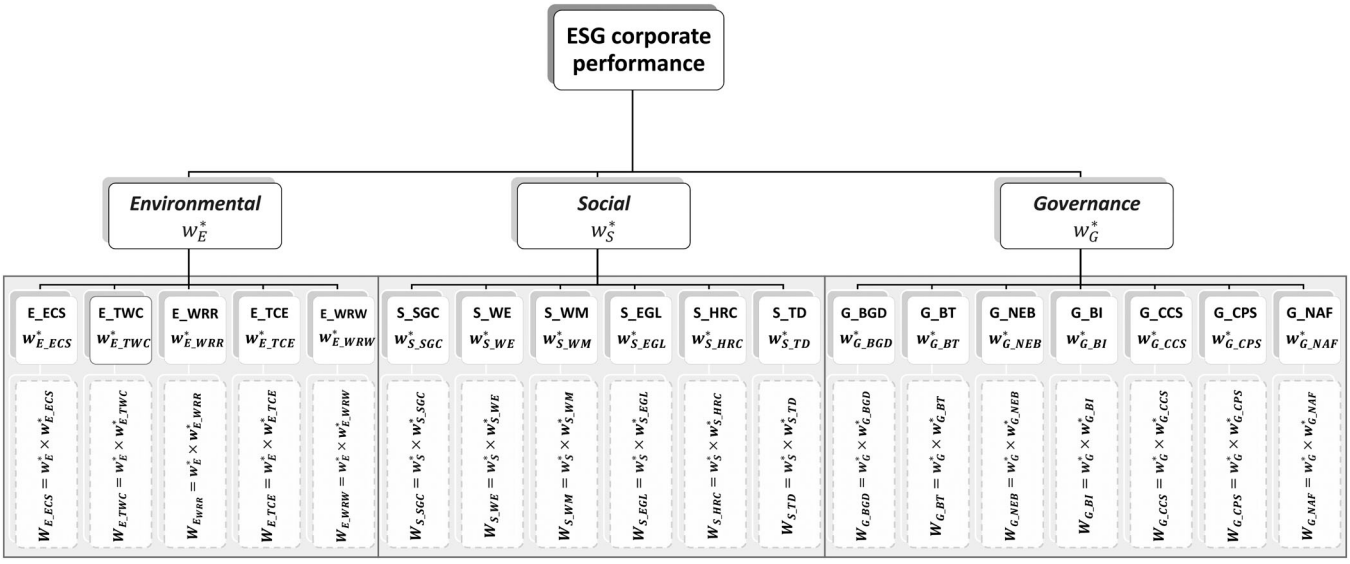

FIGURE 2 Hierarchy structure: Dimensions, indicators, and weights

controls the degree of compensation permitted among indicators; W_k is the weight of indicator k; and I_{ki} is the normalized value of indicator k for the firm i.

This function enables us to calculate a family of ESG_CI_i depending on the value considered for λ, from an option allowing total compensability among indicators (in case $\lambda = 1$) to a solution considering non-compensability (in case $\lambda = 0$), as well as a compromise set of alternatives between these two polar opposites (in cases $0<\lambda<1$) considering different degrees of partial compensability. In fact, if λ takes a value equal to 1, then the expression (2) becomes a linear additive function ($ESG\_CI_i = \sum_{k=1}^{k=n} W_k \cdot I_{ki}$), while if it takes a value 0, this function just quantifies the minimum weighted and normalized value for the set of indicators considered ($ESG\_CI_i = \underset{k}{Min}(W_k \cdot I_{ki})$). Any other intermediate value for the compensation parameter would lead to CI values between the two extremes mentioned before.

Considering the pivotal role of the decision about the value to be adopted for the compensation parameter λ, it is proposed that each stakeholder assessing firms' ESG performance fixes its value, similar to the indicator and dimension weights. For this purpose, stakeholders were informed about the implications of this choice showing performance assessments with $\lambda = 1$, $\lambda = 0.5$, and $\lambda = 0$. Then, they were asked to directly choose a value for λ on a scale ranging from 0 (non-compensability among ESG dimensions) to 1 (total compensability among ESG dimensions).

5 | EMPIRICAL APPLICATION

5.1 | Indicator weighting

Using the methods described previously in Section 4.1, we obtained the local and global weights of the 18 indicators for every stakeholder, as shown in Table 5. Moreover, Table 5 displays the aggregated indicator weights for each group of stakeholders (i.e., investors, consumers, and academics) and the whole sample.

One-way analyses of variance (ANOVAs) were conducted to determine the effect of stakeholder groups on each indicator weighting. Results are shown in Table S1, indicating nonsignificant effects (i.e., F statistics with p-values >.05). Therefore, the null hypothesis that different groups of stakeholders have the same effect on individual indicator weights cannot be rejected, that is, no statistically significant differences exist between the three groups of stakeholders.

Moreover, a one-way multivariate analysis of variance (MANOVA) was conducted to determine whether there is a difference between the three groups of stakeholders considered in their vector of indicator weights, with these vectors taken as a multivariate variable. Results shown in Table S2 indicate that we fail to reject the null hypothesis (i.e., Wilk's lambda = 0.006, with p-value >.05) and so we conclude there is a nonsignificant difference in indicator weighting based on the stakeholder group.

Since we find no statistically significant differences between the three groups of stakeholders, we reject the first hypothesis proposed in this study, which states that different groups of stakeholders have different opinions and preferences concerning corporate ESG practices.

The nonsignificant differences shown in the ANOVA and MANOVA tests confirm that the heterogeneity within groups of stakeholders is greater than between groups, suggesting that stakeholders' weighting is mainly driven by personal ESG preferences. In light of this result, we accept the second hypothesis proposed in this study, which posits that individual stakeholders, even within the same group, have different opinions and preferences regarding corporate ESG practices.

Following the results explained above, inter-stakeholder differences in indicator weighting were further explored by assessing the agreement among them through Kendall's coefficient of concordance W. This statistic ranges from 0 (no agreement) to 1 (complete agreement), allowing us to test the null hypothesis that W = 0 (i.e., there is no agreement among the stakeholders' weighting). First, Kendall's W tests were conducted to assess concordance in indicator weighting by pairs of stakeholders (see Table S3). Most of these pairwise comparisons (68.6% of the assessments: 105 out of 153) show no agreement between the stakeholders' weighting. However, the hypothesis of no agreement between the stakeholders' weighting is rejected in 31.4% of these assessments (48 out of 153). Second, Kendall's W tests were also conducted to assess the agreement in indicator weighting between a hypothetical stakeholder equally weighting all indicators (STK_0) and each stakeholder interviewed. The hypothesis of no agreement in indicator weighting is rejected (i.e., there is agreement in indicator weighting) in the case of 10 stakeholders (55.6% of the stakeholders sampled), most of whom were in the groups of consumers and academics. Thus, for these stakeholders, generic information provided by composite ESG scores built by independent advisory firms using equal weights for all indicators (e.g., *Refinitiv ESG Score*) could be helpful in assessing firms' ESG performance. However, this is not true for the rest of the stakeholders (8 out of 18, 44.4% of the sample, most of whom are investors) since their perceptions regarding firms' ESG performance are based on indicator weighting significantly different from the equal weighting criteria.

5.2 | Ranking of firms based on ESG performance

Having applied the aggregation method described in Section 4.2, firms' ESG performance was measured differently by each stakeholder, resulting in different stakeholder-specific rankings of the firms analyzed. Table 6 shows the ESG performance ranking of the 24 firms considered according to each stakeholder's preferences (i.e., indicator weighting). Average firm rankings for the different groups of stakeholders and for the whole sample are also displayed in Table 6.

As with indicator weighting, ANOVA tests were conducted to determine the effect of stakeholder groups on the ranking of firms based on their ESG performance. Table S4 shows the results obtained, indicating nonsignificant effects (i.e., F statistics with p-values >.05) for most firms. The only exceptions are JDEP and PFD, which are significantly worse ranked by investors than by consumers and academics, and LSG, which is significantly better ranked by investors than

TABLE 5 Descriptive statistics of indicator and dimension weights by groups of stakeholders

Indicator acronym	All ($n = 18$)		STK I1	STK I2	STK I3	STK I4	STK I5	STK I6	STK I7	Investors ($n = 7$)		STK C1	STK C2	STK C3	STK C4	STK C5	STK C6	Consumers ($n = 6$)		STK A1	STK A2	STK A3	STK A4	STK A5	Academics ($n = 5$)	
	Mean	SD								Mean	SD							Mean	SD						Mean	SD
E_ECS	.052	.051	.158	.017	.024	.013	.067	.020	.126	.061	.059	.022	.175	.019	.086	.032	.036	.062	.061	.033	.021	.045	.025	.014	.028	.012
E_TWC	.135	.108	.024	.095	.226	.083	.111	.020	.075	.091	.069	.329	.027	.076	.121	.327	.357	.206	.147	.137	.201	.105	.035	.083	.112	.062
E_WRR	.075	.097	.035	.041	.057	.033	.022	.009	.030	.032	.015	.092	.039	.054	.444	.061	.092	.130	.155	.082	.086	.021	.116	.032	.067	.040
E_TCE	.130	.103	.035	.024	.273	.025	.111	.073	.293	.119	.116	.066	.039	.276	.040	.061	.153	.106	.093	.319	.242	.105	.126	.083	.175	.101
E_WRW	.089	.068	.081	.010	.057	.049	.022	.020	.075	.045	.028	.153	.054	.048	.086	.263	.153	.126	.081	.082	.086	.211	.126	.032	.107	.067
ENVIRON	**.482**	**.214**	**.333**	**.187**	**.636**	**.204**	**.333**	**.143**	**.600**	**.348**	**.198**	**.662**	**.333**	**.474**	**.778**	**.744**	**.791**	**.630**	**.187**	**.653**	**.636**	**.487**	**.429**	**.244**	**.490**	**.167**
S_SGC	.059	.057	.092	.079	.026	.010	.088	.236	.026	.080	.077	.018	.086	.018	.006	.053	.005	.031	.032	.123	.028	.050	.094	.031	.065	.041
S_WE	.048	.036	.025	.131	.026	.018	.018	.107	.016	.049	.049	.033	.035	.063	.009	.063	.028	.038	.021	.024	.028	.084	.094	.064	.059	.032
S_WM	.059	.036	.092	.131	.037	.055	.103	.107	.026	.079	.040	.055	.086	.063	.009	.017	.017	.041	.031	.033	.028	.050	.094	.064	.054	.027
S_EGL	.060	.071	.025	.289	.037	.014	.014	.064	.011	.065	.101	.010	.035	.063	.051	.053	.017	.038	.021	.033	.039	.184	.036	.107	.080	.066
S_HRC	.095	.067	.092	.079	.137	.009	.103	.064	.059	.078	.040	.127	.086	.221	.051	.012	.058	.092	.074	.056	.140	.050	.094	.271	.122	.090
S_TD	.020	.024	.007	.026	.010	.004	.008	.021	.004	.012	.009	.018	.008	.045	.020	.005	.028	.021	.015	.011	.009	.017	.016	.107	.032	.042
SOCIAL	**.342**	**.181**	**.333**	**.736**	**.273**	**.111**	**.333**	**.600**	**.143**	**.361**	**.230**	**.262**	**.333**	**.474**	**.145**	**.203**	**.150**	**.261**	**.126**	**.280**	**.273**	**.436**	**.429**	**.644**	**.412**	**.151**
G_BGD	.039	.039	.110	.012	.005	.094	.064	.108	.046	.063	.044	.038	.102	.003	.003	.025	.022	.032	.037	.006	.007	.013	.025	.017	.014	.008
G_BT	.013	.018	.012	.007	.002	.053	.064	.027	.008	.025	.025	.007	.012	.008	.007	.005	.002	.007	.003	.002	.002	.005	.008	.004	.004	.003
G_NEB	.022	.022	.021	.012	.020	.094	.064	.027	.020	.037	.030	.005	.028	.017	.007	.005	.009	.012	.009	.010	.016	.013	.025	.010	.015	.006
G_BI	.040	.062	.049	.026	.024	.281	.064	.027	.020	.070	.094	.005	.047	.017	.007	.007	.009	.015	.016	.023	.020	.028	.025	.041	.027	.008
G_CCS	.014	.014	.021	.012	.005	.062	.007	.027	.020	.022	.019	.009	.020	.001	.007	.005	.004	.008	.007	.006	.007	.003	.025	.017	.012	.009
G_CPS	.032	.031	.072	.002	.024	.075	.064	.027	.098	.052	.034	.004	.077	.003	.035	.004	.008	.022	.030	.010	.020	.008	.025	.010	.015	.008
G_NAF	.016	.016	.049	.005	.009	.027	.007	.011	.046	.022	.019	.009	.047	.003	.010	.002	.004	.013	.017	.010	.020	.008	.008	.010	.011	.005
GOVERN	**.176**	**.165**	**.333**	**.077**	**.091**	**.685**	**.333**	**.257**	**.257**	**.290**	**.203**	**.077**	**.333**	**.053**	**.077**	**.053**	**.059**	**.109**	**.110**	**.067**	**.091**	**.077**	**.143**	**.111**	**.098**	**.030**
Lambda	.371	.310	.010	1.00	.500	.700	.200	.250	.200	.409	.345	.010	.200	.010	.700	.100	1.00	.337	.415	.350	.400	.300	.500	.250	.360	.096

TABLE 6 Ranking of firms by stakeholders

	All (n = 18)										Investors (n = 7)								Consumers (n = 6)							Academics (n = 5)	
Firm	Mean rank	SD	STK I1	STK I2	STK I3	STK I4	STK I5	STK I6	STK I7	Mean rank	SD	STK C1	STK C2	STK C3	STK C4	STK C5	STK C6	Mean rank	SD	STK A1	STK A2	STK A3	STK A4	STK A5	Mean rank	SD
AAK	15.1	2.4	10	19	16	14	15	15	15	14.9	2.7	16	11	18	13	15	15	14.7	2.4	16	17	12	16	18	15.8	2.3
AGB	20.8	4.1	21	13	23	8	19	22	24	18.6	5.9	22	20	22	22	22	22	21.7	0.8	24	23	23	24	20	22.8	1.6
ABF	13.8	78.0	7	9	20	15	18	7	20	13.7	5.9	21	5	17	2	21	21	14.5	8.7	20	20	16	3	6	13.0	8.0
AUSS	19.5	5.4	13	22	24	11	16	6	19	15.9	6.4	23	13	24	23	23	23	21.5	4.2	21	24	22	20	24	22.2	1.8
BARN	17.8	3.7	19	11	15	24	12	23	14	16.9	5.2	19	19	15	20	20	19	18.7	1.9	17	15	21	22	16	18.2	3.1
BELL	16.7	4.8	20	16	18	23	24	17	10	18.3	4.7	18	21	20	12	9	13	15.5	4.8	11	18	10	18	23	16	5.4
BOND	14.6	5.2	16	8	19	4	17	10	12	12.3	5.4	20	15	21	14	13	14	16.2	3.4	14	19	6	19	22	16	6.3
CHRH	3.1	0.7	3	3	3	3	3	3	4	3.1	0.4	3	2	3	5	2	3	3.0	1.1	2	3	3	4	3	3.0	0.7
CLOE	7.6	2.6	12	10	5	10	10	5	7	8.4	2.8	8	10	8	11	5	5	7.8	2.5	4	5	5	7	10	6.2	2.4
CWK	9.9	4.0	14	7	9	18	11	18	8	12.1	4.6	9	14	9	6	6	7	8.5	3.0	9	7	4	12	11	8.6	3.2
DANO	7.8	3.4	6	12	6	6	4	16	5	7.9	4.4	6	6	6	7	12	4	6.8	2.7	13	9	9	8	5	8.8	2.9
EBRO	11.2	6.1	1	5	17	16	9	12	16	10.9	6.2	4	7	4	3	17	18	8.8	6.9	19	16	17	14	7	14.6	4.6
GNC	13.1	50.0	9	6	14	21	7	4	9	10	5.8	15	8	13	19	19	17	15.2	4.2	15	14	19	15	12	15.0	2.5
GREEN	10.3	52.0	8	24	8	13	6	14	3	10.9	6.9	7	9	14	9	8	6	8.8	2.8	7	8	15	9	17	11.2	4.5
JDEP	16.6	4.2	22	18	13	20	23	24	17	19.6	3.9	12	22	11	15	14	12	14.3	4.0	18	12	13	17	15	15.0	2.5
LDO	12.2	30.0	11	20	12	17	8	13	11	13.1	46.0	13	12	16	8	10	11	11.7	2.7	10	11	11	13	13	11.6	1.3
LSG	9.8	5.5	4	4	10	9	2	2	6	5.3	3.2	14	3	10	17	18	16	13.0	5.7	12	13	18	11	8	12.4	3.6
MOWI	20.3	3.9	18	21	21	12	21	11	22	18.0	4.6	24	17	19	24	24	24	22.0	3.2	22	22	24	21	19	21.6	1.8
NESN	4.4	5.2	5	14	2	2	5	21	2	7.3	7.4	1	4	1	1	3	1	1.8	1.3	6	1	7	2	2	3.6	2.7
ORK	1.5	0.8	2	2	1	1	1	1	1	1.3	0.5	2	1	2	4	1	2	2.0	1.1	1	2	1	1	1	1.2	0.4
PFD	13.0	4.5	17	15	11	22	20	19	13	16.7	3.9	10	18	12	10	7	10	11.2	3.7	8	10	8	10	14	10.0	2.4
SCST	8.9	7.2	24	1	4	5	14	9	18	10.7	8.3	11	23	5	16	4	8	11.2	7.3	3	4	2	5	4	3.6	1.1
SZU	20.1	2.7	15	23	22	19	22	20	23	20.6	2.9	17	16	23	18	16	20	18.3	2.7	23	21	20	23	21	21.6	1.3
TET	11.8	6.6	23	17	7	7	13	8	21	13.7	6.8	5	24	7	21	11	9	12.8	7.8	5	6	14	6	9	8.0	3.7

by consumers and academics. Additionally, a MANOVA test was conducted to determine whether there is a difference between the three groups of stakeholders considered in their vector of ranks. Results shown in Table S5 (Wilk's lambda = 0.003, with *p*-value >.05) evidence a nonsignificant difference in rankings of firms based on the stakeholder group.

These results again confirm that the heterogeneity within groups of stakeholders is greater than that between groups, underlining the fact that personal ESG preferences drive stakeholders' rankings of firms. Thus, we must reject the third hypothesis proposed in this study, which states that differences in preferences about ESG practices between groups of stakeholders lead to heterogeneous assessments of firms' performance (i.e., firms' ranking) between these groups.

Inter-stakeholder differences in rankings of firms based on their ESG performance were also analyzed through Kendall's coefficient of concordance W (see Table S6). Comparing pairs of stakeholders' rankings, about half of these comparisons (81 out of 153; 52.9%) show agreement in the rankings, while the other half (47.1%) do not. Moreover, Kendall's W tests were also conducted to assess the agreement in rankings of firms between a hypothetical stakeholder equally weighting all indicators (STK_0) and each stakeholder included in the sample. In this case, it is noteworthy that almost all stakeholders (17 out of 18) show rankings of firms similar to those provided by advisory firms considering equal weights for all indicators.

The latter results contradict our initial expectations, indicating that the rankings of firms resulting from the composite ESG indicators provided by independent advisory firms equally weighting all ESG indicators (e.g., *Refinitiv ESG Score*) can be useful for a wide range of stakeholders.

Finally, it is worth noting that the implementation of the ESG assessment in this case study (i.e., firms in the food industry) provided insights about the suitability of the methodological approach followed. In fact, the stakeholders involved in this research declared they were satisfied with the results obtained, for both their individual and comparative assessments. Thus, their satisfaction can be considered a confirmation of the usefulness of the ESG assessment approach proposed.

6 | CONCLUDING REMARKS

Incorporating ESG performance information into decision-making processes is a key business practice. Corporate ESG performance is gaining prominence; stakeholders are increasingly demanding this type of information to guide their investment and/or consumption decisions, while companies are becoming aware of the strategic importance of including ESG in their scorecards. Accordingly, multiple initiatives (e.g., Refinitiv Eikon, MSCI/KLD, Sustainalytics, or Bloomberg) have emerged to assess companies' ESG performance. However, stakeholders do not seem to be satisfied with current approaches to ESG assessment because the generic information provided (i.e., common assessments assumed to be suitable for all stakeholders) may not be aligned with their specific sustainability preferences (Silva et al., 2019). The main contribution of this paper is the proposal of a new approach to evaluate corporate ESG performance accounting for the different stakeholders' sustainability preferences.

The empirical results obtained refuse the first hypothesis proposed, demonstrating few heterogeneity in ESG preferences between the three groups of stakeholders. However, about two-thirds of the pairwise assessments showed no agreement between the stakeholders' indicator weighting, evidencing diverse preferences for the different ESG pillars among individual stakeholders. Thus, results obtained validate the second hypothesis, confirming that heterogeneity is mainly driven by stakeholder-specific preferences, irrespective of the group they belong to (i.e., investors, consumers, or academics). Finally, the results point to the rejection of the third hypothesis, as almost half of the stakeholders sampled showed no agreement in indicator weighting compared with a hypothetical stakeholder equally weighting all indicators. This last result would suggest that composite ESG indicators using equal weighting criteria, like those provided by advisory firms (e.g., *Refinitiv ESG Score*), may not be helpful for them in assessing firms' ESG performance. This is especially true for investors, since most of them showed indicator weights significantly different from equal weighting. These results support recent reports that point to the lack of investor confidence in ESG scores and their associated methodologies (Chalmers et al., 2021). All this evidence corroborates the relevance of individualizing the assessment approaches, considering the relativistic perspective from Bebbington (2001) and Costa and Pesci (2016).

However, when comparing stakeholder rankings, about half of these comparisons (52.9%) showed corresponding rankings and almost all stakeholders (17 out of 18) presented company rankings similar to those provided by the advisory firms considering equal weights for all indicators. These results somewhat contradict our expectations, showing that the company rankings resulting from the composite ESG indicators provided by independent advisory firms could be useful for a wide range of stakeholders in assessing firms' ESG performance. These results can be explained by accounting for the firms' indicator performance. As can be seen, companies' ESG performance tends to be holistic. Thus, those companies that perform well (badly) on one indicator tend to perform equally well (badly) on the others. This means that the rankings of firms are fairly similar for a wide spectrum of indicator weights since companies' ESG assessment relies more on their performance in the indicators than on the indicator weights.

These results may have important implications. First, the results of this paper should prompt advisory firms to reconsider how they construct ESG composite indicators, showing that more transparency and communication with stakeholders are needed when constructing these indicators in order to provide them with the most accurate and tailored information possible. At the same time, our results may provide these advisory firms with a line of defense to use when facing criticism regarding the standardized nature of the corporate rankings performed. Even though we have proved the heterogeneity in individual stakeholders' preferences regarding ESG practices, their assessments of firms' performance (firms' ranking) are fairly homogenous.

Second, at the management level, the evidence found here calls for stakeholders' interests and needs to be taken into account, as they could help firms to foster sustainable development, in line with the stakeholder theory (Hörisch et al., 2020). In fact, a positive ESG performance assessment could enhance corporate image and reputation and help ensure the satisfaction of managerial and non-managerial stakeholders, all of which could lead to improved corporate performance and effects on asset prices.

Third, the results of this study are also useful at the policy level, suggesting that public authorities could take different stakeholders' preferences into account in order to establish procedures aimed at democratizing the construction of performance indicators, limiting the scope of action of private rating agencies to leave room for the non-hegemonic social mass.[3] In relation to this issue, de Villiers and Marques (2016) find that in countries with stronger regulation governing the reporting of ESG performance, firms have better ESG scores.

Fourth and last, the outcomes of this study are valuable for all stakeholders since they prove the relevance of suitable procedures for evaluating corporate ESG performance. Sufficiently accurate stakeholder-specific procedures, like the one proposed here based on an ESG CI, are needed to enable useful, trustworthy benchmarking that can support stakeholders' decision-making.

Nevertheless, this study has some limitations. Given the sample size and the specificity of the food industry, results should be considered exploratory and further research will be required to corroborate the validity of the preliminary conclusions reached. In this respect, it would be interesting to extend the empirical evidence by considering other different sectoral and geographical contexts. Other research avenues worth exploring include comparing results (indicator weighting and ESG performance) from different ESG assessment approaches and raters to contribute to the growing body of literature analyzing the divergence among results from different ESG performance raters.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

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ENDNOTES

[1] According to Wood (1991, p. 693), ESG performance can be defined as the "business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships."

[2] For instance, Küçükbay and Sürücü (2019) proposed a new method for assessing corporate sustainability and implemented it for the assessment of 25 companies listed in Fortune 500 USA.

[3] The IOSCO (2021) has already pointed out that the work of the rating agencies may pose a conflict of interest and may distort the perception of companies' performance "in terms of the potential risks they pose to investor protection, market transparency and efficiency, price risks, and the allocation of capital. In addition, it may present the risk of 'greenwashing' or misallocation of resources, which could lead to a lack of confidence in the robustness or relevance of ESG data."

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How to cite this article: Luque-Vílchez, M., Gómez-Limón, J. A., Guerrero-Baena, M. D., & Rodríguez-Gutiérrez, P. (2023). Deconstructing corporate environmental, social, and governance performance: Heterogeneous stakeholder preferences in the food industry. *Sustainable Development*, *31*(3), 1845–1860. https://doi.org/10.1002/sd.2488