



# Article The Antecedents of Corporate Sustainability Performance: A Study on Generic and Sustainability-Related Corporate Governance Mechanisms

Marco Minciullo \* D, Maria Cristina Zaccone D and Matteo Pedrini D

ALTIS-Graduate School Business & Society, Università Cattolica del Sacro Cuore, Largo Gemelli 1, 20123 Milan, Italy

\* Correspondence: marco.minciullo@unicatt.it

Abstract: This study aims to investigate the antecedents of corporate sustainability performance, focusing on corporate governance mechanisms. The growing diffusion of sustainability-related corporate governance regulation raises a legitimate question about the effectiveness of these mechanisms in fostering sustainability performance. While extant research has separately taken into consideration different mechanisms related to corporate governance and sustainability, in this study, we investigate the combined effect of generic governance mechanisms, such as board size and board independence, and sustainability-related governance mechanisms, such as the presence of a sustainability committee and sustainability targets in executives' compensation schemes, on corporate sustainability performance. Based on a dataset of 185 companies listed in the most important European markets, our results indicate that both generic and sustainability-related governance mechanisms enhance corporate sustainability performance. More specifically, the presence of independent directors and the inclusion of quantitative sustainability targets in executives' compensation schemes contribute to corporate sustainability performance.

**Keywords:** generic governance mechanisms; sustainability-related governance mechanisms; corporate sustainability performance

# 1. Introduction

The last decade has seen a significant diffusion of sustainability-related corporate governance mechanisms. Following the suggestions of the OECD Principles of Corporate Governance [1], national corporate governance laws in many countries have gradually introduced specific rules to integrate sustainability into corporate governance mechanisms. The growing diffusion of sustainability-related corporate governance mechanisms raises a legitimate question about the effectiveness of these mechanisms in fostering sustainability performance.

Corporate governance, a set of bodies, rules, and processes used to guide and regulate a company, is aimed at balancing the interests of different stakeholders and preventing opportunism [2]. In this context, the board of directors is one of the most important governing bodies, as it has an obligation and the authority to make the most critical decisions for the firm [3]. In particular, the board of directors is in charge of monitoring the stakeholders' interests [4], overseeing the actions to balance these interests [5], and providing advice to the firm's management [6]. Given the importance of the board of directors, prior research has investigated the antecedents of the outcomes of the decisionmaking processes of this governing body. In particular, the elevated expectations placed on the board of directors' ability to accomplish the aforementioned functions have led to a major research stream investigating the antecedents of board effectiveness, namely the ability of the board to perform its monitoring, overseeing, and advising activities, and consequently improve corporate performance. Recently, however, the meaning of



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**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). firm performance has evolved from being solely related to financial performance to a broader definition, which also includes the social and environmental outcomes of firms' activities. The pressures on firms to pay attention to sustainable development have progressively grown, leading to a shift in the traditional managerial approach of maximizing shareholders' value and the requirement to consider also non-financial (mostly social and environmental) performance [7].

While prior research has mostly examined board effectiveness in terms of financial performance [8–11], scholars have begun to propose that corporate governance studies should consider all the dimensions of corporate performance, including the non-financial ones, such as sustainability performance [12].

When talking about governance mechanisms and sustainability, it is possible to distinguish between generic and sustainability-related corporate governance mechanisms. Sustainability-related corporate governance mechanisms differ from generic corporate governance mechanisms in that they are specifically designed to integrate socio-environmental issues into the decision-making processes of the firm. In particular, these mechanisms aim to incorporate sustainability issues into the board of directors' agenda [13,14]. Generic mechanisms, instead, are used to enhance good corporate governance per se, transversally affecting all the firms' issues, from strategy to compliance and from risk management to transparency [15]. As regulations indicate only principles and recommendations, without defining specific practices, firms can choose how to integrate sustainability into their corporate governance and, consequently, how to meet the expectations of their stakeholders. On the one hand, they may rely on generic corporate governance mechanisms, which are supposed to be effective themselves on all the dimensions of corporate performance; on the other hand, firms can decide to also integrate sustainability-related governance mechanisms and put specific effort into the management of social and environmental issues. Thus, it is important to analyze the effects of the different governance mechanisms on sustainability performance, as well as the combined effects.

While extant research has separately considered different mechanisms related to corporate governance and sustainability, as far as we know, very few studies have investigated the combined effects of these mechanisms on corporate sustainability performance. Given the peculiar nature of such performance, it is firstly relevant to investigate whether generic corporate governance mechanisms are effective at enhancing sustainability performance. Secondly, it is important to understand whether sustainability-related mechanisms are effective on their own, and also in combination with generic corporate governance mechanisms. Therefore, given the development of the literature on board effectiveness, the research question of this study is: are generic and sustainability-related governance mechanisms effective at contributing to corporate sustainability performance? To answer this question, we draw on resource dependence theory [16] and stakeholder–agency theory [17] to develop a more comprehensive model of the corporate governance antecedents of corporate sustainability performance.

Firstly, we focus on generic corporate governance mechanisms, namely board size and board independence, and assess their influence on corporate sustainability performance. Regarding the board context, the resource dependency theory suggests that directors bring resources to the company, such as skills and knowledge in certain areas, which benefit the board's decision-making processes and, consequently, company performance. We draw on these insights to contend that large boards are likely to perform their monitoring and advice-giving functions better than small boards, thanks to the greater extent of knowledge, skills, and points of view brought by more board members. Additionally, concerning the board context, stakeholder–agency theory suggests that governance mechanisms, such as board independence, can align the interests of the firm to those of the stakeholders, and consequently enhance corporate performance. For instance, board independence can improve the impartiality and reliability of the board, which benefits its decision-making processes and company performance. Regarding corporate sustainability performance, independent board members have no special interests to promote, and are therefore freer to represent the interests of the various stakeholders of the firm, including their social and environmental concerns. In summation, a higher presence of independent directors is expected to lead to higher corporate sustainability performance, as the board would then be able to consider the concerns and expectations of a larger variety of stakeholders, focusing not only on economic performance. Therefore, regarding generic corporate governance mechanisms, we theorize and test the hypothesis that both board size and board independence positively influence corporate sustainability performance. Secondly, we analyze sustainability-related governance mechanisms, focusing on the presence of a sustainability committee and the inclusion of sustainability-related targets in the executives' compensation schemes, to assess their influence on corporate sustainability performance. As stakeholder-agency theory suggests, the creation of board committees within the board of directors is intended to improve the monitoring function of the board and contribute to corporate performance [18]. Drawing on these theoretical arguments, we contend that the creation of an ad hoc board committee in charge of dealing with sustainability issues is expected to enhance corporate sustainability performance. Similarly, stakeholder-agency theory proposes that another way to align managers' interests with those of stakeholders is the inclusion of specific targets in executives' compensation schemes [19–21]. Since the presence of sustainability targets in the compensation system can drive executives' behavior, we expect that such a sustainability-related governance mechanism can foster corporate sustainability performance. In summary, concerning sustainability-related corporate governance mechanisms, we theorize and test that both the presence of a sustainability board committee and the inclusion of sustainability targets in the executives' compensation schemes positively influence corporate sustainability performance.

We tested our hypotheses on a sample of companies listed on the following stock indexes: FTSE100 (United Kingdom), DAX30 (Germany), IBEX 35 (Spain), CAC40 (France), and FTSEMIB (Italy). Taken together, the results show that board independence is a strong antecedent of corporate sustainability performance. Such a finding suggests that a higher presence of independent directors makes the board more reliable and impartial, willing to consider not only economic concerns but also social and environmental ones. The results also show that the presence of quantitative sustainability targets in the executive directors' compensation schemes positively influences corporate sustainability performance, as computable performance measures are more objective and controllable, thus increasing executives' motivation to achieve specific targets. Overall, we show that generic governance mechanisms have a stronger and more consistent effect on corporate sustainability performance than sustainability-related mechanisms, as the latter may require more time to produce a significant effect, and therefore should be examined according to a long-term horizon.

Our study contributes to the nascent literature on the corporate governance of sustainability, as well as more generally to the corporate governance literature. We expand this literature by empirically verifying that only certain generic mechanisms, namely board independence, positively influence corporate sustainability performance. More specifically, our paper contributes to the literature on the link between board independence and corporate performance, showing that a higher presence of independent directors within the board leads to better sustainability performance, using a primary measure of corporate sustainability performance instead of meta-analytic results. Regarding the literature on the corporate governance of sustainability, we expand it by empirically verifying that only certain sustainability-related governance mechanisms, namely the presence of quantitative sustainability targets in the compensation system, contribute to corporate sustainability performance. With regard to theory, our findings extend the stakeholder-agency theory, according to which incentives are a useful governance mechanism to reduce stakeholderagency conflicts. Indeed, the results show that incentives are not beneficial, per se, in terms of better corporate sustainability performance, but they enhance corporate sustainability performance if they are designed according to quantitative targets, which provides objective and clear monitoring of directors' activities.

The remainder of this paper proceeds as follows. We first review the relevant literature and proceed to develop theoretically driven hypotheses regarding the effect of generic corporate governance mechanisms and sustainability-related governance mechanisms on corporate sustainability performance. Next, we elaborate on the methodology used to assess the hypotheses and present the results of the statistical analyses. Finally, we provide a discussion of the results and conclude with remarks regarding the contribution of this study and directions for future research.

### 2. Theoretical Background

Agency theory is one of the most prominent theoretical frameworks used by corporate governance scholars [22]. According to agency theory, the relationship between managers and shareholders can be configured as an agency relationship in which the shareholders (in the role of principals) delegate the execution of a set of activities to managers (in the role of agents). In the context of uncertainty and information asymmetry, the agency relationship becomes problematic, since managers may pursue their interests at the expense of those of the shareholders. Various corporate governance mechanisms can limit the discretion of managers in pursuing their interests: the existence of regulatory bodies capable of monitoring managers' behavior, the features of these bodies and their constituents, and the availability of incentives and deterrents influencing individual behaviors [4]. Recently, scholars have reconceptualized agency theory by extending the role of principals to include all corporate stakeholders. Specifically, the stakeholder–agency theory adds to agency theory and stakeholder theory by arguing that the agent acts for the stakeholders' interests rather than those of the shareholders [17]. The stakeholder-agency theory implies, therefore, that agents must take care not only of financial performance, important mostly for shareholders, but also of non-financial performance, which incorporates stakeholders' expectations [12,18,23,24].

When considering the interests of the stakeholders of the firm, the most representative governance mechanism is the board of directors [3]. The board of directors is a corporate governing body made up of a group of individuals (directors) normally chosen by the company's shareholders, who are in charge of controlling the organization and are held liable (under the doctrine of collective responsibility) for their actions [4]. The board of directors has the obligation and the authority to make the most critical decisions, as well as to oversee and monitor the firm's actions to ensure that they add value and meet stakeholders' expectations [3]. Given the importance of the board of directors, prior research has examined board effectiveness, defined as the ability of the board to perform its monitoring and advising activities [8], to investigate the factors that can lead the board of directors to achieve better firm performance. Previous research has evaluated board effectiveness mostly in terms of corporate financial performance [8–11,25], but scholars have argued recently that considering the concerns of a broad number of stakeholders implies evaluating board effectiveness also concerning the non-financial dimensions of corporate performance, such as sustainability performance [26].

It is therefore important to investigate the link between board characteristics, as an antecedent of board effectiveness, and corporate sustainability performance. For this purpose, we draw on resource dependence theory [16] and stakeholder–agency theory [17] to investigate the governance-related antecedents of corporate sustainability performance.

Regarding the board context, the resource dependency theory suggests that a larger board is expected to be more effective because of its greater variety of skills and knowledge, which benefits the board's functioning and company performance. Drawing on such theoretical underpinnings, we expect that a larger number of board members will improve the board's advice giving and monitoring functions, also regarding sustainability issues, thus leading to better corporate sustainability performance. Additionally, concerning stakeholder–agency theory, it has been assumed that governance mechanisms can align the interests of the firm to those of the stakeholders. It has been demonstrated that corporate governance mechanisms aimed at increasing the impartiality and the accountability of the board can foster firm performance. Therefore, we contend that such governance mechanisms, namely board independence, the presence of a sustainability committee, and the presence of sustainability-related financial incentives, better align management interests with those of stakeholders, thus leading to better corporate sustainability performance. However, in our study, we further distinguish generic and sustainability-related corporate governance mechanisms in that the first include board size and board independence, and the second include the presence of a sustainability committee and of sustainability-related financial incentives.

Generic corporate governance mechanisms are intended to positively and transversally affect all the firms' issues, from strategy to compliance and from risk management to transparency [15]. Sustainability-related corporate governance mechanisms are instead specifically designed to integrate socio-environmental issues into the decision-making processes of the firm and are aimed at direct efforts towards sustainability.

The consideration of the combined effects that generic and sustainability-related corporate governance mechanisms might have on corporate sustainability performance remains missing from the academic debate, as most studies have taken these mechanisms into consideration separately. Thus, the following paragraphs develop theoretically driven hypotheses regarding the effect of generic corporate governance mechanisms and sustainability-related governance mechanisms on corporate sustainability performance.

#### 2.1. Generic Corporate Governance Mechanisms and Corporate Sustainability Performance

With regard to the effect of generic corporate governance mechanisms in enhancing corporate sustainability performance, in this paper, we focus on the role of two primary mechanisms: board size and board independence. The perspective that board size relates to firm performance is based on the resource dependence theory [16,27-29]. According to this theory, board size can be used to assess an organization's ability to build environmental ties to secure key resources. The quality of decisions at the corporate apex depends on the resources available to the board. The larger the board, the more comments and suggestions the CEO receives from the variety of board members. In this regard, Pfeffer [29] and Provan [30] found that board size was related to a firm's ability to extract vital resources from an environment, such as budget, external capital, and leverage. This viewpoint is consistent with the finding that "their key normal duty" as directors is to advise the CEO of the company [31]. From this perspective, each director brings resources to the company, such as skills and knowledge in certain areas, which benefit the board's decision-making processes and, consequently, company performance. The larger the number of directors, the larger the variety of knowledge, skills, and comments that can support the board and the CEO in the decision-making processes. A larger board can therefore provide a CEO with more high-quality guidance and counsel. In this study, we consider that this positive effect should also be valid for sustainability issues. We contend that larger boards are also in a better position to exert their advice-giving function regarding environmental and societal issues—namely sustainability issues [32]. The presence of more directors can better represent the concerns and expectations of a multitude of stakeholders, as well as offer different points of view, skills, beliefs, and values, thus leading to greater consideration of social and environmental issues. Consequently, board size can increase the board's advicegiving function in terms of sustainability issues and lead to better corporate sustainability performance. Therefore, we hypothesize that:

#### **Hypothesis 1.** Board size positively influences corporate sustainability performance.

The board of directors' oversight, according to stakeholder–agency theory, is an important monitoring tool that can lessen agency conflicts. The board's monitoring function is frequently considered the most important of the directors' responsibilities. According to current research, the board of directors' monitoring role increases when the members are largely non-executive or independent directors [33]. Directors are said to be independent

when they have no meaningful link with the firm as workers or in any other capacity beyond their membership on the board [34]. Stakeholder-agency theory suggests that independent directors are better positioned to examine policies and practices impartially and transparently, thus preventing any opportunistic behavior [35]. Corporate governance studies consistently show that a board of directors made up of members who have a vested interest in the firm's policies is less likely to perform an objective review of the firm's policies. These reasons support the notion that the greater the number of independent directors, the better the board's ability to effectively supervise the company's policies and practices, thus contributing to value creation. While earlier research has shown that independent directors are better able to monitor corporate policies impartially, in this study, we theorize that independent directors can also provide greater oversight on policies that benefit the environment and society, such as sustainability policies. Given the firm's minimal relationships, independent directors' activity is not influenced by any conflicts of interest, thus reducing potential conflicts with stakeholders' interests. Being impartial, independent directors are likely to evaluate social and environmental issues regardless of economic concerns, thus representing the interests of all stakeholders, rather than just those of the shareholders. The presence of independent directors can consequently reduce agency issues and lead to long-term value enhancement for all stakeholders [36]. As a result, board independence is advantageous in improving board effectiveness in terms of the monitoring and oversight of sustainability policies, thus leading to improved corporate sustainability performance. Therefore, we propose that:

#### **Hypothesis 2.** Board independence positively influences corporate sustainability performance.

# 2.2. Sustainability-Related Corporate Governance Mechanisms and Corporate Sustainability Performance

According to the stakeholder–agency theory, governance mechanisms help promote corporate performance for all stakeholders because they reduce existing conflicts of interest between managers and stakeholders [17]. In the previous section, we only looked at generic governance mechanisms. However, sustainability-related ones should also be considered. As mentioned in the literature recently, one of the most important monitoring tools of sustainability-related issues is the presence of board committees in charge of dealing with sustainability [37]. Burke et al. [18] view the formation of ad hoc board committees as one of the most appropriate actions that corporate governance authorities can take to ensure effective supervision and address specific challenges. Boards of directors are encouraged to establish sub-committees to analyze and discuss specific topics in depth and establish their monitoring role, thereby reducing existing conflicts of interest between management and stakeholders. According to many governance codes, the most important types of board committees are the appointment committee, the control and risk committee, and the remuneration committee. Companies, on the other hand, have the option of forming additional board committees, such as a sustainability board committee, which is entrusted with responsibility for social and environmental issues. These responsibilities range from broad oversight on overall sustainability policy to specific attention to stakeholder groups, such as employees or local community. The creation of a sustainability board committee implies taking responsibility for the interests of the non-shareholding stakeholders [38], which is often related to environmental and social issues, but its impact on firm performance has been mostly disregarded [39,40]. Relying on stakeholder-agency theory, scholars consider the sustainability board committee as a sustainability-related governance mechanism that expands corporate accountability to non-shareholder stakeholder groups [18]. Being held accountable inspires and prompts directors—and, consequently, the committees on which they serve—to fulfill their responsibilities in the sustainability area [41,42]. As these committees are tasked with assuring the board's oversight of sustainability concerns [43], in line with stakeholder-agency theory, we argue that their specific attention to social and environmental issues improves the monitoring of these issues, which limits agency

problems and therefore benefits corporate sustainability performance. As a result, we propose that:

# **Hypothesis 3.** The presence of a sustainability board committee within the board positively influences corporate sustainability performance.

However, analyzing the effect of the presence of a sustainability board committee may not be enough to explain corporate sustainability performance, and it is therefore useful to deepen the analysis by considering the characteristics of such a committee. As already stated, most of the previous research on board effectiveness indicates a strong positive relationship between board size and firm performance, owing to the benefit of many resources (in terms of knowledge and competencies) held by the board, which can then provide high-quality advice and consulting. In line with resource dependence theory, the presence of more directors implies that the decision makers will be endowed with more resources (skills, expertise, and knowledge), which can lead to higher company sustainability performance. If we apply these theoretical arguments to the sustainability committee setting, it becomes reasonable to assume that larger sustainability board committees may offer better counsel regarding a wide range of socio-environmental issues and consider the interests of more stakeholders. Indeed, having a larger number of directors on the sustainability committee should allow the board to access more resources (in terms of knowledge and competencies on sustainability issues). With more resources, companies may be able to make better judgments about environmental and social challenges, which may lead to improved corporate sustainability performance. Hence, the size of sustainability committees can enhance corporate sustainability performance, as the presence of more directors within the sustainability committee can boost the effectiveness of the monitoring and advice regarding sustainability issues. As a result, we propose that:

### Hypothesis 4. Sustainability committee size positively influences corporate sustainability performance.

One of the most important governance mechanisms to reduce agency conflicts is executives' incentives [44,45]. If we adopt stakeholder-agency theory by extending agency theory to stakeholders and treating stakeholders as the principals, compensation schemes can be considered a mechanism for aligning individual behavior to the objectives of a plurality of a firm's stakeholders [46]. Therefore, the presence of financial incentives linking firms' economic results and individual rewards can reduce opportunistic behavior and enhance firm performance. Regarding sustainability, the inclusion of social and environmental objectives in compensation schemes has only recently become a topic of significant interest. According to some studies, to ensure that an executive's work is oriented towards the creation of value for a variety of stakeholders, compensation schemes must include not only economic-financial targets, but also social and environmental ones [47–50]. Some preliminary research has found that including sustainability criteria in senior managers' compensation can lead to improved environmental performance [51], but this phenomenon requires further investigation. In this study, we rely on stakeholder-agency theory to posit that the inclusion of social and environmental targets in the variable component of compensation schemes can shift executives' attention from achieving purely economic objectives to achieving social and environmental ones [49]. Such targets can foster better alignment among the interests of the firm's executives and the sustainability-related expectations of the stakeholders, thus avoiding potential conflicts of interest and consequently leading to better corporate sustainability performance. As sustainability-related financial targets can put directors in a better position to monitor and address socio-environmental issues, we assume that these targets should lead to higher corporate sustainability performance. As a result, we propose that:

**Hypothesis 5.** The presence of sustainability targets in the executive directors' compensation schemes positively influences corporate sustainability performance.

Furthermore, when considering sustainability-related targets, it is also necessary to evaluate the target typology, whether qualitative or quantitative. A qualitative target is a goal with no precise quantification, such as "lowering GHG emissions in the coming year", "increasing the number of women at the top in the coming year," or "raising the firm's DJSI rating in the coming year". A quantitative target, on the other hand, is a target with a clear-cut underlying quantification, such as "reducing GHG emissions by 20% in the next year", "increasing the number of women at the top from 20% to 40% by 2025", or "improving the firm's DJSI rating from fifth to fourth position in the next year". Subjectivity in remuneration schemes can reduce directors' drives to achieve a certain goal, as well as their ability to recognize what constitutes effective sustainability performance. Thus, qualitative targets are not related to precise measurements, making them less controllable, objective, and prone to rater bias [52]. As a result, executives' desires to perform on a specified target may be lowered. Quantitative targets, on the other hand, are based on computable performance indicators [53], making them more objective and manageable. As stakeholder-agency theory indicates that the mechanisms that foster the monitoring of activities curb opportunistic behavior, we argue that the presence of quantitative sustainability targets in executives' compensation schemes may encourage executives to put in more effort, as they will be rewarded according to precise measurements. As a result, quantitative sustainability targets can lead to improved corporate sustainability performance. Accordingly, we propose that:

**Hypothesis 6.** *The presence of quantitative sustainability targets in the executive directors' compensation schemes positively influences corporate sustainability performance.* 

# 3. Materials and Methods

### 3.1. Sample and Data Collection

Most past empirical studies on corporate governance procedures used a one-country dataset and considered the context only in the United States, leaving generalizability questions unanswered [54]. To address external validity concerns, we decided to focus on a multi-country European dataset that included the United Kingdom, Germany, Spain, France, and Italy, as these countries host the most important financial markets in Europe, which also apply the OECD Principles of Corporate Governance. We decided to focus on a sample of large companies, as the latter are under more pressure, especially from regulators, to deal with sustainability, and are therefore much more likely to have adopted governance sustainability-related mechanisms. Specifically, we focused on the top 40 companies included in the FTSE100 (UK), and on the companies listed in the DAX30 (Germany-30 firms), CAC40 (France-40 firms), FTSEMIB (Italy-40 firms) and IBEX35 (Spain—35 firms) stock market indexes, for a total of 185 firms. In addition, we chose a sample of companies from several industries rather than from a single industry, since this allowed us to generalize our findings [55]. Overall, our research is based on archival data from 185 publicly traded large companies that were collected from several sources (annual reports, corporate governance reports) from September 2020 until February 2021. Data on corporate sustainability performance, firm size, industry, board size, and board independence were collected from the Refinitiv database. Information on the presence of a sustainability committee and its size, as well as on the incentives scheme, were collected manually by analyzing annual reports, corporate governance reports, and the websites of the firms included in the sample.

# 3.2. Measurement of Variables

# 3.2.1. Dependent Variable

"Corporate sustainability performance (CSP)" is the dependent variable. We chose Refinitiv's ESG score as our metric, since it encompasses all aspects of a company's sustainability performance (environmental, social, and governance). Refinitiv's ESG score uses 186 comparable and material company-level ESG measures (e.g., water, product quality, shareholder rights) based on publicly reported information, which are then grouped into 10 categories (e.g., emissions, human rights, CSR strategy) that reformulate the three pillar scores and the final ESG score, which is normalized to percentages ranging between 0 and 100 [56]. We included a one-year lag between the independent factors and the dependent variable to account for the time it takes for the influence [10,11,25] of corporate governance mechanisms to appear in company sustainability performance. Additionally, to ensure the robustness of our findings, we considered as an alternative measure of CSP Refinitiv's ES score, which drops from the ESG score the items related to governance, focusing solely on environmental and social issues (ES).

# 3.2.2. Independent Variables

To measure the effects of corporate governance mechanisms on corporate sustainability performance, we drew on the existing literature to select the independent variables of this study. The proxies for the generic corporate governance mechanisms that we selected are, respectively, board size and board independence, which are widely acknowledged as metrics of good corporate governance [10,11]. In our study, "board size" is the total number of directors on the focal firm's board of directors [57], and "board independence" is measured by the proportion of independent directors on this board [33].

Regarding sustainability-related corporate governance mechanisms, we selected our proxies considering the most acknowledged mechanisms in this field, such as the presence of a sustainability committee within the board of directors and the inclusion of sustainability targets in the executive directors' compensation schemes [18,58]. For the first issue, we used the variables "sustainability committee (presence)" and "sustainability committee (size)", while for the second one, we used the variables "executives' compensation with sustainability targets" and "executives' compensation with quantitative sustainability targets". Adopting stakeholder-agency theory by extending agency theory to stakeholders and treating stakeholders as the principals, "sustainability board committee (presence)" was coded as a dummy variable, where "1" indicates that the structure of the board of the focal firm includes a sustainability board committee, while "0" indicates that the there is no specific committee for sustainability issues [37], whereas "sustainability board committee (size)" indicates the total number of directors on the focal firm's sustainability committee, if present. The "executives' compensation with sustainability targets" variable was coded as a dummy variable, where "1" indicates that the focal firm includes sustainability targets in the executives' compensation schemes, and "0" if not [49]. Similarly, "executives' compensation with quantitative sustainability targets" was also coded as a dummy variable, where "1" indicates that the focal firm includes quantitative and measurable sustainability targets in the executives' compensation schemes, and "0" if the targets are qualitative [58].

### 3.2.3. Control Variables

Several variables are included in the hypothesis-testing models to control for the firm-specific situation and contextual factors. First, since firm size may influence firm performance [55], we decided to control for it in all models by adopting firm assets as a proxy (expressed as the natural logarithm of firm assets). In addition, because the results might be affected by contextual specificities, we decided to control for country effects and industry effects by including specific dummy variables in all models.

# 3.3. Empirical Methodology

We first ran descriptive statistics analysis and correlation analysis, which was followed by hierarchical OLS linear regressions. In Model 0, we first tested control variables, so as to verify the existence of a relationship among industry-, country- and firm-level factors on CSP. Subsequently, more variables were added to the model in separate steps to test for the effect of each governance mechanism, either generic or sustainability related, on corporate sustainability performance. In Model 1, generic corporate governance mechanisms ("board size" and "board independence") were included, whereas Model 2 and Model 3 included sustainability-related corporate governance mechanisms, respectively related to board committees ("sustainability committee—presence" and "sustainability committee—size"), and to executive compensation ("executives' compensation with sustainability targets" and "executives' compensation with quantitative sustainability targets"). Model 4 included all the explanatory variables to assess the combined effect of generic and sustainability-related corporate governance mechanisms on CSP.

Additionally, to ensure the robustness of our findings, we re-ran the hierarchical OLS linear regression analysis by considering CSP relying only on the environmental and social issues (ES) score rather than on ESG scores, but we found equivalent results. We also conducted the additional diagnostic measures for multicollinearity suggested by Cohen et al. [59], analysis of single tolerance/variance inflexion factors (VIF) and mean VIF, and assessment of the condition index. Since the VIF values of our variables range were all below 4.0 and the mean VIF is 1.78, the first analysis establishes that the model should have no serious problems with multicollinearity.

Finally, we controlled for potential endogeneity, as the independent variables are broad and their effect on the dependent variable may be related to an omitted variable. We used instrumental variable estimators [60], but these methods did not provide us with significant results, as the cause of endogeneity is uncertain. In line with recent studies [61], we acknowledge that results and conclusions are not completely generalizable, as endogeneity concerns are present, but are still suitable to advance the understanding of this topic, as the research setting is rapidly evolving.

#### 4. Results

Table A1 (in Appendix A) provides the descriptive statistics and the correlation matrix for the variables under investigation in this study. As Table A1 shows, the correlation between board independence and CSP is positive and significant (*p*-correlation = 0.38, *p*-value < 0.05). Concerning the presence of a sustainability committee, the correlation between this and CSP is not statistically significant (*p*-correlation = 0.08, *p*-value > 0.05). Conversely, the size of the sustainability committee is positively correlated with CSP (*p*-correlation = 0.17, *p*-value < 0.05). As for the presence of sustainability targets within the executives' compensation scheme, the correlation between this and CSP is not statistically significant (*p*-correlation = 0.11, *p*-value > 0.05). However, the presence of quantitative sustainability targets within the executives' compensation scheme is significantly correlated with CSP (*p*-correlation = 0.11, *p*-value < 0.05).

Table 1 presents the results of the hierarchical OLS regression analysis where CSP is the dependent variable. In Model 0, we enter the control variables only, whereas Model 1 adds the different indicators of the hypothesized main effects of board size and board independence, Model 2 adds the main effects of sustainability committee presence and sustainability committee size, and Model 3 adds the main effects of sustainability targets within the executives' compensation scheme and the effect of quantitative targets. Lastly, Model 4 consists of all the control and the independent variables. Hypothesis 1 predicted a positive effect of board size on corporate sustainability performance, arguing that a higher number of board members would lead to improved corporate sustainability performance, while Hypothesis 2 predicted a positive effect of board independence on corporate sustainability performance, arguing that a higher presence of independent directors would lead to improved corporate sustainability performance. As Models 1 and 4 in Table 1 show, Hypothesis 1 is not supported, whereas Hypothesis 2 is strongly supported. Board independence is significant in both Model 1 ( $\beta = 16.93$ , p < 0.01) and 4 ( $\beta = 18.24$ , p < 0.001). Hypotheses 3 and 4 predicted that the presence of a sustainability committee, as well as its size, leads to better corporate sustainability performance. However, neither of these hypotheses are supported, as demonstrated by Models 2 and 4 in Table 1. Lastly, Hypothesis 5 predicted a positive effect of the presence of sustainability targets within executive compensation schemes on corporate sustainability performance, while Hypothesis 6 predicted a positive effect of the presence of quantitative sustainability targets on corporate

sustainability performance. As shown in Table 1, Hypothesis 5 is not supported, whereas Hypothesis 6 is supported. Indeed, the coefficient that relates the presence of quantitative sustainability targets within the compensation system and corporate sustainability performance is positive and significant in Model 3 ( $\beta$  = 4.47, *p* < 0.10) and Model 4 ( $\beta$  = 5.45, *p* < 0.05).

	Model 0	Model 1	Model 2	Model 3	Model 4
-	Coef.	Coef.	Coef.	Coef.	Coef.
	Std. Err.	Std. Err.	Std. Err.	Std. Err.	Std. Err.
Industry	1.62	1.20	1.38	2.18	1.76
(Industrials)	[3.65]	[3.53]	[3.98]	[3.68]	[3.49]
Industry	-3.14	-2.75	-3.52 *	-2.81 *	-2.95
(Consumer discretionary)	[2.72]	[2.64]	[3.01]	[2.90]	[2.68]
Industry	1.03	2.33	1.04	1.28	2.32
(Consumer staples)	[2.95]	[3.14]	[2.94]	[2.95]	[2.86]
Industry	1.98	4.03	1.70	2.89	4.72
(Health)	[3.46]	[3.36]	[3.71]	[3.51]	[3.40]
Industry	3.61	3.16	3.20	4.92	4.26
(Financials)	[3.66]	[3.55]	[4.01]	[3.84]	[3.54]
Industry	-13.74 **	-11.50 **	-13.66 **	-12.76 **	-10.43 **
(Information technology)	[2.70]	[2.66]	[2.78]	[2.74]	[2.76]
Industry	4.13	2.91	4.28	4.25	3.00
(Other)	[3.48]	[3.36]	[3.02]	[3.68]	[3.37]
Country	0.55	2.48	0.98	0.99	2.19
(France)	[2.62]	[2.58]	[2.73]	[2.67]	[2.59]
Country	0.34	0.34	0.63	1.47	3.25
(Germany)	[2.82]	[2.91]	[2.92]	[3.01]	[3.11]
Country	3.25	5.12 *	3.85	4.50 +	7.28 **
(Spain)	[2.66]	[2.41]	[2.53]	[2.73]	[2.47]
Country	0.61	0.29	1.33	1.54	1.69
(UK)	[2.64]	[2.57]	[2.79]	[2.68]	[2.74]
(UK)	[2.04] 5.47 **	4.81 **	5.31 **	5.44 **	[2.74] 4.57 **
Firm Size		[0.69]			
<b>E</b> :	[0.66] 0.01		[0.68]	[0.66]	[0.70]
Firm		0.01	0.01	0.01	0.01
Profitability	[0.07]	[0.07]	[0.07]	[0.07]	[0.07]
Board size		0.07			0.12
		[0.31]			[0.31]
Board independence		16.93 **			18.26 **
*		[4.46]	1.07		[4.42]
Sustainability committee			-1.97		-2.41
(presence)			[2.29]		[2.19]
Sustainability committee			0.56		0.52
(size)			[0.43]		[0.38]
Executives' compensation				0.48	-0.80
with sustainability targets				[2.18]	[2.08]
Executives' compensation				4.67 +	5.50 **
with quantitative sustainability targets				[2.38]	[2.31]
Constant	-49.29 **	-49.92 **	-53.45 **	-58.26 **	-49.26 **
	[15.91]	[14.79]	[16.04]	[15.73]	[14.77]
VIF	1.71	1.76	1.76	1.81	1.87
Adjusted R <sup>2</sup>	30.34	35.61	30.40	31.48	37.72
, F	5.80 **	7.39 **	6.35 **	6.64 **	8.12 **
Observations	185	185	185	185	185

\*\* p < 0.01, \* p < 0.05, + p < 0.1.

As mentioned, to ensure the robustness of our results, we also ran a hierarchical OLS linear regression using only the environmental and social dimensions of corporate sustainability performance (E and S scores) as the dependent variables. We obtained results on our hypothesized variables that were all in the same direction. As Table A1 shows, the correlations of the CSP (ES) variable are similar to the ones observed before. The correlation is positive and significant between CSP (ES) and board independence (*p*-correlation = 0.24, *p*-value < 0.05), between CSP (ES) and Board size (*p*-correlation = 0.19, *p*-value < 0.05), between CSP (ES) and Board size (*p*-correlation = 0.17, *p*-value < 0.05), and between CSP (ES) and Executives' compensation with quantitative sustainability targets (*p*-correlation = 0.12, *p*-value < 0.05).

Table 2 presents the results of the hierarchical OLS regression analysis where CSP (ES score) is the dependent variable. The models were built in line with the one described in Table 1, in consideration of the same hypotheses. Table 2 shows that Hypothesis 2 is strongly supported, as Board independence is significant in both Model 1 ( $\beta$  = 9.84, *p* < 0.01) and 4 ( $\beta$  = 11.09, *p* < 0.001), whereas Hypothesis 2 is not verified. Hypotheses 3 and 4 were not supported either, considering CSP (ES), as demonstrated in Models 2 and 4 of Table 2. Lastly, in line with previous findings, Table 2 shows that Hypothesis 5 is not supported. Conversely, Hypothesis 6 is verified, as the effect of Executives' compensation with quantitative sustainability targets on CSP (ES) is positive and significant in Model 3 ( $\beta$  = 4.04, *p* < 0.10) and Model 4 ( $\beta$  = 5.07, *p* < 0.05).

Table 2. Linear Regression—CSP (ES).

	Model 0	Model 1	Model 2	Model 3	Model 4
	Coef. Std. Err.				
Industry	3.16	3.64	2.91	3.64	4.23
(Industrials)	[3.86]	[3.31]	[3.91]	[3.81]	[3.88]
Industry	-1.83	-2.34	-2.05 *	-1.53 *	-2.64
(Consumer discretionary)	[2.72]	[2.89]	[2.98]	[2.90]	[2.97]
Industry	2.90	2.69	2.68	3.09	2.66
(Consumer staples)	[3.19]	[3.14]	[3.17]	[3.16]	[3.18]
Industry	3.18	4.00	3.05	3.94	4.51
(Health)	[3.61]	[3.68]	[3.76]	[3.72]	[3.77]
Industry	2.16	1.49	1.73	3.39	2.39
(Financials)	[3.65]	[3.85]	[3.98]	[3.99]	[3.99]
Industry	-18.99 **	-18.38 **	-18.97 **	-18.31 **	-17.65 **
(Information technology)	[2.70]	[2.92]	[2.97]	[2.97]	[3.09]
Industry	3.43	2.82	3.58	3.48	2.72
(Other)	[3.71]	[3.69]	[3.72]	[3.76]	[3.99]
Country	-4.39	-4.00	-4.56	-4.55	-4.14
(France)	[2.79]	[2.82]	[2.80]	[2.86]	[2.87]
Country	-5.30 +	-6.98 +	-4.24	-3.65	-4.62
(Germany)	[2.89]	[3.18]	[3.16]	[3.14]	[2.88]
Country	2.29	2.75	2.86	3.40	4.62
(Spain)	[2.63]	[2.40]	[2.41]	[2.70]	[2.76]
Country	-8.51 *	-8.23 *	-7.99 *	-7.71 *	-6.39 *
(UK)	[2.84]	[2.85]	[2.98]	[2.87]	[3.04]
Firme Circo	7.13 **	6.45 **	7.00 **	7.13 **	6.11 **
Firm Size	[0.70]	[0.76]	[0.72]	[0.71]	[0.77]
Eine Dus (itabilita	0.07	0.07	0.07	0.08	0.09
Firm Profitability	[0.07]	[0.07]	[0.07]	[0.07]	[0.07]
Poord size		0.53			0.56
Board size		[0.34]			[0.35]

	Model 0	Model 1	Model 2	Model 3	Model 4
-	Coef. Std. Err.				
Board independence		9.84 ** [4.46]			11.09 ** [4.91]
Sustainability board committee			-1.40		-2.37
(presence)			[2.44]		[2.44]
Sustainability board committee			0.52		0.40
(size)			[0.41]		[0.41]
Executives' compensation				0.57	1.05
with sustainability targets				[2.31]	[2.31]
Executives' compensation				4.04 +	5.07 *
with quantitative sustainability targets				[2.55]	[2.56]
Constant	-89.73 **	-86.41 **	-87.69 **	-92.06 **	-88.16 **
Constant	[16.91]	[16.09]	[17.04]	[16.93]	[16.95]
VIF	1.71	1.76	1.75	1.81	1.87
Adjusted R <sup>2</sup>	30.00	37.26	35.84	36.48	38.04
F	8.96 **	8.80 **	7.86 **	8.05 **	6.94 **
Observations	185	185	185	185	185

Table 2. Cont.

\*\* p < 0.01, \* p < 0.05, + p < 0.1

# 5. Discussion and Conclusions

The goal of this study was to extend the previous literature on the corporate governance antecedents of corporate sustainability performance [12,23,62] by investigating whether generic and sustainability-related corporate governance mechanisms have an impact on corporate sustainability performance. The results reveal that both generic and sustainability-related governance mechanisms are key drivers of corporate sustainability performance. However, only certain generic governance mechanisms significantly influence sustainability performance. Similarly, only certain sustainability-related governance mechanisms significantly influence corporate sustainability performance. As for the former, the results show that board size does not influence corporate sustainability performance. This result is not in line with the theoretical argument developed by taking the resource dependence theory as a theoretical lens. We theorized that if we apply the resource dependence theory to the board context, corporate sustainability performance should benefit from a high number of directors on the board. Indeed, the higher the number of directors, the larger the variety of knowledge, skills, and advice that can support the board and the CEO in the decision-making processes. However, our results reveal that board size does not significantly influence corporate sustainability performance, leading to the conclusion that, theoretically, corporate sustainability performance does not depend on the quantity of resources—in terms of knowledge, skills, and comments—available on the board [16,27–29]. If the quantity of resources is not relevant, future studies should probably take into account the quality rather than the quantity of the resources available. For instance, scholars might investigate whether directors have sustainability competencies, skills, and experience, and the effects of these characteristics on corporate sustainability performance. On the other hand, the results show that board independence is a strong antecedent of corporate sustainability performance. This is in line with the theoretical argument developed by taking the stakeholder-agency theory as a theoretical lens. What we theorized was that independent directors can ensure that the wide interests of the various stakeholders of the firm are represented, instead of only the expectations of the shareholders. Indeed, a higher presence of directors with no substantive relationship with the firm improves the impartiality and reliability of the boardroom, fostering a higher consideration of the social and environmental concerns of the stakeholders, instead of focusing solely on economic performance [35]. Our results reveal that board independence significantly influences corporate sustainability performance, leading to the conclusion that, theoretically, corporate sustainability performance depends on the presence of mechanisms able to align management interests with stakeholder interests, such as the presence of independent directors.

Regarding sustainability-related governance mechanisms, our findings reveal that neither the presence of a sustainability committee nor its size play a key role in influencing corporate sustainability performance. These findings are not in line with the theoretical argument developed by taking the stakeholder-agency theory as a theoretical lens. If corporate sustainability performance does not benefit from the presence of a sustainability committee, such a sustainability-related mechanism does not necessarily align the interests of the firm with those of the stakeholders. Therefore, future studies should observe who sits on such a committee and whether the characteristics of those members make an impact. Additionally, our paper reveals that the presence of sustainability targets within the executives' compensation schemes does not always contribute to corporate sustainability performance. In this case, as well, we adopted the stakeholder–agency theory perspective as a theoretical argument. The results indicate that such a sustainability-related governance mechanism does not necessarily align the interests of the firm with those of the stakeholders. Specifically, the results show that the inclusion of such targets is not enough to foster corporate sustainable performance. The reason behind this finding is probably that sustainability targets do not always take into account the measurability of individuals' contributions towards social and environmental issues. Indeed, according to our results, only quantitative sustainability targets, not qualitative ones, enhance corporate sustainability performance. Such a result points out the limits of stakeholder-agency theory with regard to executives' compensation schemes. What we show is that corporate sustainability performance is driven by the presence of a specific kind of sustainability target, namely quantitative targets. As other scholars have theorized, quantitative targets imply higher accountability and transparency, thus allowing stakeholders to monitor and evaluate the behavior of individuals [53]. The same, therefore, occurs with regard to sustainabilityrelated targets. Quantitative sustainability-related targets based on computable performance measures can increase executives' motivation to perform their duties in relation to social and environmental aspects and, consequently, can lead to higher corporate sustainability performance.

# 5.1. Theoretical and Managerial Contributions

Our findings extend the prior research on board effectiveness in two ways. First, we extend the literature on board effectiveness and corporate performance that has primarily focused on financial performance only [5,10], leaving the influence on non-financial metrics unexplored. Drawing on resource dependence theory and applying it to the board context, we find that a higher presence of knowledge and skills in the boardroom does not increase board effectiveness in terms of sustainability performance. In our study, resource dependence theory does not explain the link between governance mechanisms and corporate sustainability performance, probably due to the peculiar nature of the skills and knowledge required to manage sustainability issues. Conversely, drawing on the stakeholder-agency theory and applying it to the board context, we find that the presence of certain governance mechanisms also increases board effectiveness in terms of sustainability performance. As explained in the theoretical background, stakeholder-agency theory explains that governance mechanisms can align the interests of the firm to those of the stakeholders by fostering impartiality and accountability of the board. We extend this theory by showing that only certain governance mechanisms, not all governance mechanisms, can contribute to company sustainability performance. We extend the literature on sustainability-related financial incentives by questioning the existing literature and positing a "more is better" approach. Previous literature has assumed that the inclusion of sustainability targets in the compensation schemes per se is beneficial to the individual and the firm. Conversely, we show that sustainability targets are effective when they are controllable and measurable through quantitative metrics. The findings of this study provide support for the notion that

quantitative targets encourage objective and clear monitoring of directors' activities. We note that, contrary to our prediction, the presence of a sustainability committee, as well as its size, does not play a role in influencing sustainability performance. Such a result might be explained by the fact that the presence of an ad hoc committee may require more time to produce effects on corporate sustainability performance. However, our results provide significant implications for management practice, as they suggest that companies willing to effectively integrate sustainability into their corporate governance should first rely on the presence of independent directors and quantitative sustainability compensation targets. These two corporate governance mechanisms may assure a positive influence on sustainability results, whereas other sustainability-related governance mechanisms, even if often applied for compliance reasons, may lead to positive results in the longer term.

# 5.2. Limitations and Future Research Directions

This study is not free from limitations. First, it focuses on governance mechanisms and links these to corporate sustainability performance considering a dataset that refers to a period of one year, thus leaving it uncertain if such findings will hold in a longer time frame. Future studies should consider creating a panel dataset and conduct firm fixed-effect regressions. Second, even though we sought to deal with generalizability issues by focusing the analysis on a sample of companies listed in many European markets, we restricted the analysis to Europe, leaving it unexplored as to whether such governance mechanisms also influence corporate sustainability performance in other countries. Future research should test whether the current findings generalize to non-European countries, such as Asia, Africa, and Latin America [63–65]. Additionally, more research on sustainabilityrelated governance mechanisms is needed, building on existing studies that have examined the ties between governance mechanisms and CSR choices of firms [66,67]. It will be important to investigate which other sustainability-related governance mechanisms affect corporate sustainability performance, as well as to provide a "state-of-the-art" of extant research on the intersection between governance and sustainability. Furthermore, this nascent research area needs to investigate the boundary conditions under which certain sustainability-related governance mechanisms have a stronger or weaker impact on other company outcomes. For instance, it might be that the presence of a sustainability committee might be a strong antecedent of organizational innovation.

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# Appendix A

Table A1. Descriptive Statistics and Correlations.

Var.	М	SD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
01	75.50	12.69																						
02	78.92	14.07	0.72 *																					
03	0.06	0.25	0.09	0.09																				
04	0.17	0.37	-0.09	-0.05	-0.12																			
05	0.12	0.33	0.02	0.08	-0.10	-0.17 *																		
06	0.08	0.27	0.04	0.01	-0.08	-0.13	-0.11																	
07	0.06	0.25	0.04	0.00	-0.07	-0.12	-0.10	-0.08																
08	0.24	0.43	-0.09	-0.15 *	-0.15 *	-0.25 *	-0.21 *	-0.17 *	-0.15 *															
09	0.08	0.27	0.00	-0.03	-0.08	-0.13	-0.11	-0.09	-0.08	-0.17 *														
10	0.08	0.27	0.03	0.04	-0.08	-0.13	-0.11	-0.09	-0.08	-0.16 *	-0.09													
11	0.22	0.41	0.10	0.09	-0.03	0.05	0.12	0.04	-0.09	-0.11	0.13	0.00												
12	0.16	0.37	0.09	0.08	0.06	0.00	0.06	-0.02	0.12	-0.08	0.03	-0.07	-0.23 *											
13	0.19	0.39	-0.06	0.00	0.04	-0.03	-0.06	-0.09	-0.07	0.05	0.01	0.02	-0.25 *	-0.21 *										
14	0.22	0.41	0.12	-0.03	0.08	0.05	-0.12	0.18 *	0.02	0.01	-0.11	-0.01	-0.28 *	-0.23 *	-0.25 *									
15	0.22	0.41	-0.24 *	-0.13	-0.14	-0.06	0.00	-0.11	0.02	0.13	-0.06	0.05	-0.28 *	-0.23 *	-0.25 *	-0.28 *								
16	24.49	1.65	0.42 *	0.39 *	-0.01	-0.12	-0.12	-0.10	-0.13	0.55 *	-0.23 *	-0.03	0.07	0.11	-0.18 *	0.20 *	-0.20*							
17	15.37	12.76	-0.09	-0.07	-0.13	0.13	0.12	0.08	0.20 *	-0.18 *	0.04	-0.17*	-0.07	-0.09	-0.11	0.22 *	0.03	-0.24 *						
18	13.21	3.06	0.05	0.19 *	-0.14	0.05	0.12	-0.08	-0.02	0.16 *	-0.08	-0.15 *	0.11	0.41 *	-0.01	-0.30 *	-0.16 *	0.30 *	-0.17 *					
19	0.63	0.20	0.38 *	0.24 *	0.07	0.03	-0.11	-0.12	0.08	-0.02	0.04	0.10	-0.14	0.12	-0.22 *	0.25 *	-0.01	0.26 *	0.01	-0.13				
20	0.25	0.43	0.08	0.06	0.15 *	-0.12	0.09	-0.03	-0.10	-0.12	0.01	-0.02	0.00	-0.25 *	-0.02	0.34 *	-0.09	0.03	0.06	-0.08	0.07			
21	2.28	2.47	0.17 *	0.17 *	0.07	-0.02	0.10	-0.03	-0.07	-0.05	-0.07	-0.06	0.23 *	-0.32 *	-0.13	0.13	0.04	0.13	0.01	0.01	0.04	0.47 *		
22	0.50	0.50	0.11	0.14	0.05	0.10	0.05	-0.06	-0.09	-0.19 *	-0.06	0.12	0.34 *	-0.11	-0.04	-0.18 *	-0.02	-0.02	-0.06	0.03	-0.07	0.13	0.20 *	
23	0.31	0.46	0.11 *	0.12 *	-0.03	0.05	0.07	-0.07	-0.18 *	-0.11	0.06	0.12	0.30 *	-0.26 *	-0.11	-0.12	0.16 *	-0.05	-0.09	-0.10	-0.12	0.18 *	0.24 *	0.65 *

Variables: 01. CSP; 02. CSP (ES); 03. Industry 1 (Materials); 04. Industry 2 (Industrials); 05. Industry 3 (Consumer discretionary); 06. Industry 4 (Consumer staples); 07. Industry 5 (Health); 08. Industry 6 (Financials); 09. Industry 7 (Information technology); 10. Industry 8 (Other); 11. Country 1 (France); 12. Country 2 (Germany); 13. Country 3 (Spain); 14. Country 4 (UK); 15. Country 5 (Italy); 16. Firm size; 17. Firm Profitability; 18. Board Size; 19. Board independence; 20. Sustainability board committee (presence); 21. Sustainability targets; 23. Executives' compensation with quantitative sustainability targets; \* *p* < 0.05.

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