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ABSTRACT

Purpose

This study aims to analyse the role of persistence in the assessments carried out by sustainability agencies in the interaction between sustainability committee characteristics, sustainability strategies and performance.

Design/methodology/approach

We accessed a sample of European sustainable multinational and transnational companies (EMNs) for the period 2008–2017 from RobecoSAM universe. Using a set of simultaneous equation models, we test the effect of the sustainability committee on sustainability performance considering the sustainability strategy as a mediating element. Moreover, we analysed if the persistent assessment of sustainability agencies conditions the previous interaction.

Findings

Persistence of the sustainability assessment performed by an external agency is necessary to support the sustainability strategy and the sustainability committee, legitimating an organization in its institutional context.

Practical implications

This study provides practitioners with relevant insights into the identification of the sustainability strategy followed by an EMN and the effects associated with it can be useful for social and economic agents in decision-making processes.

Social implications

A persistent assessment could be a signal over time of the evolution of organizations, reinforcing the monitoring mechanisms. It is a stimulus to EMNs as they obtain both an indicator of their levels of performance and public recognition.

Originality/value

The lack of similarity in the levels of sustainable performance observed among companies can be explained by the persistence, which is an omitted variable in previous studies.

KEYWORDS: Sustainability strategy, multinational and transnational company, sustainability committee, performance, persistence.

INTRODUCTION

Economic globalization is the axis of the current world order, in which the global market is the generator of relationships among regions and countries. In this context, multinational and transnational companies (EMNs) are necessary elements because they are able to promote socio-economic relationships and environmental balance. Nowadays, EMNs should align their strategies with the Sustainable Development Goals managing environmental, social and governance (ESG) practices. It is at this point that academics wonder why EMNs have accepted this alignment and why they are collaborating on sustainability practices. In short, why are they managing their organizations according to sustainability strategies?

Sustainability strategies are a key element of a sustainability management (Baumgartner and Rauter, 2017). A sustainability strategy supposes the integration of stakeholders' needs into the corporate governance model to achieve higher levels of sustainability performance (environmental, social and economic) (Lee, 2011). Nowadays, sustainability committees are the corporate governance bodies responsible for the definition and implementation of sustainability strategies (Eberhardt-Toth, 2017). Different characteristics related to the composition of these committees have been analysed in previous studies, which have concluded that a sustainability committee, properly composed in terms of size, diversity and training, exerts a positive impact on social and environmental performance through the configuration of a sustainability strategy (Danvila *et al*., 2019; Orazalin, 2020).

However, a sustainability strategy and adequate composition of the sustainability committee could be necessary but not sufficient elements. In other cases, companies with similar sustainability committee composition should generate similar levels of sustainability performance. The relationship between sustainability committee

characteristics, sustainability strategies and sustainability performance has not been analysed extensively in previous studies (Jo and Harjoto, 2011; Sroufe and Gopalakrishna-Remani, 2018). We propose that the persistence of sustainability agencies in the assessment of sustainability practices over time is an omitted variable that could condition the activity of sustainability committees and the effectiveness of sustainability strategies. Persistence in assessment (henceforth, persistent assessment) is defined as the ability to maintain a performance ranking, relative to other entities, over a period of time (Lean *et al*., 2015, p. 255). Atwood *et al*. (2010), Dechow *et al*. (2010), Gregory *et al*. (2016) and Jia and Li (2021) studied the impact of organizations' earnings persistence. The relevance of this quality has also been analysed in the context of the socially responsible mutual fund industry (e.g. Pereira *et al*., 2019). All these studies inspired the extrapolation of this quality to sustainability assessment and the participation of EMNs in a sustainability ranking.

Despite the relevance of this notion, we cannot detect any previous studies that have explicitly considered the role of persistence in the assessments made by sustainability agencies in the interaction between sustainability committee characteristics, sustainability strategies and performance. McBrayer (2018) suggested that persistence in ESG monitoring mechanisms linked to disclosure and transparency could affect the sustainability strategy implemented by a firm. The external assessment performed by sustainability agencies (e.g. Vigeo-Eiris, MSCI, RobecoSAM and Sustainalytics) is highlighted as a monitoring instrument that is able to validate ESG efforts and order organizations according to their sustainability practices (Pagano *et al*., 2018). The assessor's persistence in its opinion about the ESG practices developed by an organization could influence the working of the sustainability committee and the progress of the sustainability strategy. Three explanations can be offered for this influence. First,

persistence in external assessments enables organizations to identify their weaknesses and strengths over time, providing a framework in which to implement improvement actions in relation to their sustainability strategy (Baumgartner, 2014). Second, the composition and working of the sustainability committee can be improved as the corporate governance dimension is an aspect that should be assessed by sustainability agencies (Sahar *et al*., 2019). Finally, persistence in these assessments, which are accessible, free and public, could serve investors and other financial agents as a way to identify increases and decreases in the levels of sustainability performance (López-Arceiz *et al*., 2020a). Although these points can explain the positive effects expected in the persistence of external assessments, we can detect a research gap in the previous literature, which has not empirically tested the role of persistent assessment undertaken by an external agency.

Therefore, the aim of our study is to analyse the role of persistence in the assessments carried out by sustainability agencies in the interaction between sustainability committee characteristics, sustainability strategies and performance. To achieve this aim, we access a sample of European EMNs for the period 2008–2017. These companies belong to the RobecoSAM universe, which is composed of publicly traded companies that are invited to participate in the S&P Global Corporate Sustainability Assessment (CSA). This study contributes to the literature in several ways. First, the success of a sustainability strategy is the consequence of the adequate composition of the sustainability committee and persistent assessment. Second, persistent assessment potentiates the activity undertaken by sustainability committees and the positive results linked to the implementation of a sustainability strategy, increasing their levels of legitimacy in the organizational context. Finally, this would also provide practitioners with relevant insights about the characteristics and usefulness of the assessment performed by sustainability agencies.

The remainder of this paper is structured as follows. Section 2 describes the theoretical framework. Section 3 presents the data, variables and statistical techniques. Section 4 and section 5 report and discuss the results, respectively. Finally, section 6 concludes the paper.

THEORETICAL FRAMEWORK

Sustainability committees and performance

Sustainability committees are specific board sub-committees that are in charge of the definition of the sustainability strategy implemented by organizations (Eberhardt-Toth, 2017). The emergence of this corporate body in EMNs can be explained through two basic theoretical approaches: the institutional theory (Meyer and Rowan, 1977; DiMaggio and Powell, 1983, 1991) and the stakeholder theory (Freeman, 1984). According to the institutional theory, the organizational context inspires the procedures and understandings by which organizations work and emphasizes how constitutive societal views come to be entrenched in organizations (Alshbili *et al*., 2019). Over the last few years, there have been growing formal institutional pressures (laws and government) in favour of the creation of a sustainability committee in EMNs. For instance, Jha and Aggrawal (2020) evidenced that companies acts have coercively pressured firms to create this kind of committee in some developing countries, such as India.[1] Pressure for the creation of sustainability committees is found not only in formal but also in informal institutions (norms, conventions and shared beliefs). For example, we can highlight, as a normative pressure, the recommendations of the International Institute for Sustainable Development (IISD, 2007), in which the creation of a new sustainability committee is suggested. Additionally, the implementation of a sustainability committee can be explained by mimetic pressure emerging from other organizations in the environment (Baraibar-Diez

and Odriozola, 2019; Orazalin and Mahmood, 2021). Then, there are coercive, normative and mimetic isomorphic pressures that lead organizations to adopt a sustainability committee as part of their governance body (Beddewela and Fairbrass, 2016). When EMNs act in accordance with these formal and informal institutional pressures, their legitimacy increases in markets and societies (Zattoni *et al*., 2020, p. 474). However, responding to these pressures is not enough to promote EMNs' optimal legitimacy.

According to the instrumental approach of the stakeholder theory (Donaldson and Preston, 1995), EMNs need the collaboration of their stakeholders,[2] who represent an allocation channel of emerging demands and play a critical mediating role between the organizational context and the EMNs (Lee, 2011). The integration of stakeholders' needs into the decision-making processes can imply the creation of new governance structures (Hung, 2011). Eberhardt-Toth (2017) highlighted the role of sustainability committees as a way to address the concerns of all the stakeholders, improving the legitimacy levels of organizations in their environment and leading, as a result, to higher levels of sustainability performance.

The previous literature has tested the positive interaction between the presence of a sustainability committee and the levels of sustainability performance (Biswas *et al*., 2018; Danvila *et al*., 2019; Peters *et al*., 2019; Orazalin, 2020; Orazalin and Mahmood, 2021; Uyar *et al*., 2021).[3] This positive effect increases with a diversified composition of this committee (Hillman *et al*., 2002; Carter *et al*., 2010; Ramon-Llorens *et al*., 2021). More recently, Eberhardt-Toth (2017) and Danvila *et al.* (2019) empirically evidenced that the sustainability committee's independence is also associated with higher levels of corporate social performance. Baraibar-Diez *et al*. (2019) further showed that the compensation policies associated with sustainability committee members are positively associated with social and environmental performance. These characteristics of the sustainability

committee are related to a larger committee size, which is needed to create a debate forum in which to exchange opinions and viewpoints (Eberhardt-Toth, 2017).

However, these authors did not analyse the impact of the different characteristics of the sustainability committee and the dimensions of sustainability performance (social, economic and environmental) interconnected in the context of EMNs. For this reason, we propose the following working hypothesis:

> H_1: The presence and adequate composition of a sustainability committee should improve the sustainability performance of an EMN.

The mediating role of a sustainability strategy

Currently, stakeholders are pressing EMNs to direct their activities towards the development of sustainability management in response to the formal and informal pressures presented in the previous subsection (Bergman *et al*., 2017). Sustainability management mixes different practices dealing with social, environmental and economic issues in an integrated manner to transform organizations in such a way that they contribute to the sustainable development of the economy and society (Schaltegger *et al*., 2016). Sustainability management demands a sustainability strategy,[4] which has the objective of determining long-term goals, ensuring and enhancing the legitimacy of corporate activities among stakeholders and society (Baumgartner, 2014, p. 261). The implementation of a sustainability strategy is the key tool for enhancing the active interrelationship and collaboration with stakeholders (Baumgartner and Rauter, 2017; Rodrigues and Franco, 2019).

The definition of a sustainability strategy and the capture of the corporate responses to stakeholders' demands will depend on the organizational structure and decision-making

bodies (Hussain *et al*., 2018). Specifically, sustainability committees play a substantial role as internal monitoring mechanisms, contributing to improving the governance structure and the levels of performance (Eberhardt-Toth, 2017; Al-Shaer and Zaman, 2018; García-Sánchez *et al.,* 2019; Elmaghrabi, 2021). However, a puzzling question concerns why EMNs with similar compositions of their sustainability committees generate different levels of sustainability performance (Velte and Stawinoga, 2020).

Naciti (2019) and Orazalin and Baydauletov (2020) partly answered this question by testing whether some aspects related to the presence of sustainability committees promote effective sustainability strategies.[5] A difference in strategies would lead to diverse levels of performance (Pirson and Turnbull, 2018; García-Sánchez *et al*., 2019; Arayssi *et al*., 2020). Diverse theoretical approaches can explain the role of the sustainability strategy as a mediating tool between the sustainability committee and the levels of sustainability performance. Orazalin (2020) used the stakeholder, resource dependency and upper-echelons theories to justify this role. According to this author, the sustainability strategy emerges as an organizational resource (resource dependency theory) that contributes to integrating stakeholders' needs (stakeholder theory) and is the result of the knowledge, skills and values of the sustainability committee members (upper-echelons theory). Kraus *et al*. (2020), using the resource-based theory, also justified the mediating role of a sustainability strategy, which is explained by the fact that it acts as a catalyst between the committee and the levels of performance, defining a valuable, rare, inimitable and organized resource of the company. Empirical results have also validated the mediating role of a sustainability strategy. Using data on the United Kingdom, Orazalin (2020) provided evidence that the presence of a sustainability committee improves the effectiveness of sustainability strategies and that firms with effective sustainability strategies exhibit better environmental and social performance. Similar conclusions were

presented by Rahman *et al*. (2021) who indicated that a sustainability strategy elaborated by the board's members is necessary to promote higher levels of sustainability performance. Sánchez-Hernández *et al*. (2021), conducting a bibliometric analysis of the previous literature, also deduced that the sustainability strategy defined by the committee facilitates competitive advantages and performance creation.

These studies analysed the mediating role of the strategy between the presence of a sustainability committee and the levels of sustainability performance. Nevertheless, we consider that the specific composition of this committee and its interaction with the sustainability strategy and performance levels of EMNs should also be investigated. For this reason, we propose the second working hypothesis:

> H_2: A sustainability strategy has a positive mediating effect on the relationship between the presence and composition of a sustainability committee and the level of sustainable performance.

The role of persistent assessment performed by sustainability agencies

The growing importance of sustainability strategies as a long-term management guide implies the adoption of tools that are useful for assessing the implementation of ESG practices. The multidimensional features of sustainability performance and the use of different methodologies for their assessment complicate their external analysis (Zhou *et al*., 2012). Currently, sustainability agencies provide investors with sustainability rankings that contribute to avoiding these obstacles. The sustainability agencies periodically assess the impact of sustainability strategies and use this assessment as the main axis for the elaboration of their sustainability rankings. Hence, the position that a

company occupies in one of these rankings shows the level that it has achieved in the implementation of ESG practices (López-Arceiz *et al*., 2020b). Thus, the assessment carried out by sustainability agencies emerges as an external monitoring mechanism to evaluate the level of development of these practices, also supporting the internal monitoring undertaken by sustainability committees.

Therefore, the assessments of these agencies can be understood as (a) rewards or incentives for the sustainability committee and (b) tools that give signals to investors and other economic and social agents. As a reward or incentive, a positive assessment can favour the observance of sustainability strategies and stimulate the talent motivation of the members of sustainability committees (Bethke-Langenegger *et al*., 2011). Using the goal-setting theory, Latham and Locke (2006) explained that motivation is a key aspect of the achievement of a positive performance. Financial and economic resources, technical capabilities and monetary incentives are necessary, but they do not guarantee that a sustainability committee will become efficient. Hence, the assessment performed by sustainability agencies complements the organizational resources, capabilities and incentives, acting as a learning tool for sustainability committees that can lead to higher performance (Lunenburg, 2011).

As a signalling tool, sustainability assessment provides a discriminating element that can guide the decisions of economic and social agents (López-Arceiz *et al*., 2020a). Danvila *et al*. (2019, p. 160) asserted that inclusion in sustainability indexes generates reputation and prestige, which can be a brief signal of the achievement of sustainable goals. Based on the signalling theory (Bergh and Gibbons, 2011; Connelly *et al*., 2011), we can deduce that the rankings elaborated by recognized agencies, as a signal of sustainability performance, can reduce the uncertainty in the future decisions of diverse economic and social agents, especially in financial markets. In fact, these assessments are signals

because they compile and complete asymmetric information about sustainability strategies and their impacts (Spence, 2002). Sustainability rankings can reduce the information gap that exists between organizations and markets despite the proliferation of non-financial information (Miller and Triana, 2009). In this sense, the role of persistence has recently been analysed in the Australian context by Jia and Li (2021). These authors analysed the role of earnings persistence in the levels of sustainability performance, evidencing a positive association between them. This notion could be extrapolated to the persistence in the assessments undertaken by sustainability agencies, which would provide information about organizational prospects in the future in relation to sustainability performance. Therefore, the ability of an EMN to maintain or improve its position in the different rankings would be a sign, similar to earnings persistence, of its commitment to sustainability over time.

Although we recognize the contributions made by previous studies, it is necessary to consider if persistent assessment conditions the interaction between sustainability committee, strategy and performance. We propose the following working hypothesis:

> H_3: Persistent assessment conditions the effect of the sustainability strategy as a mediating variable between the sustainability committee's composition and the level of sustainability performance

Figure 1 shows the theoretical model. The top of the pyramid represents the first working hypothesis (H_1), the second level introduces the mediating effect of the sustainability strategy (H_2) and the base considers the effect of persistent assessment (H_3).

INSERT_FIGURE_1

METHODOLOGY

Sample

To test our hypotheses, we analyse a sample of European EMNs during the period 2008–2017. These companies belong to the S&P Global (previous RobecoSAM) universe. They meet the definition of EMN, operating in more than sixteen countries. They are invited to participate in the Corporate Sustainability Assessment (CSA) process developed by the above-mentioned agency[6], obtaining different assessments. These assessments constitute an external vision, based on categories, about organizational prospects in the future in relation to sustainability performance. Additionally, participating in the CSA, these companies guarantee the comparability in terms of the accounting standards used and the annual reporting about the sustainability committee composition, sustainability strategy and the levels of sustainable performance. Table 1 presents the sample composition.

INSERT_TABLE_1

Consequently, the population is made up of 600 companies invited to participate in the CSA, of which 191 are part of the medal display table at the beginning of the sample period. Our sample was randomly selected and is composed of 536 companies that have been included in the Yearbook in any year during the interval 2008–2017, as shown in Table 1. The sample size is significant, considering a confidence level of 99% with a sample error of 1.85% (p=q=0.50). Information on each company was retrieved from

RobecoSAM, Orbis, Refinitiv DataStream and Refinitiv EIKON (previously Thomson Reuters).

Main variables

Sustainability committee

This variable comprises the composition of the sustainability committee (Hussain *et al*., 2018). In particular, we analyse the size (Eberhardt-Toth, 2017), independence (Hussain *et al*., 2018), cultural diversity (Naciti, 2019), gender diversity (Rao and Tilt, 2016) and compensation policy (Kartadjumena and Rodgers, 2019). These variables were retrieved from the ESG-Asset4 database in Refinitiv EIKON, and their definitions can be found in Annex I. Knowing the board member characteristics and the sustainability committee members, we can obtain the sustainability committee composition in terms of the above-mentioned variables.

Sustainability strategy

A sustainability strategy reflects an EMN's method for integrating economic, social and environmental dimensions into its day-to-day decision-making processes. This variable also considers the EMN's commitment to and effectiveness in following governance principles related to sustainability (Goergen and Tonks, 2019). This variable will influence the levels of sustainability performance positively (Wicher *et al*., 2019). The quantification of this variable, extracted from ESG-Asset4, is based on a dummy indicator (Annex I), which considers the design of a strategic sustainability plan (Lombardi *et al*., 2019).

Sustainability performance

Sustainability performance is composed of three dimensions: environmental, social and economic (López-Arceiz *et al*., 2018, p. 459). In this study, we use the social and environmental indexes available from the ESG-Asset4 (Annex I). These indexes measure a company's relative environmental and social performance, commitment and effectiveness across the areas shown in the Annex I. These indicators' values vary between 0 and 100. In relation to economic performance, we consider the return on assets (ROA) as an accounting measurement extracted from the Orbis database (Annex I).

Persistent assessment

We consider persistent assessment as the maintaining of a company's position in a sustainability ranking over time. In this study, we use the S&P Global Sustainability Yearbook (previously RobecoSAM Yearbook[7]) elaborated from the CSA. Based on this ranking, we analyse three categories: 1) medallist companies, a category that is composed of those EMNs that have achieved the highest level of sustainability performance in the ranking; 2) mentioned companies, which are companies that belong to the top category but maintain a lower level of sustainability performance than the medallists; and 3) non-mentioned companies that are assessed but are not part of the Yearbook. Additionally, we split this category, considering as controversial companies (4) those non-mentioned companies that are subject to a high ESG controversy score.[8] The persistent assessment in these categories takes into account the number of consecutive years for which the studied companies have belonged to each of the previous categories. Therefore, we consider a set of dummy variables to estimate the consecutive permanence during periods of nine years, seven years, five years, three years and one year.[9] The information used to build these variables was retrieved from the RobecoSAM agency and ESG-Asset4 (Annex I).

Statistical techniques

Given the objective of this study, a descriptive analysis of the main variables is carried out. After this analysis, a set of simultaneous equation models is specified. Simultaneous equation models enable us to implement a substantive theory and, at the same time, to obtain, test and estimate models based on robust statistics with multivariate non-normality (Satorra & Bentler, 2001). In these models, we analyse the effect of the sustainability committee composition on sustainability performance separately, using the sustainability strategy as a mediating element. The specification of the different equations is given by the following expressions [1–9]:

$$\eta_{1t}=\gamma_{1jt}*\xi_{jt} + \omega_{kt} + \theta_{ft} + \varphi_{kf} + \psi_{1fkt} \quad [1]$$

$$\eta_{2t}=\gamma_{2jt}*\xi_{jt} + \beta_{21t}*\eta_{1t} + \omega_{kt} + \theta_{ft} + \varphi_{kf} + \psi_{2fkt} \quad [2]$$

$$\eta_{3t}=\gamma_{3jt}*\xi_{jt} + \beta_{31t}*\eta_{1t} + \omega_{kt} + \theta_{ft} + \varphi_{kf} + \psi_{3fkt} \quad [3]$$

$$\eta_{4t}=\gamma_{4jt}*\xi_{jt} + \beta_{41t}*\eta_{1t} + \omega_{kt} + \theta_{ft} + \varphi_{kf} + \psi_{4fkt} \quad [4]$$

$$\xi_{jt}=X_{jt}+\delta_{jt} \quad [5]$$

$$\eta_{1t}=Y_{1t}+\varepsilon_{1t} \quad [6]$$

$$\eta_{2t}=Y_{2t}+\varepsilon_{2t} \quad [7]$$

$$\eta_{3t}=Y_{3t}+\varepsilon_{3t} \quad [8]$$

$$\eta_{4t}=Y_{4t}+\varepsilon_{4t} \quad [9]$$

where ξ_{jt} denotes the presence of a sustainability committee (ξ_{1t}) and its composition in terms of size (ξ_{2t}), independence (ξ_{3t}), cultural diversity (ξ_{4t}), gender diversity (ξ_{5t}) and compensation policy (ξ_{6t}). η_{1t} indicates the sustainability strategy, and η_{2t}, η_{3t} and η_{4t} represent the levels of sustainability performance (environmental, social and economic,

respectively). The models include various alternative combinations of specific effects, namely country–year (ω_{kt}), activity–year (θ_{ft}) and country–activity (φ_{kf}) fixed effects, which allow us to account for potential misspecification of the model and confounding effects. The term ψ defines the structural random error. Finally, expressions [5] to [9] represent the measurement model, in which the exogenous variables are introduced considering the measurement error (δ,ε).

Moreover, we estimate the effect of persistent assessment using a multigroup approach by testing, in each category (medallist, mentioned, non-mentioned and controversial categories), the number of consecutive years for which a company has remained in the same category according to the above-cited classification. A multigroup analysis is required when information from several groups is analysed at the same time (Tabachnick & Fidell, 2014). In this study, the medal display table and the results of the CSA process configure different groups whose analysis demands this technic[10]. Additionally, this latter methodological approach also enables us to consider robust statistics under multivariate non-normality.[11] The estimation method is ML with robust standard errors and COMPLEX correction to take into account the existence of non-normality and dependence among observations.

RESULTS

Table 2 shows the main descriptive statistics, including parametric and non-parametric tests for the equality of means by year, industry and country.

INSERT_TABLE_2

We highlight the increase in the presence of a sustainability committee from 59.620% in 2008 to 81.19% in 2017, although there is a certain level of harmonization among industries and countries. Moreover, approximately 60% of companies show the implementation of a sustainability strategy at the end of the sample period, with some differences in certain industries (e.g. healthcare industry: 51.51%). There is also some diversity in the levels of sustainability performance when considering the activity sector and countries. These results justify the inclusion of country–year, activity–year and country–activity fixed effects in the specified models. Table 2 also shows the descriptive statistics considering the medal display table categories defined by the RobecoSAM Yearbook. The presence and a better composition of a sustainability committee are observed in those entities not classified as controversial. For instance, medallist companies maintain a sustainability committee composed of 12.93 members (independent members: 50.03%; gender diversity: 31.58%; cultural diversity: 19.54%; compensation policy: 86.54%). This composition contrasts with the sustainability committees of the controversial companies. In addition, a sustainability strategy exists in those EMNs classified as medallist (71.07%) and mentioned (73.67%) companies, while it is present to a lesser extent in those entities that do not pass the CSA (e.g. controversial: 35.49%). A similar result is observed for the levels of sustainability performance, although the return on assets is higher in those EMNs that are classified as non-mentioned (8.07%) and controversial (8.91%). Finally, if we consider persistent assessment throughout the whole period studied (nine years), we find that the majority of the analysed companies tend to remain in the same category (e.g. medallist: 4.48%; mentioned: 9.89%; and controversial: 9.33%). Furthermore, the existence of a controversy impedes the posterior change to a higher category (medallist, mentioned and non-mentioned).

Table 3 contains the correlation matrixes for the whole sample and the two extreme categories, medallist and controversial.

INSERT_TABLE_3

Panel A shows the correlation matrix for the whole sample. We highlight the positive interactions observed between the different variables (p-value<0.010), with the exception of the economic return, for which inconclusive results are evidenced. The positive signs are present for the medallist category (Panel B), with only the interaction between the composition of the sustainability committee and the sustainability strategy with the economic return (p-value>0.100) disappearing. Finally, the sustainability strategy is not related to the sustainability committee composition for the controversial category (Panel C). Moreover, both the sustainability committee composition and the sustainability strategy show a negative correlation with the economic return and the environmental performance (p-value<0.100).

Having analysed the descriptive statistics, Table 4 shows the direct and indirect effects between the sustainability committee composition, the sustainability strategy and the three dimensions of sustainability performance. The results are presented for the whole period (nine years) considering the four previously defined categories.

INSERT_TABLE_4

According to the global fit indices, an acceptable fit is observed, which allows us to assess the proposed models. We confirm a positive interaction between the presence and composition of the sustainability committee and at least one aspect of the sustainability performance, in line with previous studies. Consequently, we cannot reject H_1. Nevertheless, we find evidence that this interaction weakens in the non-mentioned and controversial categories, in which negative parameters are obtained in relation to the economic return (p-value<0.050) and environmental performance (p-value<0.010). The mediating effect of the sustainability strategy could justify the observed diversity of signs.

The previous table also shows the results for the mediating effect of a sustainability strategy in the four categories. Focusing on the medallist category, we provide evidence that a larger size (0.030; p-value<0.010), members' independence (0.146; p-value<0.010), diversity (0.069; 0.070; p-value<0.010) and compensation policies exert a positive impact on the sustainability strategy (0.174; p-value<0.010). The same results can be observed in the mentioned and non-mentioned categories, but they change in those companies that are subject to controversial issues. In the latter case, the composition of the sustainability committee does not influence the sustainability strategy (p-value>0.100). Moreover, we observe that those entities that are classified as medallists maintain a positive interaction between the sustainability strategy and the social and environmental performance (0.081; 0.098; p-value<0.010), although this effect disappears when the return on assets is considered (p-value>0.100). This result contrasts with those of the mentioned companies, in which the latter sign is positive (0.001; p-value<0.010), this being the main difference between the two categories. We note that mentioned companies (model 2) develop an unbalanced strategy in which they sacrifice environmental performance (0.085; p-value<0.010) in the search for positive levels of economic performance. Both non-mentioned and controversial categories show a

negative influence of a sustainability strategy in terms of economic performance (p-value<0.050). Additionally, the interaction between the sustainability strategy and the environmental performance (-0.156; p-value<0.010) even becomes negative in controversial companies. The analysis of the indirect effects confirms a positive mediating effect in medallist, mentioned and non-mentioned companies, although with differences for economic returns (p-value<0.010). Therefore, we cannot reject H_2 as the sustainability strategy plays a mediating role. Nevertheless, the sign of this effect seems to be conditioned by the external assessment.

Table 5 shows the results considering the persistence of external assessment over time. We present the effects for seven, five, three and one consecutive years of permanence in the previously defined categories. We note that the non-mentioned category from the RobecoSAM universe has no persistence as these entities transfer to the other three categories over time.

INSERT_TABLE_5

We observe that EMNs maintain the same pattern over time, although it tends to weaken for short periods of time (e.g. one year, three years). Medallist companies have a properly composed sustainability committee, which decides the sustainability strategy of the organization (p-value<0.050) and causes the achievement of positive levels of environmental (p-value<0.050) and social performance (p-value<0.010). Nevertheless, we highlight that the sustainability strategy does not affect the level of returns in these entities (p-value>0.100). These results contrast with those obtained for mentioned companies (Panel B), the strategy of which is unsuccessful because it tends to promote

one dimension of performance to the detriment of the others. Panel C shows the results for those EMNs that are classified as controversial. The composition of the sustainability committee and the sustainability strategy are not related (p-value>0.100). This dissociation unbalances the relationships among the different types of performance and is associated with negative impacts in both environmental (p-value<0.050) and economic terms (p-value<0.100).

The indirect effects show a similar pattern. Positive indirect effects are observed between the sustainability committee characteristics and the levels of social and environmental performance of medallist companies during the first year (Panel A). This indirect effect disappears in the case of the mentioned companies (p-value>0.100), which only conserve a positive interaction with social performance (Panel B). The latter interaction is also present in those companies facing a controversy (Panel C), although negative indirect effects are obtained in the case of environmental performance and economic returns (p-value<0.050). The evolution over time stresses these results and leads us not to reject H_3 as the mediating effect of a sustainability strategy is conditioned by persistent assessment.

DISCUSSION

The results show that the presence of a sustainability committee positively influences the levels of performance achieved by organizations. This positive interaction has been evidenced by Biswas *et al*. (2018), Danvila *et al*. (2019), Peters *et al*. (2019), Baraibar-Diez and Odriozola (2019), Orazalin (2020), Uyar *et al*. (2021) and Orazalin and Mahmood (2021), among others. Moreover, we observe that some characteristics related to the composition of these committees, such as their size, independence, cultural diversity, gender and compensation policies, enhance the levels of performance in accordance to Rao and Tilt (2016), Eberhardt-Toth (2017), Naciti (2019), Kartadjumena

and Rodgers (2019), Radu and Smaili (2021) and Elmaghrabi (2021). In addition, we note that these committees will improve companies' working if they are able to define an efficient sustainability strategy. In this sense, Orazalin (2020) and Kraus *et al*. (2020) pointed out the mediating role of the strategy as a nexus between the committee and the performance levels. The results obtained support the mediating role of the sustainability strategy, evidencing that a sustainability committee is a promotor of sustainability among the corporate governance bodies of an EMN.

However, the interaction between the studied variables defines a different perception of the meaning of a sustainability strategy in accordance with Lee (2011). Currently, these perceptions are conditioned by sustainability agencies, which play a key role in signalling the levels of sustainability of an EMN. According to the signaling theory, companies are pressure to share organizational information as a way to signal that they are better than their competitors, attracting investors and improving their reputation (Verrecchia, 1983). Our results evidence that sustainability rankings are a tool to signal the sustainability levels of an organization, contributing to the detected gap in the literature in this field. Moreover, we highlight that previous studies focus on sustainability reporting as a way to signal (e.g. Halimah et al., 2020), but they do not consider either the implications of signaling or the interaction with the sustainability committee.

In relation to the implications of signaling, we highlight that these agencies define the concept of sustainability that EMNs should adopt to avoid being excluded from financial markets. Hence, the top categories in a sustainability ranking define the standards of sustainability of these agencies. Some companies, as in the case of medallist companies, use their sustainability strategy as a tool to achieve a perception of high levels of social, environmental and economic performance. In contrast, companies that are the subject of an ESG controversy (controversial companies) are characterized by the uselessness of the

defined sustainability strategy in creating a positive perception of their social and environmental performance. Therefore, EMNs with similar sustainability committee composition could lead to different sustainability strategies and outcomes. Our results reveal that these differences could be explained by the role of the external monitoring mechanisms.

Additionally, the internal monitoring carried out by a sustainability committee can be reinforced by the external monitoring via persistent assessment undertaken by sustainability agencies. Persistent assessment in the rankings compiled by sustainability agencies influences the interactions between sustainability committee, strategy and performance. Our results evidence this positive effect but also reveal that it increases when the sustainability assessment persists. As a reward or incentive, a positive assessment can favour the observance of sustainability strategies and stimulate the talent and motivation of the members of sustainability committees (Bethke-Langenegger et al., 2011). According to Latham and Locke (2006), motivation affects the levels of performance, but it is not be sufficient. Then, this study contributes to previous literature, evidencing that persistence assessment is key in the motivation of sustainability committee members.

Therefore, persistent assessment can play the role of both an incentive for sustainability committee members according to the goal-setting theory (Locke and Latham, 1990, 2002) and a signal for investors about the effectiveness of a sustainability strategy (Danvila et al., 2019). Both aspects are the main contribution of this study. Consequently, we show that the persistent assessment is necessary to improve the activity of the sustainability committee, guiding the sustainable strategy of the organization and improving the levels of sustainable performance. In this sense, the persistent assessment in sustainability rankings is a means to identify the level of commitment to an external model of

sustainability. This commitment, expressed through participation in a sustainability ranking, will be perceived as a signal of reputation and recognition by investors and markets, as concluded by Danvila et al. (2019).

CONCLUSIONS AND IMPLICATIONS

This study aimed to analyse the role of persistence in the assessment undertaken by sustainability agencies in the interaction between sustainability committee characteristics, sustainability strategies and performance. The results reveal that the presence and adequate composition of a sustainability committee do not guarantee high levels of sustainability performance. A successful sustainability strategy is a key element in arbitrating the interaction between the sustainability committee and the levels of performance. However, this interaction cannot be sufficient. Persistence of the sustainability assessment carried out by an external agency is necessary to support the sustainability strategy and the working of the sustainability committee, legitimating an organization in its institutional context.

Our results have managerial, social and political implications. The implementation of a sustainability strategy demands that three elements must be present. First, an adequate composition of the sustainability committee is required. In this sense, larger committees enable the integration of different viewpoints, which are complemented by the integration of independent and diverse members, who can provide different skills and perspectives. Moreover, the definition of a compensation policy based on the levels of sustainability performance achieved could incentivize the purpose of the sustainability committee. Second, an assessment performed by a sustainability agency of the implementation of ESG practices is necessary. This assessment has been shown to be a useful element in valuing the definition and implementation of a sustainability strategy. Finally, this

assessment must be persistent, reflecting the efforts exerted in the implementation of ESG practices over time.

This result also has implications related to social aspects and the integration of stakeholders' needs. Persistence in terms of sustainability assessment would pressure organizations in their commitment to sustainability. It could be considered as a signal over time of the evolution of organizations, reinforcing the monitoring mechanisms. Consequently, persistent assessment in a sustainability ranking, understood as a legitimation tool, would be a proxy for the level of satisfaction of the stakeholders' needs and their involvement in the development of sustainability practices. This effect could be especially relevant in the case of investors. Persistent assessment of EMNs in sustainability rankings provides useful information for investors who are considering designing a strategy based on investment in sustainable companies.

Moreover, in a context in which countries are promoting sustainability practices, the rankings elaborated by sustainability agencies are a stimulus to EMNs as they can obtain not only an indicator of their levels of performance but also public recognition. Nevertheless, small and medium organizations are excluded from these rankings, with few possibilities to participate in these assessment processes. Additionally, these agencies do not share measurement criteria and sustainability models. Regulatory bodies should make efforts to harmonize the criteria for measuring sustainability with the possibility of designing and promoting monitoring mechanisms in the context of international organizations and including the reality of small and medium organizations. This process could favour the comparability among the assessment processes developed by sustainability agencies.

Finally, we consider some limitations of this study. In the identification of persistent assessment, we used the RobecoSAM Yearbook. This ranking is mainly based on the

assessment of each organization undertaken through the CSA questionnaire. This limitation of sustainability rankings has already been pointed out by Székely and Knirsch (2005), who criticized the criteria used by sustainability agencies. Future studies comparing indicators should be developed as a previous step in a possible process of harmonization. Furthermore, we focused on sustainability committee practices. A sustainability strategy could be influenced by other corporate governance practices associated with the board. Moreover, the measurement of environmental and social performance is based on ESG criteria. This study should also be undertaken using companies that are not classified as EMNs. These limitations open future research directions that can improve our understanding of the notion and practices of sustainability.

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Figure 1. Theoretical model

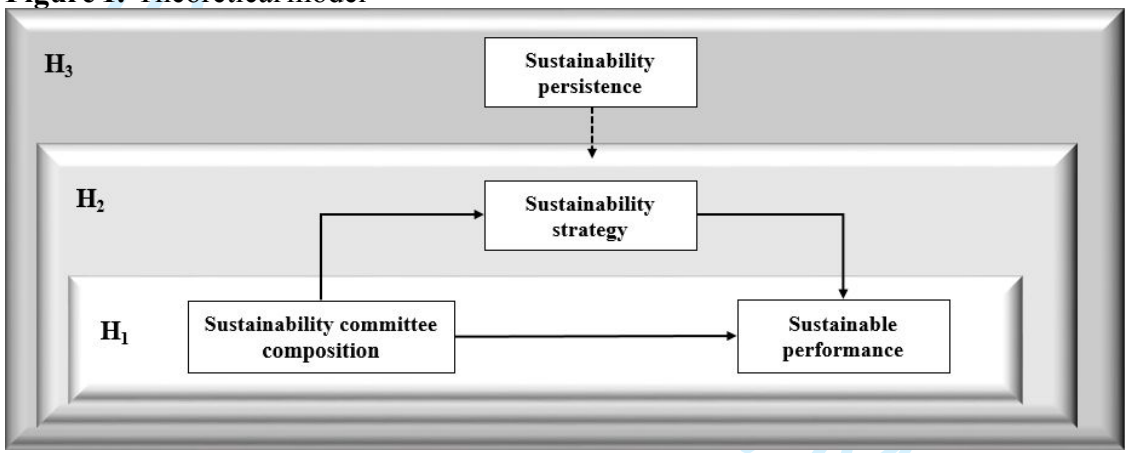

Table 1. Sample composition

Population	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Invited in Europe	600	600	600	600	600	600	600	600	600	600
Accepting invitation	594	594	595	593	595	592	593	597	597	592
Medal display table	191	198	210	200	205	211	208	208	197	197
Medal category	119	120	138	145	113	110	105	108	111	122
Mentioned category	72	78	72	55	92	101	103	100	86	75
Out medal display table	403	396	385	393	390	381	385	389	400	395
Controversial	124	111	151	146	126	149	130	76	133	130
Non-controversial	279	285	234	247	264	232	255	313	267	265
Sample	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Sample in Europe	403	410	422	412	417	423	420	420	409	409
Medal display table	191	198	210	200	205	211	208	208	197	197
Medal category	119	120	138	145	113	110	105	108	111	122
Mentioned category	72	78	72	55	92	101	103	100	86	75
Out medal display table	212	212	212	212	212	212	212	212	212	212
Controversial	108	93	85	79	78	73	62	51	52	41
Non-controversial	104	119	127	133	134	139	150	161	160	171

Table 2. Descriptive statistics by year and activity sector

Variable	2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	Mean	S.d.	Mean	S.d..	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.
Sustainability Committee																				
Presence (%)	59.62	49.12	80.38	39.75	84.24	36.48	87.73	32.84	88.51	31.93	88.64	31.77	83.78	36.90	81.39	38.96	82.54	38.00	81.19	39.12
Size	9.33	6.85	11.45	5.71	12.07	5.62	12.14	5.49	12.23	5.34	12.13	5.48	11.46	5.47	11.19	5.42	11.43	5.17	10.96	5.07
Independence (%)	29.31	30.63	41.89	28.25	42.73	25.15	46.82	24.83	48.27	23.49	48.64	23.73	40.42	26.33	38.15	26.70	40.22	26.14	41.65	26.94
Cultural diversity (%)	11.59	19.38	23.85	28.16	32.74	33.05	35.15	32.95	35.88	32.71	36.58	32.66	26.63	28.81	31.82	32.46	33.58	33.51	32.78	33.28
Gender diversity (%)	8.17	10.47	11.50	11.02	14.24	11.02	16.09	10.64	18.93	11.09	21.14	11.61	23.45	11.95	24.47	12.78	27.07	13.14	28.55	13.57
Compensation policy (%)	53.35	49.95	74.94	43.39	79.02	40.76	82.65	37.91	83.97	36.73	83.92	36.77	79.44	40.46	78.42	41.18	79.81	40.18	79.28	40.57
Sustainable strategy (%)	57.58	31.16	59.15	29.99	58.59	29.97	59.43	29.39	58.75	28.77	59.04	27.93	57.95	28.56	59.09	28.49	59.21	27.74	59.96	26.64
Sustainable performance																				
ROA	5.73	12.05	5.67	8.29	7.99	8.86	6.75	8.99	6.24	11.41	7.02	12.95	6.80	14.37	6.06	15.07	6.47	14.34	7.77	14.06
Social performance	62.50	22.46	63.97	22.55	64.85	22.24	65.92	22.46	65.23	21.53	65.54	21.46	65.11	22.20	68.82	20.46	70.15	19.43	71.50	17.55
Environmental performance	62.84	26.34	64.94	25.80	65.55	24.99	66.20	24.41	66.42	23.12	67.26	23.09	65.85	24.16	67.56	24.54	68.28	23.25	69.04	22.53

Variable	Energy		Basic materials		Industrials		Consumer cyclicals		Consumer non-cyclicals		Financials		Healthcare		Technologies		Utilities		Real State	
	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.
Sustainability Committee																				
Presence (%)	81.90	38.58	84.72	36.01	78.86	40.85	82.59	37.95	80.94	39.34	74.25	43.75	72.89	44.53	77.69	41.69	87.56	33.08	80.23	39.94
Size	10.06	5.80	10.99	5.64	10.51	6.27	10.54	6.24	9.90	6.76	9.88	6.57	9.17	6.16	10.65	6.03	10.65	6.40	10.636	6.39
Independence (%)	39.08	27.88	42.74	26.01	38.15	27.99	40.38	28.07	35.81	29.15	30.02	28.88	34.52	27.17	41.12	28.17	38.06	29.39	41.448	27.22
Cultural diversity (%)	31.01	31.11	30.30	30.67	30.21	31.44	31.31	31.10	31.07	30.05	26.14	31.17	30.39	32.30	32.24	33.62	37.00	34.49	33.458	34.1
Gender diversity (%)	17.96	12.68	17.98	12.77	18.66	14.18	18.24	12.88	16.27	13.20	17.15	14.22	18.05	13.80	18.07	13.51	16.92	14.08	17.6	13.37
Compensation policy (%)	79.31	40.60	82.93	37.66	76.77	42.26	81.53	38.83	79.18	40.67	70.43	45.66	71.66	45.15	74.92	43.41	88.07	32.50	78.43	41.26
Sustainable strategy (%)	65.89	26.44	66.39	28.05	61.47	27.085	60.07	26.79	63.40	23.86	58.18	28.37	51.51	30.79	58.16	30.82	69.64	22.80	62.786	27.88
Sustainable performance																				
ROA	5.02	7.92	6.17	7.88	6.48	8.67	6.57	8.44	6.56	7.22	5.18	10.25	6.80	9.98	12.22	33.42	5.37	6.72	6.808	6.74
Social performance	70.83	17.07	67.42	22.75	66.74	19.79	67.03	20.97	67.30	19.99	63.92	21.08	66.09	20.70	65.95	23.39	75.53	14.64	68.303	20.87
Environmental performance	72.47	18.28	69.88	22.48	67.55	21.98	67.07	24.09	70.29	21.62	64.66	25.19	61.21	24.95	64.01	25.76	78.11	13.33	68.321	24.32

ANOVA and Kruskall-Wallis reveal significant differences among the studied categories (p-valor<0.050) when the variables year is considered. These tests are also significant for the activity sectors (p-valor<0.050), except for size and gender diversity (p-valor>0.100).

Table 2. Descriptive statistics country (cont.)

Variable	Austria		Belgium		Denmark		Finland		France		Germany		Ireland		Italy	
	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.
Sustainability Committee																
Presence (%)	76.67	42.65	72.55	44.84	83.06	37.65	78.41	41.26	85.30	35.44	75.46	43.07	57.14	49.93	69.03	46.34
Size	11.28	3.29	12.27	5.90	8.36	6.54	10.68	5.13	10.72	6.11	9.80	6.01	11.71	2.36	10.14	6.61
Independence (%)	56.34	22.18	41.68	26.74	31.57	30.28	45.90	27.25	40.46	27.35	39.20	29.20	56.14	12.01	36.60	31.15
Cultural diversity (%)	30.78	33.38	28.34	28.56	35.09	29.70	30.87	34.25	35.08	34.39	24.74	30.10	16.34	23.80	29.03	32.66
Gender diversity (%)	19.72	11.69	20.37	13.60	16.07	13.70	21.31	13.37	17.56	13.18	17.43	13.39	18.01	10.57	18.66	13.83
Compensation policy (%)	63.79	48.48	69.79	46.15	81.25	39.20	75.63	43.06	81.49	38.86	73.73	44.05	54.55	50.25	67.65	48.89
Sustainable strategy (%)	65.23	30.51	45.04	31.61	55.84	32.28	59.17	29.80	57.15	29.70	55.56	28.82	55.79	25.93	61.02	30.91
Sustainable performance																
ROA	3.03	4.30	2.96	9.73	8.32	12.51	8.04	10.52	5.28	6.61	6.06	8.66	6.23	3.86	5.58	7.47
Social performance	60.31	22.60	49.68	30.77	62.58	22.31	68.29	20.61	67.57	19.37	65.42	22.46	55.93	20.11	67.08	20.92
Environmental performance	66.79	18.44	53.03	33.80	57.23	27.56	71.01	19.49	69.60	20.13	64.17	26.15	56.99	23.48	69.43	24.50

Variable	Luxembourg		Netherlands		Norway		Portugal		Spain		Sweden		Switzerland		United Kingdom	
	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d..	Mean	S.d.	Mean	S.d.
Sustainability Committee																
Presence (%)	85.37	35.78	83.81	36.91	86.60	34.24	85.48	35.51	83.64	37.05	80.54	39.65	67.26	46.98	82.62	37.91
Size	11.63	6.98	10.62	6.30	10.93	5.81	10.64	6.84	10.44	6.54	10.68	5.99	9.54	6.09	10.25	6.51
Independence (%)	32.64	24.15	33.98	26.94	39.72	25.28	36.18	30.68	35.91	28.32	43.74	28.24	37.53	28.98	36.70	27.56
Cultural diversity (%)	43.93	35.70	37.45	34.29	29.93	30.15	43.60	36.38	33.42	31.69	29.21	28.01	26.13	31.81	28.85	30.27
Gender diversity (%)	14.96	10.77	17.35	13.04	17.23	12.52	18.72	15.22	17.17	14.27	19.79	14.06	18.59	13.82	17.47	13.78
Compensation policy (%)	83.33	37.79	83.57	37.14	85.06	35.85	88.89	31.72	81.03	39.28	77.34	41.94	62.84	48.38	82.68	37.85
Sustainable strategy (%)	64.53	29.66	63.74	29.94	65.76	24.91	67.13	22.38	67.13	26.00	54.22	31.32	50.65	30.43	65.17	24.11
Sustainable performance																
ROA	5.27	4.34	6.19	8.55	6.33	6.62	3.23	15.23	6.41	6.69	7.37	12.35	6.89	8.52	8.26	18.78
Social performance	65.61	23.37	72.74	17.96	72.81	16.33	77.13	12.14	72.72	16.96	66.74	18.27	58.81	24.75	68.16	19.54
Environmental performance	64.20	24.00	72.16	21.30	70.99	20.32	77.01	15.79	74.15	15.96	61.93	23.36	58.15	25.572	68.36	23.20

ANOVA and Kruskall-Wallis reveal significant differences among the studied categories (p-valor<0.050), except for size and gender diversity (p-valor>0.100).

Table 2. Descriptive statistics by medal display table (cont.)

Variable	Medallist		Mentioned		Non-mentioned		Controversial	
	Mean	S.d.	Mean	S.d.	Mean	S.d.	Mean	S.d.
Sustainability Committee								
Presence (%)	87.800	32.900	87.200	33.400	63.900	48.100	58.900	49.200
Size	12.929	4.548	13.051	4.805	10.448	3.523	10.197	3.364
Independence (%)	50.034	21.838	47.802	21.938	49.577	21.911	42.198	22.248
Gender diversity (%)	19.536	12.947	19.292	13.087	18.369	13.053	19.259	13.645
Cultural diversity (%)	31.584	31.499	28.816	29.027	17.340	24.864	16.918	26.133
Compensation policy (%)	86.540	31.146	86.680	34.008	61.170	48.754	55.440	49.730
Sustainable strategy (%)	71.071	21.087	73.674	18.768	38.528	29.652	35.489	28.950
Sustainable performance								
ROA	5.142	9.198	5.696	9.943	8.073	16.389	8.905	19.858
Social performance	75.174	14.011	75.161	13.794	50.532	23.106	48.778	23.086
Environmental performance	77.643	14.228	77.318	14.115	46.283	25.456	43.566	25.312
Sustainable persistence								
Nine years (%)	4.478	4.277	9.888	8.910	0.000	0.000	9.328	8.458
Eight years (%)	0.933	0.924	1.866	1.831	0.000	0.000	5.037	4.784
Seven years (%)	2.239	2.189	3.545	3.419	0.000	0.000	4.664	4.447
Six years (%)	0.560	0.557	4.291	4.107	0.000	0.000	2.612	2.544
Five years (%)	1.306	1.289	4.478	4.277	0.000	0.000	2.239	2.189
Four years (%)	2.239	2.189	3.918	3.764	0.000	0.000	1.119	1.107
Three years (%)	1.306	1.289	2.052	2.010	0.000	0.000	2.239	2.189
Two years (%)	1.493	1.470	2.985	2.896	0.000	0.000	1.866	1.831
One year (%)	2.985	2.896	3.172	3.071	0.000	0.000	2.612	2.544
Non-persistence (%)	1.493	1.470	5.037	4.784	8.022	7.379	0.000	0.000

ANOVA and Kruskall-Wallis tests reveal significant differences among the studied categories (p-valor<0.010)

Tabla 3. Correlation matrix

Panel A. Whole sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Presence (%)									
Size	0.787***								
Independence (%)	0.750***	0.637***							
Cultural diversity (%)	0.563***	0.348***	0.445***						
Gender diversity (%)	0.522***	0.387***	0.527***	0.328***					
Compensation policy (%)	0.894***	0.618***	0.654***	0.523***	0.407***				
Sustainable strategy (%)	0.544***	0.396***	0.362***	0.347***	0.159***	0.551***			
ROA	-0.103***	-0.100***	0.002	-0.044**	0.023	-0.093***	-0.088***		
Environment Pillar Score	0.408***	0.300***	0.161***	0.340***	0.166***	0.425***	0.618****	-0.091***	
Social Pillar Score	0.437***	0.293***	0.230***	0.314***	0.232***	0.430***	0.633***	-0.126***	0.713***

Panel B. Medallist

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Presence (%)									
Size	0.767***								
Independence (%)	0.736***	0.588***							
Cultural diversity (%)	0.480***	0.335***	0.491***						
Gender diversity (%)	0.481***	0.336***	0.491***	0.989***					
Compensation policy (%)	0.705***	0.498***	0.652***	0.258***	0.258***				
Sustainable strategy (%)	0.412***	0.413***	0.293***	0.148***	0.148***	0.279***			
ROA	0.002	-0.062	0.002	0.013	0.013	0.017	0.058		
Environment Pillar Score	0.279***	0.348***	0.198***	0.139***	0.140***	0.154***	0.370***	0.069*	
Social Pillar Score	0.328***	0.383***	0.274***	0.243***	0.244***	0.170***	0.277***	-0.067*	0.484***

Panel C. Controversial

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Presence (%)									
Size	0.862***								
Independence (%)	0.918***	0.875***							
Cultural diversity (%)	0.663***	0.512***	0.658***						
Gender diversity (%)	0.663***	0.512***	0.657***	0.998***					
Compensation policy (%)	0.988***	0.862***	0.918***	0.663***	0.662***				
Sustainable strategy	0.387	0.342	0.274	0.225	0.224	0.379			
ROA	-0.202***	-0.267***	-0.199***	-0.192***	-0.192***	-0.201***	-0.142**		
Environment Pillar Score	-0.298**	-0.266*	-0.258*	-0.254*	-0.254*	-0.298*	-0.548***	0.200	
Social Pillar Score	0.289**	0.418**	0.318**	0.378**	0.377**	0.289**	0.540***	0.290**	0.652***

***p-value<0.010; **p-value<0.050; *p-value<0.100

Tabla 4. Results for estimated models by category (nine years)

	Model 1. Medallist				Model 2. Mentioned			
	Sustainable strategy	**SP**	**EP**	**ROA**	**Sustainable strategy**	**SP**	**EP**	**ROA**
Direct effects								
Presence	0.002***	0.002***	0.002***	0.001	0.003***	0.002***	0.002***	0.001***
Size	0.030***	0.020***	0.024***	0.001	0.032***	0.020***	0.020***	0.007***
Independence	0.146***	0.100***	0.118***	0.004	0.116***	0.073***	0.071***	0.023***
Cultural Diversity	0.069***	0.047***	0.057***	0.002	0.061***	0.038***	0.037***	0.012***
Gender Diversity	0.070***	0.048***	0.058***	0.002	0.062***	0.038***	0.038***	0.013***
Compensation policy	0.174***	0.119***	0.141***	0.005	0.175***	0.110***	0.108***	0.035***
Sustainable strategy		0.081***	0.098***	0.003		0.085***	0.083***	0.027***
Indirect effects								
Presence		0.001***	0.001***	0.000		0.001***	0.001***	0.001***
Size		0.003***	0.003***	0.000		0.003***	0.003***	0.001***
Independence		0.014***	0.012***	0.001		0.010***	0.010***	0.003***
Cultural diversity		0.007***	0.006***	0.000		0.005***	0.005***	0.002***
Gender diversity		0.007***	0.007***	0.001		0.006***	0.005***	0.003***
Compensation policy		0.017***	0.014***	0.000		0.015***	0.016***	0.006***
Year-Country		YES				YES		
Activity-Year		YES				YES		
Country-Year		YES				YES		
R^2	0.175	0.152	0.109	0.001	0.150	0.082	0.079	0.010
Goodness-of-fit	$\chi^2_{(23)}$: 59.973	RMSEA: 0.068	SRMR: 0.043	NFI: 0.946	$\chi^2_{(23)}$: 59.120	RMSEA: 0.026	SRMR: 0.051	NFI: 0.932

	Model 3. Non-mentioned				Model 4. Controversial			
	Sustainable strategy	**SP**	**EP**	**ROA**	**Sustainable strategy**	**SP**	**EP**	**ROA**
Direct effects								
Presence	0.004***	0.003***	0.002***	-0.001***	0.001	0.003**	-0.003***	-0.003**
Board size	0.046***	0.028***	0.025***	-0.012***	0.011	0.029**	-0.033***	-0.026**
Board independence	0.234***	0.145***	0.129***	-0.061***	0.061	0.153**	-0.175***	-0.141**
Cultural diversity	0.231***	0.143***	0.127***	-0.060***	0.059	0.146**	-0.167***	-0.135**
Gender diversity	0.230***	0.142***	0.126***	-0.059***	0.060	0.145**	-0.168***	-0.134**
Compensation policy	0.004***	0.003***	0.002***	-0.001***	0.001	0.003**	-0.003***	-0.003**
Sustainable strategy		0.147***	0.130***	-0.061***		0.137**	-0.156***	-0.125**
Indirect effects								
Presence		0.001***	0.001***	-0.003***		0.002	0.002	-0.001
Size		0.006***	0.007***	-0.014***		0.010	0.008	-0.008
Independence		0.030***	0.034***	-0.015***		0.009	0.008	-0.007
Cultural diversity		0.030***	0.033***	-0.014***		0.009	0.008	-0.007
Gender diversity		0.031***	0.034***	-0.001***		0.000	0.000	0.000
Compensation policy		0.001***	0.001***	-0.001***		0.000	0.000	0.000
Year-Country		YES				YES		
Activity-Year		YES				YES		
Country-Year		YES				YES		
R^2	0.458	0.220	0.281	0.049	0.028	0.180	0.275	0.211
Goodness-of-fit	$\chi^2_{(23)}$: 46.889	RMSEA: 0.066	SRMR: 0.059	NFI: 0.975	$\chi^2_{(23)}$: 53.132	RMSEA: 0.081	SRMR: 0.065	NFI: 0.926

***p-value<0.010; **p-value<0.050; *p-value<0.100

Table 5. Panel A. Results for estimated models by years of persistence. Category: Medallist

	Persistence: Seven years				Persistence: Five years			
	Sustainable strategy	**SP**	**EP**	**ROA**	**Sustainable strategy**	**SP**	**EP**	**ROA**
Direct effects								
Presence	0.005***	0.001*	0.002**	0.001	0.004***	0.001*	0.002***	0.001
Board size	0.065***	0.018*	0.027**	0.013	0.034***	0.010*	0.016***	0.009
Board independence	0.346***	0.096*	0.141**	0.070	0.271***	0.079**	0.128***	0.073
Cultural diversity	0.156***	0.043*	0.064**	0.031	0.110***	0.032*	0.052***	0.030
Gender diversity	0.433***	0.121*	0.177**	0.087	0.291***	0.085*	0.137***	0.078
Compensation policy	0.005***	0.001*	0.002**	0.001	0.004***	0.001*	0.002***	0.001
Sustainable strategy		0.084**	0.123**	0.061		0.052*	0.084***	0.048
Indirect effects								
Presence		0.001**	0.001**	0.001		0.001*	0.001**	0.001
Size		0.005**	0.008**	0.004		0.002*	0.003**	0.002
Independence		0.029**	0.042**	0.021		0.014*	0.023**	0.013
Cultural diversity		0.013**	0.019**	0.009		0.006*	0.009**	0.005
Gender diversity		0.036**	0.053**	0.026		0.015**	0.024**	0.014
Compensation policy		0.001**	0.001**	0.001		0.001*	0.001**	0.001
Year-Country		YES				YES		
Activity-Year		YES				YES		
Country-Year		YES				YES		
R^2	0.597	0.174	0.081	0.042	0.403	0.049	0.129	0.042
Goodness-of-fit	$\chi^2_{(23)}$: 42.163	RMSEA: 0.128	SRMR: 0.085	NFI: 0.903	$\chi^2_{(23)}$: 72.397	RMSEA: 0.177	SRMR: 0.077	NFI: 0.825

	Persistence: Three years				Persistence: One year			
	Sustainable strategy	**SP**	**EP**	**ROA**	**Sustainable strategy**	**SP**	**EP**	**ROA**
Direct effects								
Presence	0.004***	0.002***	0.003***	0.000	0.003***	0.001**	0.002***	0.001
Board size	0.047***	0.023**	0.034***	0.005	0.043***	0.019**	0.034***	-0.003
Board independence	0.239***	0.116**	0.176***	0.026	0.186***	0.080**	0.146***	-0.013
Cultural diversity	0.103***	0.050**	0.076***	0.011	0.090***	0.039**	0.071***	-0.006
Gender diversity	0.253***	0.123**	0.186***	0.029	0.234***	0.101**	0.183***	-0.016
Compensation policy	0.004***	0.002**	0.003***	0.000	0.003***	0.001**	0.003***	0.001
Sustainable strategy		0.101**	0.153***	0.023		0.073**	0.133***	-0.012
Indirect effects								
Presence		0.001**	0.001***	0.001		0.001*	0.001***	0.000
Size		0.005**	0.007***	0.001		0.003*	0.006***	-0.001
Independence		0.024**	0.037***	0.006		0.014*	0.025***	-0.002
Cultural diversity		0.010**	0.016***	0.002		0.007*	0.012***	-0.001
Gender diversity		0.025**	0.039***	0.006		0.017*	0.031***	-0.003
Compensation policy		0.001**	0.001***	0.001		0.001*	0.001***	-0.001
Year-Country		YES				YES		
Activity-Year		YES				YES		
Country-Year		YES				YES		
R^2	0.314	0.264	0.115	0.006	0.202	0.184	0.156	0.009
Goodness-of-fit	$\chi^2_{(23)}$: 47.869	RMSEA: 0.097	SRMR: 0.052	NFI: 0.902	$\chi^2_{(23)}$: 37.015	RMSEA: 0.063	SRMR: 0.046	NFI: 0.904

***p-value<0.010; **p-value<0.050; *p-value<0.100

Table 5. Panel B. Results for estimated models by years of persistence. Category: Mentioned

	Persistence: Seven years				Persistence: Five years			
	Sustainable strategy	**SP**	**EP**	**ROA**	**Sustainable strategy**	**SP**	**EP**	**ROA**
Direct effects								
Presence	0.002***	0.001	0.001**	0.001	0.002***	0.001	0.001	-0.001
Board size	0.026***	0.013	0.020**	0.006	0.030***	0.010	0.010	-0.008
Board independence	0.156***	0.075	0.115**	0.013	0.123***	0.073	0.074	-0.032
Cultural diversity	0.089***	0.043	0.065**	0.006	0.070***	0.048	0.048	-0.018
Gender diversity	0.169***	0.082	0.125**	0.004	0.200***	0.136	0.134	-0.052
Compensation policy	0.003***	0.001	0.002**	0.006	0.002***	0.000	0.001	-0.001
Sustainable strategy		0.058	0.089**	0.004		0.071	0.069	-0.028
Indirect effects								
Presence		0.001	0.002*	0,000		0,000	0,000	0,000
Size		0.002	0.002*	0,000		0,000	0,000	0,000
Independence		0.009	0.014*	0,002		0,009	0,009	-0,004
Cultural diversity		0.005	0.008*	0,001		0,003	0,003	-0,001
Gender diversity		0.010	0.015*	0,001		0,027	0,027	-0,010
Compensation policy		0.001	0.001*	0,000		0,000	0,000	0,000
Year-Country		YES				YES		
Activity-Year		YES				YES		
Country-Year		YES				YES		
R^2	0.092	0.030	0.070	0.008	0.143	0.087	0.085	0.013
Goodness-of-fit	$\chi^2_{(23)}$: 44.773	RMSEA: 0.108	SRMR: 0.071	NFI: 0.902	$\chi^2_{(23)}$: 48.338	RMSEA: 0.121	SRMR: 0.061	NFI: 0.920

	Persistence: Three years				Persistence: One year			
	Sustainable strategy	**SP**	**EP**	**ROA**	**Sustainable strategy**	**SP**	**EP**	**ROA**
Direct effects								
Presence	0.003***	0.001**	0.001	0.000	0.005***	0.003***	0.001	-0.001
Board size	0.038***	0.015**	0.007	-0.004	0.056***	0.042***	0.001	0.015
Board independence	0.197***	0.077**	0.038	-0.020	0.246***	0.184***	0.006	0.067
Cultural diversity	0.088***	0.034**	0.017	-0.009	0.137***	0.102***	0.003	0.038
Gender diversity	0.268***	0.105**	0.052	-0.027	0.314***	0.235***	0.008	0.086
Compensation policy	0.003***	0.001**	0.001	0.000	0.005***	0.003***	0.001	0.001
Sustainable strategy		0.052*	0.026	-0.013		0.164***	0.005	0.060
Indirect effects								
Presence		0.001**	0.000	0.000		0.001***	0.000	-0.001
Size		0.002**	0.001	-0.001		0.009***	0.001	0.003
Independence		0.010**	0.005	-0.003		0.040***	0.001	0.015
Cultural diversity		0.005**	0.002	-0.001		0.022***	0.001	0.008
Gender diversity		0.014**	0.007	-0.004		0.051***	0.002	0.019
Compensation policy		0.001**	0.001	0.000		0.001***	0.000	0.001
Year-Country		YES				YES		
Activity-Year		YES				YES		
Country-Year		YES				YES		
R^2	0.255	0.052	0.013	0.003	0.422	0.366	0.004	0.049
Goodness-of-fit	$\chi^2_{(23)}$: 60.177	RMSEA: 0.117	SRMR: 0.060	NFI: 0.901	$\chi^2_{(23)}$: 39.927	RMSEA: 0.057	SRMR: 0.051	NFI: 0.957

***p-value<0.010; **p-value<0.050; *p-value<0.100

Table 5. Panel C. Results for estimated models by years of persistence. Category: Controversial

	Persistence: Seven years				Persistence: Five years			
	Sustainable strategy	**SP**	**EP**	**ROA**	**Sustainable strategy**	**SP**	**EP**	**ROA**
Direct effects								
Presence	0.001	0.003***	-0.003**	-0.003**	0.001	0.003***	-0.003***	-0.003**
Board size	0.011	0.033***	-0.029**	-0.026**	0.011	0.033***	-0.029***	-0.026**
Board independence	0.061	0.175***	-0.153**	-0.141**	0.061	0.175***	-0.153***	-0.141**
Cultural diversity	0.059	0.167***	-0.146**	-0.135**	0.059	0.167***	-0.146***	-0.135**
Gender diversity	0.058	0.166***	-0.145**	-0.134**	0.060	0.166***	-0.145***	-0.134**
Compensation policy	0.001	0.003***	-0.003**	-0.003**	0.001	0.003***	-0.003***	-0.003**
Sustainable strategy		0.156***	-0.137**	-0.126**		0.156***	-0.137***	-0.126**
Indirect effects								
Presence		0.000	0.000	0.000		0.000	0.000	0.000
Size		0.002	-0.002	-0.001		0.002	-0.002	-0.001
Independence		0.010	-0.008	-0.008		0.010	-0.008	-0.008
Cultural diversity		0.009	-0.008	-0.007		0.009	-0.008	-0.007
Gender diversity		0.009	-0.008	-0.007		0.009	-0.008	-0.007
Compensation policy		0.000	0.000	0.000		0.000	0.000	0.000
Year-Country		YES				YES		
Activity-Year		YES				YES		
Country-Year		YES				YES		
R^2	0.028	0.275	0.211	0.180	0.028	0.275	0.211	0.180
Goodness-of-fit	$\chi^2_{(23)}$: 25.270	RMSEA: 0.061	SRMR: 0.049	NFI: 0.917	$\chi^2_{(23)}$: 53.132	RMSEA: 0.121	SRMR: 0.073	NFI: 0.906

	Persistence: Three years				Persistence: One year			
	Sustainable strategy	**SP**	**EP**	**ROA**	**Sustainable strategy**	**SP**	**EP**	**ROA**
Direct effects								
Presence	0.000	0.005***	-0.004**	-0.003**	0.003***	0.003***	-0.002***	-0.001**
Board size	0.000	0.018***	-0.018**	-0.013**	0.036***	0.031***	-0.026***	-0.006***
Board independence	-0.008	0.344***	-0.330**	-0.234**	0.182***	0.160***	-0.133***	-0.029**
Cultural diversity	-0.003	0.115***	-0.110**	-0.078**	0.164***	0.143***	-0.119***	-0.026**
Gender diversity	-0.003	0.116***	-0.111**	-0.079**	0.163***	0.142***	-0.118***	-0.025**
Compensation policy	0.000	0.005***	-0.004**	-0.003**	0.003***	0.003***	-0.002***	-0.001**
Sustainable strategy		0.316***	-0.304**	-0.216***		0.167***	-0.139***	-0.030**
Indirect effects								
Presence		0.000	0.000	0.000		0.001***	-0.001***	-0.001**
Size		0.000	0.000	0.000		0.005***	-0.006***	-0.001**
Independence		-0.003	0.002	0.002		0.025***	-0.030***	-0.005**
Cultural diversity		-0.001	0.001	0.001		0.023***	-0.027***	-0.005**
Gender diversity		-0.001	0.001	0.001		0.023***	-0.026***	-0.005**
Compensation policy		0.000	0.000	0.000		0.001***	-0.001***	-0.001**
Year-Country		YES				YES		
Activity-Year		YES				YES		
Country-Year		YES				YES		
R^2	0.001	0.454	0.419	0.212	0.252	0.295	0.204	0.010
Goodness-of-fit	$\chi^2_{(23)}$: 35.289	RMSEA: 0.045	SRMR: 0.052	NFI: 0.998	$\chi^2_{(23)}$: 45.727	RMSEA: 0.063	SRMR: 0.068	NFI: 0.924

***p-value<0.010; **p-value<0.050; *p-value<0.100

Annex I. Definition of variables

Variable	Practice	Definition	Source
Sustainability Committee	Presence	There is a committee that promotes the integration between sustainability elements	ESG-Asset4 and Refinitiv Datastream
	Board size	Number of board members at the end of the fiscal year	
	Board independence	Percentage of strictly independent board members that are not employed by the company, not representing or employed by a majority shareholder, not served on the board for more than ten years, not a reference shareholder, no cross-board membership, no immediate family and not accepting any compensation other than compensation for board service	
	Cultural diversity	Percentage of member of different nationalities on the board	
	Gender diversity	Percentage of female on the board	
	Compensation policy	Percentage of board members whose compensations are linked to individual or company-wide financial or extra-financial targets	
Sustainable strategy	Sustainable strategy	Company's practices to communicate that it integrates the economic, social and environmental dimensions into its decision-making processes	ESG-Asset4
Environmental performance	Resource use	Company's performance and capacity to reduce the use of materials, energy or water, and to find eco-efficient solutions in supply chain management	ESG-Asset4
	Emissions	Company's commitment and effectiveness towards reducing environmental emission in the production and operational processes	
	Environmental product innovation	Company's capacity to reduce the environmental costs and burdens for its customers, creating market opportunities through environmental technologies	
Social performance	Workforce	Company's effectiveness towards job satisfaction, maintaining diversity and equal opportunities, and development opportunities for its workforce	ESG-Asset4
	Human rights	Company's effectiveness towards respecting the fundamental human rights conventions	
	Community	Company's commitment towards being a good citizen, protecting public health and respecting business ethics	
	Product responsibility	Company's capacity to produce quality goods and services integrating the customer's health and safety, integrity and data privacy	
Economic performance	Economic return (ROA)	(Net benefit/Total asset)*100	Orbis
Persistence	Years	Number of consecutive years for which the companies have belonged to each one of the medallist, mentioned companies, non-mentioned and controversial categories	RobecoSAM and ESG-Asset4

[1] The Indian Company Act (2013) considers the mandatory creation of a sustainability committee for some companies (Rule 5).

[2] The moral and fairness relationships filter the stakeholders of an organization according to the concept of 'legitimacy' in stakeholder theory (Phillips, 2003).

[3] This positive effect is also observable in developing countries. For instance, Kitsikopoulos *et al*. (2018, p. 1297) concluded in the South African context that 'the sustainability committee was also seen to improve environmental performance (…), as it supports communication to the board, improves company management and awareness and drives company change'. A similar conclusion is observed in Asia, Latin America and Africa (Cordova *et al*., 2021), Turkey (Yaşar *et al*., 2019) and Pakistan (Khan *et al*., 2021).

[4] Rodrigues and Franco (2019) consider a sustainable strategy is a partial aspect of sustainability management, which involves organizational efficiency and is a response to the dynamism of institutional environments to ensure survival in the present and future.

[5] There are different types of sustainability strategy based on stakeholders' interactions (Lee, 2011, p. 286): (a) obstructionist strategies; (b) defensive strategies; (c) accommodative strategies; and (d) proactive strategies.

[6] The CSA consists of 100 questions about three dimensions: environmental ('E'), social ('S') and governance and economic ('G'). The CSA generates a total ESG score for every company covered as well as individual scores for the different dimensions.

[7] The RobecoSAM Yearbook contains these categories: a) gold class: companies with a minimum mark of 60, representing 1% of the companies with better sustainability performance (BSP); b) silver class: companies with a minimum mark of 57, representing between 1% and 5% of the BSP companies; c) bronze class: companies with a minimum mark of 54, representing between 5% and 10% of the BSP companies; and d) member class: those companies that are not included in the medal classification, representing 15% of BSP companies. We name categories a), b) and c) medallist and category d) mentioned companies.

[8] We consider an ESG controversy score from ESG-Asset4 from Refinitiv EIKON to be high if this index is 100.

[9] We also consider periods of eight years, six years, four years and two years. The results are available on request.

[10] Statistically, the proposed model constitutes a "moderated mediation" (Langfred, 2004. p.388), which describes "the relationship between the mediator and the outcome variable is moderated by another variable". We use the persistent assessment as moderator, the sustainability strategy as a mediator and the level of performance as the outcome, being the sustainability committee the exogenous variable.

[11] Reverse causality is tested using a Granger test. The null hypotheses are: a) a sustainability committee does not Granger cause performance (p-value<0.010) and b) performance does not Granger cause a sustainability committee (p-value>0.100).

Dear editor,

First of all, we would like to express our gratitude for the suggestions and comments made by the reviewers. They have provided us with useful ideas and insights. Consequently, in this version of the manuscript we have addressed all these issues. The main changes are the following:

1) Title: We have followed the second reviewer's comments to detail more in the words in the title.
2) Methodology: Considering the first reviewer's comments, we have detailed the general characteristics of the sample, the database and the reasons because we use the specific statistics technics.
3) Discussion: We have reorganized the discussion to highlight the contributions of our manuscript in relation to previous literature. In these, we have restructured the last two paragraphs and added a new one.

We have also added some bibliographical references related to the statistical technics and we have considered other improvements highlighted by the reviewers. All changes are underlined in green colour.

Finally, we would like to thank the reviewers once again for the insightful observations and constructive suggestions that helped us to improve the paper substantially. We hope that this new version of the paper will merit publication in "*Sustainability Accounting Management and Policy Journal.*"

Yours sincerely,

The authors

REVIEWERS' REPORT

Dear reviewer,

First of all, we would like to express our gratitude for your suggestions and comments. They have provided us with useful ideas and insights. Consequently, in this version of the manuscript we have addressed all these issues. The main changes are the following:

1) Title: We have detailed more in the words in the title.

2) Methodology: We have detailed the general characteristics of the sample, the databases and the reasons because we use the specific statistics technics.

3) Discussion: We have reorganized the discussion to highlight the contributions of our manuscript in relation to previous literature. In these, we have restructured the last two paragraphs and added a new one.

Finally, we have added some bibliographical references related to the statistical technics and we have checked some minor mistakes highlighted by the reviewers. All changes are highlighted in green colour.

We answer the specific comments in the following paragraphs:

REVIEWER 1:

R1_1: I appreciate your efforts to improve the methodological section by adding details and 'technical' nuances but now when I read the revised version I miss more general argumentation. This is not a big issue but can help you to make the section better. I would recommend discussing your sample a bit more in detail by for example explaining why this sample was selected, why it suits the hypotheses etc. I also lack justification of your method: you uncover your methodological technics and variables well but you do not explain why you select this specific method. That might be at the beginning of the section.

We agree with you. In the revised version, the sample and statistical technics are introduced without a general argumentation. Following your comment, we have added two new modifications. The first one is related to the sample in order to explain the selection of the sample while the second one details the suitability of the methodology to test the proposed hypotheses.

Consequently, we elaborate a first paragraph, in which we explain that S&P Global universe (previous RobecoSAM) in Europe is composed of public companies. Some of these companies will belong to the Dow Jones Sustainability Europe Index. This index bases on the 600 largest European companies in the S&P Global Broad Market Index that lead the field in terms of sustainability. These companies meet the definition of EMN as they operate in more than sixteen countries. They are invited to participate in the Corporate Sustainability Assessment (CSA) process, obtaining different assessments.

These assessments constitute an external vision, based on four categories, about organizational prospects in the future in relation to sustainability performance. Additionally, participating in the CSA, these companies guarantee not only the comparability in terms of the accounting standards used and the annual reporting about the sustainability committee composition, sustainability strategy and the levels of sustainable performance.

Additionally, we have reformed the statistical technics section. In this case, we have added a paragraph explaining the reason because we use a simultaneous equation modelling and a second paragraph detailing the use of a multigroup approach. So, we consider that the simultaneous equation models enable us to implement a substantive theory and, at the same time, to obtain, test and estimate models based on robust statistics with multivariate non-normality (Satorra & Bentler, 2001). A multigroup analysis is required when information from several groups are analysed at the same time. In this study, the medal display table and the results of the CSA process configure different groups whose analysis demands this technic (Tabachnick & Fidell, 2014). We have added this information together with the references in the main text.

Finally, we want to thank you your suggestion because it improves the manuscript and the interaction between the different sections.

R1_2: Discussion can be further improved: I still miss a clear articulation of the authors' contribution and the link to research questions/ purpose in the Intro: What is your contribution exactly? To what literature bodies do you contribute? How does/do your contribution(s) help to prior research? As it is now the section is an extension of your results rather than an attempt 'to go up at a higher theoretical level in discussing the study' as Discussion usually requires.

Following your suggestion, we have rewritten the discussion. First, we have reduced the paragraphs in the discussion in which we comment the results. Second, we have added a new paragraph highlighting the interaction between the results and the theoretical section together with an explanation about the contribution of the manuscript in relation to previous literature. This new structure enables us to underline the obtained results and the contribution to the sustainability assessment literature body.

Consistently, we have reduced the extension of the first two paragraphs to focus on the contribution of our study. In this sense, we assert that our results contribute to signalling theory, evidencing that sustainability rankings are a tool to signal the sustainability levels of an organization. Moreover, we highlight that previous studies focus on sustainability reporting as a way to signal (e.g. Halimah et al., 2020), but they do not consider either the implications of signalling or the interaction with the sustainability committee. Additionally, the internal monitoring carried out by a sustainability committee can be reinforced by the external monitoring via persistent assessment undertaken by sustainability agencies. Persistent assessment in the rankings compiled by sustainability agencies influences the interactions between sustainability committee, strategy and performance. Our results evidence this positive effect but also reveal that it increases when the sustainability assessment persists. According to Latham and Locke (2006),

motivation affects the levels of performance, but it is not be sufficient. Then, this study contributes to previous literature, evidencing that persistence assessment is key in the motivation of sustainability committee members.

Moreover, we have introduce a final paragraph to highlight that persistent assessment can play the role of both an incentive for sustainability committee members according to the goal-setting theory (Locke and Latham, 1990, 2002) and a signal for investors about the effectiveness of a sustainability strategy (Danvila et al., 2019). Both aspects being the main contribution of this study. Consequently, we show that the persistent assessment is necessary to improve the activity of the sustainability committee, guiding the sustainable strategy of the organization and improving the levels of sustainable performance. In this sense, the persistent assessment in sustainability rankings is a means to identify the level of commitment to an external model of sustainability. This commitment, expressed through participation in a sustainability ranking, will be perceived as a signal of reputation and recognition by investors and markets, as concluded by Danvila et al. (2019).

We have added these paragraphs in the main text. We thank your suggestion because it enables us to better connect the different parts of our manuscript and to highlight the contributions of our study.

R1_3: On p.3 you write 'Persistent assessment is defined as the ability to…' I struggle with that: how can assessment be an ability? Probably you mean persistence in assessment or performance persistence as in the reference you cite (Lean et. al. 2015)

We agree with you. In this new version, we have used the term "persistence in assessment", which reflects better the meaning. We thank your comment.

R1_4: The headline on p. 7 is "Sustainability committees and performance: The mediating role of a sustainability strategy" and its first part is the same as the previous subheading. At the same time, the next subheading is 'The moderating role of persistent assessment performed by sustainability agencies'. I think you should unify a way of naming: for example, leaving only "The mediating role of a sustainability strategy" for the second subheading

We thank your comment. Following your suggestion, we have changed the name of the second subheading.

Finally, we would like to thank your suggestions again because they enabled us to improve the manuscript and show the main implications in a clearer way. We trust the present format meets with your requirements and standards of quality.

Yours faithfully,

REVIEWER 2

Dear reviewer,

First of all, we would like to express our gratitude for your suggestions and comments. They have provided us with useful ideas and insights. Consequently, in this version of the manuscript we have addressed all these issues. The main changes are the following:

1) Title: We have detailed more in the words in the title.

2) Methodology: We have detailed the general characteristics of the sample, the databases and the reasons because we use the specific statistics technics.

3) Discussion: We have reorganized the discussion to highlight the contributions of our manuscript in relation to previous literature. In these, we have restructured the last two paragraphs and added a new one.

Finally, we have added some bibliographical references related to the statistical technics and we have checked some minor mistakes highlighted by the reviewers. All changes are highlighted in green colour.

We answer the specific comments in the following paragraphs:

R2_1: Many thanks for authors' efforts to improve the paper. It has been substiantially improved - well done. However, the authors might consider renaming the title, if possible. For example, the terms "strategy" and "performance" are too broad. Please specify. is it a CSR strategy or sustainability strategy? The same with performance. is it a financial performance, CSR performance, business performance, etc. The effects of persistence: what effects moderating or mediating?

Following your advice, we have changed the title specifying the different words that we used. Consequently, we have titled the manuscript: "The mediating effect of sustainability strategy between sustainability committees and business performance: Can persistent assessment condition this effect?". We think that this title summarizes the effects and the interactions we test. We thank your comment because it contributes to improve the manuscript.

R2_2:The following hypothesis might confuse the reader as it contains both moderation and mediation. Moderator and mediator are not the same and thus one should be removed. Please be specific, aviod using both terms in constructing a hypothesis. Persistent assessment moderates the effect of the sustainability strategy as a mediating variable between the sustainability committee's composition and the level of sustainability performance

We understand your comment. It is true that statistically the proposed model constitutes a "moderated mediation" (Langfred, 2004). According to this author (p.388), this kind of model describes "the relationship between the mediator and the outcome variable is

moderated by another variable". In our case, we use the persistent assessment as moderator, the sustainability strategy as a mediator and the level of performance as the outcome, being the sustainability committee the exogenous variable. As you comment, the inclusion of both terms can be confusing. For this reason, we have opted to use the world "condition". The redaction of the hypothesis will be: Persistent assessment conditions the effect of the sustainability strategy as a mediating variable between the sustainability committee's composition and the level of sustainability performance. We have also removed this term in the text and we have added the footnote 10 to clarify the meaning of "moderated mediation". We thank your comment because it enables us to clarify the meaning of this working hypothesis.

R2_3:The authors used EIKON-Refinitv several times. It should be Refinitiv Eikon. And it is a global platform previously (known as Thomson Reuters). The authors should specify that governance and sustainability data come from the ESG-ASSET4 database. it is really important to refer to correct names of databases.

Following your comment, we have specified the correct names of the databases that we have analysed.

Finally, we would like to thank your suggestions again because they enabled us to improve the manuscript and show the main implications in a clearer way. We trust the present format meets with your requirements and standards of quality.

Yours faithfully,