

DOES COMPANY SIZE CHANGE EVERYTHING? AN ANALYSIS OF THE RELATIONSHIP BETWEEN ESG AND PERFORMANCE

YVELISE GIACOMELLO PICCININ¹

*Federal University of Santa Maria, Graduate Program in Administration,
Department of Administration, Santa Maria, RS, Brazil*

• <https://orcid.org/0000-0002-3537-1667>

yvelisepiccinin@hotmail.com

PAULO SERGIO CERETTA

*Federal University of Santa Maria, Graduate Program in Administration,
Department of Administration, Santa Maria, RS, Brazil*

• <https://orcid.org/0000-0001-8264-0439>

paulo.ceretta@ufsm.br

ABSTRACT

This article examines the moderating role of company size in the relationship between the disclosure of environmental, social, and governance (ESG) practices and corporate performance, focusing on firms located in member countries of the Organisation for Economic Co-operation and Development (OECD). The research is classified as descriptive, documentary, and quantitative, covering the period from 2019 to 2023. The initial sample of 26,017 companies was refined to 5,552 after excluding financial institutions and records with incomplete data. For the empirical analysis, quantile regression models were applied at $\tau = 0.05$, $\tau = 0.50$, and $\tau = 0.95$, allowing the capture of heterogeneous effects of ESG performance. The results reveal that smaller companies face significant obstacles in implementing ESG practices, particularly due to financial and operational constraints. In contrast, larger companies demonstrate greater capacity to internalize the benefits of these practices, which is reflected in improved corporate performance. The study contributes to the ongoing debate by showing that the impact of ESG initiatives is not uniform, varying according to the pillar considered and the size of the organization. These findings reinforce the importance of public policies and business strategies that take into account the structural specificities of companies in order to promote corporate sustainability more equitably.

Keywords: ESG. Corporate Performance. Company Size. OECD. Quantile Regression.

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¹ **Correspondence address:** Avenida Roraima, 1000 | Camobi | 97105-340 | Santa Maria/RS | Brazil.

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1 INTRODUCTION

The growing emphasis on environmental, social, and governance (ESG) practices has transformed corporate standards as companies seek to meet the increasingly demanding expectations of investors, consumers, regulators, and other stakeholders (Aydoğmuş et al., 2022). ESG practices have become central to corporate strategy, contributing to risk management, reputation strengthening, and the promotion of business sustainability (Mohammad and Wasiuzzaman, 2021; Durlista and Wahyudi, 2023). When properly implemented, they can lead to greater operational efficiency, easier access to capital, and enhanced firm value (Risal et al., 2024a). On the other hand, some studies indicate that the benefits of ESG initiatives may not be immediate, as they are associated with high costs and long-term returns (Duque-Grisales and Aguilera-Caracuel, 2021).

However, the impact of ESG practices on corporate performance remains controversial (Gillan et al., 2021). Reported effects range from positive (Albuquerque et al., 2020; Alareeni and Hamdan, 2020; Azmi et al., 2021; Mohammad and Wasiuzzaman, 2021; Delvina and Hidayah, 2023) to negative (Nollet et al., 2016; Atan et al., 2018; Duque-Grisales and Aguilera-Caracuel, 2021; Risal et al., 2024b) or insignificant (Taufik and William, 2021; Hsu et al., 2022). Wang et al. (2016) suggest that insignificant results may be explained by the volatility of market-based metrics, which are influenced by multiple factors beyond ESG practices.

One of the elements that may influence this relationship is company size. Most studies use this variable as a control, whereas few treat it as a moderator (Mansour et al., 2024). Research indicates that larger companies, because they possess greater financial resources and a higher capacity for adaptation, tend to adopt ESG practices more effectively, respond more adequately to stakeholder demands, and report their actions in a structured manner (Risal et al., 2024a). Greater visibility and public pressure for responsible conduct also foster engagement with ESG, thereby enhancing legitimacy and improving corporate performance (Li et al., 2018; Mansour et al., 2024).

Nevertheless, complex paradigms, resistance to change, and high transition costs may hinder the adoption of cleaner technologies, even among large corporations (Duque-Grisales and Aguilera-Caracuel, 2021; Mansour et al., 2024). These factors underscore the need for further investigation into the role of company size in the implementation of ESG practices. In addition, evaluations of the effects on corporate performance are still lacking, especially regarding the different dimensions that make up the ESG pillars.

Accordingly, this study is guided by the following research question: what is the moderating effect of company size on the relationship between ESG practices and corporate performance in companies from OECD member countries? The objective is to analyze the moderating effect of company size on the relationship between ESG and corporate performance in companies from OECD member nations. From a theoretical standpoint, this study seeks to deepen the understanding of the relationship between ESG actions and corporate performance, considering that companies of different sizes may influence the outcomes of this relationship and helping to address this existing gap. Furthermore, the literature still lacks a more detailed understanding of the distinct effects of the ESG pillars (environmental, social, and governance) on the performance of companies of different sizes.

From a practical perspective, the study aims to provide support for managers and stakeholders in aligning ESG investments according to company size, contributing to risk mitigation and opportunity identification. From a social standpoint, the research seeks to demonstrate that business performance may be affected in different ways, highlighting the importance of a disaggregated analysis of ESG components, which allows companies to prioritize investments that foster global sustainability and orderly social development.

2 THEORETICAL FRAMEWORK

2.1 ESG and Corporate Performance

Ethical behavior within organizations, grounded in social well-being, pollution reduction, and proper waste management, has become an imperative requirement in the contemporary corporate environment (Mohammad and Wasiuzzaman, 2021). Engagement in ESG practices can generate several benefits for companies, such as higher financial returns, value creation for shareholders, and access to financing under more favorable conditions (Gillan et al., 2021). The growing social interest in ESG-related issues has directed support toward companies with positive reputations and a clear commitment to sustainability (Risal et al., 2024a).

The adoption of ESG actions can strengthen organizational competitive advantage by increasing acceptance among investors and enhancing corporate reputation, which tends to yield future returns (Mohammad and Wasiuzzaman, 2021). Voluntary disclosure of ESG information contributes to stock value appreciation while providing relevant data for decision-making by investors and stakeholders, reducing risk, volatility, and information asymmetry (Albuquerque et al., 2020; Inawati and Rahmawati, 2023). Furthermore, such practices enhance organizational legitimacy (Durlista and Wahyudi, 2023). To fully benefit from ESG practices, it is essential that companies integrate these principles robustly into their business strategies, which may result in greater long-term profitability (Risal et al., 2024b). In addition, ESG investments can mitigate agency problems, reinforcing the importance of implementing these practices within organizations (Grodt et al., 2024).

On the other hand, Friedman's (1970) classical perspective argues that managers should not use shareholder resources for purposes that do not aim at profit maximization. From this viewpoint, investment in ESG practices could compromise financial results by diverting CEOs from the primary objective of the firm (Nollet et al., 2016). Moreover, such initiatives may not align with shareholder interests and may be interpreted as a consequence of agency problems (Gillan et al., 2021). Duque-Grisales and Aguilera-Caracuel (2021) emphasize that the costs associated with ESG investments often do not translate into financial performance, either due to the inefficiency of actions or the lack of institutional visibility, which undermines acceptance among stakeholders (Abdi et al., 2022).

High transition costs associated with cleaner technologies also pose a challenge. Implementation requires significant investments, and returns tend to materialize only in the long term (Duque-Grisales and Aguilera-Caracuel, 2021; Abdi et al., 2022). Atan et al. (2018) suggest that the lack of stakeholder recognition or the inadequate use of voluntary reporting contributes to negative effects. Inefficiency in resource allocation and insufficient managerial preparedness, which limits the perception of competitive advantages arising from ESG practices, are also relevant factors (Mohammad and Wasiuzzaman, 2021; Abdi et al., 2022). Additionally, corporate ESG strengthens the importance of accounting information, while external factors such as corruption influence the level of ESG disclosure (Barbosa et al., 2024; Degenhart et al., 2024).

Thus, the implications of ESG disclosure for market performance are diverse, with evidence of positive effects (Albuquerque et al., 2020; Alareeni and Hamdan, 2020; Azmi et al., 2021; Mohammad and Wasiuzzaman, 2021; Delvina and Hidayah, 2023; Degenhart et al., 2024), negative effects (Nollet et al., 2016; Atan et al., 2018; Duque-Grisales and Aguilera-Caracuel, 2021; Risal et al., 2024b), or insignificant effects (Taufik and William, 2021; Hsu et al., 2022; Leitão Junior et al., 2025; Silva and Mascena, 2024). Wang et al. (2016) argue that insignificant results may be attributed to the volatility of market metrics, which are influenced by multiple factors beyond ESG practices.

The influence of OECD member countries on global economic trends and standards is substantial and long-lasting (D'Souza et al., 2025). As leaders in the development of regulatory

frameworks, particularly regarding corporate governance, environmental protection, and social responsibility, the practices and policies adopted by these nations generate far-reaching implications for business behavior on an international scale (Canton, 2021).

According to Nakajima et al. (2021), these countries not only lead the formulation of ESG metrics but also directly influence how such practices are incorporated into corporate value, increasingly reflected in firms' financial assessments. Enhanced ESG performance significantly contributes to market valuation and positively affects profitability and operational efficiency in developed economies, such as OECD member nations (D'Souza et al., 2025).

Organizations may adopt a variety of strategies to signal greater commitment to stakeholders and to the creation of shareholder value (Duque-Grisales and Aguilera-Caracuel, 2021). Understanding how specific activities within each ESG pillar contribute to value generation or lead to excessive costs is fundamental for more effective managerial decisions regarding voluntary disclosure (Azmi et al., 2021). Considering that ESG scores are determined by multiple factors, and that each one may influence market performance differently (Alareeni and Hamdan, 2020), it becomes relevant to analyze the ESG pillars individually and their respective effects on corporate performance. From this perspective, the first hypothesis of this study is formulated:

H1: There is a relationship between the level of ESG (H1a), Environmental (H1b), Social (H1c), and Governance (H1d) performance and corporate performance.

The literature on ESG and corporate performance presents contradictory results, ranging from positive impacts to negative or statistically insignificant effects. These divergences stem largely from distinct theoretical approaches. The trade-off theory suggests that ESG practices entail additional costs that may compromise short-term profitability, whereas synergy theory argues that such practices generate value by mitigating risks and strengthening corporate reputation (Boubaker et al., 2023).

Furthermore, different perspectives such as stakeholder theory, agency theory, and legitimacy theory offer varied interpretations of the incentives and pressures shaping corporate behavior regarding ESG (Bani-Khaled et al., 2025). The lack of standardization in measuring ESG indicators and the divergence among ratings issued by different institutions also undermine comparability across studies, generating inconsistencies in empirical findings (Shi and Yao, 2025).

In addition, factors such as industry sector, geographic region, investment horizon, and governance structure significantly influence the observed outcomes (Oni, 2025). In this context, company size emerges as a relevant moderating variable, since larger organizations tend to possess more robust resources to implement, measure, and communicate their ESG strategies, which may explain part of the heterogeneity found in the current literature (Nakajima et al., 2021).

2.2 Moderating Effects of Company Size on the Relationship Between ESG and Corporate Performance

The implementation of ESG practices requires significant investments in ecological systems, infrastructure, and social and community engagement programs. Larger companies, due to their greater availability of resources, tend to manage these practices more efficiently. This occurs because they can allocate funds and qualified labor to study, measure, and report the impacts of ESG initiatives (Risal et al., 2024b). In addition, these companies generally attract greater public attention, which intensifies pressure from governments, the media, and other stakeholders, influencing the adoption of sustainable practices in their operations (Li et al., 2018), while also being subject to greater public scrutiny (Mansour et al., 2024).

According to Baldini et al. (2018), larger firms tend to engage more deeply with ESG issues, which contributes to improved performance. The disclosure of these practices can generate

long-term benefits, such as greater operational efficiency, risk mitigation, and enhanced reputation, ultimately leading to improved corporate performance (Inawati and Rahmawati, 2023). Moreover, it strengthens the legitimacy of social and environmental concerns, positively influencing corporate sustainability (Amalia and Kusuma, 2023). Thus, larger companies have the potential to amplify the effects of ESG disclosure on profitability (Risal et al., 2024a).

Organizations with significant asset bases are more likely to conduct high-cost operations (Sari, 2023), which demonstrates that financially successful corporations with broad support have greater capacity to engage in ESG initiatives in pursuit of public legitimacy (Indana and Pangestuti, 2024). These companies also tend to produce more structured, institutionalized, and complex reports, supporting data availability and transparency (Risal et al., 2024a). Corporations that effectively manage their assets to fulfill social responsibilities exhibit strong financial health, enabling them to sustain social programs over time (Indana and Pangestuti, 2024).

However, large companies may also present more conservative characteristics, resistance to organizational change, and difficulties adapting to new trends, which can undermine their performance (Prasad and Junni, 2017). Transactional complexity tends to increase proportionally with firm size (Indana and Pangestuti, 2024). Additionally, a high volume of fixed assets may result in greater depreciation expenses, negatively affecting profits and requiring attention in financial analysis (Rahmadani et al., 2020; Susanto et al., 2024).

Ghitti, Gianfrate, and Palma (2023) discuss how more complex governance structures, common in large corporations, may facilitate greenwashing practices, compromising the effectiveness of environmental and social actions. Liu et al. (2023) argue that larger firms face internal coordination and strategic alignment challenges, which can lead to inefficiencies in the implementation of ESG policies. These studies reinforce the idea that ESG performance may not be linearly proportional to company size, and that factors such as symbolic governance and operational complexity are influenced by organizational scale.

Some corporations may be discouraged by the perception that their participation in ESG initiatives will not yield relevant benefits (Mansour et al., 2024). Others may choose not to engage, fearing reputational damage resulting from ineffective or inadequate ESG actions. Furthermore, low ESG performance tends to negatively affect the reputation of large companies, influencing their corporate performance (Sari, 2023). There are also organizations that prioritize only their own financial interests, neglecting the environment and society around them (Risal et al., 2024b).

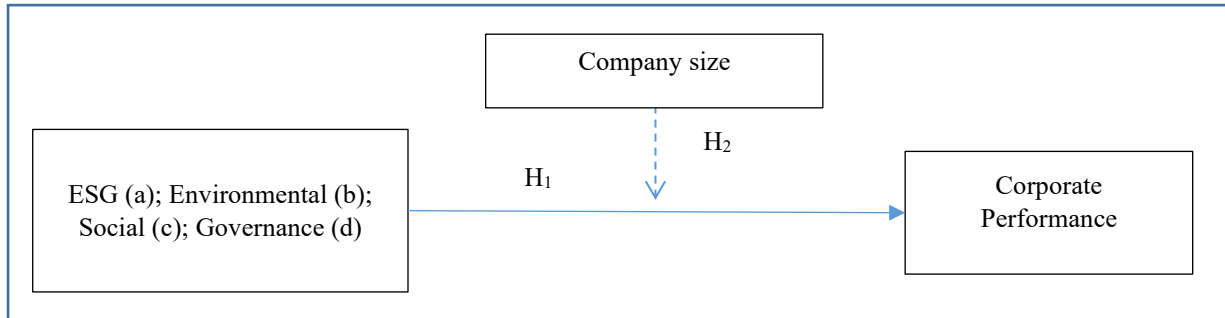
Although company size is recognized as a relevant factor in organizational management, the literature often treats it as a control variable when analyzing the relationship between ESG and corporate performance. There is a scarcity of empirical studies investigating the moderating role of firm size in this relationship (Mansour et al., 2024). Observed effects remain inconclusive, ranging from positive (Inawati and Rahmawati et al., 2023; Grodt et al., 2024; Mansour et al., 2024; Risal et al., 2024a), to negative (Purnama and Handayani, 2021; Indana and Pangestuti, 2024; Susanto et al., 2024), or insignificant (Risal et al., 2024b).

Alareeni and Hamdan (2020) warn that isolated analysis of only one ESG dimension may lead to distortions, as it does not properly reflect the specific impacts of each component on corporate performance nor consider potential influences related to the robustness of organizational assets. In this context, the second hypothesis of this study is formulated:

H2: There are moderating effects of company size on the relationship between ESG performance (H2a), Environmental performance (H2b), Social performance (H2c), and Governance performance (H2d) and corporate performance.

Figure 1 presents the theoretical model developed in this study, which synthesizes and integrates the proposed relationships based on the two formulated hypotheses.

Figure 1
Theoretical Research Model



Source: Prepared by the authors.

3 METHODOLOGICAL PROCEDURES

The research is characterized as descriptive, documentary, and quantitative. The study population comprises all companies located in the 38 member countries of the Organisation for Economic Co-operation and Development (OECD), namely: Germany, Australia, Austria, Belgium, Canada, Chile, Colombia, South Korea, Costa Rica, Denmark, Slovakia, Slovenia, Spain, the United States, Estonia, Finland, France, Greece, Hungary, Ireland, Iceland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Norway, New Zealand, the Netherlands, Poland, Portugal, the United Kingdom, the Czech Republic, Sweden, Switzerland, and Turkey. Previous studies have sought to analyze a similar sample by focusing on OECD member countries (Canton, 2021; D’Souza et al., 2025; Hassan et al., 2022 e Nakajima et al., 2021).

The choice to analyze OECD member countries is methodologically appropriate given the central role these economies play in shaping corporate sustainability practices on a global scale. According to Hassan et al. (2022), the advanced economies of the OECD account for a significant share of global GDP, international trade, and foreign direct investment flows, positioning them as strategic agents in consolidating agendas focused on sustainable development. In addition, these nations lead the formulation of public policies and regulatory frameworks related to environmental, social, and corporate governance, making them ideal contexts for investigating the effectiveness of ESG practices and their implications for corporate performance (D’Souza et al., 2025).

The analysis period covers the years 2019 to 2023, defined due to limitations in data disclosure for earlier and later periods, and aligned with the temporal scope adopted in previous studies on ESG (Mansour et al., 2024; Purnama and Handayani, 2021; Risal et al., 2024a). To define the sample, companies in the financial sector were initially excluded because of their specific characteristics, which could distort the results of the analysis (Duque-Grisales and Aguilera-Caracuel, 2021). After this exclusion, the initial population consisted of 26,017 companies. Subsequently, firms with incomplete data for the calculation of the variables during the period under investigation were removed, resulting in a final sample of 5,552 companies. Table 1 presents the composition of the initial population and the resulting sample, distributed by industry sector.

Table 1
Sample composition

Sector	Abbreviation	Population	Sample total	% Sample
Non-cyclical consumer goods	S1	1.809	397	7.15%
Academic and educational services	S2	121	18	0.32%
Basic materials	S3	4.086	579	10.43%
Cyclical consumer goods	S4	3.909	936	16.86%
Energy	S5	1.377	348	6.27%
Health	S6	3.365	895	16.12%
Industry	S7	4.282	997	17.96%
Real estate	S8	1.591	257	4.63%
Technology	S9	4.976	930	16.75%
Utilities	S10	501	195	3.51%
Total		26.017	5.552	100%

Source: Research Data.

Table 1 presents the research construct, composed of the variables analyzed, their respective operationalization, the authors who employed these metrics in previous studies, and the data sources. It is important to note that the selection of databases was guided by the criterion of accessibility. Table 2 further details the construct by specifying the definition of each variable, the measurement methods adopted, and the procedures used for data collection.

Table 2
Research Construct

Variables	Operational Definition and Measurement	Collection	
Corporate Performance: measured by Tobin's Q (QT)	Relationship between MVE divided by Total Assets, where MVE is calculated as the company's share price multiplied by the number of outstanding common shares.	Refinitiv Eikon®	
ESG Performance *	Overall ESG		Overall company score based on self-reported information in the environmental, social, and corporate governance pillars.
	Environmental Pillar (AMB)		Refers to the company's environmental performance regarding resource use, emissions, and innovation in environmental matters.
	Social Pillar (SOC)		Refers to the company's social performance regarding human rights, workforce, community, and product responsibility.
	Governance Pillar (GOV)		Measures the systems and processes that ensure directors and executives act in the best interests of long-term shareholders
Company Size (TAM)	Logarithm of the company's Total Assets.		
Leverage (ALA)	Relationship between total debt (long-term and short-term) and total Equity.		
Sector Fixed Effects	Refinitiv Eikon® classification, comprising: s1. Non-cyclical Consumer Goods; s2. Academic and Educational Services; s3. Basic Materials; s4. Cyclical Consumer Goods; s5. Energy; s6. Health; s7. Industry; s8. Real Estate; s9. Technology; and s10. Utilitie		

* The ESG scores provided by Refinitiv Eikon® are calculated from more than 450 publicly disclosed data variables. From these, a subset of 186 variables, considered the most relevant and comparable across sectors, is used in the evaluation and scoring process. These variables are distributed across ten categories that form the three pillars and the overall ESG score. The scores range from 0 to 100. with 100 assigned to companies demonstrating the highest performance in ESG criteria (Refinitiv Eikon, 2022).

Source: Research Data.

After conducting the descriptive analysis and assessing the correlations among the variables, quantile regression models were applied. Models 1, 2, 3, and 4 were used to analyze the effects of the overall ESG index and its environmental, social, and governance pillars on corporate

performance, measured by Tobin’s Q, while considering the moderating effect of company size. The analysis was performed across three quantiles. The choice of $\tau = 0.05$, $\tau = 0.50$. and $\tau = 0.95$ was based on the need to capture the heterogeneity of effects along the conditional distribution of the dependent variable. The lower (0.05) and upper (0.95) quantiles allow the investigation of distribution extremes, revealing specific patterns among firms with lower and higher performance, whereas the median quantile (0.50) represents a central tendency of the distribution. This approach is supported by Dao et al. (2022), who highlight the importance of examining specific quantile levels in model specification and variable selection, particularly when the objective is to understand differentiated effects in distinct portions of the distribution. The analysis across multiple quantiles therefore seeks to uncover nuances that would remain concealed in models based solely on mean effects. The equations used are presented below:

$$\text{Corporate Performance} = \beta_0 + \beta_1 \text{ESG} + \beta_2 \text{ESG_TAM} + \beta_3 \text{ALA} + \sum \text{Sector Fixed Effect} + \varepsilon \quad (1)$$

$$\text{Corporate Performance} = \beta_0 + \beta_1 \text{AMB} + \beta_2 \text{AMB_TAM} + \beta_3 \text{ALA} + \sum \text{Sector Fixed Effect} + \varepsilon \quad (2)$$

$$\text{Corporate Performance} = \beta_0 + \beta_1 \text{SOC} + \beta_2 \text{SOC_TAM} + \beta_3 \text{ALA} + \sum \text{Sector Fixed Effect} + \varepsilon \quad (3)$$

$$\text{Corporate Performance} = \beta_0 + \beta_1 \text{GOV} + \beta_2 \text{GOV_TAM} + \beta_3 \text{ALA} + \sum \text{Sector Fixed Effect} + \varepsilon \quad (4)$$

Furthermore, it is important to note that the use of quantile regression is justified by its suitability for the analysis of accounting and financial data, as it is considered a more robust statistical technique and less sensitive to heteroscedasticity and the presence of outliers, which are frequently observed in this type of dataset (Duarte et al., 2017). Robustness tests were performed to ensure the statistical validity of the results. Multicollinearity was assessed through the VIF, with values within acceptable limits. Residual heteroscedasticity was evaluated using the Breusch–Pagan test, confirming the adequacy of the quantile regression approach.

4 RESULTS

The results obtained through quantile regression, presented in Table 3, reveal the effects of the overall ESG index on corporate performance, considering the moderating impact of company size..

Table 3
ESG and corporate performance: effects of company size

Variable	$\tau = 0.05$		$\tau = 0.50$		$\tau = 0.95$	
	Coefficient	p_value	Coefficient	p_value	Coefficient	p_value
S1	-0.249	0.000*	-0.001	0.084	0.255	0.000*
S2	-0.495	0.060	-0.011	0.448	0.530	0.441
S3	-0.368	0.000*	-0.001	0.473	0.358	0.000*
S4	-0.307	0.000*	-0.001	0.019	0.319	0.000*
S5	-0.382	0.000*	-0.003	0.000*	0.351	0.000*
S6	-0.753	0.000*	-0.009	0.000*	0.928	0.000*
S7	-0.397	0.000*	-0.002	0.000*	0.398	0.000*
S8	-0.145	0.000*	0.000	0.578	0.137	0.000*
S9	-0.655	0.000*	-0.004	0.000*	0.706	0.000*
S10	-0.102	0.000*	0.000	0.478	0.113	0.000*
TAM	-0.429	0.000*	-0.604	0.000*	-0.667	0.000*
ALA	-0.108	0.005**	-0.033	0.000*	0.050	0.529
ESG	0.001	0.336	-0.001	0.000*	-0.005	0.001*
ESG_TAM	-0.047	0.000*	-0.003	0.000*	0.052	0.000*

Pseudo_R2	0.104	0.183	0.168
Pseudo_R2_m	0.137	0.184	0.193

Note. S1: Non-cyclical Consumer Goods; S2: Academic and Educational Services; S3: Basic Materials; S4: Cyclical Consumer Goods; S5: Energy; S6: Health; S7: Industry; S8: Real Estate; S9: Technology; and S10: Utilities. TAM: Company size; ALA: Leverage; ESG: Overall ESG; ESG TAM: interactive variable between company size and overall ESG. Significance at the *1%; **5%; ***10% levels.

Source: Research Data.

Table 3 presents the quantile regression results, highlighting the effects of the overall ESG index on corporate performance while considering the moderating impact of company size. Overall, the findings indicate that the level of ESG practices does not exert a statistically significant influence on the performance of firms positioned in the first quantile. However, in the second and third quantiles, a significant negative influence is observed.

When examining the moderating effects, it becomes evident that small and medium-sized firms — represented by the first and second quantiles — exhibit negative coefficients in relation to corporate performance, suggesting that the adoption of ESG practices may compromise their results. Specifically, the interaction coefficients *esg_tam* are -0.047 ($p = 0.001$) in the first quantile and -0.003 ($p = 0.000$) in the second, indicating that resource constraints may hinder the effective implementation of these practices.

In contrast, in the third quantile, the interaction coefficient becomes positive (0.052 ; $p = 0.001$), suggesting that larger firms are better able to capture the benefits associated with ESG practices, such as enhanced reputation and greater operational efficiency, which aligns with the findings of Risal et al. (2024a). Table 4 presents the effects of the environmental pillar on corporate performance, considering the moderating role of company size across the quantiles analyzed.

Table 4

Environmental performance and corporate performance: effects of company size

Variable	$\tau = 0.05$		$\tau = 0.50$		$\tau = 0.95$	
	Coefficient	p value	Coefficient	p value	Coefficient	p value
S1	-0.256	0.000*	-0.001	0.136	0.234	0.000*
S2	-0.519	0.072	-0.012	0.586	0.551	0.492
S3	-0.379	0.000*	-0.001	0.160	0.386	0.000*
S4	-0.305	0.000*	-0.001	0.013	0.314	0.000*
S5	-0.392	0.000*	-0.003	0.001*	0.388	0.000*
S6	-0.747	0.000*	-0.009	0.000*	0.935	0.000*
S7	-0.400	0.000*	-0.002	0.000*	0.391	0.000*
S8	-0.160	0.000*	-0.001	0.299	0.157	0.000*
S9	-0.636	0.000*	-0.005	0.000*	0.722	0.000*
S10	-0.104	0.000*	0.000	0.961	0.118	0.000*
TAM	-0.421	0.000*	-0.602	0.000*	-0.695	0.000*
ALA	-0.099	0.002**	-0.036	0.000*	0.021	0.653
AMB	0.001	0.261	0.000	0.000*	-0.004	0.001*
AMB TAM	-0.040	0.000*	-0.001	0.004**	0.039	0.000*
Pseudo_R2	0.104		0.183		0.168	
Pseudo_R2_m	0.129		0.184		0.187	

Note. S1: Non-cyclical Consumer Goods; S2: Academic and Educational Services; S3: Basic Materials; S4: Cyclical Consumer Goods; S5: Energy; S6: Health; S7: Industry; S8: Real Estate; S9: Technology; and S10: Utilities. TAM: Company size; ALA: Leverage; AMB: Environmental pillar; AMB TAM: interactive variable between company size and the environmental pillar. Significance at the *1%; **5%; ***10% levels.

Source: Research Data.

Table 4, which presents the results related to the environmental pillar, shows that the environmental variable (*amb*) has a statistically insignificant impact on corporate performance in smaller firms positioned in the first quantile (0.001 ; $p = 0.261$). In the second quantile, the effect

is neutral (0.000; $p = 0.000$), while in the third quantile it becomes negative (-0.004 ; $p = 0.001$). The interaction *amb_tam* follows a similar pattern: it exhibits a negative coefficient in the first quantile (-0.040 ; $p = 0.000$) and in the second (-0.001 ; $p < 0.004$), and a positive coefficient in the third (0.039 ; $p = 0.000$).

These results suggest that smaller firms face greater challenges in implementing environmental practices, possibly due to the high costs involved and the expectation of long-term returns, as highlighted by Duque-Grisales and Aguilera-Caracuel (2021). In contrast, larger firms demonstrate greater capacity to allocate resources to clean and sustainable technologies, enabling them to obtain benefits such as reduced risk and increased legitimacy among stakeholders (Gillan et al., 2021).

These findings may reflect not only operational limitations but also phenomena such as greenwashing, in which companies with greater visibility and resources adopt symbolic sustainability practices without meaningful operational transformation (Liu et al., 2023). Ghitti et al. (2023) show that firms with more complex governance structures — such as larger or more independent boards — may paradoxically be more prone to greenwashing, which undermines firm value and the credibility of environmental actions.

Furthermore, Liu et al. (2023) indicate that large corporations face internal coordination and strategic alignment challenges across departments, which may generate inefficiencies in the implementation of ESG policies, particularly within the Environmental and Social pillars. Thus, the negative results observed in the third quantile may reflect not only financial or temporal constraints but also strategic and operational distortions inherent to large corporate structures.

Table 5 presents the effects of the social pillar on corporate performance, considering the moderating influence of company size in each of the quantiles analyzed.

Table 5
Social performance and corporate performance: effects of company size

Variable	$\tau = 0.05$		$\tau = 0.50$		$\tau = 0.95$	
	Coefficient	p_value	Coefficient	p_value	Coefficient	p_value
s1	-0.246	0.000	-0.001	0.237	0.249	0.000
s2	-0.434	0.002	0.001	0.975	0.453	0.633
s3	-0.376	0.000	0.000	0.578	0.369	0.000
s4	-0.310	0.000	-0.001	0.023	0.326	0.000
s5	-0.396	0.000	-0.003	0.003	0.338	0.000
s6	-0.765	0.000	-0.009	0.000	0.937	0.000
s7	-0.407	0.000	-0.002	0.000	0.400	0.000
s8	-0.153	0.000	0.000	0.597	0.138	0.000
s9	-0.654	0.000	-0.004	0.000	0.714	0.000
s10	-0.121	0.000	0.000	0.707	0.116	0.000
Tam	-0.429	0.000	-0.600	0.000	-0.714	0.000
Ala	-0.132	0.000	-0.033	0.000	0.053	0.494
Soc	0.002	0.053	0.000	0.000*	-0.003	0.014**
soc_tam	-0.035	0.000*	-0.001	0.004**	0.033	0.000*
Pseudo_R2	0.104		0.183		0.168	
Pseudo_R2_m	0.127		0.183		0.183	

Note. S1: Non-cyclical Consumer Goods; S2: Academic and Educational Services; S3: Basic Materials; S4: Cyclical Consumer Goods; S5: Energy; S6: Health; S7: Industry; S8: Real Estate; S9: Technology; and S10: Utilities. TAM: Company size; ALA: Leverage; SOC: Social pillar; SOC_TAM: interactive variable between company size and the social pillar. Significance at the *1%; **5%; ***10%.

Source: Research Data.

Table 5, which focuses on the social pillar, shows that social initiatives exert a negative impact on corporate performance in larger firms positioned in the third quantile (-0.003 ; $p = 0.014$). The interaction *soc_tam* follows the pattern observed in the other pillars, presenting a negative coefficient in the first quantile (-0.035 ; $p = 0.000$), a negative coefficient in the second quantile for medium-sized firms (-0.001 ; $p = 0.004$), and a positive coefficient in the third quantile (0.033 ; $p = 0.000$).

These results suggest that, for larger firms, social initiatives contribute to strengthening reputation and building institutional legitimacy, as highlighted by Amalia and Kusuma (2023). In contrast, for smaller firms, operational complexity may hinder the effectiveness of such initiatives, generating challenges in aligning with stakeholder expectations (Mohammad and Wasiuzzaman, 2021; Leitão Junior et al., 2025; Silva and Mascena, 2024). Table 6 presents the results for the governance pillar, considering the moderating effects of company size on corporate performance.

Table 6

Governance performance and corporate performance: effects of company size

Variable	$\tau = 0.05$		$\tau = 0.50$		$\tau = 0.95$	
	Coefficient	p value	Coefficient	p value	Coefficient	p value
S1	-0.271	0.000*	-0.001	0.103	0.252	0.000*
S2	-0.473	0.169	-0.014	0.348	0.405	0.531
S3	-0.390	0.000*	-0.001	0.089	0.401	0.000*
S4	-0.316	0.000*	-0.001	0.002**	0.321	0.000*
S5	-0.410	0.000*	-0.003	0.000*	0.361	0.000*
S6	-0.760	0.000*	-0.009	0.000*	0.937	0.000*
S7	-0.416	0.000*	-0.002	0.000*	0.415	0.000*
S8	-0.146	0.000*	-0.001	0.273	0.142	0.000*
S9	-0.662	0.000*	-0.004	0.000*	0.716	0.000*
S10	-0.127	0.000*	0.000	0.782	0.119	0.000*
TAM	-0.426	0.000*	-0.603	0.000*	-0.709	0.000*
ALA	-0.101	0.040	-0.032	0.000*	0.036	0.622
GOV	0.001	0.043**	0.000	0.000*	-0.002	0.075
GOV_TAM	-0.022	0.000*	-0.001	0.002**	0.023	0.000*
Pseudo_R2	0.104		0.183		0.168	
Pseudo_R2_m	0.118		0.183		0.180	

Note. S1: Non-cyclical Consumer Goods; S2: Academic and Educational Services; S3: Basic Materials; S4: Cyclical Consumer Goods; S5: Energy; S6: Health; S7: Industry; S8: Real Estate; S9: Technology; and S10: Utilities. TAM: Company size; ALA: Leverage; GOV: Governance pillar; GOV_TAM: interactive variable between company size and the governance pillar. Significance at the *1%; **5%; ***10% levels.

Source: Research Data.

Finally, Table 6 presents the results for the governance pillar. A positive impact is observed on the corporate performance of smaller firms positioned in the first quantile (0.001 ; $p = 0.043$). The interaction term *gov_tam*, which represents the moderating effect of company size, shows a negative coefficient in the first quantile (-0.022 ; $p = 0.002$) and a positive coefficient in the third quantile (0.023 ; $p = 0.000$). These results suggest that, in larger firms, robust governance practices contribute to operational efficiency and risk mitigation. In contrast, in smaller firms, operational complexity and greater public scrutiny may overload governance structures, as noted by Rahmadani et al. (2020).

In summary, the results regarding the direct effects of overall ESG and its pillars (environmental, social, and governance) on corporate performance reveal distinct behaviors — positive, negative, or neutral — depending on the quantile analyzed. Overall, the findings indicate that engagement in ESG practices has not consistently enhanced corporate returns. This may be

related to the high costs associated with implementing clean technologies (Mohammad and Wasiuzzaman, 2021; Duque-Grisales and Aguilera-Caracuel, 2021; Leitão Junior et al., 2025; Silva and Mascena, 2024), the fact that returns from these initiatives tend to materialize only in the long term (Abdi et al., 2022), as well as the lack of recognition from stakeholders and society (Risal et al., 2024b).

Another possible explanation for the predominantly negative results lies in the deviation from the firm's core objective when prioritizing ESG activities, which may generate conflicts with shareholder interests and constitute agency problems (Friedman, 1970; Nollet et al., 2016; Duque-Grisales and Aguilera-Caracuel, 2021). In addition, the lack of visibility or inefficiency in disclosing these actions, as well as the inadequate selection of initiatives — which are not always those with the greatest return — also contribute to the observed outcomes (Abdi et al., 2022; Mohammad and Wasiuzzaman, 2021).

Thus, the first hypothesis of this study — H1: There is a relationship between ESG level (H1a), Environmental (H1b), Social (H1c), and Governance (H1d) performance and corporate performance — is partially accepted. Hypotheses H1, H1a, and H1b are confirmed in the third quantile, with negative impacts, while H1d shows a significant positive influence in the first quantile in relation to the governance pillar. These findings suggest that positive impacts may reflect stronger stakeholder commitment and returns on governance investments, especially in smaller firms (Duque-Grisales and Aguilera-Caracuel, 2021).

These conclusions align with the arguments of Azmi et al. (2021), who emphasize that the individualized analysis of ESG pillars adds value to investment decisions and to the reallocation of resources toward activities with higher return potential. Insignificant effects, in turn, may be attributed to the use of market-based performance metrics, which are highly volatile and influenced by multiple factors beyond ESG practices (Wang et al., 2016).

The results of this study must be interpreted in light of the leading role played by OECD countries in advancing policies aimed at sustainable development. As highlighted by Nakajima et al. (2021), these economies play a central role in defining ESG standards and promoting sustainable investments globally, making them privileged contexts for examining the relationship between ESG practices and business performance.

Moreover, the findings reflect the theoretical complexity surrounding the relationship between ESG and corporate performance. Methodological divergences and contextual variations — such as industry sector, region, and governance structure — contribute to contradictory findings in the literature (Shi and Yao, 2025; Oni, 2025). Theories such as stakeholder theory, agency theory, and legitimacy theory provide distinct interpretations of the effects of ESG practices (Bani-Khaled et al., 2025), while the tension between financial return and socio-environmental responsibility is captured by trade-off theory (Boubaker et al., 2023).

Taken together, the results for the second hypothesis — H2: There are moderating effects of company size on the relationship between ESG performance (H2a), Environmental performance (H2b), Social performance (H2c), and Governance performance (H2d) and corporate performance — indicate that company size exerts a varying influence on this relationship, with distinct effects across the quantiles. In the first quantile, both overall ESG and its pillars exert negative effects on performance, suggesting that smaller firms face greater challenges in implementing ESG practices due to financial and operational constraints (Baldini et al., 2018).

In the second and third quantiles, the effects become positive across all models, indicating that larger companies have greater capacity to integrate ESG practices strategically and capture their long-term benefits (Mansour et al., 2024). Moreover, smaller firms tend to face lower institutional and stakeholder pressure, which reduces the incentive to invest in ESG, especially when costs are high and returns are perceived only in the long run (Risal et al., 2024a). In this

context, company size stands out as a moderating variable, influencing a firm's ability to internalize the benefits of sustainable practices (Nakajima et al., 2021).

Another relevant factor is that, in smaller companies, ESG initiatives may not generate the expected legitimacy (Inawati and Rahmawati, 2023). The disclosure of poorly structured reports or reports written with highly technical language can hinder stakeholder recognition. In contrast, larger firms tend to produce more robust and accessible reports, which improves transparency and engagement (Risal et al., 2024a). The financial strength of these organizations also enables the continuity of ESG investments over time (Indana and Pangestuti, 2024).

Despite their more conservative characteristics and greater resistance to organizational change, large companies have been able to direct efforts toward sustainable practices that maximize their performance (Prasad and Junni, 2017). The analysis of different ESG dimensions, combined with the quantile approach, demonstrated the importance of considering specific impacts, reducing analytical distortions, and reflecting the robustness of organizational assets (Alareeni and Hamdan, 2020). Thus, the second hypothesis is accepted, with negative effects in the lower quantiles and positive effects in the third.

5 CONCLUSION

This study investigated the moderating effect of company size on the relationship between ESG practices — environmental, social, and governance — and the corporate performance of firms located in OECD member countries. The results show that company size exerts a significant influence on this relationship, affecting the effectiveness of ESG practices in shaping organizational performance.

Hypothesis H1 — which proposes the existence of a relationship between ESG pillars and corporate performance — was partially accepted. Specifically, H1a (overall ESG) and H1b (Environmental) were confirmed in the third quantile, with negative effects on performance, suggesting that environmental practices may generate costs or operational challenges that outweigh short-term benefits (Risal et al., 2024b). H1c (Social) was rejected, given its negative impact in the third quantile without consistent statistical significance. H1d (Governance) was accepted in the first quantile, with a significant positive influence, indicating that smaller firms tend to benefit more from governance practices, possibly due to more agile structures and closer stakeholder relationships (Duque-Grisales and Aguilera-Caracuel, 2021).

Hypothesis H2 — which examines the moderating effect of company size on the relationship between ESG and performance — was accepted in all its dimensions (H2a, H2b, H2c, and H2d). The findings demonstrate that company size exerts a variable influence, with negative effects in the lower quantiles and positive effects in the upper quantile. Smaller firms face financial, operational, and institutional constraints that hinder the effective implementation of ESG practices (Baldini et al., 2018; Inawati and Rahmawati, 2023), whereas larger firms show greater capacity to strategically integrate these practices, improving long-term performance (Mansour et al., 2024; Indana and Pangestuti, 2024).

However, the negative effects observed in the Environmental and Social pillars for large companies in the third quantile require deeper interpretation. Recent studies show that large corporations, despite their resources, may face organizational complexity that hampers agile and effective ESG implementation, as well as risks associated with greenwashing or impression management, which undermine the authenticity of sustainability efforts (Ghitti et al., 2023; Liu et al., 2023). Thus, company size not only modulates the potential impact of ESG initiatives but also introduces specific risks that should be considered in future analyses. Smaller firms often experience negative ESG impacts due to limited resources to invest in clean technologies or structured social programs (Baldini et al., 2018; Risal et al., 2024b), whereas large companies benefit from solid financial capacity and human capital, enabling effective ESG structures,

stronger disclosure practices, and greater stakeholder engagement (Mansour et al., 2024; Risal et al., 2024a).

The disaggregated analysis of ESG pillars revealed that governance was the most consistent in generating positive impacts, particularly for larger firms. The environmental and social pillars showed more heterogeneous effects, varying with firm size and strategic orientation. These findings highlight the importance of a strategic, size-adjusted approach to ESG, aimed at maximizing benefits while respecting organizational constraints (Alareeni and Hamdan, 2020; Duque-Grisales and Aguilera-Caracuel, 2021; Degenhart et al., 2024).

This study contributes to the literature by deepening the understanding of the moderating role of company size in the ESG–performance relationship, a dimension still underexplored in academic research (Mansour et al., 2024). By examining the distinct effects of each ESG pillar across firms of different sizes, the findings demonstrate that a disaggregated approach is essential to understanding how each component uniquely affects performance. Identifying governance as the central driver of sustainable benefits for larger firms constitutes a relevant contribution with theoretical and practical implications.

From a practical perspective, the findings suggest that smaller firms should carefully evaluate their financial and operational limits before committing to ESG initiatives. For larger firms, the results indicate that strategically integrated ESG practices may yield substantial benefits, both in terms of reputation building and value creation.

For future research, it is recommended to explore the moderating role of additional variables such as financial leverage and firm age in the relationship between ESG pillars and corporate performance across different organizational contexts. The use of alternative performance metrics, such as the market-to-book ratio and return on equity, is also suggested to enhance the robustness of the findings. As a limitation, the results are constrained by the period, companies, and countries included in this study.

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CONFLICT OF INTERESTS.

The authors declare that there is no conflict of interest regarding this submitted work.

AUTHOR CONTRIBUTIONS

Roles	1st author	2nd author
Conceptualization	◆	
Data Curation	◆	◆
Formal Analysis	◆	◆
Funding Acquisition		
Investigation	◆	◆
Methodology	◆	◆
Project Administration	◆	◆
Resources	◆	◆
Software		◆
Supervision		◆
Validation		◆
Visualization	◆	◆
Writing – Original Draft	◆	
Writing – Review and Editing	◆	◆