

The Impact of ESG on Financial Performance of Manufacturing Companies Listed in China Stock Markets

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Abstract

This study investigates the impact of Environmental, Social, and Governance (ESG) performance on the financial performance of China's listed manufacturing companies. As the world's largest manufacturing powerhouse, China is pursuing a strategic transformation toward sustainable and high-quality development. With the growing global emphasis on responsible investment, ESG has become an essential benchmark for evaluating corporate competitiveness, transparency, and long-term value creation. However, empirical evidence regarding the relationship between ESG and financial performance within China's manufacturing sector remains limited and inconclusive. Using panel data from A-share listed manufacturing firms on the Shanghai and Shenzhen Stock Exchanges from 2009 to 2023, this study examines whether ESG performance enhances corporate financial outcomes. ESG scores are obtained from the Huazheng ESG Rating System, while financial data are sourced from the China Stock Market and Accounting Research (CSMAR) database. Financial performance is measured by return on earnings per share (EPS). Control variables include firm size, leverage, cash flow, growth, and ownership concentration. The study employs a fixed-effects regression model to capture within-firm variations and control for unobserved heterogeneity. The empirical results show that ESG performance has a significant and positive impact on financial performance across EPS. The findings confirm that responsible business practices effectively boost profitability and operational efficiency, validating the dual value of stakeholder theory and signaling theory. The study further emphasizes that ESG initiatives are not merely compliance requirements, but strategic engines driving sustainable value creation. Overall, this research enriches the literature on ESG and financial performance in emerging markets by providing evidence from China's manufacturing sector. It also offers practical implications for managers, policymakers, and investors seeking to integrate sustainability principles into corporate decision-making.

Keywords: ESG Performance, Financial Performance, Manufacturing Companies, Sustainability, China

Introduction

As the world's largest manufacturing hub, China accounts for nearly one-third of global manufacturing output and plays a pivotal role in global supply chains. Manufacturing enterprises are central to China's economic growth, employment creation, and technological upgrading. However, the sector is also characterized by high energy consumption, environmental pollution, and intensive resource use. As China transitions from extensive growth to high-quality and sustainable development, manufacturing firms face increasing pressure to reconcile economic performance with environmental protection, social responsibility, and sound corporate governance.

Against this background, Environmental, Social, and Governance (ESG) performance has emerged as a comprehensive framework for evaluating corporate sustainability and long-term value creation. Globally, ESG considerations have evolved from ethical concerns into strategic determinants of corporate competitiveness and financial resilience. Sustainable investment assets exceeded USD 35 trillion in 2022, reflecting the growing recognition that ESG performance is closely linked to firms' risk management, innovation capacity, and long-term profitability. In China, regulatory initiatives by the China Securities Regulatory Commission and major stock exchanges, together with the "dual-carbon" targets, have further accelerated ESG adoption, particularly in energy-intensive manufacturing industries.

From a theoretical perspective, the relationship between ESG performance and financial performance can be explained primarily through **stakeholder theory** and **signaling theory**. Stakeholder theory argues that firms engaging responsibly with stakeholders—including employees, customers, investors, and regulators—can enhance trust, legitimacy, and long-term performance. Signaling theory suggests that high-quality ESG performance and disclosure convey credible signals of managerial competence and long-term orientation, thereby reducing information asymmetry and improving market valuation. Together, these frameworks imply that ESG engagement is not merely a compliance requirement but a strategic resource that can enhance financial outcomes.

Although a growing body of international literature documents a positive association between ESG performance and financial performance, empirical evidence remains mixed, particularly in emerging markets. While studies in developed economies largely support the value-creation hypothesis, findings for China are less conclusive. Some scholars argue that ESG investments impose short-term costs that may weaken profitability, whereas others highlight their long-term benefits through improved risk control, operational efficiency, and stakeholder relationships. Moreover, existing studies often focus on financial or service sectors, leaving China's manufacturing industry underexplored, despite its substantial economic and environmental significance.

To address these gaps, this study investigates whether ESG performance enhances the financial performance of manufacturing companies listed on China's stock markets. Using panel data from A-share listed manufacturing firms between 2009 and 2023, this study employs a fixed-effects regression model to examine the impact of ESG performance on earnings per share (EPS), while controlling for firm size, leverage, cash flow, growth, ownership concentration, and ownership nature. By focusing on China's manufacturing

sector and adopting a long-term panel framework, this research provides robust evidence on the financial implications of ESG engagement in an emerging-market context.

This study contributes to the literature in three main ways. First, it extends ESG–financial performance research to China’s manufacturing industry, a sector critical to both economic development and environmental sustainability. Second, it offers empirical support for the value-creation role of ESG, challenging the perception that ESG represents a financial burden. Third, by integrating stakeholder and signaling theories, it provides a coherent conceptual explanation for how ESG practices translate into tangible financial benefits. The findings offer valuable insights for corporate managers, investors, and policymakers seeking to promote sustainable and high-quality development in China’s manufacturing sector.

Literature Review

Concept and Dimensions of ESG

Environmental, Social, and Governance (ESG) performance has become a cornerstone of corporate sustainability assessment. It represents a comprehensive framework for evaluating how companies manage their responsibilities toward the environment, society, and internal governance structures (Bassen & Kovács, 2008). The **environmental dimension** examines a firm’s impact on natural ecosystems, including energy use, carbon emissions, waste management, and pollution control. The **social dimension** focuses on labor relations, community engagement, product safety, and human rights. The **governance dimension** addresses corporate board structure, transparency, shareholder rights, and ethical conduct. Together, these dimensions capture how firms integrate sustainability into long-term value creation.

In recent years, ESG has evolved beyond corporate philanthropy into a core business strategy. Companies that excel in ESG practices are increasingly recognized for their ability to mitigate non-financial risks, attract investment, and sustain competitive advantages (Clark, Feiner, & Viehs, 2015). For investors, ESG serves as an indicator of firm quality and resilience, offering insights into management efficiency, innovation potential, and reputation risk. Consequently, ESG evaluation has become integral to both corporate governance and investment decision-making processes worldwide.

Theoretical Foundations

The relationship between ESG performance and financial performance is underpinned by several theoretical frameworks, among which **stakeholder theory** and **signaling theory** are the most prominent.

Stakeholder theory (Freeman, 1984) argues that a firm’s long-term success depends on its ability to balance the interests of multiple stakeholders, including shareholders, employees, customers, suppliers, and the broader community. Effective ESG practices help build trust and reduce conflicts among stakeholders, thereby enhancing corporate reputation and performance. For example, environmental initiatives reduce regulatory risks and operating costs, social programs strengthen employee loyalty, and strong governance enhances managerial accountability. Empirical studies support this perspective, finding that firms with higher ESG engagement exhibit improved profitability, innovation, and stability (Orlitzky, Schmidt, & Rynes, 2003; Margolis & Walsh, 2003).

Signaling theory (Spence, 1973) complements this view by emphasizing the role of ESG disclosure as a credible signal to investors and the market. Firms with robust ESG practices send positive signals about their quality, management competence, and long-term orientation. Transparent ESG reporting reduces information asymmetry, lowers the cost of capital, and enhances investor confidence. Fatemi, Glaum, and Kaiser (2018) found that firms with better ESG disclosure experience higher firm value, supporting the notion that sustainability information serves as a trust-enhancing mechanism. Similarly, Verheyden, Eccles, and Feiner (2016) demonstrated that ESG screening improves portfolio performance by mitigating risk exposure.

Other theoretical perspectives also enrich understanding of the ESG–financial performance link. The **resource-based view (RBV)** suggests that ESG practices create unique and inimitable resources—such as reputation, innovation capabilities, and stakeholder relationships—that contribute to sustainable competitive advantage (Hart & Dowell, 2011). **Legitimacy theory** argues that ESG engagement helps firms maintain legitimacy and social acceptance, especially in highly regulated environments (Suchman, 1995). Collectively, these theories provide a comprehensive foundation for examining the ESG–FP nexus.

Empirical Evidence: Global Context

Empirical research on ESG and financial performance has grown substantially over the past two decades. Meta-analyses by Friede, Busch, and Bassen (2015) and Orlitzky et al. (2003) concluded that the majority of studies report a positive or neutral relationship between ESG and financial performance. Friede et al. (2015), synthesizing over 2,000 studies, found that approximately 90% show a non-negative correlation, and more than 60% indicate a positive link. This consistent evidence underscores that ESG engagement tends to enhance financial outcomes rather than undermine them.

Numerous firm-level studies in developed economies support this conclusion. For instance, Clark et al. (2015) found that companies with strong ESG profiles outperform their peers in long-term stock returns and operational efficiency. Fatemi et al. (2018) further showed that ESG disclosure improves firm value, particularly when information credibility is high. Similarly, Khan, Serafeim, and Yoon (2016) identified that firms focusing on material ESG issues experience higher stock performance and profitability. More recently, Albuquerque et al. (2019) demonstrated that ESG-oriented firms exhibit lower systematic risk, confirming that sustainability practices serve as financial stabilizers.

However, not all studies find uniformly positive effects. Some researchers, such as Waddock and Graves (1997) and Brammer et al. (2006), argue that ESG initiatives may impose short-term financial burdens, especially in industries with high compliance costs. This view is known as the **trade-off hypothesis**, suggesting that ESG expenditures might divert resources from core profit-generating activities. Nevertheless, mounting evidence in recent years supports the **value-creation hypothesis**, which posits that ESG investments yield long-term economic benefits through enhanced innovation, risk management, and stakeholder relations.

Empirical Evidence: China's Context

In emerging markets such as China, ESG research is still in its developmental stage but is expanding rapidly. The introduction of ESG disclosure guidelines by the China Securities

Regulatory Commission (CSRC) and major stock exchanges has significantly improved data availability. Studies focusing on Chinese firms generally reveal a positive relationship between ESG and financial performance. For example, Wang and Li (2023) analyzed listed manufacturing firms and found that ESG engagement significantly enhances both accounting-based and market-based performance indicators. Similarly, Chen, Li, and Zhang (2021) showed that ESG disclosure improves firm value by reducing information asymmetry and strengthening investor confidence.

Other studies highlight industry-specific dynamics. In high-pollution industries, improved ESG performance can lead to substantial cost savings through energy efficiency and regulatory compliance (Zhao & Xiao, 2022). For manufacturing enterprises, environmental initiatives such as green innovation and carbon reduction not only improve public image but also foster operational efficiency. The social dimension—employee welfare, safety management, and supply chain responsibility—has also been found to contribute positively to productivity and profitability (Luo et al., 2020). Governance practices, including board independence and transparency, are especially influential in China's institutional environment, where information asymmetry remains prevalent (Liu & Zhang, 2021).

While most evidence supports the positive ESG–FP linkage, several studies point to heterogeneity across firm characteristics. For instance, state-owned enterprises (SOEs) may implement ESG policies more for regulatory compliance than profit motives, leading to weaker financial impacts compared to privately owned firms (Hao & Wang, 2020). In contrast, non-state firms tend to view ESG as a strategic investment that enhances market competitiveness. Given this variation, it is essential to control for ownership structure to obtain unbiased estimates of ESG's financial effects, while avoiding overcomplicating the model with moderating relationships.

Research Gaps and Hypothesis Development

Despite extensive literature, several gaps remain unresolved. First, much of the existing research focuses on developed economies, leaving limited empirical evidence from China's manufacturing sector—a critical engine of economic growth and environmental impact. Second, previous Chinese studies often rely on cross-sectional data, which cannot capture the dynamic effects of ESG engagement over time. This study successfully fills these research gaps by employing 15-year panel data, effectively isolating the direct financial effects of ESG. Based on stakeholder and signaling theories and supported by prior empirical evidence, this study proposes the following hypothesis:

H1: ESG performance has a significant positive impact on the financial performance of China's listed manufacturing companies.

This hypothesis assumes that firms with higher ESG engagement demonstrate superior financial performance through improved operational efficiency, reputation, and stakeholder trust. The next section details the methodology used to test this hypothesis using panel data analysis.

Methodology

Research Design

This study adopts a quantitative research design to empirically examine the relationship between ESG performance and financial performance among China's listed manufacturing companies. Given the longitudinal nature of ESG activities and financial outcomes, panel data analysis is employed to capture both cross-sectional and time-series variations. The use of firm-level panel data allows for more accurate estimation by controlling for unobserved heterogeneity across firms and over time.

A **fixed-effects regression model** is applied, as it effectively accounts for time-invariant firm-specific characteristics that could bias the results. The fixed-effects model isolates within-firm variations and is appropriate when omitted variables are correlated with explanatory factors—a likely scenario in corporate finance and sustainability research. This model helps ensure that the estimated impact of ESG performance on financial performance reflects genuine within-company changes rather than unobserved cross-sectional differences.

Data Sources and Sample Selection

The dataset consists of A-share listed manufacturing firms on the Shanghai and Shenzhen Stock Exchanges between **2009 and 2023**. ESG performance data are sourced from the **Huazheng ESG Rating System (HZE)**, one of China's most authoritative ESG databases widely used in academic research. The HZE system evaluates firms' performance across three dimensions—environmental (E), social (S), and governance (G)—and provides annual composite scores ranging from 0 to 100.

Financial and accounting data are obtained from the **China Stock Market and Accounting Research (CSMAR)** database, which offers comprehensive and reliable financial information for all publicly listed firms. The dataset covers firm-level indicators such as total assets, total liabilities, net income, and cash flow.

To ensure data consistency and reliability, the following sample selection criteria are applied:

1. Only firms classified as manufacturing according to the **CSRC industry classification (2012 edition)** are included.
2. Firms with missing ESG or financial data are excluded.
3. Firms designated as ST (Special Treatment) or delisted during the sample period are removed to avoid financial distortion.
4. All continuous variables are winsorized at the 1% and 99% levels to mitigate the impact of outliers.

After applying these filters, the final sample comprises **approximately 26,216 firm-year observations** across 15 years, providing a robust empirical basis for regression analysis.

Variable Measurement

Table 1 summarizes the definitions and measurements of the variables used in this study.

Table 1

Variable Definitions

Variable	Symbol	Measurement
Dependent Variable		
Earnings Per Share	EPS	(Net profit-preferred stock dividends) /Average number of common shares outstanding
Independent Variable		
ESG Performance	ESG	The average value of each year score from Huazheng database (0–100)
Control Variables		
Enterprise Size	Size	Natural logarithm of total corporate assets
Financial Leverage	Lev	Total liabilities/Total assets
Cash Flow Ratio	Cashflow	Net operating cash flow/ total assets
Firm Growth	Growth	Annual growth rate of operating revenue
Top1 Shareholding Ratio	Top1	Number of shares held by the first largest shareholder/Total number of shares
Nature of Ownership	SOE	State-owned enterprises=1, non-state-owned enterprises=0
Return on Equity	ROE	Net income /Shareholders' equity

The **dependent variable** in this study is **financial performance (FP)**, measured by the accounting indicator of earnings per share (EPS), which reflects the profitability of the enterprise.

The **independent variable** is the ESG composite score, reflecting firms' overall sustainability engagement. Higher ESG scores indicate better performance.

Control variables are included to account for firm-level characteristics that may influence financial performance. Firm size captures economies of scale; leverage represents financial risk; cash flow reflects internal liquidity and investment capacity; growth measures expansion capability; and ownership concentration (Top1) captures governance structure effects.

Model Specification

To test the hypothesis that ESG performance positively affects financial performance, the following fixed-effects regression model is estimated:

$$EPS_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 Cashflow_{it} + \beta_5 Growth_{it} + \beta_6 Top1_{it} + \beta_7 SOE_{it} + \beta_8 ROE_{it} + \gamma_t + \delta_i + \varepsilon_{it}$$

Where: EPS_{it} represents the financial performance of the listed company i in year t ; ESG_{it} denotes ESG performance of the listed company i in year t ; $Size_{it}$, Lev_{it} , $Cashflow_{it}$, $Growth_{it}$, $Top1_{it}$, SOE_{it} and ROE_{it} are control variables. β_0 is the intercept term, β_1 to β_8 are the regression partial slope coefficients. γ_t , δ_i and ε_{it} represent the year fixed effect, company fixed effect and the error term.

This model structure enables the study to isolate the direct effect of ESG on financial outcomes, controlling for both time-varying and firm-specific characteristics.

Results and Discussion

Descriptive Statistics

Before conducting regression analysis, descriptive statistics were computed to provide an overview of the sample characteristics. Table 2 presents the mean, standard deviation, minimum, and maximum values of the key variables used in the model.

Table 2

Descriptive Statistics (N = 26,216 company-year observations)

Variable	Mean	Std. Dev.	Min	Max	Normality
EPS	0.422	0.749	-1.657	3.801	0.00000
ESG	4.085	0.905	1.500	6.000	0.00000
Size	21.915	1.251	19.058	25.554	0.00000
Lev	0.400	0.197	0.054	0.939	0.00000
ROE	0.084	0.155	-0.758	0.458	0.00000
Growth	0.209	0.541	-0.689	3.303	0.00000
Cashflow	0.915	1.473	0.014	9.366	0.00000
Top1	33.439	14.378	8.720	72.960	0.20399

The results indicate that the average ESG score of the sample enterprises is 4.085, with a standard deviation of 0.905, a minimum value of 1.500, and a maximum value of 6.000. This indicates that although the ESG awareness and implementation level of enterprises are reflected to some extent, there are differences among different enterprises. The average return on equity (ROE) is 8.4%, indicating that the company's profitability is at a corresponding level. The mean value of enterprise Size is 21.915, the standard deviation is 1.251, the minimum value is 19.058, and the maximum value is 25.554, reflecting the diversity of listed enterprises in terms of scale and resource allocation. The average debt ratio (Lev) is approximately 40%, indicating that the capital structure remains balanced.

Descriptive statistics show that significant difference exists among the ESG performance in different enterprises (the standard deviation is 0.905, and the minimum and maximum gap evident), suggest that sustainable practices may be heterogeneous. This difference provides empirical evidence for examining how ESG differences affect financial results (EPS) .

Correlation Analysis

The results of the Kendall's tau-b correlation analysis are presented in Table 3. The correlation coefficients range between -1 and 1, where values closer to ± 1 indicate stronger relationships, and the sign denotes the direction of the relationship. The analysis reveals a moderate positive correlation between ESG performance and financial performance (EPS), with a tau-b coefficient of 0.2084, suggesting that firms with higher ESG scores tend to have better profitability per share. Additionally, ESG is positively correlated with firm size (0.0842) and return on equity (0.1518), while it shows a negative correlation with leverage (-0.1059) and cash flow (-0.2210), implying that higher ESG performers may be more financially prudent or conservative in cash flow management.

Table 3

Kendall's Tau-b Correlation Matrix

	EPS	ESG	Size	Lev	ROE	Growth	Cashflow	Top1	SOE
EPS	0.9998								
ESG	0.2084	0.8834							
Size	0.1024	0.0842	0.9999						
Lev	-0.1641	-0.1059	0.3259	0.9998					
ROE	0.6786	0.1518	0.0629	-0.1001	0.9999				
Growth	-0.0115	-0.0018	-0.0327	-0.0038	-0.0111	0.9998			
Cash flow	0.1992	0.1288	-0.2210	-0.5637	0.1462	0.0096	0.9998		
Top1	0.1028	0.0626	0.0358	-0.0255	0.0986	-0.0038	0.00493	0.9996	
SOE	-0.0642	-0.0049	0.1480	0.1384	-0.0483	-0.0014	-0.771	0.0623	0.4092

Table 1

Correlation Results between Enterprise Financial Performance and Independent Variables

F (1,2625)	188.037
Prob > F	0.000

Table 4 presents that the F-statistic value is 188.037, indicating that the linear relationship between the independent and dependent variables in the model is highly significant. The corresponding Prob > F is 0.0000. Given a significance level of $\alpha = 0.05$, the p-value (0.000) is less than 0.01, leading to the rejection of the null hypothesis that there is no within-group autocorrelation. This result suggests the presence of within-group autocorrelation in the equation.

Table 2

Multicollinearity Results among Independent Variables

Variable	VIF	1/VIF
ESG	1.14	0.875
Size	1.49	0.669
Lev	2.00	0.501
Cashflow	1.47	0.682
ROE	1.16	0.861
SOE	1.15	0.866
Top1	1.04	0.957
Growth	1.01	0.991

Table 5 presents the results of the multicollinearity test among the independent variables. This test aims to assess whether there exists a high degree of correlation among the explanatory variables. In this study, the Variance Inflation Factor (VIF) was employed to diagnose the severity of multicollinearity. Generally, a VIF value greater than 10 indicates a serious multicollinearity issue (citation). In the current analysis, all VIF values for the independent variables are below 10, suggesting that the level of multicollinearity is within an

acceptable range. The highest VIF value observed is 2, which is well below the threshold of 10, indicating that multicollinearity is not a concern in this model.

Table 3

Heteroscedasticity between Enterprise Financial Performance and Independent Variables

X² (43)	5834.07
Prob > X ²	0.000

Table 6 shows that the p-value (0.0000) < 0.01, which leads to the rejection of H₀ and confirms that the residual variance is significant. Heteroskedasticity can cause bias in OLS standard errors, such as the possible overestimation of ESG's significance for EPS. To address this issue, this study employs a fixed effects model (FEM) with heteroskedasticity-robust standard errors (Robust SE). Even in the presence of heteroskedasticity, FEM estimates of individual fixed effects (e.g., industry, firm traits) remain consistent, ensuring control over unobserved heterogeneity. Standard errors are adjusted using the Stata command `xtreg, fe robust` to render t-tests and p-values valid, thereby accurately testing the significance of variables such as ESG (e.g., to avoid spurious significance arising from heteroskedasticity).

Regression Results

Table 7 reports the results of fixed-effects regression analyses using EPS. The models include company and year fixed effects, and standard errors are clustered at the firm level.

Table 7

The results of fixed-effects regression analyses using EPS

	EPS (1)	EPS (2)
ESG	0.226***	0.059***
Size		0.122***
Lev		-0.268***
ROE		3.095***
Growth		-0.030***
Cashflow		0.036***
Top1		0.001***
SOE		-0.079***
Year	YES	YES
Company	YES	YES
_cons	-0.499***	-2.598***
Observations	29,217	

Table 7 presents the results of t fixed-effects regression analyses using EPS. The findings indicate a significant positive relationship between corporate ESG performance and financial performance. In EPS (1), which excludes control variables, a one-unit increase in ESG performance leads to an average increase of 0.226 units in earnings per share (EPS), and the coefficient is significant at the 1% level. This suggests that the independent effect of ESG on financial performance is notably strong when other influencing factors are not considered. Regression analysis demonstrates that ESG performance exerts a significant positive influence on the financial metric EPS. The ESG coefficient in Model 1 is 0.226* (statistically significant at the 1% level), while in Model 2 it remains at 0.059* (still statistically significant

at the 1% level). These findings confirm that companies with superior ESG performance typically achieve higher EPS and better shareholder returns. Moreover, even when controlling for other influencing factors, ESG's positive impact on EPS remains robust.

Regarding control variables, firm size (Size) shows a significant positive correlation with EPS, indicating that large enterprises can enhance earnings per share through economies of scale and improved governance. The leverage ratio (Lev) demonstrates a significant negative impact on EPS, suggesting that excessive debt increases financial risks that constrain profit growth. Return on Equity (ROE) serves as the primary driver of EPS, underscoring the pivotal role of a company's internal value creation in earnings per share. Cashflow demonstrates a strong positive correlation with EPS, highlighting how sufficient liquidity supports shareholder returns. The shareholding ratio of the largest shareholder (Top1) shows a significant positive correlation with EPS, indicating that concentrated ownership enhances EPS optimization through strengthened oversight. State-owned enterprises (SOEs) exhibit a notable negative impact on EPS, likely due to their greater social responsibilities constraining profitability. Growth metrics (Growth) show a significant negative correlation with EPS, possibly because short-term investments during expansion phases suppress earnings per share.

Robustness Tests

Although the baseline regression incorporates control variables from multiple dimensions, endogeneity biases may still arise due to issues such as bidirectional causality and omitted variables. Drawing on the research frameworks of Lin & Wang (2023) and Xie & Xue (2022), this study selects the mean ESG score of other firms in the same industry and year (M-ESG) as the instrumental variable for corporate ESG performance. In terms of relevance, there exists a "peer effect" in ESG practices within an industry (e.g., imitative behaviors regarding outstanding ESG practices among industry peers), which renders a firm's individual ESG score significantly correlated with the industry-average ESG score. In terms of exogeneity, the industry-average ESG does not directly act on a firm's financial performance (a firm's financial performance is more driven by its own characteristics and strategic decisions), so M-ESG is uncorrelated with the error term, satisfying the exclusion restriction of the instrumental variable.

Table 8

Regression Results of Instrumental Variables

Variable	First-stage regression ESG	Second-stage regression EPS
M-ESG	0.262*	0.122***
ESG		0.258***
Size	0.217***	0.077***
Lev	-1.242***	-0.016***
ROE	0.772***	2.936***
Growth	-0.045***	-0.021***
Cashflow	0.002	0.035***
Top1	0.003***	0.001
SOE	-0.021*	-0.075***
Observations	29,217	26,216
R-squared		0.429

Table 8 reports the regression results of the two-stage least squares (2SLS) method. In the first-stage regression, the coefficient of the instrumental variable M-ESG is significantly positive at the 10% significance level, verifying the correlation between M-ESG and corporate ESG. Furthermore, the validity of the instrumental variable is tested via the Kleibergen-Papp Wald F-statistic (with a value of 41.534), which is much larger than the critical value (16.38) corresponding to the 10% bias in the Stock-Yogo weak identification test. This strongly rejects the null hypothesis of "weak identification of instrumental variables", indicating a strong correlation between the instrumental variable and the endogenous variable (corporate ESG). In the second-stage regression, the estimated coefficient of ESG on EPS remains significantly positive, suggesting that after controlling for endogeneity issues, the positive impact of ESG on financial performance is still robust, and thus the conclusion of the baseline regression is reliable.

Discussion

The findings strongly support the value-creation hypothesis, suggesting that ESG engagement enhances firm profitability and competitiveness. This evidence reinforces the dual theoretical perspectives of stakeholder and signaling theories.

From the stakeholder perspective, ESG engagement builds long-term relationships of trust and cooperation with employees, investors, customers, and regulators. Such relationships foster innovation, operational efficiency, and reduced transaction costs. Environmental practices improve compliance and reduce penalties; social initiatives enhance employee morale and customer loyalty; and sound governance improves transparency and accountability. Collectively, these mechanisms translate into improved financial performance.

From the signaling perspective, ESG disclosure serves as a credible signal to the market about managerial quality and commitment to sustainable growth. Firms with transparent ESG practices are perceived as lower-risk investments, thereby attracting capital and improving market valuation. The significant positive coefficient of ESG in all models confirms that ESG practices reduce information asymmetry and enhance investor confidence in China's capital market.

These results are consistent with global research by Friede et al. (2015), Clark et al. (2015), and Albuquerque et al. (2019), all of whom documented that ESG engagement enhances both firm value and stability. The present study extends these findings to China's manufacturing sector, demonstrating that sustainability practices can generate tangible financial benefits even in resource-intensive industries.

Findings and Conclusion

Findings

This study empirically explores the relationship between environmental, social, and governance (ESG) performance and financial performance (with earnings per share, EPS, as the core indicator) of Chinese listed companies from 2009 to 2023. Grounded in stakeholder theory and signaling theory, this study aims to verify whether firms with outstanding ESG performance can achieve superior financial outcomes. By constructing a fixed-effects panel data model, controlling for characteristic variables including firm size (Size), leverage ratio

(Lev), return on equity (ROE), cash flow (Cashflow), shareholding ratio of the largest shareholder (Top1), firm nature (SOE), and growth rate, and adopting the instrumental variable approach (using “the mean ESG score of other firms in the same industry and year” as the instrumental variable) to mitigate endogeneity biases, the research results strongly demonstrate that: ESG performance exerts a significant and robust positive impact on financial performance.

Empirical results show that firms with higher ESG scores exhibit better earnings per share (EPS) and stronger profitability. This finding corroborates signaling theory: credible ESG information disclosure can effectively reduce information asymmetry, enhance market confidence, and lower financing costs; meanwhile, ESG initiatives promote the improvement of financial performance in multiple dimensions by strengthening stakeholder relationships, enhancing operational efficiency, and accumulating corporate reputation capital.

The performance of control variables aligns with economic logic: firm size (Size) is significantly positively correlated with EPS, as large enterprises benefit from economies of scale and more sophisticated governance systems; leverage ratio (Lev) is significantly negatively correlated with EPS, reflecting that excessive debt increases financial risks, squeezes profit margins, and restricts operational flexibility; return on equity (ROE) has the most prominent driving effect on EPS, fully embodying that a firm’s internal value creation capability is the core foundation of EPS; cash flow (Cashflow) is significantly positively correlated with EPS, highlighting the importance of liquidity management in supporting shareholder returns; the shareholding ratio of the largest shareholder (Top1) is significantly positively correlated with EPS, reflecting the positive promotional effect of concentrated ownership on EPS by strengthening supervision mechanisms; state-owned enterprises (SOE) are significantly negatively correlated with EPS, possibly because SOEs often undertake more social responsibilities, which impose certain constraints on profit levels; the growth indicator (Growth) is significantly negatively correlated with EPS, which may be attributed to the short-term investment during a firm’s growth process exerting an inhibitory effect on earnings per share. Overall, the research results verify the “value creation hypothesis”, indicating that ESG engagement can not only improve firms’ internal operational performance but also enhance external market perception, thereby strengthening the strategic and financial value of sustainable development in the field of Chinese listed companies. Moreover, verified by the instrumental variable approach, the positive impact of ESG on financial performance remains robust after controlling for endogeneity, further supporting the reliability of the conclusions.

Conclusion

In conclusion, this study demonstrates that **ESG performance has a significant and positive impact on the financial performance of China’s listed manufacturing companies**. The evidence supports the argument that sustainability and profitability are not mutually exclusive but mutually reinforcing. Firms that integrate ESG into their strategic and operational frameworks can achieve superior financial outcomes while contributing to broader societal and environmental goals.

By providing empirical validation and practical guidance, this study contributes to the growing body of evidence that ESG engagement represents a **strategic path toward sustainable value creation**, particularly in emerging economies undergoing industrial transformation.

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