The Indonesian Accounting Review Vol. 16, No. 2, July – December 2026, pages 160–173

How ESG Disclosure and Board Gender Diversity Shape Firm Value in Asia's Industrial Sector Amidst Economic Uncertainty

Darma Irawanti Marbun[1], Rr Sri Saraswati[2*]

[1, 2] *Department of Accounting, Telkom University, Indonesia*

ARTICLE INFO

Article history:
Received May 04, 2026
Revised June 14, 2026
Accepted June 20, 2026

JEL Classification:
G30, G32, M14, Q56

Key words:
ESG disclosure, board gender diversity, corporate value

DOI:
10.14414/tiar.v16i2.5697

**Corresponding author, email: sassasuntung@telkomuniversity.ac.id*

ABSTRACT

This study investigates the effect of the environmental, social, and governance (ESG) disclosure score and board gender diversity on firm value in industrial sector companies across Asia during the 2021–2024 period. The analysis is based on a balanced panel of 209 firms observed over four years, resulting in 836 firm-year observations. Firm value is measured using Tobin's Q, while the ESG disclosure score and board gender diversity are the main explanatory variables. Firm size and leverage are included as control variables. The study employs panel data regression analysis using the fixed-effects model (FEM), based on model selection tests. The results indicate that the ESG disclosure score has a negative and statistically significant effect on firm value, while board gender diversity also shows a negative but statistically insignificant influence. Control variables exhibit mixed effects, where firm size has a significant negative effect, and leverage is not statistically significant in explaining firm value across industrial firms in Asia. These findings confirm that sustainability disclosure and board composition have not yet been fully perceived as value-enhancing factors in short-term market valuation. The study contributes to the corporate governance and sustainability accounting literature by providing empirical evidence from Asian industrial firms and offers practical implications for corporate policymakers and investors in improving ESG implementation and board diversity strategies.

ABSTRAK

Penelitian ini meneliti dampak ***ESG Disclosure Score*** *dan* ***Board Gender Diversity*** *terhadap nilai perusahaan (diukur dengan Tobin's Q) pada 209 perusahaan industri di Asia (2021–2024, 836 observasi). Menggunakan* Fixed Effect Model*, hasilnya menunjukkan* ***ESG Disclosure Score*** *berdampak negatif signifikan, sementara* ***Board Gender Diversity*** *tidak berpengaruh signifikan. Variabel kontrol,* ***firm size****, juga negatif signifikan, sedangkan* ***leverage*** *tidak berpengaruh. Temuan ini mengindikasikan bahwa pengungkapan ESG dan keberagaman dewan belum dianggap meningkatkan nilai perusahaan dalam jangka pendek, memberikan implikasi bagi kebijakan dan investor.*

INTRODUCTION

In recent years, global economic conditions have become increasingly volatile due to globalization, geopolitical tensions, trade uncertainty, and fluctuations in financial markets. These dynamics have strengthened the importance of sustainability as a key determinant of corporate resilience and long-term valuation. Firms are no longer evaluated solely based on short-term profitability but also on their ability to integrate environmental, social, and governance (ESG) principles into business strategies to ensure long-term sustainability and stakeholder confidence (Sedovs et al., 2025). However, in the context of capital markets, the extent to which sustainability-related practices are translated into higher firm value remains an important empirical issue, particularly in regions with diverse institutional, regulatory, and economic conditions.

Firm value reflects the market's assessment

of a company's performance and its future growth prospects (Bai et al., 2025). In the modern era, the creation of firm value is not solely driven by physical assets, but is increasingly influenced by the strengthening of corporate governance, the optimization of intellectual capital, and the implementation of an adaptive organizational culture aimed at improving operational efficiency (Saraswati et al., 2024).Under uncertain global conditions, firm value becomes a critical indicator of risk exposure and expected returns. Investors increasingly emphasize corporate resilience, adaptability, and sustainability in evaluating investment decisions, rather than focusing solely on short-term earnings. Firm value represents a firm's ability to maintain stability, adapt to environmental changes, and manage risks in a dynamic global environment (Lin & Li, 2025). Therefore, examining firm value in relation to sustainability and governance mechanisms is relevant because investors may respond differently to ESG disclosures and board composition depending on the credibility, consistency, and perceived economic benefits of these practices.

In Asia, industrial firms face additional pressures arising from the global economic slowdown, geopolitical instability, exchange rate volatility, inflationary pressures, and tight monetary policies. These conditions increase business uncertainty and risk exposure, thereby influencing corporate performance and investor perception (Banna et al., 2023). Consequently, firm value in Asian markets is highly sensitive to long-term growth prospects, risk management capabilities, and sustainability performance (Abdi et al., 2020). Despite these challenges, firm value in the Asian industrial sector during the 2021–2024 period shows an increasing trend, indicating improved investor confidence and corporate adaptability in response to economic dynamics. This condition provides an empirical basis for investigating whether an increase in firm value is associated with firms' sustainability, transparency, and governance characteristics, rather than being explained only by general market recovery or financial performance.

Alongside this trend, ESG disclosure has also shown consistent improvement in Asian industrial firms, increasing from 61.05 in 2021 to 66.00 in 2024. This reflects the growing corporate commitment to transparency and integration of environmental, social, and governance practices in business operations, driven by increasing demands from investors and regulators. Improved ESG disclosure is associated with enhanced investor trust and reduced information asymmetry, which in turn may positively influence firm value (Aydoğmuş et al., 2022). However, previous studies report inconsistent findings, as some argue that ESG implementation may impose additional costs that negatively affect firm value (Cipto & Hersugondo, 2025). Moreover, the level of ESG disclosure may interact with external factors such as corporate political connections, which simultaneously influence how the market processes sustainability-related transparency in shaping firm value (Sitorus & Inawati, 2025). Thus, the first research gap lies in the inconclusive empirical evidence regarding whether ESG disclosure creates value for firms or instead generates additional costs that may reduce firm value, particularly in Asian industrial companies during the post-pandemic and global uncertainty period.

In addition to ESG disclosure, social aspects such as board gender diversity have become an important consideration in corporate evaluations. Firms are increasingly assessed not only based on financial and environmental performance but also on inclusiveness and gender representation in leadership structures (Schoonjans, 2024). Board gender diversity reflects a commitment to equality, human rights, and sustainable governance practices (Valls et al., 2022). A strong and diverse board composition, including gender diversity, has been shown to contribute positively to governance efficiency, which in turn enhances long-term financial performance (Murti et al., 2023). Strengthening diversity within management structures is considered crucial, as boards with greater gender diversity are associated with stronger commitments to social accountability and improved corporate sustainability performance at the regional level (Hapsari et al., 2023). Prior studies suggest that gender-diverse boards improve decision-making quality, strengthen oversight, and enhance corporate governance, thereby increasing firm value (Awad et al., 2023). In the context of emerging markets in Asia, the presence of women on corporate boards often generates strategic debate, yet empirical evidence shows that it can consistently encourage greater information transparency by improving the quality of corporate commitment to ESG value disclosure (Aulia et al., 2025). However, other findings indicate that gender diversity does not always translate into improved firm performance when women's roles in strategic decision-making remain limited (Saputra & Nuzula, 2024). This indicates the second research gap, namely that the effect of board gender diversity on firm value remains debatable because the presence of women on the board may not necessarily reflect meaningful participation in corporate decision-making.

The heterogeneity of industrial firms across Asia, characterized by differences in economic development, regulatory frameworks, culture, and governance systems, makes the region highly suitable for empirical investigation. These variations also lead to differences in ESG implementation and board gender diversity practices, which may influence firm value differently across countries. Although prior studies have examined ESG disclosure, gender diversity, and firm value, many tend to focus on single-country settings, specific sectors outside the industrial sector, or separate examinations of ESG and board diversity. Therefore, limited empirical evidence explains how ESG disclosure and board gender diversity jointly influence firm value in Asian industrial firms during the 2021–2024 period. Furthermore, firm-specific financial characteristics, such as firm size and leverage, also play an important role in determining corporate value. Firm size reflects operational scale and financial strength, where larger firms tend to have better access to resources and stronger resilience against economic uncertainty (Zavalii et al., 2025; Ghofar et al., 2025). Meanwhile, leverage represents the extent of debt usage in financing operations, which can enhance firm value when optimally managed but may also increase financial risk if excessively high (Arhinful & Radmehr, 2023; X. Li, 2025). Therefore, both variables are used as control variables to ensure more accurate estimation of the main relationships (Ahmed et al., 2023).

Based on these conditions, this study aims to analyze the effect of ESG disclosure and board gender diversity on firm value in Asian industrial companies during the 2021–2024 period, with firm size and leverage as control variables. The novelty of this study lies in its focus on Asian industrial companies during a recent period marked by economic uncertainty, while simultaneously examining ESG disclosure and board gender diversity as sustainability- and governance-related determinants of firm values. This study is expected to contribute to the literature on sustainability accounting and corporate governance and provide empirical evidence of how ESG practices and board diversity influence firm value in an emerging and heterogeneous regional context.

THEORETICAL FRAMEWORK AND HYPOTHESES

Agency Theory

Agency theory refers to a contractual relationship between the principal (owners) and agent (managers) within a company, where the principal delegates authority to the agent to manage the firm on their behalf (Putri & Setiawan, 2026; Arifah, 2024). In the corporate context, this relationship is reflected in the interaction between shareholders and managers, which may lead to conflicts of interest due to differing objectives and the presence of information asymmetry, in which managers possess more information than owners (Nafisah & Liyanto, 2025; García-Sánchez et al., 2025).

This information imbalance may trigger practices such as earnings management and the emergence of adverse selection and moral hazards, which occur when the information disclosed is incomplete or when owners do not fully monitor managerial actions (Aydoğmuş et al., 2022; Chouaibi et al., 2022). Within this framework, governance mechanisms such as ESG disclosure and board composition function as monitoring tools to reduce agency conflicts and improve transparency.

Expanded Theoretical Foundation

To provide a more comprehensive explanation of the relationship between ESG disclosure, board gender diversity, and firm value, this study relies on agency and signaling theories and is strengthened by stakeholder, legitimacy, and resource dependence theories.

Stakeholder theory explains that firms are responsible not only to shareholders but also to a wider group of stakeholders, such as employees, communities, regulators, and investors. ESG disclosure becomes a mechanism to meet stakeholder expectations and maintain long-term relational legitimacy, which ultimately contributes to improved firm valuation (Freeman-based logic applied in the corporate sustainability context).

Legitimacy theory argues that firms continuously seek to ensure that their operations are perceived as socially acceptable. In this context, ESG disclosure and gender diversity in leadership act as legitimacy-building instruments, especially in emerging markets such as Asia, where regulatory enforcement and institutional pressure vary across countries.

Resource dependence theory emphasizes that organizational effectiveness depends on access to critical external resources. Board gender diversity enhances access to broader knowledge, networks, and strategic perspectives, while ESG disclosure strengthens investor confidence, both of which improve firms' ability to secure capital and reduce financing constraints.

By integrating these theories, ESG disclosure and board gender diversity can be theoretically positioned not only as governance signals but also as strategic mechanisms that

enhance legitimacy, reduce dependency risk, and strengthen stakeholder relations, ultimately influencing firm value.

ESG Disclosure Score

ESG (Environmental, Social, and Governance) disclosure represents a form of voluntary corporate reporting that has evolved from corporate social responsibility (CSR) practices into sustainability reporting and integrated reporting frameworks (Aydoğmuş et al., 2022). The ESG score is used to objectively assess a company's performance based on environmental, social, and governance aspects (Putri & Setiawan, 2026). Currently, ESG considerations are increasingly integrated into investment decisions and asset allocation in a more holistic manner, making it an attractive investment trend for investors (Heldayat & Sulfitri, 2025).

However, in Indonesia, there are currently no specific guidelines or mandatory requirements for ESG reporting issued by the Indonesia Stock Exchange (IDX), in contrast to the UN Sustainability Exchange, which targets all listed companies to disclose their ESG impacts by 2030 (Arifah, 2024; Nafisah & Liyanto, 2025). This institutional gap is particularly relevant in Asian markets, where variations in regulatory enforcement may affect the consistency and credibility of ESG disclosure practices, thereby influencing their market valuation effect.

Board Gender Diversity

Board diversity refers to diversity within a company's board structure, including aspects such as gender, race, education, experience, and social and cultural backgrounds, which collectively shape a heterogeneous board composition (Lawrence & Raithatha, 2023). This diversity supports more effective decision-making by incorporating different perspectives and enhances the organization's image as more modern and socially oriented (Krisyadi et al., 2024).

Board diversity encompasses both the board of directors and the board of commissioners, which is considered capable of expanding solution alternatives, although it may also increase internal conflict; nevertheless, it ultimately improves the quality of decision-making processes (Vidalis et al. 2025). One important form of board diversity is gender diversity, which refers to the representation of both men and women within corporate boards and is influenced by biological, social and cultural factors (Jilani, 2024). Differences in cognitive and behavioral patterns between men and women can enrich corporate strategies and enhance decision-making quality (Li et al., 2024).

Gender diversity refers to the proportion of women in leadership positions within a company, which plays an important role in shaping decision-making processes and organizational policies (Alvina & Yurniawati, 2025). From a resource dependence theory perspective, gender-diverse boards expand access to external networks, improve the quality of strategic advice, and strengthen organizational adaptability, especially in volatile and heterogeneous Asian markets.

Firm Value

Firm value reflects both the company's condition and market perception of its current performance and future prospects and can be interpreted as the price investors are willing to pay if the company is sold (Cipto & Hersugondo, 2025; Heldayat & Sulfitri, 2025). This value is reflected in stock prices, where an increase in stock price indicates higher investor confidence and greater potential returns for shareholders. Therefore, the higher the stock price, the higher the firm value and its attractiveness to investors (Arifah, 2024).

Firm value is an important indicator of attracting investment and supporting business development, as well as reflecting shareholder wealth (Ikhyanuddin, 2021; Sudradjat & Maryani, 2025). Factors influencing firm value include environmental disclosure, profitability, and corporate social responsibility (Jilani, 2024). Within an emerging market context, firm value is also strongly influenced by perceived institutional quality, governance credibility, and sustainability transparency.

Firm Size

Firm size refers to the scale of a company, which is commonly measured by total assets, sales, and market capitalization (Amrulloh & Amalia, 2020; Alaudin & Moin, 2023). The larger the firm size, the greater its financing needs and access to external funding, as it is generally supported by higher profitability and stronger growth potential (An et al., 2025; Vidalis et al., 2025).

Large firms also tend to have more complex operations and face higher stakeholder pressure, leading them to disclose more information related to social responsibility than smaller firms do (Lawrence & Raithatha, 2023). This is consistent with stakeholder theory, which posits that large firms have a broader impact on society, whereas smaller firms often face resource constraints that limit their ability to disclose information (Du et al. 2026).

Leverage

Leverage is a financial ratio that indicates the

extent to which a company uses debt to finance its assets and its ability to meet both short- and long-term obligations (Zhang et al., 2025). The use of debt serves as an alternative source of operational financing; however, it comes with obligations such as principal and interest payments and an increased risk of bankruptcy, which require careful management (Cardillo & Basso, 2025).

On the other hand, debt financing can encourage managerial efficiency and creativity and facilitate access to external funding sources. However, larger firms tend to prefer internal financing over debt, which, under certain conditions, may influence corporate strategies and policies (Ariasinta et al., 2024).

Hypothesis

The ESG Disclosure Score and Board Gender Diversity are non-financial indicators that reflect the quality of corporate governance and a firm's commitment to sustainability. Based on signaling theory, these two aspects function as signals to investors regarding transparency, managerial quality, and a firm's ability to manage long-term risks. High ESG disclosure indicates greater information transparency, whereas gender diversity on the board reflects more inclusive decision-making. The combination of both can reduce information asymmetry, enhance investor confidence, and ultimately increase firm value (Cardillo and Basso 2025).

Simultaneously, the ESG disclosure score and board gender diversity are expected to positively affect firm value. Strong ESG performance enhances transparency and sustainability, whereas gender diversity improves supervisory effectiveness and the quality of board decisions. Previous studies have also shown that ESG disclosure and board diversity contribute positively to firm value by improving governance quality and reducing information asymmetry (Aydoğmuş et al., 2022; Li et al., 2024).

From a multi-theoretical perspective, ESG and gender diversity strengthen stakeholder relations (stakeholder theory), enhance organizational legitimacy in society (legitimacy theory), and improve access to critical resources such as capital, expertise, and networks (resource dependence theory), which collectively contribute to higher firm value, particularly in heterogeneous Asian markets.

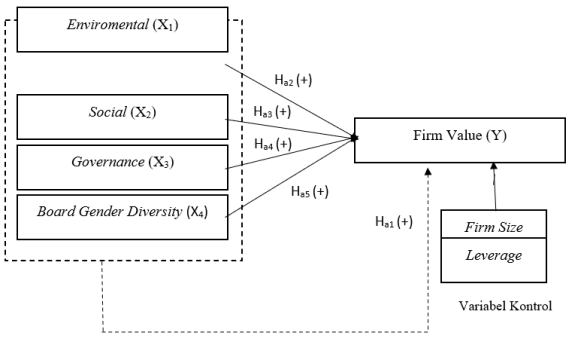
In addition, each ESG dimension has a distinct impact on firm values. Environmental disclosure enhances corporate reputation and investor trust through sustainability signaling (Heldayat and Sulfitri, 2025). Social disclosure strengthens corporate legitimacy and improves stakeholder perception (Ariasinta et al., 2024; Zhang et al., 2025). Governance reduces agency conflicts and improves monitoring efficiency (An et al., 2025). Thus, ESG is expected to positively influence firm value.

Furthermore, board gender diversity plays an important role in improving the quality of corporate governance. Gender diversity within the board enhances decision-making quality and supervisory effectiveness, thereby strengthening firm value (Vidalis et al., 2025; Lawrence and Raithatha, 2023).

Therefore, the higher the ESG disclosure and board gender diversity, the higher the firm value. Based on the conceptual framework, the ESG disclosure score in this study was divided into three main dimensions: environmental, social, and governance. Therefore, the effect of the ESG disclosure score on firm value is explained through the individual impacts of the Environmental, Social, and Governance dimensions on firm value.

Overall, the integration of multiple theories in this study provides a stronger and more coherent explanatory framework that links ESG disclosure and board gender diversity with firm value, particularly in the context of Asian industrial firms characterized by institutional heterogeneity and dynamic economic conditions.

Figure 1.
Hypothesis of the Study



H_a1: ESG disclosure score (environmental, social, and governance) and board gender diversity simultaneously have a significant effect on firm value in industrial companies across Asian countries during the 2021–2024 period, with firm size and leverage as the control variables.

H_a2: The Environmental Score has a positive and significant effect on firm value in industrial companies across Asian countries during the 2021–2024 period.

H_a3: Social score has a positive and significant effect on firm value in industrial companies across Asian countries during 2021–2024.

H_a4: Governance score has a positive and significant effect on firm value in industrial companies across Asian countries during the 2021–2024 period.
H_a5: Board gender diversity has a positive and significant effect on firm value in industrial companies across Asian countries during 2021–2024.

RESEARCH METHOD

This study employs a quantitative approach using descriptive and verification research methods to examine the effect of environmental, social, governance, and board gender diversity on firm value, with firm size and leverage as control variables. The data used are secondary panel data consisting of a combination of cross-sectional and time series data. The research objects are industrial sector companies operating in Indonesia, Singapore, Thailand, China, and Japan during the 2021–2024. All financial and non-financial data were obtained from annual reports, financial statements, and the Refinitiv Eikon database, which provides standardized ESG information and enables comparability across companies and countries. The use of panel data is considered appropriate because it allows the study to capture both differences across firms and changes over time, while also improving the efficiency of estimation compared to purely cross-sectional or time-series data.

The population in this study consists of all industrial sector companies recorded in the Refinitiv Eikon database during the research period, totaling 381. The sampling technique used was non-probability sampling with a purposive sampling approach based on specific criteria. The inclusion criteria are as follows: (1) industrial sector companies recorded in Refinitiv Eikon in Indonesia, Singapore, Thailand, China, and Japan during the 2021–2024 period; (2) companies with a fiscal year ending on December 31; (3) companies that consistently provide complete ESG scores, including Environmental, Social, and Governance scores; (4) companies with complete financial data needed to calculate firm value, firm size, and leverage; and (5) companies with available board gender composition data. The exclusion criteria are as follows: (1) companies with incomplete ESG or financial data during the observation period; (2) companies with missing board gender diversity information; (3) companies with different fiscal year-end dates; and (4) companies with extreme or unavailable values that may distort regression estimation. Based on these criteria, 209 companies were selected as the research sample, resulting in 836 firm-year observations.

Data collection techniques were performed through documentation and literature studies. The documentation method involved collecting financial statements, annual reports, and ESG data from Refinitiv Eikon, while the literature review involved reviewing relevant sources such as books, academic journals, and previous research related to the topic of the study. To ensure consistency, ESG data were obtained from Refinitiv Eikon, and financial variables were calculated based on standardized financial statement items. The data were then organized in a panel form according to the company and year before being statistically analyzed.

The operational definitions of the variables are as follows. Firm value is measured using Tobin's Q, which reflects the market-based valuation of a company by comparing the market value and book value of assets. Environmental, Social, and Governance Scores are measured using ESG component scores obtained from Refinitiv Eikon. Board gender diversity is measured by the proportion of female board members to total board members. Firm size is measured using the natural logarithm of total assets, while leverage is measured by the ratio of total debt to total assets. These operational definitions are used to ensure that each variable is measurable, comparable, and consistent with previous empirical studies on ESG, corporate governance, and firm value.

The data analysis technique used is panel data regression analysis. Prior to hypothesis testing, descriptive statistical analysis was conducted to provide an overview of the data through mean, minimum, maximum, and standard deviation values. The selection of the appropriate regression model was carried out using the Chow, Hausman, and Lagrange multiplier tests to determine the best model among the common effect, fixed effect, and random effect models. The Chow test was used to compare the common effect and fixed effect models, while the Hausman test was used to compare the fixed effect and random effect models. If the Chow test indicates that the fixed effect model is more appropriate than the common effect model and the Hausman test supports the fixed effect model over the random effect model, then the fixed effect model is selected as the final estimation model. This model is appropriate because it controls for unobserved firm-specific characteristics that are constant over time, such as managerial culture, internal governance quality, and firm-specific strategic orientation.

The regression model used in this study was formulated as follows:

$$FV_{it} = \alpha + \beta_1 ENV_{it} + \beta_2 SOC_{it} + \beta_3 GOV_{it} + \beta_4 BGD_{it} + \beta_5 SIZE_{it} + \beta_6 LEV_{it} + \mu_i + \varepsilon_{it}$$

where FV represents firm value, ENV represents environmental score, SOC represents social score, GOV represents governance score, BGD represents board gender diversity, SIZE represents firm size, LEV represents leverage, μ_i represents unobserved firm-specific effects, and ε_{it} represents the error term.

Furthermore, classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, are conducted to ensure that the regression model satisfies the BLUE assumptions. In addition, this study considers potential endogeneity issues that may arise from reverse causality and omitted variable bias. Reverse causality may occur because firms with higher firm values may have more resources to improve ESG disclosure and board diversity, while omitted variable bias may arise from unobserved firm characteristics that influence both governance practices and firm value. To reduce this concern, this study applies panel data regression with firm-specific effects and includes firm size and leverage as control variables. Nevertheless, the findings are interpreted as empirical associations rather than definitive causal relationships.

DATA ANALYSIS AND DISCUSSION

Panel Data Regression Model Analysis

This study employs panel data regression analysis, which combines cross-sectional and time-series data. This approach is selected because it provides more comprehensive estimation in analyzing the relationship between variables. Prior to hypothesis testing, model selection is conducted to determine the most appropriate estimation model among the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). In addition, panel data analysis is considered appropriate for controlling unobserved heterogeneity across firms and capturing dynamic variations over time, which is essential in cross-country ESG studies.

Classical Assumption Tests

Multicollinearity Test

The multicollinearity test was used to examine the correlation between the independent variables in the regression model. A good model should not exhibit a high correlation between the independent variables. In this study, multicollinearity was tested using a correlation matrix. Based on Ghozali (2021), a model is considered free from multicollinearity if the correlation value is below 0.80.

Table 1 Multicollinearity Test Results

	Y	ESG Disclosure	Board Gender Diversity	Firm Size	Leverage
Y	1.000000	-0.163569	-0.155789	-0.320208	-0.211917
ESG Disclosure	0.163569	1.000000	0.247955	0.381884	0.065948
BGD	0.155789	0.247955	1.000000	0.561014	0.261994
Firm Size	0.320208	0.381884	0.561014	1.000000	0.319205
Leverage	0.211917	0.065948	0.261994	0.319205	1.000000

The correlation matrix indicates that all independent variables have relatively low-to-moderate relationships with the dependent variable (Tobin's Q). The ESG disclosure score shows a weak negative correlation, while board gender diversity, firm size, and leverage exhibit negative correlations with firm value. Meanwhile, the correlations among the independent variables remained below the critical threshold of 0.80, indicating that no multicollinearity problem existed in the regression model.

Heteroscedasticity Test

The heteroscedasticity test was conducted to determine whether the variance of the residuals was constant across observations. This study uses the Glejser test.

The results indicate that the probability values of the variables are above the significance level of 0.05, suggesting that the regression model is heteroscedastic.

Table 2: Heteroscedasticity Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.472229	0.465349	3.163706	0.0016
ESG Disclosure Score	-0.002847	0.003830	-0.743296	0.4575
Board Gender Diversity	-3.375106	3.830115	-0.881202	0.3785
Firm Size	-0.044121	0.066399	-0.664484	0.5066
Leverage	-0.516936	0.425091	-1.216060	0.2243

Autocorrelation Test

According to Pesaran (2004), the cross-section dependence test is used to examine whether the residuals are correlated across cross-sectional units in panel data models. This test was conducted using the Residual Cross-Section Dependence Test, which includes the Breusch–Pagan LM, Pesaran Scaled LM, Bias-Corrected Scaled LM, and Pesaran CD approaches.

Table 3 Autocorrelation Test Results

Test	Statistic	d.f.	Prob
Breusch Pagan LM	39506.75	22791	0.0000
Pesaran scaled LM	78.29411		0.0000
Bilas-corrected scaled LM	42.62744		0.0000
Pesaran CD	8.346740		0.0000

Based on the test results, the probability values of the Breusch-Pagan LM, Pesaran Scaled LM, Bias-Corrected Scaled LM, and Pesaran CD tests are all 0.0000, which is below the 0.05 significance level. Therefore, the null hypothesis (H0) is rejected, indicating the presence of cross-sectional dependence in the model. This implies that the residuals are correlated across firms. Hence, robust estimation methods or standard errors are required to ensure valid and reliable results.

Panel Data Model Selection

Chow Test

The Chow test was used to select the best model between the CEM and FEM.

Table 4 Chow Test Results

Effect Test	Statistic	d.f.	Probability
Cross-section F	5.803651	(213, 638)	0.0000
Cross-section chi-square	922.414493	213	0.0000

The probability value of the test was below 0.05, indicating that the fixed effect model (FEM) is more appropriate than the common effect model (CEM).

Hausman Test

The Hausman test was used to determine the appropriate model between the FEM and REM.

Table 5: Hausman Test Results

Test Summary	Chi-Square Statistic	Chi-Square d.f.	Probability
Cross-section random	79.981005	4	0.0000

Source: processed data (2026)

The results show a probability value below 0.05, indicating that the FEM is more appropriate than the REM. Based on both the Chow and Hausman tests, the FEM was identified as the most suitable model for estimation.

Panel Data Regression Estimation

Based on model selection tests, the fixed effect model (FEM) was used for hypothesis testing. The regression equation was estimated using panel EGLS with cross-sectional weights.

Table 6 Regression Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	41.02840	4.060167	10.10510	0.0000
ESG Disclosure Score	-0.033940	0.009355	-3.628104	0.0003
Board Gender Diversity	-8.648197	16.80216	-0.514707	0.6069
Firm Size	-4.080296	0.478084	-8.534689	0.0000
Leverage	-1.222505	1.598102	-0.764973	0.4446
Cross Section Fixed				
R-squared	0.700636	Mean dependent variable		1.957566
Adjusted R-squared	0.598814	S.D. dependent var		2.952332
S.E. of regression	1.869984	Akaike's information criterion		4.305150
Sum squared residual	2230.983	Schwarz criterion		5.515425
Log likelihood	-1624.604	Hannan-Quinn criteria.		4.768593
F-statistic	6.881028	Durbin-Watson stat		1.322791
Prob (F-statistic)	0.000000			

The estimated regression model is

Firm Value = 41.028399 – 0.033940 ESG – 8.648197 BGD – 4.080296 SIZE – 1.222505 LEV

The constant indicates that when all independent and control variables are zero, the firm value equals 41.028399.

Model Diagnostic Enhancement (Misspecification Awareness)

To improve model reliability, this study acknowledges the possibility of model misspecification, including omitted variable bias and potential reverse causality between ESG practices and firm values. Although firm fixed effects help control for time-invariant unobserved heterogeneity, they do not eliminate all endogeneity concerns. Therefore, the estimated coefficients were interpreted as statistical associations rather than strict causal effects.

Hypothesis Testing

Coefficient of Determination (R^2)

The R^2 test measures the extent to which independent variables explain variations in firm value.

Table 7 R-Squared Results

Indicator	Value	Mean dependent variable	1.957566
R-squared	0.700636	S.D. dependent var	2.952332
Adjusted R-squared	0.598814	Akaike's information criterion	4.305150
S.E. of	1.869984	Schwarz	5.515425

regression		criterion	
Sum squared residual	2230.983	Hannan-Quinn criteria.	4.768593
Log likelihood	-1624.604	Durbin-Watson stat	1.322791
F-statistic	6.881028		
Prob (F-statistic)	0.000000		

The adjusted R^2 value of 0.5988 indicates that 59.88% of the variation in firm value is explained by the model, while the remaining 40.12% is explained by variables outside this study.

Table 8 F-Test Results

Indicator	Value	Mean dependent variable	1.957566
R-squared	0.700636	S.D. dependent var	2.952332
Adjusted R-squared	0.598814	Akaike's information criterion	4.305150
S.E. of regression	1.869984	Schwarz criterion	5.515425
Sum squared residual	2230.983	Hannan-Quinn criteria.	4.768593
Log likelihood	-1624.604	Durbin-Watson stat	1.322791
F-statistic	6.881028		
Prob (F-statistic)	0.000000		

Simultaneous Test (F-Test)

The F-test was used to examine the joint effect of all the independent variables on firm value.

The F-statistic is significant at $p < 0.05$, indicating that ESG, board gender diversity, firm size, and leverage jointly have a significant effect on firm value. Therefore, the model is statistically fit for analysis.

Partial Test (t-Test)

A t-test was used to examine the individual effects of each variable.

Table 9 T-Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	41.02840	4.060167	10.10510	0.0000
ESG Disclosure Score	-0.033940	0.009355	-3.628104	0.0003
Board Gender Diversity	-8.648197	16.80216	-0.514707	0.6069
Firm Size	-4.080296	0.478084	-8.534689	0.0000
Leverage	-1.222505	1.598102	-0.764973	0.4446

The results show that the ESG disclosure score has a significant negative effect on firm value. Board gender diversity does not have a significant effect. Firm size has a significant negative effect, while leverage does not significantly affect firm value.

These findings indicate that not all variables contribute significantly to firm value individually, although the model remains significant.

Robustness Test

A robustness test was used to examine the individual effects of each variable.

Table 10 Robustness Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	41.02840	3.614731	11.35033	0.0015
X_ESG_DISCLOSURE_SCORE	-0.033940	0.009898	-3.429113	0.0416
X_BOARD_GENDER_DIVERSITY	-8.648197	3.749152	-2.306708	0.1043
SIZE_CONTROL	-4.080296	0.418022	-9.760968	0.0023
LEVERAGE_CONTROL	-1.222505	0.772168	-1.583211	0.2115

Based on the results of the robust regression using White cross-section standard errors, after correcting for heteroscedasticity, the ESG Disclosure Score and Size Control were found to have a significant effect on firm value, both with negative coefficients, while Board Gender Diversity and Leverage Control were not statistically significant. These findings indicate that only certain variables consistently influence firm value after applying the robust standard errors.

DISCUSSION

The Effect of ESG Score on Firm Value (Tobin's Q)

Based on the t-test results, the ESG disclosure score (X1) has a statistically significant negative effect on firm value (Tobin's Q), as indicated by a p-value of 0.0003 (< 0.05) and a coefficient of -0.033940. This finding suggests that an increase in the ESG disclosure score is associated with a decrease in firm value, holding other variables constant (ceteris paribus).

Theoretically, ESG disclosure is expected to enhance corporate legitimacy and reputation. However, when viewed from the legitimacy theory and agency theory perspectives, ESG

implementation may also generate additional agency costs and compliance burdens, particularly in emerging markets where ESG standards are still developing. This condition can lead to a perception gap between firms and investors regarding the economic benefits of ESG activities.

Empirically, this result is consistent with several studies that argue that ESG adoption may initially reduce firm profitability due to high implementation costs (Cipto & Hersugondo, 2025), but it is inconsistent with studies that find a positive valuation effect of ESG disclosure through improved investor confidence and reduced information asymmetry (Aydoğmuş et al., 2022).

In the context of Asian industrial firms, this negative relationship can be explained by market characteristics, such as short-term investment orientation, heterogeneous regulatory enforcement, and varying levels of ESG awareness among investors. Compared to developed markets, investors in emerging Asian markets tend to prioritize immediate financial performance over long-term sustainability.

In addition, based on stakeholder theory, ESG activities are designed to satisfy broader stakeholder expectations; however, in practice, not all stakeholders (especially capital market investors) directly translate these non-financial improvements into higher firm valuation.

From a component perspective, environmental investments require significant capital expenditure for green technology and emission control, whereas social initiatives, such as CSR programs and employee welfare, increase operational costs. Governance improvements also require higher compliance and reporting costs. These combined costs may temporarily reduce earnings quality, which, in turn, affects market valuation in the short run.

Therefore, the ESG Disclosure Score in this study reflects a long-term strategic investment that is not yet fully capitalized by the market into firm value during the 2021–2024 period.

The Effect of Board Gender Diversity on Firm Value (Tobin's Q)

The t-test results indicate that board gender diversity (X2) does not have a statistically significant effect on firm value (Tobin's Q), as shown by a p-value of 0.6069 (> 0.05) and a coefficient of -8.648197. Although the relationship is negative in direction, it is not statistically significant.

Conceptually, board gender diversity reflects gender representation within corporate boards, which is expected to enhance decision-making quality and improve corporate governance. From the perspective of resource dependence theory, gender-diverse boards should enhance access to broader knowledge, networks, and strategic resources. However, this effect may not materialize in firm value if female board members are not substantially involved in the strategic decision-making processes.

This finding is consistent with studies suggesting that the economic benefits of gender diversity are context-dependent and may not immediately translate into market valuations (Saputra & Nuzula, 2024). However, this contrasts with research showing that gender-diverse boards improve firm performance through better monitoring and decision quality (Awad et al., 2023).

In the Asian context, the insignificant result may be explained by cultural and institutional factors, where gender diversity is often implemented as a compliance requirement rather than a strategic governance mechanism. In many firms, female representation on boards remains symbolic rather than functional, limiting its influence on strategic corporate outcomes.

Furthermore, investors in emerging markets tend to focus more heavily on financial indicators such as profitability, leverage, and growth prospects rather than on board composition variables. The results show that board gender diversity is not yet perceived as a strong market signal affecting firm valuation.

Therefore, board gender diversity represents a long-term governance attribute, the benefits of which are more likely to be realized gradually rather than immediately reflected in firm value during the observation period.

FINDINGS

The regression results indicate that the ESG disclosure score, board gender diversity, firm size, and leverage collectively explain the variations in firm value, as confirmed by the significant F-statistic. The model explains approximately 59.88% of the variation in firm value, indicating moderate explanatory power in the context of Asian industrial firms during the 2021–2024 period.

The ESG disclosure score shows a statistically significant negative effect on firm value. From an economic perspective, the coefficient of -0.033940 implies that a one-unit increase in ESG disclosure is associated with a 0.033940 decrease in Tobin's Q, ceteris paribus. This suggests that, in the short run, ESG-related expenditures may outweigh perceived financial benefits in capital markets, leading to lower firm valuation.

Board gender diversity does not show a statistically significant effect on firm value.

Economically, this implies that variations in female representation on corporate boards do not yet translate into measurable changes in market valuation, indicating that investors may not fully price governance diversity into firm valuation models in the short term.

Firm size has a significant negative effect on firm value. This suggests that larger firms in the sample may experience diminishing marginal valuation, possibly due to increased operational complexity, higher agency costs, or slower growth expectations, which are penalized by the market.

Leverage was found to be statistically insignificant. Economically, this indicates that the debt structure in the observed firms does not play a dominant role in influencing market valuation during the study period, possibly due to stable financing structures or market tolerance toward leverage levels in industrial firms.

Overall, the economic interpretation of the results suggests that the markets in Asian industrial sectors during 2021–2024 are more responsive to short-term financial efficiency and risk perceptions than sustainability and governance indicators. This reinforces the notion that ESG and board diversity are still in the early stages of value recognition in emerging capital markets.

CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the empirical results and discussion, it can be concluded that the ESG disclosure score has a significant negative effect on firm value (Tobin's Q). This indicates that the increase in ESG disclosure is still perceived by investors as a cost burden, particularly in the short term, rather than as a value-enhancing strategy. From a theoretical perspective, this finding supports agency theory, in which ESG activities may be interpreted as additional agency costs, while also reflecting the early stage of ESG integration in emerging Asian capital markets, where sustainability signals are not yet fully capitalized into firm valuation. Meanwhile, board gender diversity does not have a significant effect on firm value, suggesting that the representation of women in corporate boards is still relatively limited and has not yet been considered a key factor in market valuation.

Regarding the control variables, firm size showed a significant negative effect on firm value. This finding implies that larger firms may experience higher operational complexity and agency costs, which potentially reduce market valuation. On the other hand, leverage did not have a significant effect on firm value, indicating that the capital structure of firms is not a primary determinant of investor valuation decisions during the study period. Overall, these results suggest that market valuation in Asian industrial firms is still predominantly driven by traditional financial considerations rather than sustainability-oriented governance mechanisms.

The implications of this study suggest that ESG practices and board diversity have not yet been fully recognized by the market as immediate value drivers for companies. Therefore, companies are encouraged to improve the effectiveness, efficiency, and transparency of ESG implementation to strengthen investor trust and long-term firm value. In addition, investors are advised to consider non-financial indicators, such as ESG performance and governance structure, in their long-term investment decisions, rather than focusing solely on short-term financial performance. From a policy perspective, regulators in Asian markets should strengthen ESG reporting standards and enforcement mechanisms to reduce information asymmetry and improve comparability across firms' ESG scores.

Furthermore, firms should view ESG disclosure and board gender diversity not merely as regulatory compliance but as part of a strategic approach to sustainable value creation. Enhancing the quality of ESG reporting and increasing meaningful female participation in board decision-making may help improve corporate credibility and long-term competitiveness. These findings also highlight the importance of integrating ESG and governance mechanisms into corporate strategic planning rather than treating them as symbolic or compliance-based activities.

Finally, this study had several limitations. The research is limited to industrial sector companies in selected Asian countries during the 2021–2024 period, which may limit the generalizability of the findings. Additionally, the relatively short observation period may not fully capture the long-term effects of ESG and board diversity on firm value. Moreover, this study is subject to potential methodological limitations, such as endogeneity risk, where reverse causality may exist between ESG practices and firm value, as well as possible sample selection bias due to the use of purposive sampling. Another limitation relates to ESG measurement, which relies on aggregated ESG scores that may not fully capture the nuances of firm-specific sustainability performance.

Future studies should extend the study period, expand the sample coverage, and incorporate additional variables such as profitability or macroeconomic factors to obtain more comprehensive results. In addition, future studies

are encouraged to apply more advanced econometric approaches, such as dynamic panel data models (e.g., Generalized Method of Moments/GMM), to address endogeneity issues and improve causal inference. Cross-country comparative analysis with differentiated institutional environments is also recommended to better capture the heterogeneity of ESG effects across markets.

ACKNOWLEDGMENT

The author would like to express sincere gratitude to all the individuals who contributed to the completion of this study. We also appreciate the academic supervisors and institutional support that provided guidance, motivation, and assistance throughout the research process. This study did not receive any specific financial support or funding from public, commercial, or not-for-profit funding agencies. The completion of this research was achieved through the author's independent efforts, dedication, and academic commitment.

REFERENCES

Abdi, Y., Li, X., & Càmara-Turull, X. (2020). Impact of sustainability on firm value and financial performance in the air transport industry. *Sustainability (Switzerland)*, *12*(23), 1-2 2. https://doi.org/10.3390/su12239957

Ahmed, A. M., Sharif, N. A., & Ali, M. N. (2023). *Effect of Firm Size on the Association between Capital Structure and Profitability*. 1-17.

Alaudin, I. R., & Moin, A. (2023). Analisis Pengaruh Mekanisme Corporate *Governance* dan Board Diversity terhadap Nilai Perusahaan yang Listed dalam Index LQ45. *Selekta Manajemen: Jurnal Mahasiswa Bisnis & Manajemen*, *2*(1), 178-189. https://journal.uii.ac.id/selma/article/view/24798%0Ahttps://journal.uii.ac.id/selma/article/download/24798/14959

Alexandre, M., Fenando, L., & Basso, C. (2025). Revisiting knowledge on ESG / CSR and financial performance: A bibliometric and systematic review of moderating variables. *Journal of Innovation & Knowledge*, *10*(1), 100648. https://doi.org/10.1016/j.jik.2024.100648

Alvina, Y., & Yurniawati. (2025). The effect of asset structure, working capital turnover, board size, and gender diversity on firm value. *COSTING: Journal of Economic, Business and Accounting*, *8*(2), 990-1007.

Amrulloh, A. A., & Amalia, D. (2020). Pengaruh Profitabilitas, Struktur Modal, Likuiditas, Ukuran Perusahaan, dan Kebijakan Dividen Terhadap Nilai Perusahaan (Studi Empiris pada Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia Periode Tahun 2015-2019). *Jurnal Akuntansi Dan Keuangan*, *9*(2).

An, H., Ran, C., & Gao, Y. (2025). Does ESG information disclosure increase firm value? The mediation role of financing constraints in China. *Research in International Business and Finance*, *73*. https://doi.org/10.1016/j.ribaf.2024.102584

Arhinful, R., & Radmehr, M. (2023). The Impact of Financial Leverage on the Financial Performance of the Firms Listed on the *Tokyo Stock Exchange*. *SAGE Open*, *13*(4), 1-22. https://doi.org/10.1177/21582440231204099

Ariasinta, T., Indarwanta, D., & Utomo, H. J. N. (2024). Pengaruh *Environmental*, *Social*, and *Governance* (ESG) Disclosure Dan Intellectual Capital Terhadap Firm Value Dengan *Firm Size* Sebagai Variabel Moderasi (Studi Pada Perusahaan Indeks LQ45 Tahun 2018-2022). *Jurnal Administrasi Bisnis (JABis)*, *22*(2), 255-273. https://doi.org/10.31315/jurnaladmbisnis.v22i2.12832

Arifah, J. (2024). *The Effect of Environmental, Social, and Governance Performance on Firm Value with Firm Size as a Moderating Variable. Eduvest - Journal of Universal Studies*, *4*(8), 7416-7433. https://doi.org/10.59188/eduvest.v4i8.1516

Artikasari, L. A. (2023). *Effect Of Leverage, Company Size And Working Capital Turnover On Firm Value With Profitability As Mediation Variable*. *12*(02), 611-624.

Aulia, A., Lastari, A. W., & Dillak, V. (2025). Meningkatkan Pengungkapan ESG : Peran Profitability , Financial Slack , dan Board Gender Diversity di Sektor Perbankan Indonesia dan Malaysia Enhancing ESG Disclosure : The Role of Profitability , Financial Slack , and. *07*(1), 67–77.

Awad, A. B., Khalaf, B. A., & Afzal, A. (2023). *The Power Of Board Size And Gender Diversity On The Value Of Companies Listed On Emerging Markets*. *5*(2), 128-139. https://doi.org/10.22495/clgrv5i2p14

Aydoğmu ş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG performance on firm value and profitability. *Borsa Istanbul Review*, *22*, 119-127. https://doi.org/10.1016/j.bir.2022.11.006

Bai, Y., Wang, Z., Huang, Q., & Ding, H. (2025). *The Impact of ESG Performance on Corporate Value in Listed Sports Companies: The Mediating Role of Intangible Assets and Moderating Role of Policy Environment*. 1-15.

Banna, H., Alam, A., Haviour, X., & Alam, A. W.

(2023). Energy security and economic stability: The role of inflation and war. *Energy Economics*, *126*(August), 106949. https://doi.org/10.1016/j.eneco.2023.106949

Cardillo, M. A. dos R., & Basso, L. F. C. (2025). The *ESG disclosure-performance* paradox in BRICS: Evidence from shareholder returns and firm value. *Sustainable Futures*, *10*. https://doi.org/https://doi.org/10.1016/j.sftr.2025.101510

Chouaibi, S., Chouaibi, J., & Rossi, M. (2022). ESG and corporate financial performance: the mediating role of green innovation: UK common law versus German civil law. *EuroMed Journal of Business*, *17*(1), 46-71. https://doi.org/10.1108/EMJB-09-2020-0101

Cipto, N. S., & Hersugondo, H. (2025). Pengaruh ESG (*Environmental*, *Social*, and *Governance*) terhadap Kinerja dan Nilai Perusahaan dengan Ukuran Perusahaan sebagai Variabel Moderasi. *Jurnal Ekonomi, Manajemen Akuntansi Dan Perpajakan (Jemap)*, *7*(2), 393-416. https://doi.org/10.24167/jemap.v7i2.11761

Diah, K., Paramita, Y., Gede, L., & Dewi, K. (2024). *The Impact of Board Gender Diversity and Ownership Structure on ESG Disclosure*. *5*(4), 4393-4403.

Du, M., Chen, Y., & Liu, S. (2026). The impact mechanism of ESG ratings on firm value: An empirical study based on the multi-period difference-in-differences approach. *Sustainable Futures*, *11*. https://doi.org/https://doi.org/10.1016/j.sftr.2025.101564

García-Sánchez, I. M., Hussain, N., Aibar-Guzmán, C., & Aibar-Guzmán, B. (2025). ESG controversies and external assurance: Examining their impact on firm value and image. *British Accounting Review*. https://doi.org/10.1016/j.bar.2025.101704

Ghofar, A., Kusumadewi, A. W., & Widiastutik, R. N. (2025). Does *firm size* strengthen the relationship between digital transformation and capital structure? A case in ASEAN nations. *Cogent Business & Management*, *12*(1). https://doi.org/10.1080/23311975.2025.2570503

Hapsari, T. A., Departement, A., & Java, W. (2023). Ceo Power , Gender Diversity And Esg Performance : Evidence From Financial Companies In Asean-5.

Heldayat, F. M., & Sulfitri, V. (2025). Pengaruh *Environmental Social Governance* (ESG), Leverage, Size dan Growth terhadap Nilai Perusahaan. *INNOVATIVE: Journal Of Social Science Research*, *5*(2), 559-577.

Hermundsdottir, F., & Aspelund, A. (2022). Competitive sustainable manufacturing: Sustainability strategies, *environmental* and *social innovations*, and their effects on firm performance. *Journal of Cleaner Production*, *370*(October 2021), 133474. https://doi.org/10.1016/j.jclepro.2022.133474

Ikhyanuddin. (2021). Pengaruh Board Diversity Terhadap Nilai Perusahaan (Studi Pada Perusahaan Manufaktur Yang Terdaftar di Bursa Efek Indonesia Tahun 2017-2018). *Indonesian Journal of Intellectual Publication*, *1*(3), 219-227.

Jilani, I. (2024). Capitalizing on Diversity: The Impact of *Board Gender Diversity* on the Value of Excess Cash. *International Journal of Accounting, Finance and Risk Management*, *9*(3), 69-78. https://doi.org/10.11648/j.ijafrm.20240903.11

Krisyadi, R., Hendi, H., & Meilisa, J. (2024). Keragaman Gender Dan Nilai Perusahaan di Indonesia Dengan Ukuran Perusahaan Sebagai Variabel Moderasi. *Keunis*, *12*(1), 100. https://doi.org/10.32497/keunis.v12i1.5358

Lawrence, E. R., & Raithatha, M. (2023). Gender bias, board diversity, and firm value: Evidence from a natural experiment. *Journal of Corporate Finance*, *78*. https://doi.org/https://doi.org/10.1016/j.jcorpfin.2022.102349

Li, L., Saat, M. M., & Chu, P. (2024). The Influence of *Board Gender Diversity* on Firm Value: Empirical Insights from Listed Companies in China. *International Journal of Academic Research in Business and Social Sciences*, *14*(12), 1336-1346. https://doi.org/10.6007/ijarbss/v14-i12/24088

Li, X. (2025). *Research on the Impact of Financial Leverage on Corporate Capital Structure*.

Lin, Y., & Li, S. (2025). *Supply chain resilience, ESG performance, and corporate growth*. *97*(August 2024).

Murti, G. T., Saraswati, R. R. S., & Yorianti, Y. M. (2023). Does Intellectual Capital And Board Characteristics Affect Financial Performance ? 4(2), 304–319.

Nafisah & Liyanto (2025). Pengaruh *Environmental, Social,* Dan *Governance* (ESG) Disclosure Terhadap Nilai Perusahaan di Moderasi Ukuran Perusahaan yang Terdaftar di Bursa Efek Indonesia Periode 2020-2023. *Majalah Ekonomi: Telaah Manajemen, Akuntansi Dan Bisnis*, *31*(2), 106-122.

Putri, E. Y., & Setiawan, R. (2026). ESG , Kinerja, dan Risiko Perusahaan: Dimoderasi oleh *Board Gender Diversity*. *SEIKO : Journal of Management*

& Business, *9*(1), 186-198.

Saputra, A. D., & Nuzula, N. F. (2024). *Board Diversity, Competitive Advantage, Firm Size, and Firm Value: A Case on the Indonesian Materials Industry*. *18*(2), 231-244.

Saraswati, R. S., Yadiati, W., Suharman, H., Soemantri, R., Yadiati, W., & Suharman, H. (2024). Corporate governance , intellectual capital , and organizational culture : their influence on lean manufacturing and firm value. Cogent Business & Management, 11(1). https://doi.org/10.1080/23311975.2024.2382335

Schoonjans, E. (2024). From diversity to sustainability: *Environmental* and *social* spillover effects of board gender quotas. *Journal of Economic Behavior and Organization*, *222*(August 2023), 314-331. https://doi.org/10.1016/j.jebo.2024.04.026

Sedovs, E., Volkova, T., & Ludviga, I. (2025). Sustainable development and strategic management—what is on the horizon in our non-ergodic world research? *Sustainable Futures*, *9*(December 2024), 100414. https://doi.org/10.1016/j.sftr.2024.100414

Sitorus, C. O., & Inawati, W. A. (2025). Pengaruh Environmental , Social , Governance (ESG) Disclosure dan Political Connection Terhadap Nilai Perusahaan (Studi pada Perusahaan Non-Keuangan yang Terdaftar Di Bursa Efek Indonesia Periode 2019-2023).

Sudradjat, D. G., & Maryani, N. (2025). The Influence of *ESG Disclosure* and Institutional Ownership on Firm Value with *Firm Size* as a Moderating Variable (A Case Study of Companies Listed on the Indonesia Stock Exchange in 2018-2024). *Al-Kharaj: Journal of Islamic Economic and Business*, *7*(4), 8600-8608.

Sundarasen, S., Kumar, R., Tanaraj, K., & Ali, A. (2024). From board diversity to disclosure: A comprehensive review on board dynamics and ESG reporting. *Research in Globalization*, *9*(July).

Valls, C., Santos-ja, M., Soriano, R., & Martín-cervantes, P. A. (2022). *Are gender and cultural diversities on board related to the corporation? 363*(March). https://doi.org/10.1016/j.jclepro.2022.132638

Vidalis, S., Petsas, I., Cai, J., Guan, R., Lu, Y., & Balagyozyan, A. (2025). Does female participation improve firm value? *Board gender diversity* reform and asymmetric market responses. *Journal of Economic Asymmetries*, *32*. https://doi.org/https://doi.org/10.1016/j.jeca.2025.e00440

Zavalii, T., Zhyhlei, I., & Ivashko, O. (2025). *Does Size Determine Financial Performance of Advertising and Marketing Companies? Evidence from Western Europe on SDGs*. *1*, 1-30.

Zhang, Y., Li, X., Huang, Q., & Mu, X. (2025). The blue phraseology in ESG reports and firm value: textual analysis evidence from Chinese listed companies. *Economic Analysis and Policy*, *87*, 281-296. https://doi.org/10.1016/j.eap.2025.05.059