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The Effect of Environmental, Social, and Governance on Financial Performance with Firm Size as a Moderating Variable in Companies Listed on the Indonesia Stock Exchange for the Period 2020–2024

Puput Puspitasari[1]*, Eni Wuryani[2]
State University of Surabaya
Corresponding Author: Puput Puspitasari puput.22173@mhs.unesa.ac.id

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A B S T R A C T
This study examines the effect of Environmental, Social, and Governance (ESG) disclosure on financial performance proxied by Tobin's Q, as well as the moderating role of firm size in that relationship. A quantitative causal-associative design using balanced panel data was employed. The sample consists of 71 companies listed on the Indonesia Stock Exchange (IDX) that consistently held Bloomberg ESG Scores throughout 2020–2024, yielding 355 observations after two-stage iterative outlier removal using the Z-score criterion (±2.5). Panel data regression with the Random Effect Model (REM), corrected for heteroskedasticity through White Period Cross-section Cluster Standard Errors, was applied. Moderated Regression Analysis (MRA) with mean-centering was used to test the moderating hypotheses. Results indicate that composite ESG (β = +0.0074, p = 0.0025), the Environmental pillar (β = +0.0052, p = 0.0006), and the Governance pillar (β = +0.0067, p = 0.0099) each exert a positive and significant effect on Tobin's Q, while the Social pillar shows a negative and significant effect (β = −0.0057, p = 0.0328). Firm size significantly strengthens the positive effect of composite ESG (β = +0.0057, p = 0.0003) and the Environmental pillar (β = +0.0033, p = 0.0000) on Tobin's Q, but does not moderate the effects of the Social (p = 0.6844) or Governance (p = 0.4318) pillars. These findings support Stakeholder Theory (Freeman, 1984) and Legitimacy Theory (Suchman, 1995) in explaining how ESG practices translate into market valuation in the Indonesian capital market context.

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INTRODUCTION

The integration of Environmental, Social, and Governance (ESG) principles into corporate strategy has emerged as a defining characteristic of the contemporary global business landscape. As sustainability concerns intensify and regulatory scrutiny deepens, companies that systematically disclose and manage their ESG performance are increasingly perceived as lower-risk, higher-quality investment targets. The Global Sustainable Investment Alliance (2023) reported that total assets allocated to sustainable investment reached approximately USD 35.3 trillion, representing 36% of all professionally managed assets worldwide a figure that underscores the structural shift toward sustainability-driven capital allocation.

Indonesia has actively aligned itself with this global trajectory. The Financial Services Authority (OJK) issued Regulation No. 51/POJK.03/2017 mandating sustainability reporting for financial sector entities, with full implementation targeted by 2025. The Indonesia Stock Exchange (IDX) launched the IDX ESG Leaders Index in December 2020 as a benchmark for investors prioritizing strong sustainability performance. These regulatory milestones have placed ESG disclosure at the center of corporate governance discourse for publicly listed companies in Indonesia, yet empirical evidence on whether such disclosure translates meaningfully into market-based financial performance remains limited and inconsistent.

Financial performance in this study is measured using Tobin's Q, a market-based indicator that captures investor expectations about a firm's future cash flows and intangible assets elements that accounting-based metrics such as Return on Assets (ROA) or Return on Equity (ROE) often fail to reflect. Tobin's Q is particularly suited to ESG research because ESG investments often create intangible value in the form of reputation, stakeholder loyalty, and regulatory goodwill, none of which appear directly on the balance sheet (Giannopoulos et al., 2022). Observations of average Tobin's Q among the sampled companies show an increase from 0.784 in 2020 to a peak of 1.100 in 2021, followed by relative stability before declining to 0.854 in 2024, reflecting post-pandemic market dynamics and evolving investor sentiment.

An intriguing empirical tension motivates this study: despite an average rise in composite ESG scores from 47.44 in 2020 to 54.12 in 2023, Tobin's Q did not exhibit a proportional increase and subsequently declined in 2024. This disconnect suggests that ESG information may not yet be fully priced into the Indonesian capital market, raising the question of whether firm-level heterogeneity particularly company size conditions the extent to which ESG translates into superior market valuations.

Research gaps in this domain are substantial. Most extant studies originate in developed economies such as Europe, the United States, and the United Kingdom, whose institutional environments, regulatory maturity, and investor sophistication differ markedly from Indonesia's (Ahmad et al., 2021; Zahid et al., 2023). Studies conducted domestically tend to rely on self-reported sustainability disclosure indices, which are vulnerable to greenwashing and subjective selection bias (Bhatia & Marwaha, 2022). Furthermore, prior Indonesian studies predominantly use accounting-based performance proxies,

examine single sectors, and rarely decompose ESG into its constituent pillars. The moderating role of firm size remains unresolved, with some studies finding a strengthening effect (Shawat et al., 2024; Ahmad et al., 2021) and others finding a null effect (Qofi'ah & Lismawati, 2025; Khairani & Lismawati, 2025), likely owing to differences in context, period, and methodology.

This study addresses these gaps by: (1) covering the period 2020–2024, which captures the COVID-19 pandemic, economic recovery, and accelerating ESG regulatory enforcement; (2) using standardized Bloomberg ESG Scores as the primary measure of ESG performance, thereby reducing self-reporting bias; (3) analyzing both composite ESG and each individual pillar (Environmental, Social, Governance) separately to avoid conflation of distinct dimensions; (4) applying MRA with mean-centering to examine the conditioning role of firm size; and (5) using Tobin's Q as a forward-looking market performance indicator rather than a backward-looking accounting metric. The findings are intended to inform corporate ESG strategy, investor decision-making, and evidence-based policymaking by OJK and IDX.

LITERATURE REVIEW

Theoretical Foundation

This study is grounded in two complementary theoretical frameworks. Stakeholder Theory, introduced by Freeman (1984), posits that a firm's long-run success depends on its ability to satisfy the interests of all stakeholders not merely shareholders including employees, customers, suppliers, communities, regulators, and creditors. Under this framework, ESG practices function as a structured mechanism through which firms demonstrate commitment to stakeholder expectations: the Environmental pillar addresses community and regulatory concerns; the social pillar reflects care for employees and customers; and the Governance pillar signals accountability to investors. Firms that manage these relationships effectively are predicted to secure greater stakeholder support, reduced operational friction, and enhanced access to capital, ultimately translating into superior market valuations (Wang, 2024; Khamisu et al., 2024).

Legitimacy Theory, formalized by Suchman (1995), complements this perspective by arguing that organizations require social acceptance legitimacy to sustain their license to operate. Firms pursue ESG disclosure as a legitimacy signaling strategy to align their perceived identity with prevailing social norms and regulatory expectations. Credible ESG disclosure reduces reputational and regulatory risk, lowers the cost of capital, and generates a legitimacy premium in market valuations (Jiang et al., 2024; Reber et al., 2022). Critically for this study, larger firms face greater public scrutiny and operate under a broader stakeholder lens, amplifying both the legitimacy benefits of ESG disclosure and the consequences of poor ESG performance thereby providing the theoretical basis for anticipating a moderating role of firm size in the ESG–financial performance relationship.

ESG and Financial Performance: Composite Effect

The relationship between composite ESG performance and financial outcomes has been explored extensively, with a preponderance of evidence supporting a positive association. Zhang (2025) demonstrated a bidirectional synergistic effect using Panel Vector Autoregression on Chinese A-share firms. Ahmad et al. (2021) confirmed a positive ESG effect on market value for 351 FTSE350 UK firms. Shawat et al. (2024) found positive ESG–ROA associations in the MENA region, while Chen et al. (2023) replicated these results using Tobin's Q for global large-cap firms. Domestically, Anggraini & Sari (2024) reported a positive ESG–ROA relationship for IDX ESG Leaders energy sector firms. Contrasting evidence also exists Qofi'ah & Lismawati (2025) and Khairani & Lismawati (2025) found that ESG either negatively affects or has no significant impact on financial performance for Indonesian manufacturing companies, citing implementation costs and underdeveloped market pricing. These contradictions underscore the importance of contextual factors, including measurement period, industry composition, ESG data source, and performance proxy employed.

H_1: Composite ESG has a positive and significant effect on Tobin's Q.

Environmental Pillar and Financial Performance

The Environmental pillar encompasses firm-level practices related to greenhouse gas emissions, energy efficiency, waste management, water conservation, and climate change adaptation. Legitimacy Theory predicts that superior environmental disclosure signals responsible management, reducing exposure to regulatory sanctions and litigation costs while strengthening the firm's social license to operate (Senadheera et al., 2021). From a resource efficiency perspective, proactive environmental management generates dual benefits: cost reduction through energy and material savings, and revenue enhancement through green product differentiation and access to green financing at reduced capital costs (Shahzad et al., 2024). Chen et al. (2023) found that the Environmental pillar produced the strongest impact on Tobin's Q among all ESG components for S&P 500 firms, particularly in high-footprint sectors.

H_2: The Environmental pillar has a positive and significant effect on Tobin's Q.

Social Pillar and Financial Performance

The Social pillar reflects the quality of a firm's relationships with employees, customers, suppliers, and communities. Stakeholder Theory predicts that fair employment practices, workforce development, and community engagement build stakeholder trust, reduce conflicts, and increase organizational productivity effects that should, over time, contribute to superior financial performance (Licandro et al., 2024; Becchetti et al., 2022). However, the empirical record is notably mixed. While studies such as Qureshi et al. (2021) and Ali et al. (2024) report positive social–performance linkages, others find that social expenditures impose short-run cost burdens that may not be promptly rewarded by market participants, particularly in emerging markets where investor horizons tend to be shorter (Jin, 2025; Qofi'ah & Lismawati,

2025). In Indonesia, where CSR obligations are legally mandated under Law No. 40/2007 on Limited Liability Companies, additional voluntary social disclosure may not differentiate firms in the eyes of the market.
H_3: The Social pillar has a negative and significant effect on Tobin's Q.

Governance Pillar and Financial Performance

The Governance pillar captures the quality of board composition, management accountability, shareholder rights protection, transparency in financial reporting, and anti-corruption practices. Good governance reduces information asymmetry between managers and investors, lowering agency costs and enhancing investor confidence (Khan et al., 2020). Kovacs et al. (2024) demonstrated that Governance scores were associated with superior stock returns during periods of geopolitical uncertainty, as investors placed a premium on firms with robust oversight structures. Câmara (2023) argued that Governance functions as the foundation enabling the broader ESG agenda, facilitating constructive engagement between firms and their investors.
H_4: The Governance pillar has a positive and significant effect on Tobin's Q.

Moderating Role of Firm Size on Composite ESG

Firm size, measured as the natural logarithm of total assets, has been proposed as a moderator of the ESG–financial performance relationship on both theoretical and empirical grounds. Larger firms possess greater financial slack, more mature organizational capabilities, and higher visibility among institutional investors, analysts, and media outlets all of which amplify the signal value of ESG disclosure (Bissoondoyal-Bheenick et al., 2023). Legitimacy Theory implies that large firms face greater public scrutiny, making ESG legitimacy more valuable to them relative to smaller firms operating below public radar (Gholami et al., 2022). Empirically, Shawat et al. (2024), Ahmad et al. (2021), and Abdi et al. (2022) each confirmed that firm size strengthens the positive ESG–performance relationship across different contexts.
H_5: Firm size strengthens the positive effect of composite ESG on Tobin's Q.

Moderating Role of Firm Size on Environmental, Social, and Governance Pillars

Large firms bear a proportionally greater environmental footprint in terms of emissions, energy consumption, and natural resource use and consequently face more intense regulatory and stakeholder scrutiny of their environmental practices. This implies that the reputational and risk-management benefits of strong environmental performance are larger in absolute terms for large firms, and more easily observable by investors (Chen et al., 2023; Jin, 2025). Additionally, large firms can deploy green financing instruments (e.g., green bonds, sustainability-linked loans) at lower cost of capital, amplifying the financial returns from environmental investments.

Regarding the Social pillar, the negative effect of social disclosure on Tobin's Q reflects the cost burden of mandatory CSR obligations that apply uniformly across all company sizes under Company Law No. 40/2007. Since larger firms face proportionally higher social expenditure expectations, firm size does not generate meaningful differentiation in market response to social

disclosure, and thus is not expected to moderate this already negative relationship. For the Governance pillar, governance quality has increasingly become a baseline requirement for all listed companies under OJK and IDX regulations, with minimum standards applied uniformly regardless of firm size, potentially eliminating any scale-based differential effect.

H_6: Firm size strengthens the positive effect of the Environmental pillar on Tobin's Q.

H_7: Firm size does not moderate the effect of the social pillar on Tobin's Q.

H_8: Firm size strengthens the positive effect of the Governance pillar on Tobin's Q.

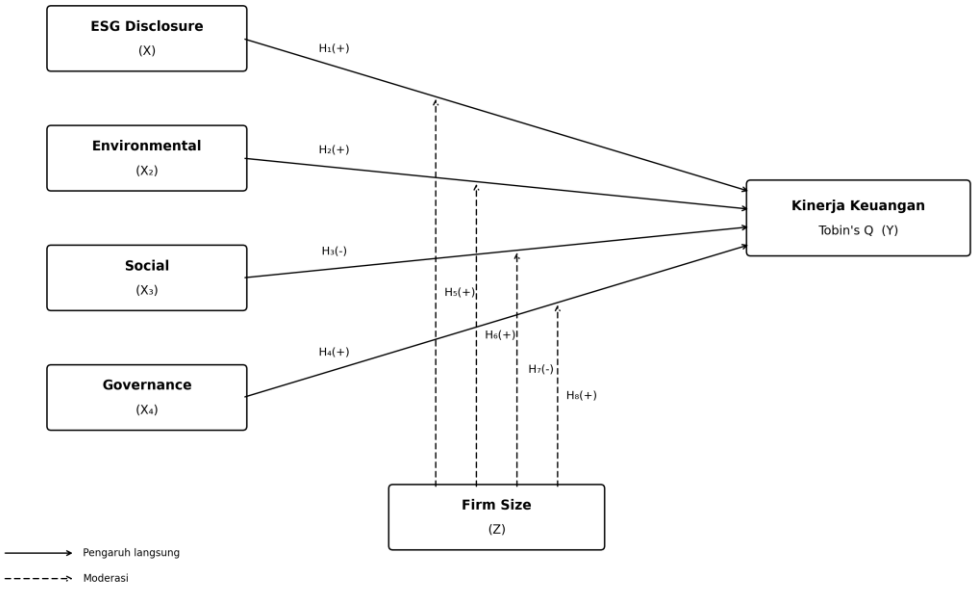

Figure 1. Conceptual Framework

METHODOLOGY

This study employs a quantitative approach with a causal-associative research design grounded in positivist epistemology. The population comprises all companies listed on the Indonesia Stock Exchange (IDX) throughout the period 2020–2024. Purposive sampling was applied with three selection criteria: (1) continuous IDX listing throughout the full five-year period; (2) consistent availability of Bloomberg ESG Scores for all five years; and (3) uninterrupted publication of annual reports. These criteria yielded 77 initial companies (385 observations).

Outlier detection followed a two-stage iterative Z-score procedure (threshold: ±2.5) on the dependent variable Tobin's Q, as recommended by Hair et al. (1998) and adapted by Ghozali (2021) for non-normal distributions. In the first stage, PT Telkom Indonesia Tbk (TLKM) was identified with a Z-score of 9.91 and excluded. In the second stage, five additional companies SMAR, BTPS, INDF, ITMG, and AMRT were identified and removed. The final sample comprises 71 companies with 355 balanced panel observations.

The dependent variable is Tobin's Q, calculated following the simplified formula of Chung & Pruitt (1994) as: Tobin's Q = (MVE + BVD) / TA, where MVE is the market value of equity (closing price on 31 December × shares outstanding), BVD is the book value of total liabilities, and TA is total assets. The independent variables are Bloomberg ESG Disclosure Scores: composite ESG (X), Environmental pillar (X_1), Social pillar (X_2), and Governance pillar (X_3), each ranging from 0 to 100. The moderating variable is firm size (Z), measured as the natural logarithm of total assets (Ln Total Assets).

Panel data analysis was conducted using EViews 12. Model selection followed the sequential Chow test (CEM vs FEM), Hausman test (FEM vs REM), and Lagrange Multiplier Breusch-Pagan test (CEM vs REM). Heteroskedasticity was detected through the Panel Cross-section Heteroskedasticity LR Test and corrected using White Period Cross-section Cluster Standard Errors. Multicollinearity was assessed via the Pearson correlation matrix, with the 0.80 threshold applied. To prevent multicollinearity between composite ESG and its constituent pillars, four separate models were estimated.

The four regression equations are as follows:

Model 1 : $TQ_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 SIZE_{it} + \varepsilon_{it}$ ……(1)

Model 2 : $TQ_{it} = \alpha + \beta_1 E_{it} + \beta_2 S_{it} + \beta_3 G_{it} + \beta_4 SIZEit + \varepsilon it$ ……(2)

Model 3 : $TQ_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 SIZE_{it} + \beta_3 (ESG_{it} \times SIZE_{it}) + \varepsilon_{it}$ ……(3)

Model 4 : $TQ_{it} = \alpha + \beta_1 E_{it} + \beta_2 S_{it} + \beta_3 G_{it} + \beta_4 SIZE_{it} + \beta_5 (E_{it} \times SIZE_{it}) + \beta_6 (S_{it} \times SIZE_{it}) + \beta_7 (G_{it} \times SIZE_{it}) + \varepsilon_{it}$ ……(4)

RESULT AND DISCUSSION

Descriptive Statistics

Table 1 presents descriptive statistics for all variables across 355 observations. The mean Tobin's Q of 0.7223 (below 1.0) indicates that, on average, sample companies' market valuations fall short of asset replacement cost, suggesting that intangible value creation through ESG and other strategic assets has yet to be fully reflected in market prices across the full sample. The wide range (0.0025 to 1.6422) and moderate standard deviation (0.3291) signal considerable cross-sectional heterogeneity in market valuations, consistent with the diverse sectoral composition of the sample.

Among ESG pillars, the Governance pillar (X_3) records by far the highest mean score (74.84), confirming that Indonesian listed companies have made relatively greater strides in governance disclosure compared to environmental or social domains. The Environmental pillar (X_1) shows the lowest mean (29.87), reflecting the still-nascent state of systematic environmental reporting among Indonesian issuers, which is consistent with the relatively recent mandatory sustainability reporting framework introduced by OJK.

Table 1. Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min	Max
Tobin's Q (Y)	355	0.7223	0.7223	0.3291	0.0025
ESG Composite (X)	355	45.89	45.89	10.31	18.43
Environmental (X_1)	355	29.87	29.87	12.45	0.48
Social (X_2)	355	32.45	11.23	11.23	9.98
Governance (X_3)	355	74.84	74.84	11.19	38.62
Firm Size (Z)	355	17.51	17.51	1.456	13.72

Source: Data processed with EViews 12 (2026)

Model Selection and Diagnostic Tests

All four models were subjected to the Chow test, Hausman test, and Lagrange Multiplier (Breusch-Pagan) test. The Chow test yielded highly significant F-statistics (p = 0.0000) across all models, rejecting the Common Effect Model in favor of the Fixed Effect Model. Subsequently, the Hausman test produced chi-square statistics with probabilities far exceeding 0.05 (ranging from 0.5687 to 0.7927), indicating that the Random Effect Model (REM) is preferred over the Fixed Effect Model. The Lagrange Multiplier test confirmed the presence of significant cross-sectional random effects (p = 0.0000 for all models), validating REM as the optimal estimator.

Normality of residuals was assessed using the Jarque-Bera test. Following two-stage iterative outlier removal, the final sample produced a JB probability of 0.6498, indicating that residuals do not significantly deviate from normality. Multicollinearity was assessed via the Pearson correlation matrix. The only correlation exceeding 0.80 was between the Environmental pillar (X_1) and composite ESG (X), at 0.8605 pre-empted by model separation. Heteroskedasticity was detected across all four models (p = 0.0000) and corrected using White Period Cross-section Cluster Standard Errors.

Hypothesis Testing

Tables 2 and 3 present the final regression results. All models are jointly significant (F-statistic probabilities = 0.0000). Adjusted R^2 values range from 0.058 (Model 1) to 0.213 (Model 4), which is within the expected range for cross-sectional ESG studies where numerous macro-level and industry-specific factors influence market valuations beyond the variables included in the model (Tudose et al., 2022).

Table 2. Panel Regression Results (Models 1 & 2)

Variable	Coeff.	Std. Err.	t-Stat	Prob.	Decision
Model 1: ESG Composite → Tobin's Q					
ESG (X)	0.0074	0.0024	3.1311	0.0025	H_1 Accepted
Firm Size (Z)	−0.0145	0.0229	−0.6325	0.5291	
Adj. R^2 = 0.058; F = 11.90; p = 0.000					
Model 2: ESG Pillars → Tobin's Q					

Environmental (X_1)	0.0052	0.0014	3.5975	0.0006	H_2 Accepted
Social (X_2)	−0.0057	0.0026	−2.1771	0.0328	H_3 Accepted
Governance (X_3)	0.0067	0.0025	2.6508	0.0099	H_4 Accepted
Firm Size (Z)	−0.0093	0.0221	−0.4223	0.6741	
Adj. R^2 = 0.0749; F = 12.29; p = 0.000					

Source: Data processed with EViews 12 (2026)

H_1 (Composite ESG → Tobin's Q): The composite ESG coefficient is +0.0074 (t = 3.131, p = 0.0025), confirming a positive and significant effect. H_1 is accepted.
H_2 (Environmental → Tobin's Q): The Environmental pillar coefficient is +0.0052 (t = 3.598, p = 0.0006), confirming a positive and significant effect. H_2 is accepted.
H_3 (Social → Tobin's Q): The Social pillar coefficient is −0.0057 (t = −2.177, p = 0.0328), confirming the hypothesized negative direction. H_3 is accepted. The Social pillar exerts a negative and statistically significant effect on Tobin's Q.
H_4 (Governance → Tobin's Q): The Governance pillar coefficient is +0.0067 (t = 2.651, p = 0.0099). H_4 is accepted.

Table 3. MRA Results – Moderating Effect of Firm Size (Models 3 & 4)

Interaction Variable	**Coeff.**	**Std. Err.**	**t-Stat**	**Prob.**	**Decision**
Model 3: Moderating Effect – Composite ESG					
ESG × Size (XZ_C)	0.0057	0.0015	3.8497	0.0003	H_5 Accepted
Adj. R^2 = 0.1281; F = 18.33; p = 0.000					
Model 4: Moderating Effect – ESG Pillars					
Environmental × Size (X_1Z_C)	0.0033	0.0006	5.6555	0.0000	H_6 Accepted
Social × Size (X_2Z_C)	0.0007	0.0017	0.4082	0.6844	H_7 Accepted
Governance × Size (X_3Z_C)	0.0019	0.0024	0.7907	0.4318	H_8 Rejected
Adj. R^2 = 0.1882; F = 14.68; p = 0.000					

Source: Data processed with EViews 12 (2026).

H_5 (Firm Size moderates ESG → Tobin's Q): The interaction coefficient XZ_C is +0.0057 (t = 3.850, p = 0.0003). Firm size positively and significantly moderates the ESG–Tobin's Q relationship. H_5 is accepted.
H_6 (Firm Size moderates Environmental → Tobin's Q): The interaction coefficient X_1Z_C is +0.0033 (t = 5.656, p = 0.0000), the strongest moderating effect observed. H_6 is accepted.

H_7 (Firm Size moderates Social → Tobin's Q): X_2Z_C = +0.0007 (p = 0.6844), not significant. Consistent with H_7, firm size does not moderate the Social–Tobin's Q relationship. H_7 is accepted.
H_8 (Firm Size moderates Governance → Tobin's Q): X_3Z_C = +0.0019 (p = 0.4318), not significant. Firm size does not moderate the Governance–Tobin's Q relationship. Since the hypothesis predicted a strengthening effect, H_8 is rejected.

Composite ESG and Tobin's Q

The positive and significant effect of composite ESG on Tobin's Q (H_1 accepted) confirms that broader ESG disclosure quality is rewarded by the Indonesian capital market through higher market valuations. This finding is consistent with Stakeholder Theory, which predicts that comprehensive ESG engagement simultaneously satisfies environmental regulators, employee and consumer expectations, and investor accountability demands generating a holistic legitimacy premium that translates into higher Tobin's Q (Suchman, 1995). This result aligns with Shawat et al. (2024), Pulino et al. (2022), and Ahmad et al. (2021). The divergence from some domestic studies reporting null results (Khairani & Lismawati, 2025) likely reflects the use of self-reported disclosure proxies in prior work versus standardized Bloomberg ESG Scores employed here.

Environmental Pillar and Tobin's Q

The positive significant effect of the Environmental pillar (H_2 accepted) indicates that Indonesian companies demonstrating stronger environmental disclosure performance tend to command higher market valuations. From a Legitimacy Theory perspective, proactive environmental disclosure signals corporate responsibility toward communities and regulators, reducing regulatory sanctions risk. From a resource efficiency perspective, superior environmental management is associated with reduced energy consumption and improved material utilization cost savings that directly improve future cash flow expectations. The finding is consistent with Senadheera et al. (2021) and Chen et al. (2023), who found the Environmental pillar to exert the strongest market value effect among S&P 500 firms in high-footprint industries.

Social Pillar and Tobin's Q

The negative and significant effect of the social pillar (H_3 accepted) is consistent with the hypothesized direction, grounded in the cost perspective of Legitimacy Theory. The coefficient of −0.0057 (p = 0.0328) indicates that higher social disclosure scores are associated with lower Tobin's Q in the Indonesian context. Three interrelated explanations are proposed. First, a short-horizon cost effect: Social programs impose material short-run expenditures whose economic benefits are predominantly long-term and difficult to quantify. Investors in emerging markets may interpret elevated social spending as an immediate drag on profitability functioning as a deadweight cost that reduces short-term profitability expectations. Second, a regulatory saturation effect: CSR is legally mandated in Indonesia under Company Law No. 40/2007 on Limited Liability Companies, making additional voluntary social expenditure beyond

minimum compliance appear inefficient rather than value-creating, and removing any premium-value differentiation signal in the eyes of the market. Third, a disclosure quality effect: Bloomberg's Social pillar score measures the breadth of disclosure rather than effectiveness, so higher scores may reflect larger mandatory expenditures rather than genuinely superior social outcomes. This echoes Jin (2025) and Qofi'ah & Lismawati (2025).

Governance Pillar and Tobin's Q

The positive and significant effect of the Governance pillar (H_4 accepted), with the highest individual-pillar coefficient (0.0067), underscores the primacy of governance quality in market valuation within the Indonesian capital market. This aligns with Stakeholder Theory's prediction that transparent, accountable governance structures reduce information asymmetry, lower agency costs, and enhance investor confidence. Governance quality also provides the structural foundation for effective ESG strategy execution (Câmara, 2023). In the Indonesian regulatory context, OJK's progressive tightening of corporate governance standards has elevated investor expectations regarding board independence, transparency, and accountability.

Moderating Role of Firm Size on Composite ESG

The positive and significant moderating effect of firm size on composite ESG (H_5 accepted, XZ_C = +0.0057, p = 0.0003) confirms that the ESG–Tobin's Q relationship is stronger for larger companies. Larger firms possess greater financial resources and organizational maturity to implement ESG programs systematically. They attract higher analyst coverage, institutional investor attention, and media scrutiny, meaning their ESG commitments carry greater signal value. Additionally, large firms increasingly access green financing instruments whose preferential terms amplify the financial returns from ESG investment. These results are consistent with Shawat et al. (2024), Ahmad et al. (2021), and Abdi et al. (2022).

Moderating Role of Firm Size on ESG Pillars

The positive and highly significant moderation by firm size on the Environmental pillar (H_6 accepted, X_1Z_C = +0.0033, p = 0.0000) represents the study's most robust moderating finding. Large firms in Indonesia bear a disproportionate environmental footprint and face intense scrutiny from regulators, NGOs, and institutional investors with ESG integration mandates. Superior environmental management by large firms thus generates more substantial legitimacy premiums and more material operational cost savings. This corroborates Ahmad et al. (2021) and Jin (2025).

Consistent with H_7, firm size does not moderate the social pillar (p = 0.6844). For the Governance pillar (p = 0.4318), firm size also does not produce a significant moderating effect, leading to the rejection of H_8. The null moderating effect for the social pillar is consistent with the observation that CSR expenditures scale roughly proportionally with firm size under Indonesia's mandatory framework. For the Governance pillar, the baseline expectations for governance quality are relatively uniform across all listed firms under OJK and

IDX regulations, eliminating scale-based differentiation. This interpretation aligns with Khairani & Lismawati (2025).

CONCLUSIONS AND RECOMMENDATIONS

This study provides cross-sector empirical evidence on the ESG–financial performance relationship in Indonesia's capital market across a five-year post-pandemic period (2020–2024), using standardized Bloomberg ESG Scores and market-based financial performance measurement (Tobin's Q). ESG disclosure at the composite level and through the Environmental and Governance pillars is positively and significantly associated with higher Tobin's Q, supporting Stakeholder Theory and Legitimacy Theory. The Social pillar exerts a negative significant effect, consistent with the cost perspective of Legitimacy Theory: mandatory CSR obligations under Company Law No. 40/2007 render additional social expenditure a perceived deadweight cost rather than a value signal, reflecting short-term cost perception, regulatory saturation, and disclosure-effectiveness limitations specific to the Indonesian emerging market context. Firm size significantly amplifies the ESG–performance and Environmental performance relationships, but does not moderate the Social or Governance relationships — revealing that size-based advantages in ESG value creation are pillar-specific rather than uniformly distributed.

The theoretical contributions are threefold. First, ESG pillars produce heterogeneous effects on financial performance in an emerging market, challenging the treatment of ESG as a single homogeneous construct. Second, the moderating role of firm size is selective, operative for composite and environmental dimensions but not for social and governance. Third, this study provides an Indonesian-market validation of Stakeholder Theory and Legitimacy Theory using objective, internationally comparable data.

Future research should expand the performance measurement framework to include both market-based and accounting-based proxies. Extending the sample to include mid- and small-cap companies would enhance external validity. Researchers should also consider incorporating sector-specific analyses, macro-economic controls, and potential mediating variables. For practitioners, this study underscores the strategic importance of prioritizing environmental management and governance quality in ESG disclosure, particularly for large companies. Social program investments should be accompanied by clearer impact-oriented disclosure to convert mandatory expenditure into verifiable stakeholder value signals.

FURTHER STUDY

Several limitations should be noted. First, ESG measurement relies exclusively on Bloomberg ESG Scores; results may differ under alternative rating providers such as MSCI or Refinitiv. Second, the sample is structurally biased toward large-cap firms with consistent ESG data availability, limiting generalizability to mid- and small-cap issuers. Third, the single-proxy financial performance measure (Tobin's Q) does not capture accounting-based dimensions such as profitability or efficiency. Fourth, the study does not

incorporate potential mediating variables such as cost of capital or innovation investment through which ESG may influence firm value.

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