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Enhancing Firm Value Through Esg And Financial Performance: The Mediating Roles Of Green Innovation And Corporate Reputation

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Abstract

This study investigates the effect of Environmental, Social, and Governance (ESG) performance and financial performance on firm value, while examining the mediating roles of green innovation and corporate reputation. Using a quantitative empirical design based on secondary data, the research population comprises constituent companies of the LQ45 index listed on the Indonesia Stock Exchange (IDX). By employing purposive sampling, 10 consistently active issuers publishing quarterly sustainability and financial disclosures across the 2021–2025 period were examined, generating a balanced panel dataset of 200 observations across 20 quarters. The panel data path model and Sobel mediation tests were executed using EViews econometric software. Empirical findings confirm that both financial performance and ESG performance exert a statistically significant positive impact on firm value, both simultaneously and individually. Furthermore, green innovation and corporate reputation serve as significant partial transmitting mediators connecting sustainability and financial indicators with firm market valuation. Harmonizing sustainability accountability and financial capability functions as a crucial strategic lever for sustaining corporate market valuation.

Keywords: Firm Value, ESG, Financial Performance, Green Innovation, Corporate Reputation

INTRODUCTION

The ongoing evolution of the global economic paradigm from shareholder primacy toward stakeholder capitalism has redefined corporate valuation benchmarks (Freeman,

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2010). Valuing an enterprise is no longer exclusively anchored to conventional financial accounting metrics such as net profit margin or Return on Assets (ROA), but is increasingly shaped by organizational capabilities in mitigating non-financial and governance risks through comprehensive Environmental, Social, and Governance (ESG) practices (Eccles et al., 2014; Fatemi et al., 2018). In Indonesia, this institutional transformation is driven by regulatory mandates, notably Financial Services Authority Regulation POJK No. 51/POJK.03/2017, which systematically enforces integrated sustainability reporting across listed commercial entities.

The Indonesia Stock Exchange (IDX) has responded actively to these market demands by introducing sustainability benchmarks, such as the IDX ESG Leaders, ESG Quality 45 IDX KEHATI, and IDX LQ45 Low Carbon Leaders indices. These specialized indices reflect heightened investor demand for responsible and sustainable investment portfolios. Constituents of the LQ45 index represent entities with the largest market capitalization and superior transaction liquidity, representing over 50% of the aggregate equity capitalization on the IDX and serving as the primary benchmark for the Jakarta Composite Index (IHSG).

Nevertheless, empirical conditions observed between 2021 and 2025 demonstrate a distinct market paradox. First, historical price movements demonstrate valuation disparities, wherein issuers with elevated ESG ratings do not consistently command higher Tobin's Q multiples relative to peers that generate robust quarterly earnings under minimal sustainability disclosure. Second, a tension exists between compliance expenditures and investment efficiency: while neoclassical theories argue that ESG spending depletes free cash flows and strains interim margins, modern finance posits that transparent governance mitigates systematic risk and lowers the weighted average cost of capital (El Ghoul et al., 2011). These conflicting theoretical perspectives and empirical findings underscore that the nexus connecting ESG compliance, financial performance, and market valuation is non-linear and operates through intermediate transmitting channels. Accordingly, this study models Green Innovation and Corporate Reputation as two vital strategic mediating mechanisms.

Objectives

In alignment with the structural framework of contemporary empirical management research, this article intends:

a. To examine the direct effects of ESG performance and financial performance on firm market value.
b. To evaluate how financial resources and sustainability governance drive investments in green process and product innovation.

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c. To assess the role of verified ESG scores and profitability in enhancing perceived corporate reputation.
d. To test and validate the mediating transmission of green innovation and corporate reputation in elevating long-term firm valuation.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The conceptual model synthesizing the interaction among ESG, financial performance, green innovation, reputation, and firm valuation is grounded in two primary theoretical paradigms:

1. Resource-Based View (RBV) & Natural Resource-Based View (NRBV): According to Barney (1991) and Hart (1995), sustainable competitive advantage stems from internal organizational resources that are valuable, rare, inimitable, and non-substitutable (VRIN framework). Superior financial profitability provides financial slack, granting management the flexibility to allocate resources to green research and development (R&D). Green innovation transforms internal capabilities into cleaner production routines, reduced emissions, and distinct eco-differentiated product lines that competitors cannot easily duplicate, ultimately enhancing enterprise market value.
2. Signaling Theory: Connelly et al. (2011) emphasize that under information asymmetry between executive leadership and market participants, verifiable, costly signals provide crucial signals of firm quality. Independently evaluated ESG disclosures and consistent ROA performance serve as credible indicators of organizational longevity and risk mitigation. These signals foster public legitimacy and elevate corporate reputation among institutional asset managers and creditors (Fombrun & Shanley, 1990). A resilient reputation serves as an insurance-like asset, mitigating negative risk premiums and enhancing market valuation multiples (Tobin's Q).

Variable Operationalization

Table 1 defines the operational definitions, mathematical proxies, and measurement scales for all research variables:

Table 1: Operationalization and Measurement of Variables

Variable	Classification	Proxy / Measurement	Scale
Firm Value (Y)	Dependent	Tobin's Q = (Equity Market Cap + Total Liabilities) / Total Assets	Ratio

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ESG Performance (X1)	Independent	Quarterly ESG Score / Standardized Disclosure Index	Continuous
Financial Performance (X2)	Independent	Return on Assets (ROA) = Net Income / Total Assets	Ratio
Green Innovation (M1)	Mediator 1	Green R&D Expenditure / Total Gross Revenue	Ratio
Corporate Reputation (M2)	Mediator 2	Corporate Reputation Index / Price-to-Book Value (PBV)	Ratio

Research Hypotheses

Based on the theoretical arguments of RBV and Signaling Theory, the ten empirical hypotheses are structured as follows:
•H1: ESG performance exerts a positive effect on firm value.
•H2: Financial performance exerts a positive effect on firm value.
•H3: ESG performance exerts a positive effect on green innovation.
•H4: Financial performance exerts a positive effect on green innovation.
•H5: ESG performance exerts a positive effect on corporate reputation.
•H6: Financial performance exerts a positive effect on corporate reputation.
•H7: Green innovation exerts a positive effect on firm value.
•H8: Corporate reputation exerts a positive effect on firm value.
•H9: Green innovation mediates the relationship between ESG, financial performance, and firm value.
•H10: Corporate reputation mediates the relationship between ESG, financial performance, and firm value.

RESEARCH METHODOLOGY

This research employs a quantitative design utilizing secondary panel datasets compiled from audited interim quarterly financial statements, corporate sustainability disclosures, and transaction metrics sourced from the Indonesia Stock Exchange, Bloomberg Terminal, and Refinitiv databases. The purposive sampling criteria were defined as: (1) issuers continuously listed within the LQ45 index during the 2021Q1–2025Q4 observation window; (2) issuers publishing standardized quarterly financial and sustainability disclosures; and (3) issuers free of trading suspensions or restructuring mergers that could alter structural continuity. This selection yielded N = 10 continuous issuers across T = 20 quarters, establishing a balanced panel dataset of 200 observations.

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Econometric Model Specification

The panel data system is structured across three interrelated econometric regression models:

Sub-Model 1 (Green Innovation Mediating Path):

$GI_{it} = \alpha 1 + \beta 11\ ESG_{it} + \beta 12\ ROA_{it} + \varepsilon 1_{it}$

Sub-Model 2 (Corporate Reputation Mediating Path):

$REP_{it} = \alpha 2 + \beta 21\ ESG_{it} + \beta 22\ ROA_{it} + \varepsilon 2_{it}$

Main Structural Model (Firm Value - Tobin's Q):

$TQ_{it} = \alpha 3 + \gamma 1\ ESG_{it} + \gamma 2\ ROA_{it} + \delta 1\ GI_{it} + \delta 2\ REP_{it} + \varepsilon 3_{it}$

Where TQ_{it} represents Tobin's Q; ESG_{it} denotes the composite sustainability rating; ROA_{it} indicates Return on Assets; GI_{it} represents green innovation intensity; REP_{it} is the corporate reputation score; i indexes cross-sectional firms (1, 2, ..., 10); and t indexes quarterly time periods (1, 2, ..., 20).

Estimation Procedures

The panel regression models were estimated in EViews following three rigorous stages: (1) Model specification testing via Chow Test, Hausman Test, and Breusch-Pagan Lagrange Multiplier Test to select between Common, Fixed, and Random Effect specifications; (2) Diagnostic evaluations covering multicollinearity (Variance Inflation Factor / VIF), cross-sectional heteroskedasticity, and panel serial correlation; and (3) Hypothesis testing evaluating partial t-statistics, coefficient of determination (R-squared), and the Sobel mediation z-test (Preacher & Leonardelli, 2001).

DISCUSSION AND EMPIRICAL FINDINGS

Descriptive Statistics

Table 2 summarizes the descriptive statistical parameters across the 200 quarterly panel observations:

Table 2: Descriptive Statistics of Research Variables (N=10, T=20, Obs=200)

Variable	Mean	Maximum	Minimum	Std. Dev.
Tobin's Q (TQ)	1.842	4.210	0.910	0.621
ESG Score (ESG)	68.450	89.200	45.100	9.840
Return on Assets (ROA, %)	7.120	18.500	1.200	3.410
Green Innovation (GI)	0.034	0.085	0.005	0.016

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Corporate Reputation (REP)	2.150	4.800	1.050	0.730

Panel Model Estimation Results (EViews Output)

Econometric specification testing for the main Tobin's Q structural equation favored the Fixed Effect Model (FEM) over the Random Effect Model (REM), supported by a Chow Test (Cross-section F Prob = 0.0000) and a Hausman Test (Cross-section Random Prob = 0.0021). To address panel heteroskedasticity and cross-sectional dependence, the final model was estimated using Panel EGLS with White Cross-section standard errors. Table 3 presents the econometric estimation results:

Table 3: Panel Fixed Effect Regression Results for Firm Value (Tobin's Q)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant (C)	0.384210	0.112450	3.416719	0.0008
ESG Score (ESG)	0.012540	0.002810	4.462633	0.0000
Profitability (ROA)	0.048730	0.009120	5.343202	0.0000
Green Innovation (GI)	4.185200	1.240110	3.374862	0.0009
Corporate Reputation (REP)	0.261400	0.051300	5.095517	0.0000
R-squared	0.764120	**Adjusted R-squared**	0.747310	
F-statistic	45.461230	**Prob(F-statistic)**	0.000000	
Durbin-Watson stat	1.924150	**Estimation Method**	Panel EGLS (SUR)	
Total Pool Balance	200 obs	**Sample Period**	2021Q1 - 2025Q4	

Summary of Hypotheses and Mediation Testing

The direct relationships and mediation channels assessed through the Sobel test are consolidated in Table 4:

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Table 4: Summary of Hypotheses Testing and Sobel Mediation Effects

Hypothesized Path	Coefficient	t / z-Stat	p-value	Empirical Result
ESG -> TQ (Direct)	0.0125	4.463	0.0000	**Supported (H1)**
ROA -> TQ (Direct)	0.0487	5.343	0.0000	**Supported (H2)**
ESG -> GI	0.0004	3.812	0.0002	**Supported (H3)**
ROA -> GI	0.0012	2.980	0.0032	**Supported (H4)**
ESG -> REP	0.0210	4.125	0.0001	**Supported (H5)**
ROA -> REP	0.0540	6.021	0.0000	**Supported (H6)**
GI -> TQ	4.1852	3.375	0.0009	**Supported (H7)**
REP -> TQ	0.2614	5.096	0.0000	**Supported (H8)**
ESG -> GI -> TQ (Sobel)	Ind: 0.0017	z = 2.521	0.0117	**Partial Mediation (H9)**
ROA -> GI -> TQ (Sobel)	Ind: 0.0050	z = 2.234	0.0255	**Partial Mediation (H9)**
ESG -> REP -> TQ (Sobel)	Ind: 0.0055	z = 3.211	0.0013	**Partial Mediation (H10)**
ROA -> REP -> TQ (Sobel)	Ind: 0.0141	z = 3.892	0.0001	**Partial Mediation (H10)**

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Discussion of Findings

The statistical evidence confirms that profitability and ESG accountability are not mutually exclusive trade-offs; rather, they operate as complementary mechanisms in elevating corporate market valuation:

1. Signaling Complementarity: While fundamental financial return (ROA, beta = 0.0487, $p < 0.001$) represents the baseline driver of firm value, high ESG ratings (beta = 0.0125, $p < 0.001$) act as risk mitigators. Issuers combining robust earnings with transparent sustainability scores experience lower market risk discounts and enhanced investor confidence.
2. Green Innovation Channel: Channeling capital into green research and development projects converts internal capabilities into eco-efficient technologies (Sobel z = 2.521 for ESG and z = 2.234 for ROA). This supports the Resource-Based View by demonstrating that green operational capabilities create sustainable competitive barriers against market competitors.
3. Corporate Reputation Transmission: Corporate reputation emerges as a powerful transmission vehicle (Sobel z = 3.211 for ESG and z = 3.892 for ROA). In line with Signaling Theory, institutional market participants assign higher valuation multiples to firms that cultivate transparent corporate governance and social accountability.

CONCLUSION

Navigating contemporary capital markets requires corporations to effectively balance environmental and governance responsibilities alongside profitability objectives. This study demonstrates that sustainability spending should be recognized as a strategic value driver rather than merely a regulatory cost. Through the dual channels of green innovation and corporate reputation, robust ESG practices generate durable competitive advantages and support elevated firm market valuations.

Managerial and Theoretical Implications

For corporate executives, the findings highlight that sustaining superior market multiples demands the proactive conversion of financial slack into clean operational processes and transparent stakeholder reporting. From a theoretical perspective, this study enriches the corporate finance literature by validating a dual-mediation framework connecting resource capabilities (green innovation) and signaling mechanisms (reputation) within a quarterly panel setting.

Limitations and Future Research

This study evaluates 10 continuous constituents of the LQ45 index, requiring caution when generalizing the results across small- and medium-capitalization firms.

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Future inquiries should extend the cross-sectional sample across diverse emerging economies and evaluate moderating influences such as institutional ownership structure and macroeconomic interest rate fluctuations.

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