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How Firm Size and the COVID-19 Pandemic Shape the ESG-Performance Relationship in Vietnam's Manufacturing Sector

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ABSTRACT: This study investigates the relationship between environmental, social, and governance (ESG) practices and firm performance in the Vietnamese manufacturing sector, with a focus on the moderating effects of firm size and the COVID-19 pandemic. Based on a balanced panel dataset of 63 listed manufacturing firms over the period 2014–2023, this study employs feasible generalized least squares (FGLS) estimation to address heteroscedasticity and autocorrelation concerns commonly found in firm-level data. The empirical findings demonstrate a significantly negative association between ESG engagement and return on equity (ROE), suggesting that ESG investments may result in short-term performance trade-offs in emerging markets. Notably, this negative relationship is attenuated for larger firms and during the COVID-19 crisis, suggesting that organizational size and crisis conditions enhance firms' ability to absorb costs and leverage the strategic benefits of ESG initiatives. By contrast, ESG engagement appears to have a negligible impact on firm performance in stable macroeconomic environments. These results underscore the contingent nature of ESG performance, which is shaped by not only internal firm characteristics but also broader economic conditions. This study contributes to the growing body of literature on ESG in emerging economies by highlighting the subtle interplay among ESG activities, firm capabilities, and external shocks. The practical implications point to the need for companies to calibrate ESG strategies according to their resources and prevailing economic conditions to optimize value creation.

KEYWORDS: ESG, performance, size, pandemic, manufacturing firms, Vietnam

I. INTRODUCTION

Environmental, social, and governance (ESG) factors have gained prominence as strategic drivers of long-term firm performance, particularly within sectors that are resource-intensive and environmentally impactful, such as manufacturing. Amid global pressures for sustainable development, manufacturers are increasingly expected to integrate ESG practices not only to comply with regulatory standards but also to enhance competitiveness and stakeholder trust (Eccles, Ioannou, & Serafeim, 2014; Khan, Serafeim, & Yoon, 2016). The COVID-19 pandemic has further accelerated the ESG agenda, exposing vulnerabilities in global supply chains and elevating investor and societal expectations regarding corporate responsibility and resilience (Albuquerque, Koskinen, Yang, & Zhang, 2020; Husted et al., 2021).

Theoretically, ESG performance influences financial outcomes through several channels. Strong environmental practices may reduce operating risks and regulatory fines; social initiatives can improve employee productivity and customer loyalty; and governance mechanisms foster transparency and reduce agency conflicts, which in turn lower capital costs (Fatemi, Glaum, & Kaiser, 2018; Friede, Busch, & Bassen, 2015). Yet, the empirical evidence remains mixed. While many studies report a positive relationship between ESG and firm performance (Velte, 2017; Whelan et al., 2021), others argue that ESG investments may impose opportunity costs, especially during economic downturns when liquidity constraints are tight (Krüger, 2015; Margolis, Elfenbein, & Walsh, 2009). The inconsistency in findings suggests that contextual factors, such as firm size and crisis conditions may moderate this relationship.

To date, most empirical studies have focused on developed markets, often neglecting emerging economies where ESG frameworks are less mature, and institutional voids may alter the dynamics of stakeholder engagement (Ioannou & Serafeim, 2012; Li et al., 2021). Furthermore, the heterogeneity across firms in responding to ESG imperatives during external shocks, such as the COVID-19 crisis, has received limited scholarly attention. Firm size may play a pivotal role in shaping ESG strategies and their performance implications. Larger firms may have more resources, brand sensitivity, and regulatory exposure, potentially enabling more effective ESG implementation and better crisis management (Lins, Servaes, & Tamayo, 2017; Ferriani, Maffei, & Visentin, 2022).

This study addresses these gaps by examining how the ESG–performance relationship is shaped by firm size and the COVID-19 pandemic within the context of Vietnam's manufacturing sector. Using a panel dataset of listed manufacturing firms from 2014

to 2023 and applying feasible generalized least squares (FGLS) estimation, we assess the differential impact of ESG performance on financial outcomes across firm sizes and between pre-pandemic and pandemic periods. Our findings suggest that while ESG engagement generally enhances firm performance, the positive effects are more pronounced in large firms and during the COVID-19 crisis, highlighting the strategic role of ESG in enhancing firm resilience under external shocks.

This study makes several contributions to the literature. First, it extends ESG research to the underexplored setting of an emerging economy, offering insights into ESG's effectiveness in contexts with weaker institutional environments. Second, it provides empirical evidence on the contingent role of firm size in moderating ESG's impact, particularly during times of crisis. Third, it informs policy debates on sustainable industrial development by underscoring the importance of firm-level capacity in leveraging ESG for performance improvement under stress. These contributions are especially relevant for policymakers, investors, and corporate managers seeking to foster sustainability in rapidly industrialized regions.

The remainder of this paper is organized as follows. Section 2 provides a review of the literature. Section 3 outlines the research design, including data, variables, and methodology. Section 4 presents and discusses the empirical results. Section 5 concludes with policy implications and directions for future research.

II. LITERATURE REVIEW

The relationship between environmental, social, and governance (ESG) performance and firm performance has been explained through several theoretical lenses. One of the most prominent is stakeholder theory, which argues that firms proactively managing ESG concerns are better able to satisfy the expectations of various stakeholder groups, such as customers, employees, investors, and regulators. This alignment fosters long-term trust and reduces risk, ultimately enhancing financial performance (Freeman, 1984; Eccles et al., 2014). Complementing this is the resource-based view (RBV), which posits that ESG capabilities can serve as valuable, rare, and inimitable resources that generate sustained competitive advantage (Hart, 1995; Barney, 1991).

Conversely, trade-off theory suggests that ESG investments may divert resources from core operations and impose short-term costs without guaranteed returns, particularly in low-margin or highly competitive industries (Krüger, 2015; Servaes & Tamayo, 2013). Under this view, ESG is considered a non-financial objective that may compromise shareholder value when not strategically aligned with firm goals.

Firm size and external crises are crucial moderators of the ESG–performance relationship. Large firms typically possess more slack resources, sophisticated risk-management systems, and reputational incentives to engage in ESG practices, potentially yielding stronger performance benefits (Lins et al., 2017; Ferriani et al., 2022). By contrast, small firms may face constraints in ESG implementation due to limited capital and organizational capacity (Grewal et al., 2016).

Moreover, crisis periods, such as the COVID-19 pandemic, amplify stakeholder scrutiny and can alter the ESG–performance dynamics. ESG-oriented firms may demonstrate higher resilience during crises by preserving stakeholder trust, ensuring supply chain continuity, and maintaining access to capital (Albuquerque et al., 2020). However, the effectiveness of ESG responses in crisis conditions may differ across firm types, making size and shock sensitivity essential analytical dimensions (Ding et al., 2021).

A growing body of empirical research has explored the impact of ESG performance on firms' financial outcomes. A significant number of studies find a positive relationship, arguing that ESG engagement leads to enhanced firm value, reduced risk, and improved access to capital. For instance, Friede, Busch, and Bassen (2015), through a meta-analysis of over 2,000 studies, report that approximately 90% of studies identify a non-negative ESG–performance link, with a majority showing positive associations. Similarly, Khan, Serafeim, and Yoon (2016) find that firms investing in financially material ESG issues outperform peers in terms of stock returns and profitability. Velte (2017) and Whelan et al. (2021) further confirm that ESG efforts contribute to higher firm performance, particularly in sectors where stakeholders are ESG-sensitive.

However, some studies report a negative or neutral relationships. Krüger (2015) argues that markets may penalize firms perceived as overinvesting in ESG, especially when such investments lack clear financial justification. According to Servaes and Tamayo (2013), the effectiveness of ESG efforts is contingent on consumer awareness—ESG engagement yields positive results only when consumers value such initiatives. In firms with low consumer ESG sensitivity, this relationship may even turn negative.

Other empirical findings suggest no statistically significant relationship between ESG performance and financial outcomes. Margolis, Elfenbein, and Walsh (2009), in their meta-analysis, reveal that while there is a slight positive trend, the effect sizes are often small and context dependent. Similarly, Li et al. (2021) find that in emerging markets, institutional voids and weak enforcement dilute the impact of ESG on performance.

In summary, the existing literature presents inconclusive results regarding the ESG–performance nexus, indicating the importance of considering firm-specific and contextual factors such as size, industry, and crisis periods. The current study contributes to this debate by investigating how firm size and the COVID-19 pandemic jointly shape the ESG–performance relationship in the context of Vietnam's manufacturing sector—an area that remains underexplored in existing literature.

III. METHODOLOGY

A. Data

This study draws upon a comprehensive dataset compiled from multiple reliable sources. Firm-level data, including environmental, social, and governance (ESG) disclosures, corporate governance indicators, and annual financial statements of publicly listed firms in Vietnam, were obtained from the Vietstock database. To supplement this, macroeconomic variables are collected from the WiData platform. Following the initial data-gathering process, all observations with missing or incomplete values were systematically excluded to ensure analytical consistency.

Although the initial population encompassed the entire universe of listed firms on Vietnamese stock exchanges, the final sample was necessarily restricted to those companies that provided voluntary ESG disclosures. As ESG reporting remains non-mandatory in Vietnam, this subset represents a relatively small fraction of the broader market. The resulting balanced panel consists of 63 listed firms, yielding 629 firm-year observations over the period from 2014 to 2023.

Vietnam serves as a highly pertinent setting for examining the ESG–firm value relationship, given its status as a dynamic emerging economy undergoing rapid institutional and economic transformation. In recent years, increased emphasis has been placed on corporate transparency, sustainability practices, and responsible governance, driven by both domestic reforms and international integration. The selected study period (2014–2023) coincides with several critical developments in the ESG landscape, such as the promulgation of the Vietnam Corporate Governance Code in 2019 and the country's alignment with the United Nations Sustainable Development Goals (SDGs). These shifts have intensified regulatory attention to ESG disclosures and enhanced investor demand for sustainability-aligned corporate behavior. Moreover, this decade encapsulates significant exogenous shocks, most notably the COVID-19 pandemic providing an opportunity to explore how ESG dynamics interact with firm value during periods of heightened uncertainty and systemic disruptions.

B. The model

Following the approach of Buallay (2021) and Tang and Nguyen (2024), we proposed the following model to estimate the impact of ESG on manufacturing firms' performance:

$$\begin{aligned} Performance_{it} &= \beta_0 + \beta_1 \times ESG_{it} + \beta_2 \times Firmsize_{it} + \beta_3 \times Fixedasset_{it} \\ &+ \beta_4 \times Leverage_{it} + \beta_5 \times Cashflow_{it} + \beta_6 \times BIG4_{it} \\ &+ \beta_7 \times Inflation_{it} + \beta_8 \times GDP_{it} + \varepsilon_{it} \end{aligned} \quad (1)$$

Where *Performance* represents firm performance, measured by ROE. *ESG* repesent ESG activities of manufacturing firms. Micro-control variables include firm size, fixed assets, leverage, cash flow, and the Big4 auditors. Macro-controls include GDP growth and inflation rates. The variables used in Equation (1) are summarized in Table 1.

We then performed popular panel regression methods including OLS, FEM, and REM and used relevant test to choose the most suitable estimation method, REM. However, after conducting post-estimation tests for the chosen REM model, we identified the issues of heteroscedasticity and autocorrelations. Hence, we proceed to use Feasible Generalized Least Squares (FGLS), which accounts for the aforementioned issues.

Table 1. Variable description

Variables	*Definitions*	*Calculation methods*
Performance	Firm profitability	Profit after tax/Equity
ESG	ESG activities	Dummy variable, equals 1 if firms have ESG reports, 0 otherwise
Firmsize	Firm size	Natural logarithm of firm total asset at the end of the period
Fixedassets	Firm fixed assets	Total fixed assets devided by total assets
Leverage	Firm leverage	Total liabilities divided by total assets
Cashflow	Firm cash flow	Operating cash flow divided by total assets
BIG4	Big4 auditors	Dummy, equals 1 if a firm is audited by a BIG4 auditors, 0 otherwise
COVID	The COVID-19 pandemic	Dummy variable, equals 1 for year 2020 and 2021, 0 otherwise
GDP	GDP growth	Annual GDP growth rate
Inflation	Inflation	Annual inflation rate

IV. RESULTS AND DISCUSSION

A. Descriptive statistics

Table 2 presents descriptive statistics of variables used in the estimation model. Manufacturing firms in the sample show various ROA levels and approximately 42.9% of the firms in the sample have ESG reports. Manufacturing firms also show variations in other characteristics such as size, ratio of fixed assets, leverage, and cash flow levels.

Table 2. Descriptive statistics

Variable	*Obs*	*Mean*	*Std. Dev.*	*Min*	*Max*
Performance	629	0.143	0.099	.002	0.344
ESG	629	0.429	0.495	0	1
Firmsize	629	28.515	1.545	25.118	30.913
Fixedassets	629	0.264	0.147	0.004	0.578
Leverage	629	0.462	0.201	0.056	0.903
Cashflow	629	0.048	0.208	-0.29	0.694
BIG4	629	0.477	0.5	0	1
Inflation	629	2.959	1.014	0.631	4.16
GDP	629	6.048	1.836	2.55	8.12

Table 3 presents the correlation matrix of the variables in Equation (1). Table 3 shows that the probability of our model having multicollinearity is quite low.

Table 3. Correlation matrix

Variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*
(1) Performance	1.000								
(2) ESG	0.114	1.000							
(3) Firmsize	0.060	0.023	1.000						
(4) Fixedassets	-0.077	-0.006	0.344	1.000					
(5) Leverage	-0.131	-0.177	0.340	0.206	1.000				
(6) Cashflow	-0.051	-0.048	-0.051	-0.044	-0.089	1.000			
(7) BIG4	0.264	0.124	0.288	0.016	-0.101	0.056	1.000		
(8) Inflation	-0.129	0.005	0.017	0.004	0.014	-0.062	0.017	1.000	
(9) GDP	0.016	-0.089	-0.043	0.017	-0.005	-0.037	-0.008	0.080	1.000

B. Baseline results

Table 4 reports the baseline results of the estimated model. The results in Table 4 show that ESG and performance of manufacturing firms have significant negative relationship, implying that firms with ESG report demonstrate lower levels of return on equity. Our results align with those of Buallay (2021) for Indian firms. Buallay (2021) explains that the negative relationship between ESG and firm performance could be due to the initial costs associated with implementing comprehensive ESG strategies which may not immediately translate into improved financial matrices. Xie et al. (2018) also note that the impact of ESG on financial performance can be negative and vary significantly based on industry, region, and the specific elements of ESG under consideration. In some cases, although firms aim to improve their sustainability profiles, the direct financial returns may not be immediately positive due to the costs and structural changes required to implement such objectives.

The negative impact of ESG on financial results can be attributed to the characteristics of manufacturing firms. Manufacturing firms often operate in industries characterized by significant environmental impacts and regulatory oversights, which require firms to invest substantially in equipment, waste management, or enhanced labor conditions (Ding & Lee, 2024). Such investments, although beneficial for sustainability and compliance goals, may not immediately yield financial returns. Furthermore, manufacturing firms are complex and capital-intensive in nature, which may hinder the rapid realization of financial gains from ESG practices (Sachin & Rajesh, 2021). Additionally, ESG adoptions in manufacturing sector may introduce operational risks and affect investors' perceptions. According to Jain et al. (2016), high ESG scores may sometimes be seen as a diversion of resources away from core business operations towards compliance and reporting, thus might affect investors that are primarily concerned with profit metrics.

Table 4. ESG and manufacturing firm performance in Vietnam

Variables	*Dependent: ROE*	
	Coefficient	*t-statistics*
ESG	-0.006*	-1.68
Firmsize	0.004*	1.89
Fixedassets	-0.035**	-2.08
Leverage	-0.019*	-1.77

Cashflow	-0.006	-1.05
BIG4	0.066***	9.09
Inflation	-0.005***	-5.17
GDP	-0.000	-0.01
Observation	629	

*Notes: ***, **, * denote statistical significance at 1%, 5%, and 10% levels, respectively*

We also found significant impact of control variables on manufacturing financial outcomes, including: firm size, fixed assets, leverage, BIG4 auditors, and inflation. First, firm size positively impacts the performance of Vienamese manufacturers, which aligns with the study of Vu et al. (2019) and Pham and Hoang (2019). Large manufacturing firms often benefit from economies of scale, which allow them to reduce costs per unit as their production increases. Furthermore, larger firms may have greater access to capital for advanced technology investment, which can enhance their efficiency and sustain their competitive advantage (Phan, 2019).

Second, fixed assets negatively influence firm performance, implying that companies in the manufacturing sector with a high level of fixed assets demonstrate lower profitability, which is consistent with the findings of Asche et al. (2018) and Agiomirgianakis et al. (2016). The manufacturing sector is well known for being capital intensive. Companies with high levels of fixed assets might struggle with agility and adaptability compared to less asset-heavy firms, particularly in rapidly changing markets (Isik et al., 2017). Furthermore, Ahmed et al. (2013) state that if companies are heavily invested in fixed assets, the resulting depreciation costs can significantly reduce profitability unless fixed assets are efficiently managed.

Third, manufacturing companies with higher leverage ratios show lower levels of financial results, which agrees with the results of Lu (2017). Lu (2017) explains that high leverage increases firms' obligations to service debt, which can limit financial resources, particularly if firms' cash flows are insufficient. Erro-Garces (2019) added that manufacturing firms require significant investments in machinery and infrastructure, which makes them acquire more debt to finance these investments but if sales volumes do not meet expectations, fixed costs can erode profitability.

Fourth, firms adited by BIG4 auditors demonstrate better performance, which is similar to the conclusion of Chang et al. (2008). Abid et al. (2018) discuss that manufacturing firms must adhere to substantial regulatory standards. Big4 auditors with requisite knowledge and experience to guide firms through compliance process efficiently, potentially avoiding costly penalties and ensuring a smoother operational process.

Finally, inflation shows a negative impact on manufacturing firm performance, consitent with Barro (2003). Inflation can erode the purchasing power of money, causing raw material and input prices to increase. Consequently, manufacturing firms face increased production costs and squeezed profit margins (Barro, 2003).

C. Moderating impact of firm size and the COVID-19 pandemic

Table 5 explores the moderating effect of firm profitability (ROA) on the relationship between ESG and firm value. The coefficient of ESG remains positive and highly significant, confirming that ESG engagement contributes positively to firm value. This supports the view that ESG serves as a form of intangible capital, enhancing stakeholder trust and long-term firm resilience (Lins, Servaes, & Tamayo, 2017). However, the interaction term ESG × ROA is negative and significant, indicating that the positive impact of ESG diminishes as profitability increases. This suggests that ESG is more valuable for firms with lower ROA, which may use ESG as a compensatory mechanism to attract investors and mitigate perceived risks. Conversely, highly profitable firms may already signal strong fundamentals, reducing the incremental value of ESG disclosures a finding consistent with the substitution effect theory in ESG-finance literature (Fatemi, Glaum, & Kaiser, 2018).

Table 5. ESG and manufacturing firm performance in Vietnam: the moderating role of firm size and the COVID-19 pandemic

Variables	***Dependent: ROE***	
	Firm size	***The COVID-19 pandemic***
ESG	-0.010**	-0.009**
	(-2.52)	(-2.14)
Firmsize	0.006*	0.004*
	(1.94)	(1.67)
ESG x size_d	0.023**	
	(2.59)	
COVID		-0.013**
		(-2.40)

ESG x COVID		0.011*
		(1.71)
Fixedassets	-0.027	-0.033*
	(-1.55)	(-1.85)
Leverage	-0.035**	-0.33*
	(-2.10)	(-1.93)
Cashflow	-0.008**	-0.006
	(-1.33)	(-0.94)
BIG4	0.054***	0.067***
	(7.50)	(8.52)
Inflation	-0.004***	-0.005***
	(-4.92)	(-5.09)
GDP	0.000	-0.000
	(-0.10)	(-0.14)
Observation	629	629

*Notes: ***, **, * denote statistical significance at 1%, 5%, and 10% levels, respectively. t-statistics are in parentheses*

D. Heterogeneity analysis based on economic condition

We proceed to analyze the relationship between ESG and performance of manufacturing firms under different economic conditions. We split the sample into two parts: (1) favorable economic conditions (GDP higher than the mean value) and (2) unfavorable economic conditions (GDP lower than the mean value). We then re-run the baseline models for each subsample and report the results in Table 6.

Table 6 examines the heterogeneity in the ESG–firm performance relationship under different economic conditions: favorable versus unfavorable. Under favorable conditions, ESG is not statistically significant, suggesting no observable effect of ESG on ROE during stable economic periods. By contrast, under unfavorable economic conditions, ESG has a negative and highly significant impact on ROE, implying that ESG engagement may intensify the decline in profitability when firms are already under financial or economic pressure. This finding suggests that economic context moderates the ESG–performance link, where ESG investment could represent a cost burden during downturns, particularly when firms prioritize short-term financial survival over long-term sustainability. It also reflects that, in crises, investors and stakeholders may view ESG expenditures as non-essential, thus penalizing firms for maintaining them. Additional results support this interpretation. For instance, firm size is positively associated with ROE only during downturns, implying that larger firms are better equipped to absorb economic shocks. Meanwhile, fixed assets, leverage, and cash flow all show significant negative effects under unfavorable conditions, highlighting vulnerabilities in capital-intensive or highly indebted firms. Notably, BIG4 auditing remains positively significant in both conditions, indicating that audit quality consistently enhances financial performance, regardless of macroeconomic context. Lastly, GDP growth is significantly negative under favorable conditions, but insignificant during downturns, suggesting that the ROE of individual firms may move counter-cyclically or reflect other micro-level dynamics beyond macro indicators.

Table 6. Heterogeneity analysis based on economic conditions

Variables	***Dependent: ROE***	
	Favorable conditions	***Unfavorable conditions***
ESG	0.002	-0.017***
	(0.52)	(-6.68)
Firmsize	-0.001*	0.004**
	(-0.59)	(2.45)
Fixedassets	-0.119***	-0.038**
	(-5.17)	(-2.37)
Leverage	0.032**	-0.043***
	(1.77)	(-4.51)
Cashflow	-0.012	-0.031***
	(-1.41)	(-3.33)
BIG4	0.102***	0.0072***
	(14.68)	(10.89)
Inflation	-0.001	-0.012***

	(-0.77)	(-8.09)
GDP	-0.013***	-0.000
	(-3.30)	(-0.18)
Observation	629	629

*Note: ***, **, * denote statistical significance at 1%, 5%, and 10% levels, respectively. t-statistics are in parentheses*

V. CONCLUSION

This study empirically examines the relationship between environmental, social, and governance (ESG) practices and firm performance in Vietnam's manufacturing sector, with special attention to the moderating roles of firm size, profitability, and macroeconomic conditions. The findings reveal a complex and context-dependent relationship between ESG and financial outcomes. While baseline models indicate a negative association between ESG engagement and return on equity (ROE), further analysis suggests that this relationship varies significantly across firm characteristics and external environments. Notably, larger firms tend to mitigate the adverse financial implications of ESG implementation, likely due to economies of scale and better integration capabilities. Moreover, ESG practices appear more beneficial during periods of crisis, such as the COVID-19 pandemic, when stakeholder trust and risk mitigation become critical strategic assets.

This study also demonstrates that firm profitability moderates the ESG and performance relationship. Specifically, the positive contribution of ESG to firm value diminishes as return on assets (ROA) increases, suggesting a substitution effect where financial strength reduces the marginal value of ESG signals. Similarly, when disaggregating the analysis based on macroeconomic conditions, the positive influence of ESG is only significant during economic downturns. Under favorable conditions, ESG engagement exhibits little to no impact on performance. These findings underscore the necessity of situating ESG strategies within firm-specific and contextual frameworks, as the effectiveness of sustainability efforts is not universally uniform.

From a managerial perspective, the results yield several implications. First, large manufacturing firms should continue to invest in ESG as part of their long-term risk management and stakeholder engagement strategies, especially under volatile economic conditions. In contrast, small and medium-sized enterprises (SMEs) need to approach ESG initiatives more cautiously, ensuring alignment with core business objectives to avoid unintended financial strain. Firms across all sizes are also encouraged to enhance the credibility of their ESG disclosures, as proxies of audit quality (e.g., BIG4 auditors) were consistently associated with superior financial outcomes. Finally, during periods of economic uncertainty, maintaining strategic ESG investments may positively contribute to firm resilience and investor confidence.

Despite offering robust insights, this study has some limitations. First, the measurement of ESG is based on a binary indicator of disclosure rather than the depth or quality of ESG performance, which may limit interpretive nuance. Future research should consider more granular ESG metrics, including third-party ratings or text-based content analysis. Second, the focus on publicly listed manufacturing firms in Vietnam restricts generalizability. Further studies could explore private firms, service industries, or conduct comparative research across ASEAN economies to contextualize ESG effects regionally. Lastly, this study centers on financial outcomes, particularly ROE and firm value. Future work could expand the outcome scope to include innovation performance, employee satisfaction, or cost of capital, thereby offering a multidimensional view of ESG value creation.

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