The Impact of ESG Performance on Corporate Competitiveness

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Abstract. With sustainable development emerging as a global consensus and China's "dual carbon" goals advancing in depth, Environmental, Social, and Corporate Governance (ESG) performance has become an increasingly critical benchmark for assessing a firm's long-term value and competitiveness. This study investigates the effect of ESG performance on corporate competitiveness by examining Chinese A-share listed firms from 2013 to 2023 through a two-way fixed effects model. The results demonstrate that ESG performance significantly enhances corporate competitiveness, with the effect being particularly pronounced among large-scale and state-owned enterprises. These findings provide valuable insights for firms seeking to embed ESG principles into their core strategies to strengthen competitiveness, as well as for policymakers aiming to refine ESG-related regulatory frameworks.

Keywords: ESG performance, corporate competitiveness, firm size, ownership structure, fixed effects model.

1. Introduction

Global challenges such as climate change, resource depletion, and social inequality have exposed the limitations of traditional development models, making sustainable development a universal imperative. Within this context, the ESG (Environmental, Social, and Governance) framework has gained traction as a vital standard for evaluating firms' long-term value and resilience. The Environmental (E) dimension reflects the urgent response to ecological crises highlighted by UN climate assessments and China's "dual carbon" commitments. The Social (S) dimension underscores rising societal expectations regarding corporate responsibility, encompassing employee welfare, consumer rights, and broader community engagement. The Governance (G) dimension emphasizes the importance of robust internal systems to mitigate risks, build investor confidence, and support ESG-driven objectives. However, a central dilemma in ESG practice persists: how can ESG performance be translated into corporate competitiveness? The answer remains inconclusive. Many firms still approach ESG as a compliance obligation rather than a strategic priority. In this context, examining the concrete pathways through which ESG performance shapes competitiveness is of both theoretical and practical significance.

This study contributes to the domestic ESG literature by conducting an empirical analysis of the Chinese market. Unlike prior work that has largely focused on normative aspects—such as institutional design and information disclosure—this study leverages large-scale data to uncover how ESG performance affects corporate competitiveness. The findings carry implications at both the firm and policy levels. In the short term, they highlight the incentive for firms to expand ESG investment. In the long term, they underscore the importance of integrating ESG into corporate strategy to cultivate sustainable advantages, including green innovation and stakeholder collaboration. At the macro level, the results provide essential evidence for policymakers to refine ESG policy frameworks, advance the "dual carbon" goals, and promote high-quality economic development.

2. Literature Review

2.1. Economic Consequences of ESG Performance

Extensive research, both in China and internationally, has examined the relationship between ESG performance and corporate financial outcomes, yet consensus remains elusive. Some scholars argue that strong ESG performance fosters the development of low-carbon technologies and green products, enabling firms to capture the sustainable consumer market. Busco et al. (2024) found that companies that disclose ESG information achieve stronger operational performance compared with their peers[1]. Yan Weixiang et al. (2023) conducted an empirical analysis of ESG ratings and concluded that ESG performance not only enhances financial performance but also alleviates financing constraints, improves efficiency, and boosts the profitability of listed firms[2]. Du Yu and Kong Kexuan (2024) further contended that robust ESG performance increases the proportion of board shareholdings, thereby exerting a positive influence on financial outcomes[3]. Chai Shanglei et al. (2024) reported that ESG information disclosure significantly enhances financial performance, while media attention exerts a negative moderating influence on this relationship. Their quantile regression analysis further indicates that such moderation is statistically significant only among firms with higher levels of ESG disclosure. In contrast, other scholars contend that the association between ESG performance and financial performance is not necessarily positive[4].

Shifting the focus from traditional financial indicators, many researchers have examined operational risks, exploring the interplay between ESG performance, financial market risk, and business risk. A prevailing view suggests that stronger ESG performance is linked to lower firm risk. For instance, Mei Han and Xiao Jianzhong (2024) demonstrated that superior ESG performance substantially reduces business risk, not only directly but also through mechanisms such as strengthening internal controls, easing financing constraints, and improving disclosure quality[5]. Likewise, Jiang Yichi and Yao Shujie (2024) observed that proactive ESG disclosure diminishes corporate risk, with external media attention and analyst coverage amplifying this risk-mitigating effect[6].Nonetheless, some scholars argue that ESG transformation requires considerable upfront investment, which may introduce financial and developmental risks and increase managerial complexity.

In addition to the studies discussed above, other economic consequences of corporate ESG performance have also attracted scholarly attention. Fang Ming et al. (2024) demonstrated that ESG ratings and media coverage significantly promote green innovation among listed companies. Specifically, both ESG ratings and media attention strengthen strategic green innovation while simultaneously fostering substantive innovation, each playing a substantive role in the process [7]. Guan Xiaoyan et al. (2025) further revealed that stronger ESG performance is associated with higher labor investment efficiency. Notably, the restraining effect of ESG performance is more pronounced in firms with excessive labor investment compared to those facing labor underinvestment[8]. Moreover, Zhang Wei et al. (2025), through empirical investigation, found that higher-quality ESG disclosure reduces corporate violations primarily by lowering debt financing costs, mitigating information asymmetry, and curbing type I agency costs[9].

2.2. Factors Influencing Corporate Competitiveness

Corporate competitiveness constitutes a firm's underlying capability for sustainable development. It reflects the overall ability to generate value and capture market-based wealth, distinct from financial-domain performance or production-domain efficiency. Rather, competitiveness emerges as a dynamic outcome shaped by both external environmental pressures and the integration of internal resources. Accordingly, this paper examines the determinants of corporate competitiveness from two perspectives: the external environment and internal resource endowments.

From the external environment perspective, Porter (1996) argued that, under certain conditions, environmental regulations can enhance corporate competitiveness by generating innovation compensation and first-mover advantages[10]. Yu Bo and Chen Chiping (2022), drawing on

empirical evidence, demonstrated that the impact of manufacturing servitization on competitiveness exhibits a "rise–fall–rise again" pattern as the intensity of environmental regulation increases[11]. Similarly, Zhang Wanming and Yang Guangzhao (2022) showed that optimizing the business environment boosts market efficiency and strengthens the vitality and competitiveness of private enterprises by dismantling rent-seeking mechanisms and improving the circulation and accuracy of public information[12]. Shen Tao and Li Xiaoyi (2023) further observed that, following the implementation of the Green Credit Guidelines, heavily polluting enterprises experienced greater improvements in competitiveness relative to their less-polluting counterparts. This effect was primarily attributed to green technological innovation and gains in total factor productivity. Moreover, the role of green credit in strengthening competitiveness proved even more significant in regions characterized by stricter environmental regulation and lower levels of financial marketization[13].

From the internal resources perspective, Zhang Zhidong and Gui Yaqing (2023) found that innovation investment exerts a U-shaped incentive effect on competitiveness, while the synergy between innovation investment and market position produces an additional positive impact[14]. Scholars have also investigated the influence of corporate digital transformation. Pan Yi and Zhang Jinchang (2023) reported that digital transformation substantially improves competitiveness, with total factor productivity serving as a mediating channel [15]. Along similar lines, Zhang Naiyi (2023) argued that digital transformation markedly strengthens market competitiveness, with the effect being more pronounced in traditional industries than in technology-intensive sectors [16]. Wei Ming et al. (2024) further revealed that when firms adopt a "consistency between words and deeds" disclosure model, digital-related information disclosure enhances competitiveness primarily by mitigating financing constraints. Conversely, "all talk and little action" strategic disclosures tend to consolidate managerial power, thereby undermining competitiveness[17].

2.3. Literature Review

Overall, existing scholarship has made notable progress in examining both corporate ESG performance and corporate competitiveness, offering important insights for this study. Yet, research on the mechanisms through which ESG influences competitiveness remains fragmented. In particular, prior work has tended to isolate single drivers—such as environmental regulation or innovation investment—while overlooking a systematic analysis of how comprehensive non-financial evaluation systems shape competitiveness. As China moves toward a model of high-quality development, it becomes both necessary and urgent to investigate how ESG practices can serve as an engine for sustainable competitiveness. To address this gap, this paper develops an analytical framework built on the three dimensions of ESG—environmental responsibility (E), social responsibility (S), and corporate governance (G)—and empirically tests their impact on corporate competitiveness.

3. Theoretical Analysis and Research Hypotheses

This study explores the mechanisms through which ESG performance enhances competitiveness and integrates Resource-Based Theory, Stakeholder Theory, and Information Asymmetry Theory into a unified framework. Resource-Based Theory (Wernerfelt, 1984) positions ESG investment as a heterogeneous strategic resource whose accumulation underpins competitive advantage. By improving the efficiency of resource allocation and establishing barriers to imitation, ESG efforts can generate long-term value. Recent studies emphasize that ESG investment should no longer be regarded as a simple cost burden. Firms with strong ESG performance benefit from lower financing costs and higher operating income, while at a broader level, they increase firm value and reinforce sustainable competitiveness. For example, Ali et al. (2018) examined the relationship between ESG activities and firm value and found that ESG strengths increase value, weaknesses erode it, and that transparent disclosure mitigates the negative effects of weaknesses—ultimately contributing positively to firm value and competitiveness [18]. Stakeholder Theory (Freeman, 1984) illustrates how ESG practices reconcile the contractual expectations of diverse stakeholders—including

shareholders, employees, communities, and regulators—by transforming environmental compliance, social responsibility, and governance transparency into concrete channels for strengthening cooperative networks, building brand loyalty, and minimizing external frictions. Together, these effects lay the groundwork for sustained competitiveness. Empirical evidence further supports this view. Gu Feng et al. (2024) argued that strong ESG performance enhances competitiveness primarily by stimulating greater R&D investment[19]. Similarly, Shi Nan et al. (2025) found that ESG performance bolsters competitiveness through increased corporate philanthropy and improvements in total factor productivity. They emphasized that firms should institutionalize management systems and commit to substantive ESG investments to ensure continuous governance improvements [20].Information Asymmetry Theory provides another lens for understanding how ESG practices translate into market value. On the one hand, high-quality ESG disclosure helps mitigate the "lemons market" problem, reduce adverse selection, and foster investor trust [21]. On the other hand, ESG ratings and related market signals lower the cost of identifying high-quality firms in capital markets [22]. In addition, robust ESG governance mechanisms constrain managerial moral hazard and safeguard the effectiveness of long-term investments[23].The interplay of these three theoretical perspectives jointly supports the analysis of how ESG performance drives corporate competitiveness.

Based on this reasoning, the study advances the following hypothesis:

H1: ESG performance significantly enhances corporate competitiveness; in other words, the stronger a firm's ESG performance, the greater its competitiveness.

4. Research Design

4.1. Sample Selection and Data Sources

This study takes A-share listed firms as the research sample and constructs a panel dataset covering the period 2013–2023. The sample was refined through the following steps:

1）Firms designated as ST or ST were excluded and missing observations in ESG ratings;

2）Observations with severe data omissions were removed;

3）All continuous variables were winsorized at the 1% level in both tails.

After processing, the final dataset comprised 34,719 firm-year observations. Data were primarily drawn from the CSMAR database, the Wind database, and the SynTao Green Finance ESG rating system. To mitigate the impact of heteroscedasticity, selected variables were log-transformed.

4.2. Variable Definitions

4.2.1. Dependent Variable

Following Wei Zhihua and Zhu Caiyun (2019), corporate competitiveness is proxied by market share[24], calculated as the ratio of a firm's operating revenue to the total operating revenue of all firms within the same industry. Market share reflects a firm's relative position in the market, with higher values indicating stronger competitiveness.

4.2.2. Independent Variable

Corporate ESG performance is measured using the Huazheng ESG rating index, consistent with Li Li (2024) [25]. The nine rating levels, ranging from AAA to C, are converted into numerical scores as follows: AAA = 9, AA = 8, A = 7, BBB = 6, BB = 5, B = 4, CCC = 3, CC = 2, C = 1.

4.2.3. Control Variables

To improve model robustness and following Chen Hua and Jiang Huiting (2024)[26], several firm-level controls are included (Table 1): debt-to-asset ratio, return on total assets, fixed asset ratio, board size, ownership concentration (shareholding ratio of the top ten shareholders), firm age, and management shareholding ratio.

Table 1. Variable Definitions

Variable Type	Variable Name	Symbol	Definition
Dependent	Corporate Competitiveness	EC	Firm's operating revenue/Total industry operating revenue
Independent	ESG Performance	ESG	Huazheng ESG ratings converted to scores (1–9)
Control	Debt-to-Asset Ratio	Lev	Total liabilities/Total assets
	Return on Total Assets	ROA	Net profit/Average total assets
	Fixed Asset Ratio	Fixed	Net fixed assets/Total assets
	Board Size	Board	Natural log of total directors
	Top 10 Shareholders	Top10	Shares held by top 10 shareholders/Total shares
	Firm Age	FirmAge	ln(Current year – Listing year + 1)
	Management Ownership	Mshare	Managerial shareholding/Total shares

4.3. Model Specification

To empirically examine the relationship between ESG performance and corporate competitiveness, this study employs a two-way fixed effects panel model. By controlling simultaneously for both industry and year fixed effects, the model mitigates potential endogeneity concerns arising from unobserved heterogeneity and omitted variables. The baseline regression model is specified as follows (1):

$$EC_{it}=\alpha_0+\alpha_1 ESG_{it}+\alpha_i Controls_{it}+\sum Year+\sum Industry+\gamma_{it} \quad (1)$$

Where EC_{it} denotes corporate competitiveness, ESG_{it} captures ESG performance, and $Controls_{it}$ represents the vector of control variables. $\sum$Year and $\sum$Industry denote year and industry fixed effects, respectively. The coefficient α_1 measures the effect of ESG performance on competitiveness, and, γ_{it} is the error term.

5. Research Results and Analysis

5.1. Descriptive Statistics

Table 2 presents the results of the descriptive statistics. The mean value of EC is 0.021, with a standard deviation of 0.072, indicating substantial variation in corporate competitiveness across firms. The minimum and maximum values are 0 and 1, respectively, while the median is only 0.003. This suggests that the majority of firms exhibit relatively low competitiveness, whereas only a small fraction achieve exceptionally high competitiveness. The mean ESG score is 73.358, with a standard deviation of 4.912, a minimum of 41.19, a maximum of 92.93, and a median of 73.52. These figures indicate that ESG scores are generally high and exhibit limited dispersion, reflecting relatively stable performance among the sample firms. Regarding the control variables, the mean ROA is 0.040, but the minimum value of –0.375 suggests that some firms are loss-making. The median FIXED is 0.202, implying that the sample firms are, on average, asset-light in structure.

Table 2. Descriptive Statistics

VarName	Obs	SD	Mean	Min	Median	Max
EC	34719	0.072	0.021	0.000	0.003	1.000
ESG	34719	4.912	73.358	41.190	73.520	92.930
Lev	34719	0.202	0.408	0.046	0.398	0.927
ROA	34719	0.067	0.040	-0.375	0.039	0.255
FIXED	34719	0.152	0.202	0.002	0.170	0.721
Board	34719	0.195	2.105	1.609	2.197	2.708
Top10	34719	0.153	0.585	0.207	0.593	0.910
FirmAge	34719	0.309	2.974	1.792	2.996	3.638
Mshare	34719	19.966	15.177	0.000	2.520	70.047

5.2. Correlation Analysis

Correlation analysis serves to preliminarily assess the degree of association among variables and to determine whether a statistical linear relationship exists between the core explanatory variable and the dependent variable, thereby providing empirical support for the research hypothesis. Pearson correlation coefficients are employed to test these relationships, with the results reported in Table 3. The results show that the absolute values of most correlation coefficients among the variables are below 0.5, suggesting that multicollinearity is not a concern and that the empirical regression model is robust. Specifically, the correlation coefficient between ESG performance (explanatory variable) and corporate competitiveness (dependent variable) is 0.103, significant at the 1% level. This indicates a positive relationship between the two, thereby offering preliminary evidence in support of Hypothesis H1.

Table 3. Correlation Analysis

	lnEC	lnESG	Lev	ROA	FIXED	Board	Top10
lnEC	1						
lnESG	0.103***	1					
Lev	0.333***	-0.115***	1				
ROA	0.078***	0.222***	-0.358***	1			
FIXED	0.145***	-0.071***	0.097***	-0.065***	1		
Board	0.212***	0.009*	0.149***	0.002	0.133***	1	
Top10	0.100***	0.143***	-0.120***	0.271***	0.021***	0.001	1
FirmAge	0.047***	-0.029***	0.180***	-0.110***	0.033***	0.072***	-0.192***
Mshare	-0.259***	0.084***	-0.310***	0.180***	-0.150***	-0.211***	0.227***
	FirmAge	Mshare					
FirmAge	1						
Mshare	-0.236***	1					

Note: ***, ** and * respectively indicate significance at the 1%, 5% and 10% levels, the same below.

5.3. Multicollinearity Test

Although the correlation analysis indicates no severe multicollinearity among the selected variables, this study further conducts a Variance Inflation Factor (VIF) test for confirmation. The results are presented in Table 4. All variables exhibit VIF values below 5, with an average of only 1.15, suggesting the absence of multicollinearity. Accordingly, regression estimates based on these independent variables can be considered robust and reliable.

Table 4. Multicollinearity Test

Variable	VIF	1/VIF
Lev	1.270	0.790
ROA	1.260	0.791
Mshare	1.240	0.806
Top10	1.160	0.865
FirmAge	1.100	0.912
Board	1.070	0.931
lnESG	1.070	0.938
FIXED	1.050	0.957
Mean VIF	1.150	

5.4. Baseline Regression Analysis

Prior to regression analysis, a Hausman test was conducted. The results yield a p-value of 0.0000, strongly rejecting the null hypothesis and indicating that a fixed-effects model is appropriate. Accordingly, this study employs industry- and year-fixed effects in the baseline regression, with the results reported in Table 5.

Column (1) reports the regression results without control variables, whereas Column (2) presents the results after including control variables. In both specifications, the coefficient of ESG performance on corporate competitiveness is significantly positive at the 1% level. This finding implies that firms with superior ESG performance tend to exhibit stronger competitiveness. Enhanced ESG practices contribute to corporate reputation, attract sustainability-oriented consumers, and foster brand loyalty, thereby strengthening competitiveness. These results provide empirical support for the research hypothesis proposed in this study.

Table 5. Baseline Regression Results

	(1)	(2)
VARIABLES	lnEC	lnEC
lnESG	4.334*** (40.75)	4.374*** (49.38)
Lev		3.823*** (110.01)
ROA		5.208*** (53.14)
FIXED		0.026 (0.51)
Board		0.802*** (25.81)
Top10		0.941*** (22.38)
FirmAge		0.175*** (8.13)
Mshare		-0.013*** (-40.57)
Constant	-24.221*** (-53.05)	-28.724*** (-73.92)
Industry Control	Yes	Yes
Year Control	Yes	Yes
Observations	34,719	34,719
R-squared	0.469	0.657

Note: ***,** , and * denote significance at the 1%, 5%, and 10% levels, respectively; robust t-statistics adjusted for heteroscedasticity are reported in parentheses (applies to all subsequent tables).

5.5. Robustness Tests

To ensure the robustness of the baseline regression results, three supplementary tests are conducted, with the findings reported in Table 6.First, a commonly employed approach is to replace the explanatory variable, thereby testing whether the main conclusions remain consistent under alternative indicators and model specifications. Specifically, the three ESG sub-dimensions—environmental (E), social (S), and governance (G)—are individually used as explanatory variables. The regression results, presented in Columns (1)–(3) of Table 6, show that the coefficients of E, S, and G on corporate competitiveness are all significantly positive at the 1% level. This indicates that each sub-dimension independently exerts a positive effect on competitiveness, thereby reinforcing the robustness of the baseline findings.

Second, given that the COVID-19 pandemic substantially disrupted firms' operating environments and financial performance, the normal relationships among variables may have been structurally distorted. To mitigate the potential confounding effect of this exogenous shock, data from the pandemic years 2021–2023 are excluded for the second robustness test. The results, reported in Column (4), confirm that ESG performance remains significantly positively associated with competitiveness, further validating the reliability and objectivity of the baseline results.

Finally, as ESG investments—such as improvements in environmental technologies or adjustments to governance structures—typically require time to translate into financial or market outcomes, introducing a lagged variable better reflects the actual mechanism of impact. Therefore, lagged ESG is used as the explanatory variable in the third robustness test. The results, shown in Column (5), reveal that lagged ESG has a coefficient of 3.826 on corporate competitiveness, which remains significant at the 1% level. This finding provides additional evidence that the baseline regression results are robust.

Table 6. Robustness Tests

	(1)	(2)	(3)	(4)	(5)
	ESG sub-dimensions			Exclusion of COVID-19 years	Lagged by one period
VARIABLES	lnEC	lnEC	lnEC	lnEC	lnEC
lnE	2.189*** (41.91)				
lnS		1.423*** (28.97)			
lnG			1.951*** (28.00)		
lnESG				3.537*** (36.28)	
L.lnESG					3.826*** (40.27)
Lev	3.598*** (102.07)	3.676*** (103.24)	3.952*** (109.12)	3.769*** (86.55)	3.801*** (99.17)
ROA	5.842*** (59.98)	5.797*** (58.54)	5.595*** (55.84)	4.534*** (36.29)	5.608*** (53.30)
FIXED	-0.003 (-0.06)	0.081 (1.59)	0.041 (0.81)	-0.034 (-0.56)	-0.111** (-2.02)
Board	0.789*** (25.13)	0.812*** (25.53)	0.874*** (27.50)	0.844*** (21.70)	0.829*** (24.23)
Top10	1.039*** (24.54)	1.097*** (25.61)	1.001*** (23.24)	1.123*** (21.11)	1.104*** (23.77)
FirmAge	0.151*** (6.98)	0.172*** (7.85)	0.160*** (7.27)	0.078*** (2.92)	0.156*** (6.34)
Mshare	-0.013*** (-37.76)	-0.014*** (-40.63)	-0.013*** (-39.22)	-0.014*** (-32.54)	-0.014*** (-36.77)
Constant	-18.835*** (-82.21)	-16.156*** (-70.25)	-18.674*** (-58.26)	-24.768*** (-57.47)	-26.404*** (-63.19)
Industry Control	Yes	Yes	Yes	Yes	Yes
Year Control	Yes	Yes	Yes	Yes	Yes
Observations	34,719	34,718	34,719	21,222	28,815
R-squared	0.651	0.642	0.641	0.655	0.652

5.6. Heterogeneity Analysis

5.6.1. Heterogeneity by Firm Size

This study examines whether the impact of ESG performance on competitiveness differs by firm size, with the results presented in Table 7. The regression coefficients for both small and large firms are significantly positive, indicating that ESG performance enhances competitiveness regardless of firm size. However, the coefficient for large firms (3.796) is substantially greater than that for small firms (1.703). This suggests that large firms, owing to stronger resource integration capabilities and economies of scale, are better positioned to convert ESG performance into competitive advantages. In contrast, while small firms also benefit from ESG practices, their limited resources constrain the breadth and effectiveness of such initiatives. To formally test for differences between the two groups, a Chow test was conducted. The test yields a p-value of 0.0000, strongly rejecting the null hypothesis. This confirms that although ESG performance significantly improves competitiveness for both large and small firms, the magnitude of the effect is statistically different, demonstrating that firm size moderates the ESG–competitiveness relationship.

Table 7. Heterogeneity Test by Firm Size

	(1)	(2)
	Small firms	Large firms
VARIABLES	lnEC	lnEC
lnESG	1.703*** (17.73)	3.796*** (33.99)
Lev	1.851*** (49.18)	3.041*** (60.85)
ROA	3.303*** (35.44)	4.456*** (31.29)
FIXED	0.176*** (3.32)	-0.121* (-1.90)
Board	0.341*** (10.73)	0.535*** (13.16)
Top10	-0.084* (-1.77)	1.436*** (27.98)
FirmAge	0.002 (0.08)	0.149*** (5.23)
Mshare	-0.002*** (-6.54)	-0.012*** (-22.43)
Constant	-15.191*** (-35.93)	-25.034*** (-50.55)
Industry Control	Yes	Yes
Year Control	Yes	Yes
Chow Test	2227.35	Prob=0.0000
Observations	17,359	17,360
R-squared	0.769	0.621

5.6.2. Heterogeneity by Firm Ownership

Firm ownership is further considered as a grouping variable to assess how ESG performance influences competitiveness across different ownership structures. The results, reported in Table 8, show that ESG performance has a significantly positive effect on competitiveness at the 1% level for both non-state-owned enterprises (non-SOEs) and state-owned enterprises (SOEs). However, the coefficient is larger for SOEs. The stronger effect for SOEs can be explained by two main factors: (1) their policy alignment with national strategic goals (such as the dual carbon targets), which facilitates preferential access to government resources and market opportunities; and (2) their higher credibility and governance standards, reinforced by stricter regulatory oversight, which contribute to stronger ESG ratings and enhanced competitiveness. Similar to the firm size analysis, a Chow test was performed, yielding a p-value of 0.0000. This result strongly rejects the null hypothesis, confirming that the difference between SOEs and non-SOEs is statistically significant.

Table 8. Heterogeneity Test by Firm Ownership

	(1)	(2)
	Non-SOEs	SOEs
VARIABLES	lnEC	lnEC
lnESG	3.446*** (33.40)	5.289*** (33.36)
Lev	3.696*** (91.87)	3.786*** (58.34)
ROA	5.319*** (50.91)	5.703*** (26.58)
FIXED	0.018 (0.30)	-0.014 (-0.16)
Board	0.735*** (20.76)	0.660*** (11.22)
Top10	0.147*** (3.04)	2.134*** (26.84)
FirmAge	0.153*** (6.47)	0.178*** (3.96)
Mshare	-0.009*** (-25.87)	-0.021*** (-17.19)
Constant	-24.211*** (-53.36)	-32.832*** (-46.80)
Industry Control	Yes	Yes
Year Control	Yes	Yes
Chow Test	155.32	Prob=0.0000
Observations	23,415	11,304
R-squared	0.677	0.618

6. Conclusion

Drawing on Chinese A-share listed companies from 2013 to 2023, and grounded in Resource-Based Theory, Stakeholder Theory, and Information Asymmetry Theory, this study empirically examines the effect of ESG performance on corporate competitiveness. By constructing a two-way fixed effects panel model and conducting baseline regressions, robustness checks, and heterogeneity analyses, the following key conclusions are obtained:On one hand, ESG performance significantly enhances corporate competitiveness. Strong ESG practices contribute to greater market share and improved competitiveness. In the Chinese market context, ESG investment should not be viewed merely as a cost burden; rather, it represents a strategic investment that can be effectively transformed into sustainable competitive advantage.On the other hand, The effect of ESG on competitiveness is heterogeneous.Firm size: ESG performance significantly enhances competitiveness in both small and large firms, but the effect is markedly stronger for large firms. With superior resource integration capabilities and economies of scale, large firms are better equipped to convert ESG input into competitive strength. Small firms also benefit, though their resource constraints limit the extent of the effect.Firm ownership: ESG performance significantly improves competitiveness for both SOEs and non-SOEs, but the impact is greater for SOEs. Their alignment with national strategic goals and higher governance credibility amplify the competitive advantages derived from ESG initiatives.

Enterprises should embed ESG considerations deeply into their strategic planning and daily operations. This requires setting explicit objectives, allocating resources effectively, improving the quality of ESG disclosure, and strengthening engagement with stakeholders to foster trust and enhance brand value. Regulators, meanwhile, need to establish disclosure standards tailored to China's institutional context, ensure the comparability and reliability of ESG information, and enforce stricter oversight to curb "greenwashing." Such measures can guide the market toward effectively rewarding sustainable firms. For investors, ESG ought to be treated as a core component of investment decisions, serving as a vital indicator of both risk management capacity and long-term value creation.

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