

## Which ESG Dimension Matters Most for Firm Value? Evidence from Indonesia

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**Abstract:** *This study examines which environmental, social, and governance (ESG) disclosure dimension is most relevant to firm value in Indonesia. Using 200 firm-year observations from 50 listed firms over 2021–2024, the study estimates regression models with firm-clustered standard errors. Tobin's Q serves as the primary firm-value proxy, while price-to-book value (PBV) is used for robustness analysis. The models control for firm size, profitability, leverage, sales growth, listing age, industry profile, and year effects, and are complemented by relative importance analysis. The results show that environmental disclosure is positively associated with Tobin's Q at the 5% level and remains positive using PBV at the 10% level. Social and governance disclosure have positive but statistically insignificant coefficients in the full models. Relative importance analysis further indicates that environmental disclosure accounts for 65.73% of the total ESG-related explanatory contribution, compared with 25.33% for social disclosure and 8.94% for governance disclosure. Although governance disclosure is the most prevalent ESG practice in the sample, it provides the smallest incremental contribution to firm value. These findings demonstrate that ESG dimensions are not equally value-relevant and that environmental transparency provides the strongest market signal in the Indonesian context. The study extends emerging-market ESG research by combining disaggregated disclosure measures with a direct ranking of their explanatory contributions and offers practical implications for firms, investors, and regulators seeking more decision-useful sustainability reporting.*

### Introduction

Environmental, Social, and Governance (ESG) disclosure has become a central issue in corporate reporting, investment decision-making, and firm valuation. In recent years, capital market participants have increasingly incorporated non-financial information into their assessment of corporate risk, resilience, and long-term value creation. ESG disclosure provides information about how firms manage environmental risks, social responsibilities, and governance mechanisms, thereby helping investors and stakeholders evaluate corporate sustainability beyond traditional financial indicators. Recent literature shows that ESG-related information may influence firm value by reducing information asymmetry, improving transparency, strengthening stakeholder trust, and shaping market perceptions of corporate resilience (Christensen et al., 2021; Gillan et al., 2021; Whelan et al., 2021).

The importance of ESG disclosure is particularly relevant in emerging markets, including Indonesia. Firms in emerging economies often face growing sustainability pressure, evolving disclosure regulations, increasing demand from global investors, and stronger public scrutiny regarding environmental and social impacts. However, the ESG–firm value relationship in emerging markets remains inconclusive. Some studies suggest that ESG activities and disclosure improve firm value by strengthening legitimacy, stakeholder confidence, and sustainability-oriented risk management (Azmi et al., 2021; Broadstock et al., 2021; Hamdouni, 2025). Other studies indicate that ESG may have insignificant or even negative valuation effects when investors perceive sustainability activities as costly, symbolic, or insufficiently credible (Raghunandan & Rajgopal, 2022; Singh & Das, 2025). This inconsistency indicates that ESG disclosure does not automatically create value; its effect depends on institutional context, investor awareness, industry characteristics, disclosure credibility, and the specific ESG dimension being disclosed.

A key limitation of prior research is the frequent use of aggregate ESG scores. Although aggregate ESG measures are useful, they may hide important differences among environmental, social, and governance dimensions. Each ESG dimension contains different information and may have different implications for firm value. Environmental disclosure reflects corporate transparency regarding emissions, pollution, energy use, waste management, resource efficiency, climate-related risks, and environmental compliance. Social disclosure captures corporate responsibility toward employees, customers, suppliers, communities, human rights, diversity, and occupational health and safety. Governance disclosure concerns board structure, ownership, audit quality, accountability, transparency, internal control, and shareholder protection. Because these dimensions represent different risk channels and value-creation mechanisms, their effects on firm value may not be identical (Aydoğmuş et al., 2022; Behl et al., 2022; Berg et al., 2022).

This study is theoretically grounded in stakeholder theory, legitimacy theory, and signaling theory. Stakeholder theory suggests that ESG disclosure can enhance firm value when firms respond to the expectations of broader stakeholder groups. Legitimacy theory explains ESG disclosure as a mechanism through which firms maintain social acceptance and reduce legitimacy gaps between corporate activities and societal expectations. Signaling theory views ESG disclosure as a signal of superior risk management, managerial quality, and long-term sustainability commitment. However, because ESG disclosure may differ in credibility and materiality across dimensions, investors may respond more strongly to one ESG

dimension than to others (Gibson Brandon et al., 2021; Pedersen et al., 2021; Wong & Zhang, 2022).

Accordingly, this study aims to examine which ESG disclosure dimension matters most for firm value among Indonesian listed firms. Specifically, this study investigates whether environmental disclosure, social disclosure, and governance disclosure are associated with firm value, and which of these dimensions provides the greatest explanatory contribution. Firm value is measured using Tobin's Q as the main proxy, while price-to-book value is used as an alternative measure for robustness analysis. The empirical results show that environmental disclosure is positively and significantly associated with Tobin's Q. The robustness test using PBV also shows a positive association between environmental disclosure and firm value. In contrast, social and governance disclosure show positive but statistically insignificant coefficients. Furthermore, the relative importance analysis indicates that environmental disclosure contributes the largest share of ESG-related explanatory power.

The novelty of this study lies in its disaggregated and comparative approach. Unlike many previous studies that examine ESG as an aggregate construct, this study separates ESG disclosure into environmental, social, and governance dimensions and applies relative importance analysis to identify which dimension contributes most strongly to firm value. This approach allows the study to move beyond the general question of whether ESG matters and provide a more precise answer to which ESG dimension matters most. The study contributes to the ESG literature in three ways. First, it enriches empirical evidence from Indonesia, an emerging market where ESG disclosure practices are still developing. Second, it demonstrates that the three ESG dimensions should not be assumed to have equal value relevance. Third, it provides practical implications for managers, investors, and regulators by showing that improving the quality, credibility, and comparability of environmental disclosure may generate stronger market valuation benefits than merely increasing aggregate ESG disclosure.

### *Theoretical Foundations of ESG Disclosure and Firm Value*

The relationship between ESG disclosure and firm value can be explained through stakeholder theory, legitimacy theory, and signaling theory. In the ESG context, stakeholder theory suggests that firms are expected to create value not only for shareholders but also for broader stakeholder groups, including investors, creditors, regulators, employees, customers, communities, and environmental groups. ESG disclosure enables firms to communicate how they manage non-financial risks and respond to stakeholder expectations. Recent corporate finance literature shows that ESG and CSR issues have become central in explaining firm outcomes because capital market participants increasingly consider sustainability-related information when evaluating firm risk, resilience, and long-term value creation (Gillan et al., 2021; Whelan et al., 2021).

Legitimacy theory further explains that firms disclose ESG information to obtain and maintain social acceptance. Companies operate within a social contract; therefore, they must demonstrate that their activities are aligned with prevailing social norms, environmental expectations, and governance standards. In this perspective, ESG disclosure is not merely a reporting practice but a legitimacy mechanism that helps firms reduce public scrutiny, regulatory pressure, and reputational risk. Christensen et al. (2021) emphasize that sustainability reporting has economic consequences because it affects transparency,

accountability, and stakeholders' interpretation of corporate responsibility. This argument is particularly relevant in emerging markets, where ESG reporting practices are still developing and investor confidence depends heavily on disclosure credibility.

Signaling theory complements stakeholder and legitimacy perspectives by focusing on information asymmetry between firms and capital market participants. ESG disclosure may serve as a signal of managerial quality, long-term orientation, risk management capability, and sustainability commitment. Firms with stronger ESG disclosure can differentiate themselves from firms that provide limited sustainability information. However, signaling effectiveness depends on disclosure credibility and consistency. Berg et al. (2022) show that ESG ratings often diverge across rating providers, implying that ESG information may be interpreted differently by investors. Similarly, Gibson Brandon et al. (2021) find that ESG rating disagreement matters for capital market outcomes. Therefore, credible and dimension-specific ESG disclosure is important for improving the value relevance of sustainability information.

#### *Recent Empirical Evidence on ESG and Firm Value*

Recent empirical studies generally suggest that ESG is value-relevant, but the evidence remains mixed across countries, sectors, methods, and ESG dimensions. Pedersen et al. (2021) develop the concept of the ESG-efficient frontier and show that responsible investing can be integrated into risk-return optimization. Broadstock et al. (2021) find that ESG performance contributed to market resilience during the COVID-19 crisis in China, suggesting that ESG may function as an "insurance-like" mechanism under uncertainty. In a similar crisis-related context, Lu et al. (2022) show that firms with stronger sustainability performance tend to be more resilient during COVID-19, although the sustainability–financial performance relationship may vary across crisis periods.

Empirical evidence from emerging markets also supports the relevance of ESG, but with important contextual differences. Azmi et al. (2021) provide international evidence from emerging economies and show that ESG activities are associated with banking performance. Behl et al. (2022), using cross-lagged panel analysis in the Indian energy sector, find that the ESG–firm value relationship is dynamic and may require time before value effects materialize. This supports the argument that ESG disclosure should be understood as a long-term value mechanism rather than a short-term market reaction. Relatedly, research has examined corporate transformation toward Industry 4.0 and financial performance through the influence of ESG (Alkaraan et al., 2022).

Aydoğmuş et al. (2022) provide strong evidence that aggregate ESG performance is positively associated with firm value and profitability. However, their disaggregated analysis shows that ESG pillars do not contribute equally: social and governance scores have positive and significant relationships with firm value, while the environmental score is not significant in their model. ScienceDirect also reports that their article appears in *Borsa Istanbul Review* and examines ESG performance, firm value, profitability, and Tobin's Q. Aydoğmuş et al., (2022) this evidence is highly relevant to the present study because it shows the importance of examining environmental, social, and governance dimensions separately.

Other recent studies also highlight the heterogeneity of ESG effects. Wong and Zhang (2022) examine global stock markets and question whether ESG investing is a temporary trend

or a long-term investment logic. Kumar et al. (2022) show that sustainability indices responded differently during COVID-19, suggesting that sustainability-related signals may be valued differently across market conditions. Raghunandan and Rajgopal (2022), however, caution that ESG-oriented funds do not always translate into stakeholder-friendly outcomes. These mixed results indicate that ESG disclosure is not automatically value-enhancing; its effect depends on credibility, institutional environment, industry exposure, investor awareness, and the specific ESG dimension being disclosed.

#### *Environmental Disclosure and Firm Value*

Environmental disclosure reflects corporate transparency regarding emissions, energy use, waste management, pollution control, biodiversity, resource efficiency, climate-related risk, and environmental compliance. The environmental dimension is expected to be value-relevant because it provides information about firms' exposure to environmental regulation, transition risk, operational efficiency, and long-term sustainability risk. In environmentally sensitive industries, investors may place greater weight on environmental disclosure because poor environmental management can generate legal costs, reputational damage, and future liabilities.

Recent evidence increasingly supports the relevance of environmental information for firm value. Agovino et al. (2026) show that environmental commitment is positively associated with Tobin's Q after correcting for self-selection bias in ESG reporting. This finding implies that environmental responsibility may be underestimated if researchers fail to account for the strategic nature of ESG disclosure. He et al. (2025), using evidence from Chinese energy firms under the dual-carbon policy context, find that ESG performance enhances firm value, especially among firms exposed to high pollution and stronger green policy attention. Bhue et al. (2025) also show that environmental and social practices can improve financial performance under high product market competition, particularly in developing-country contexts.

However, the environmental dimension may also involve short-term costs. Singh and Das (2025) show that ESG controversies can weaken the sustainability–performance relationship, particularly for environmental dimensions. This indicates that environmental disclosure may increase firm value only when investors perceive it as credible and not as symbolic reporting. Despite this complexity, environmental disclosure is expected to have a positive relationship with firm value because it reduces uncertainty regarding environmental risk and signals long-term sustainability capability.

H1a. Environmental disclosure is positively associated with firm value.

#### *Social Disclosure and Firm Value*

Social disclosure captures corporate responsibility toward employees, customers, suppliers, communities, human rights, diversity, occupational health and safety, and broader social welfare. From stakeholder theory, social disclosure can enhance firm value by strengthening stakeholder trust, employee commitment, customer loyalty, and community acceptance. Firms that disclose more social information may be perceived as having stronger stakeholder relationships and lower social conflict risk.

Recent evidence suggests that social performance can be value-relevant, although the relationship is not always consistent. Aydoğmuş et al. (2022) find that the social pillar has a positive and significant association with firm value, indicating that investors may reward firms with stronger social performance. Whelan et al. (2021), in their synthesis of ESG and financial performance evidence, also suggest that ESG-related activities can generate financial benefits through improved reputation, innovation, and risk management. Hamdouni (2025) finds that ESG disclosure enhances value creation among Sharia-compliant firms, supporting the view that stakeholder trust and transparency are important in values-based capital markets.

Nevertheless, the social dimension may be less directly priced by investors than environmental or governance information because social investments often produce intangible and long-term benefits. Social programs may also be interpreted as costs when investors do not clearly observe their economic returns. Therefore, while social disclosure is theoretically expected to improve firm value, the magnitude of its effect may depend on stakeholder awareness, industry visibility, and the credibility of disclosed information.

H1b. Social disclosure is positively associated with firm value.

#### *Governance Disclosure and Firm Value*

Governance disclosure refers to transparency about board structure, independence, audit committee effectiveness, ownership structure, shareholder rights, executive compensation, internal control, ethics, and accountability mechanisms. Governance is central to firm value because it reduces agency problems, improves monitoring, protects investors, and strengthens decision-making quality. In ESG research, governance is often viewed as the internal mechanism that determines whether environmental and social commitments are credible or merely symbolic.

Recent studies provide strong support for the value relevance of governance. Aydoğmuş et al. (2022) find that the governance pillar has a positive and significant association with firm value. Yücel et al. (2025) show that ESG scores and a corporate governance index are positively associated with firm value in Türkiye, suggesting that sustainability performance and governance quality jointly strengthen market valuation. Gillan et al. (2021) also emphasize that governance remains a central dimension in ESG-related corporate finance research because it shapes managerial incentives, accountability, and shareholder protection.

Governance disclosure may be especially important in emerging markets, where investor protection, ownership concentration, and enforcement quality vary across firms. Strong governance disclosure can signal that the firm has effective monitoring structures and lower agency risk. However, when governance disclosure becomes highly standardized due to regulation, its incremental explanatory power for firm value may be weaker than environmental or social disclosure. Therefore, governance disclosure is expected to be positively associated with firm value, although its relative contribution may differ from other ESG dimensions.

H1c. Governance disclosure is positively associated with firm value.

#### *Which ESG Dimension Matters Most?*

Although ESG disclosure is commonly treated as an aggregate construct, recent literature indicates that environmental, social, and governance dimensions do not necessarily

have equal valuation effects. Aggregate ESG scores may hide important differences across dimensions. Some studies find stronger value relevance for social and governance pillars (Aydoğmuş et al., 2022), while others show that environmental disclosure becomes more important in high-risk, high-pollution, or climate-sensitive contexts (Agovino et al., 2026; He et al., 2025). Evidence from ESG ratings also suggests that measurement inconsistency can affect how ESG information is interpreted by capital markets (Berg et al., 2022; Gibson Brandon et al., 2021).

Therefore, the present study disaggregates ESG disclosure into environmental, social, and governance dimensions. This approach is consistent with the view that ESG is multidimensional and that each pillar may communicate different information to investors. In the Indonesian context, where ESG reporting is still evolving and firms face increasing sustainability pressure, it is important to examine not only whether ESG disclosure affects firm value, but also which ESG dimension provides the strongest explanatory contribution.

**RQ1. Which ESG disclosure dimension provides the greatest explanatory contribution to firm value among Indonesian listed firms?**

Based on the theoretical arguments and prior empirical evidence discussed above, this study develops a conceptual framework that links ESG disclosure dimensions to firm value. The framework positions environmental disclosure, social disclosure, and governance disclosure as the main independent variables, while firm value serves as the dependent variable. Environmental disclosure is expected to influence firm value by signaling environmental risk management and long-term sustainability commitment. Social disclosure is expected to enhance firm value through stronger stakeholder relationships and social legitimacy. Governance disclosure is expected to improve firm value by strengthening transparency, accountability, and investor confidence. In addition, several firm-level control variables, including firm size, profitability, leverage, growth, firm age, industry type, and year effects, are incorporated to ensure that the relationship between ESG disclosure dimensions and firm value is examined after controlling for relevant firm characteristics. The proposed conceptual framework is presented in Figure 1.

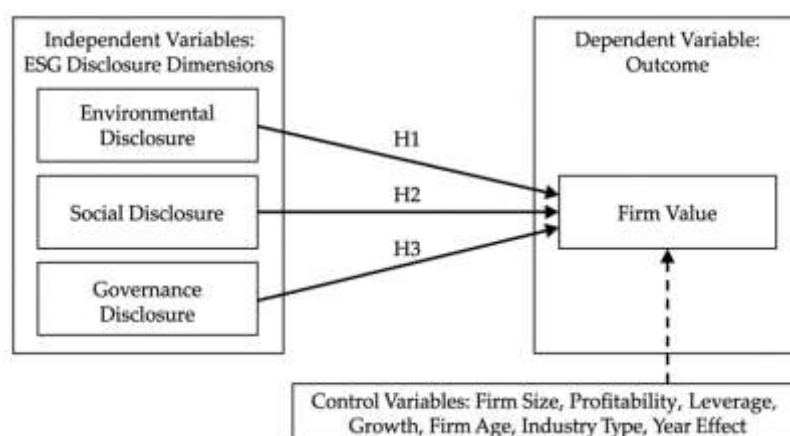


Figure 1. Conceptual Framework

## Results and Discussion

### *Descriptive Statistics*

Table 1 presents the descriptive statistics for the variables used in this study. The final dataset consists of 200 firm-year observations, representing 50 Indonesian listed firms observed over the period 2021–2024. Firm value is measured using Tobin's Q as the main dependent variable, while price-to-book value is used as an alternative firm value proxy for robustness analysis. The main independent variables are the three ESG dimensions, namely environmental disclosure, social disclosure, and governance disclosure.

Table 1. Descriptive Statistics

| Variable     | Obs. | Mean   | Std. Dev. | Min    | Median | Max    |
|--------------|------|--------|-----------|--------|--------|--------|
| ENV_Index    | 200  | 0.706  | 0.211     | 0.133  | 0.733  | 1.000  |
| SOC_Index    | 200  | 0.724  | 0.164     | 0.400  | 0.767  | 1.000  |
| GOV_Index    | 200  | 0.854  | 0.109     | 0.528  | 0.861  | 1.000  |
| Tobin's Q    | 200  | 5.334  | 7.057     | 0.524  | 2.552  | 49.741 |
| PBV          | 200  | 10.372 | 15.512    | 0.185  | 4.224  | 87.563 |
| SIZE         | 200  | 31.874 | 0.902     | 29.439 | 32.070 | 34.253 |
| ROA          | 200  | 0.075  | 0.041     | 0.012  | 0.068  | 0.180  |
| LEV          | 200  | 0.499  | 0.138     | 0.252  | 0.504  | 0.796  |
| GROWTH       | 200  | 0.079  | 0.122     | -0.118 | 0.077  | 0.280  |
| AGE          | 200  | 24.280 | 8.458     | 3.000  | 26.500 | 42.000 |
| High_Profile | 200  | 0.580  | 0.495     | 0.000  | 1.000  | 1.000  |

**Notes:** ENV\_Index = environmental disclosure index; SOC\_Index = social disclosure index; GOV\_Index = governance disclosure index; Tobin's Q = market-based firm value; PBV = price-to-book value; SIZE = natural logarithm of total assets; ROA = return on assets; LEV = leverage; GROWTH = sales growth; AGE = listing age; High\_Profile = dummy variable equal to 1 for firms in high-profile industries and 0 otherwise.

The descriptive statistics show that the average environmental disclosure index is 0.706, with a standard deviation of 0.211. This indicates that, on average, firms disclose approximately 70.6% of the environmental items included in the ESG disclosure index. The relatively large standard deviation suggests considerable variation in environmental disclosure practices across Indonesian listed firms. The minimum value of 0.133 and maximum value of 1.000 further indicate that some firms disclose only a limited number of environmental items, whereas others disclose all environmental items included in the index.

The average social disclosure index is 0.724, with a standard deviation of 0.164. Compared with environmental disclosure, social disclosure has a slightly higher mean and lower dispersion. This suggests that social-related disclosure practices are relatively more common and less heterogeneous across the sample firms. The minimum value of 0.400 implies that even firms with relatively low social disclosure still report several social-related items, while the maximum value of 1.000 indicates full disclosure among some firms.

Governance disclosure records the highest mean score among the three ESG dimensions, with an average value of 0.854 and a standard deviation of 0.109. This finding

suggests that governance-related disclosure is the most developed ESG dimension among the sampled firms. The higher mean and lower standard deviation indicate that governance disclosure is relatively more institutionalized and more consistently reported than environmental and social disclosure. This pattern is theoretically plausible because governance disclosure is often more closely associated with formal corporate reporting requirements, board structure, audit mechanisms, ownership information, and compliance-oriented reporting.

Regarding firm value, Tobin's Q has a mean value of 5.334, a median of 2.552, and a maximum value of 49.741. The difference between the mean and median suggests that Tobin's Q is positively skewed, meaning that several firms have substantially higher market valuations relative to their asset base. A similar pattern is observed for PBV, with a mean value of 10.372, a median of 4.224, and a maximum value of 87.563. These results indicate that firm value varies considerably across Indonesian listed firms in the sample.

For the control variables, firm size has a mean value of 31.874, indicating that the sample consists of relatively large publicly listed firms. ROA has an average value of 0.075, suggesting that firms generate an average return on assets of approximately 7.5%. Leverage has a mean value of 0.499, indicating that, on average, liabilities account for approximately 49.9% of total assets. Sales growth has a mean value of 0.079, suggesting an average sales growth rate of 7.9%. The average listing age is 24.280 years, indicating that most firms in the sample are relatively mature listed companies. Finally, the mean value of the high-profile industry dummy is 0.580, meaning that 58% of the firm-year observations belong to high-profile industries.

Overall, the descriptive statistics provide three important preliminary insights. First, governance disclosure has the highest average score among the ESG dimensions. Second, environmental disclosure exhibits the greatest variation, suggesting that environmental reporting practices differ substantially across firms. Third, the relatively high dispersion in Tobin's Q and PBV indicates that firm value is heterogeneous across the sample, thereby justifying further regression analysis to examine whether ESG disclosure dimensions explain differences in market-based firm value.

### Correlation Analysis

Table 2 presents the Pearson correlation matrix among the main variables. The correlation analysis is conducted to provide an initial indication of the bivariate associations between ESG disclosure dimensions, firm value, and control variables. In addition, the correlation matrix is useful for detecting potential multicollinearity problems before estimating the regression models.

Table 2. Pearson Correlation Matrix

| Variable | TQ     | PBV    | ENV   | SOC   | GOV    | SIZE  | ROA | LEV | GROWTH | AGE | HP |
|----------|--------|--------|-------|-------|--------|-------|-----|-----|--------|-----|----|
| TQ       | 1.000  |        |       |       |        |       |     |     |        |     |    |
| PBV      | 0.951  | 1.000  |       |       |        |       |     |     |        |     |    |
| ENV      | 0.071  | 0.046  | 1.000 |       |        |       |     |     |        |     |    |
| SOC      | -0.093 | -0.071 | 0.092 | 1.000 |        |       |     |     |        |     |    |
| GOV      | 0.040  | 0.028  | 0.267 | 0.039 | 1.000  |       |     |     |        |     |    |
| SIZE     | -0.662 | -0.636 | 0.002 | 0.326 | -0.041 | 1.000 |     |     |        |     |    |

| Variable | TQ     | PBV    | ENV    | SOC    | GOV    | SIZE   | ROA    | LEV    | GROWTH | AGE   | HP    |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| ROA      | -0.066 | -0.034 | 0.102  | -0.000 | -0.083 | 0.024  | 1.000  |        |        |       |       |
| LEV      | 0.003  | 0.168  | -0.050 | 0.058  | -0.037 | 0.076  | 0.046  | 1.000  |        |       |       |
| GROWTH   | 0.042  | 0.067  | -0.083 | -0.075 | -0.073 | -0.043 | -0.107 | 0.148  | 1.000  |       |       |
| AGE      | 0.096  | 0.079  | 0.064  | 0.011  | -0.076 | -0.055 | 0.076  | -0.127 | 0.053  | 1.000 |       |
| HP       | 0.036  | 0.008  | 0.575  | -0.095 | 0.319  | -0.245 | 0.175  | -0.155 | -0.055 | 0.204 | 1.000 |

**Notes:** TQ = Tobin's Q; PBV = price-to-book value; ENV = environmental disclosure index; SOC = social disclosure index; GOV = governance disclosure index; SIZE = firm size; ROA = return on assets; LEV = leverage; GROWTH = sales growth; AGE = listing age; HP = high-profile industry dummy.

The correlation results show that Tobin's Q is positively correlated with environmental disclosure and governance disclosure, with correlation coefficients of 0.071 and 0.040, respectively. However, the correlation between Tobin's Q and social disclosure is negative, with a coefficient of -0.093. These bivariate associations are relatively weak, indicating that the relationship between ESG disclosure and firm value cannot be adequately inferred from simple correlation analysis alone. Therefore, multivariate regression analysis is required to examine the effect of each ESG dimension after controlling for firm characteristics.

The correlation between PBV and the three ESG dimensions shows a broadly similar pattern. PBV is positively correlated with environmental disclosure and governance disclosure, with coefficients of 0.046 and 0.028, respectively, but negatively correlated with social disclosure, with a coefficient of -0.071. These weak correlations suggest that the market valuation effect of ESG disclosure may depend on the inclusion of control variables and the simultaneous estimation of the three ESG dimensions.

Among the ESG dimensions, the highest correlation is observed between environmental disclosure and governance disclosure, with a coefficient of 0.267. The correlations between environmental and social disclosure (0.092) and between social and governance disclosure (0.039) are relatively low. These results suggest that the three ESG dimensions capture distinct aspects of corporate sustainability disclosure. In other words, firms with stronger governance disclosure do not necessarily have equally strong environmental or social disclosure practices. This supports the decision to examine environmental, social, and governance disclosure separately rather than combining them into a single aggregate ESG score.

The correlation matrix also shows a strong positive correlation between Tobin's Q and PBV, with a coefficient of 0.951. This is expected because both variables represent market-based firm value. However, Tobin's Q and PBV are not included simultaneously in the same regression model; instead, PBV is used as an alternative dependent variable in the robustness analysis. Therefore, the high correlation between these two firm value measures does not create a multicollinearity concern in the main regression model.

Firm size is negatively correlated with both Tobin's Q and PBV, with coefficients of -0.662 and -0.636, respectively. This result suggests that larger firms in the sample tend to have lower market-based valuation ratios. This may reflect the possibility that smaller firms have higher growth expectations or that larger firms have more mature asset structures, resulting in lower valuation multiples. The high-profile industry dummy is positively correlated with

environmental disclosure (0.575) and governance disclosure (0.319), suggesting that firms operating in high-profile industries tend to disclose more environmental and governance information. This pattern is consistent with the view that firms exposed to higher public, regulatory, and environmental scrutiny are more likely to engage in ESG disclosure.

Overall, the correlation coefficients among the independent variables are below commonly used critical thresholds, indicating that multicollinearity is unlikely to be a serious concern. To further confirm this, variance inflation factor analysis was conducted. The VIF values for the main ESG variables are relatively low, with environmental disclosure at 1.739, social disclosure at 1.246, and governance disclosure at 1.428. The highest VIF value is 2.263, which remains well below the commonly accepted threshold of 10. Therefore, the regression models can be estimated without serious multicollinearity concerns.

Taken together, the correlation analysis provides preliminary evidence that the ESG dimensions are empirically distinguishable and suitable for separate examination. Although the direct bivariate correlations between ESG disclosure and firm value are weak, the absence of severe multicollinearity supports the use of multivariate regression analysis to identify which ESG dimension matters most for firm value.

#### *Main Regression Results: ESG Dimensions and Firm Value*

Before estimating the main regression model, a variance inflation factor analysis was conducted to assess whether the independent variables suffer from multicollinearity problems. Table 3 reports the VIF values for the ESG dimensions, control variables, and year dummy variables included in the regression model.

Table 3. Variance Inflation Factor Analysis

| Variable            | VIF   |
|---------------------|-------|
| ENV_Index           | 1.739 |
| SOC_Index           | 1.246 |
| GOV_Index           | 1.428 |
| SIZE_In_TotalAssets | 1.216 |
| ROA                 | 1.084 |
| LEV                 | 1.092 |
| GROWTH              | 1.085 |
| AGE_Listing         | 1.154 |
| High_Profile_Dummy  | 2.050 |
| Year_2022           | 1.626 |
| Year_2023           | 1.853 |
| Year_2024           | 2.263 |
| Mean VIF            | 1.486 |

**Notes:** ENV\_Index = environmental disclosure index; SOC\_Index = social disclosure index; GOV\_Index = governance disclosure index; SIZE\_In\_TotalAssets = natural logarithm of total assets; ROA = return on assets; LEV = leverage; GROWTH = sales growth; AGE\_Listing = firm listing age; High\_Profile\_Dummy = dummy variable equal to 1 for firms in high-profile industries and 0 otherwise.

The VIF results indicate that multicollinearity is not a serious concern in the regression model. The highest VIF value is 2.263, observed for the 2024 year dummy, while the VIF values for the three ESG dimensions are 1.739 for environmental disclosure, 1.246 for social disclosure, and 1.428 for governance disclosure. These values are substantially below the commonly used threshold of 10, and also below the more conservative threshold of 5. The mean VIF value is 1.486, further confirming that the independent variables do not exhibit excessive linear dependence.

The low VIF values are particularly important for this study because the main objective is to compare the relative importance of the environmental, social, and governance dimensions. If the ESG variables were highly collinear, it would be difficult to isolate the individual effect of each dimension on firm value. However, the VIF results show that the three ESG dimensions are sufficiently distinct to be included simultaneously in the regression model. Therefore, the regression analysis can proceed without serious multicollinearity concerns.

Table 4 presents the main regression results examining the relationship between ESG disclosure dimensions and firm value. Tobin's Q is used as the dependent variable because it captures market-based firm value and reflects investors' assessment of the firm's future growth prospects. The regression models are estimated using firm-clustered standard errors to account for possible within-firm correlation across the observation period.

Three regression specifications are reported. Model 1 includes only the three ESG dimensions. Model 2 adds firm-level control variables, including firm size, profitability, leverage, sales growth, listing age, and high-profile industry classification. Model 3 represents the full model by adding year dummy variables to control for time-specific effects.

Table 4. Main Regression Results: ESG Dimensions and Firm Value

| Variable            | Model 1: ESG Only | Model 2: ESG + Controls | Model 3: Full Model  |
|---------------------|-------------------|-------------------------|----------------------|
| ENV_Index           | 2.443<br>(4.499)  | 7.215**<br>(3.639)      | 8.342**<br>(3.964)   |
| SOC_Index           | -4.347<br>(5.239) | 4.452<br>(3.941)        | 5.617<br>(4.057)     |
| GOV_Index           | 1.604<br>(7.584)  | 3.170<br>(4.988)        | 6.031<br>(5.975)     |
| SIZE_In_TotalAssets |                   | -5.962***<br>(1.428)    | -5.912***<br>(1.419) |
| ROA                 |                   | -4.020<br>(6.994)       | -4.289<br>(7.062)    |
| LEV                 |                   | 1.819<br>(2.035)        | 1.949<br>(2.106)     |
| GROWTH              |                   | 0.532<br>(1.846)        | 1.355<br>(2.106)     |
| AGE_Listing         |                   | 0.090<br>(0.065)        | 0.109<br>(0.070)     |
| High_Profile_Dummy  |                   | -4.177***<br>(1.232)    | -4.639***<br>(1.352) |
| Year_2022           |                   |                         | -1.334*<br>(0.697)   |

| Variable             | Model 1: ESG Only | Model 2: ESG + Controls | Model 3: Full Model    |
|----------------------|-------------------|-------------------------|------------------------|
| Year_2023            |                   |                         | -1.714**<br>(0.851)    |
| Year_2024            |                   |                         | -2.174*<br>(1.189)     |
| Constant             | 5.387<br>(4.905)  | 183.933***<br>(43.529)  | 179.270***<br>(42.955) |
| Observations         | 200               | 200                     | 200                    |
| R-squared            | 0.016             | 0.514                   | 0.523                  |
| Adjusted R-squared   | 0.000             | 0.491                   | 0.492                  |
| Controls             | No                | Yes                     | Yes                    |
| Year Effects         | No                | No                      | Yes                    |
| Clustered SE by Firm | Yes               | Yes                     | Yes                    |

**Notes:** The dependent variable is Tobin's Q. Firm-clustered standard errors are reported in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

The regression results provide important evidence regarding which ESG dimension matters most for firm value. In Model 1, which includes only the three ESG dimensions, none of the ESG variables is statistically significant. This suggests that the simple association between ESG disclosure and firm value is weak when firm characteristics are not controlled. This result is consistent with the correlation analysis, which shows only weak bivariate correlations between ESG disclosure dimensions and Tobin's Q.

After adding firm-level control variables in Model 2, environmental disclosure becomes positive and statistically significant at the 5% level. The coefficient of ENV\_Index is 7.215, indicating that firms with higher environmental disclosure tend to have higher Tobin's Q, holding other firm characteristics constant. This finding suggests that environmental disclosure may be valued by the capital market when investors evaluate Indonesian listed firms. In contrast, the coefficients of social disclosure and governance disclosure are positive but statistically insignificant.

Model 3 reports the full specification after controlling for both firm-level characteristics and year effects. The coefficient of ENV\_Index remains positive and statistically significant at the 5% level, with a coefficient of 8.342. This indicates that environmental disclosure is consistently associated with higher firm value even after controlling for size, profitability, leverage, growth, listing age, industry profile, and year-specific effects. Therefore, among the three ESG dimensions, environmental disclosure appears to be the most relevant dimension for explaining variation in firm value.

The coefficient of SOC\_Index in Model 3 is positive but statistically insignificant. This implies that although social disclosure may have a positive direction of association with firm value, the evidence is not strong enough to conclude that social disclosure significantly affects Tobin's Q in the current model. Similarly, GOV\_Index also shows a positive but statistically insignificant coefficient. This result is noteworthy because governance disclosure has the highest average score in the descriptive statistics, yet it does not emerge as the most influential ESG dimension in the regression model. Thus, the findings suggest that the most

frequently disclosed ESG dimension is not necessarily the dimension that contributes most strongly to market-based firm value.

The control variables also provide meaningful insights. Firm size has a negative and statistically significant coefficient across Models 2 and 3. In the full model, the coefficient of `SIZE_In_TotalAssets` is -5.912 and significant at the 1% level. This indicates that larger firms tend to have lower Tobin's Q, which may reflect lower growth opportunities or more mature asset structures among larger listed firms. The high-profile industry dummy is also negative and statistically significant, suggesting that firms operating in high-profile industries have lower Tobin's Q after controlling for ESG disclosure and other firm characteristics. Meanwhile, profitability, leverage, sales growth, and listing age do not show statistically significant effects on firm value in the full model.

The year dummy variables show negative coefficients, suggesting that Tobin's Q was lower in 2022, 2023, and 2024 relative to the base year 2021. The coefficients for `Year_2022`, `Year_2023`, and `Year_2024` are negative, with `Year_2023` statistically significant at the 5% level and `Year_2022` and `Year_2024` significant at the 10% level. This pattern is consistent with the descriptive trend showing a decline in average Tobin's Q over the sample period.

Overall, the regression results indicate that environmental disclosure is the ESG dimension that matters most for firm value. While all three ESG dimensions show positive coefficients in the full model, only environmental disclosure is statistically significant. This finding supports the central argument of the study that capital market participants may place greater value on environmental transparency than on social or governance disclosure in the Indonesian context. The result is particularly relevant for firms in emerging markets, where environmental issues are often closely linked to regulatory scrutiny, public legitimacy, operational risk, and long-term sustainability performance.

#### *Robustness Test: Alternative Firm Value Measure Using PBV*

To examine the robustness of the main findings, this study re-estimates the regression model using price-to-book value (PBV) as an alternative proxy for firm value. While Tobin's Q reflects the market valuation of a firm relative to its asset base, PBV captures how the capital market values the firm relative to its book value of equity. Therefore, using PBV provides an additional test of whether the effect of ESG disclosure dimensions on firm value remains consistent across different market-based valuation measures.

Table 5 presents the robustness test results. Similar to the main regression analysis, three model specifications are reported. Model 1 includes only the three ESG dimensions. Model 2 adds firm-level control variables, and Model 3 includes both firm-level controls and year effects. Firm-clustered standard errors are used to account for potential within-firm correlation over time.

Table 5. Robustness Test Using PBV as an Alternative Firm Value Measure

| Variable  | Model 1: ESG Only  | Model 2: ESG + Controls | Model 3: Full Model |
|-----------|--------------------|-------------------------|---------------------|
| ENV_Index | 3.501<br>(10.366)  | 13.799*<br>(7.558)      | 14.655*<br>(8.043)  |
| SOC_Index | -7.164<br>(10.122) | 11.080<br>(8.727)       | 11.965<br>(9.054)   |
| GOV_Index | 2.570<br>(17.129)  | 6.798<br>(11.791)       | 8.969<br>(13.372)   |

| Variable             | Model 1: ESG Only  | Model 2: ESG + Controls | Model 3: Full Model    |
|----------------------|--------------------|-------------------------|------------------------|
| SIZE_In_TotalAssets  |                    | -12.903***<br>(3.079)   | -12.865***<br>(3.103)  |
| ROA                  |                    | 0.650<br>(17.368)       | 0.447<br>(17.470)      |
| LEV                  |                    | 22.238***<br>(6.195)    | 22.332***<br>(6.335)   |
| GROWTH               |                    | 1.648<br>(4.033)        | 2.274<br>(4.231)       |
| AGE_Listing          |                    | 0.199<br>(0.145)        | 0.213<br>(0.155)       |
| High_Profile_Dummy   |                    | -8.746***<br>(2.565)    | -9.097***<br>(2.761)   |
| Year_2022            |                    |                         | -1.018<br>(1.450)      |
| Year_2023            |                    |                         | -1.292<br>(1.517)      |
| Year_2024            |                    |                         | -1.655<br>(2.175)      |
| Constant             | 10.892<br>(11.843) | 387.028***<br>(90.946)  | 383.491***<br>(92.485) |
| Observations         | 200                | 200                     | 200                    |
| R-squared            | 0.008              | 0.519                   | 0.520                  |
| Adjusted R-squared   | -0.007             | 0.497                   | 0.490                  |
| Controls             | No                 | Yes                     | Yes                    |
| Year Effects         | No                 | No                      | Yes                    |
| Clustered SE by Firm | Yes                | Yes                     | Yes                    |

**Notes:** The dependent variable is PBV. Firm-clustered standard errors are reported in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

The robustness test results are broadly consistent with the main regression analysis using Tobin's Q. In Model 1, none of the ESG dimensions is statistically significant, suggesting that ESG disclosure alone does not sufficiently explain variation in PBV without considering firm-specific characteristics. This result is consistent with the main regression results, where the ESG-only model also shows limited explanatory power.

After firm-level control variables are included in Model 2, environmental disclosure becomes positive and statistically significant at the 10% level. The coefficient of ENV\_Index is 13.799, indicating that firms with higher environmental disclosure tend to have higher PBV after controlling for firm size, profitability, leverage, sales growth, listing age, and industry profile. This suggests that environmental disclosure remains relevant when firm value is measured using PBV.

In the full model, reported in Model 3, the coefficient of ENV\_Index remains positive and statistically significant at the 10% level, with a coefficient of 14.655. This finding provides additional support for the main result that environmental disclosure is the ESG dimension most closely associated with firm value. Although the level of statistical significance is weaker

than in the Tobin's Q model, the direction and relative importance of the coefficient remain consistent.

The coefficients of SOC\_Index and GOV\_Index are positive in the full model but remain statistically insignificant. This indicates that social and governance disclosure do not show a robust direct association with PBV in the present model. Therefore, the robustness test reinforces the conclusion that environmental disclosure is the most relevant ESG dimension for market-based firm value in this dataset.

The control variables also provide additional insights. Firm size has a negative and statistically significant coefficient, suggesting that larger firms tend to have lower PBV. This result is consistent with the Tobin's Q regression and may indicate that larger firms have more mature asset structures and lower valuation multiples. Leverage shows a positive and statistically significant coefficient in the PBV model, suggesting that firms with higher leverage tend to have higher market valuation relative to book equity. Meanwhile, the high-profile industry dummy is negative and statistically significant, indicating that firms operating in high-profile industries tend to have lower PBV after controlling for ESG disclosure and firm characteristics.

The year dummy variables are negative but statistically insignificant in the PBV model. This suggests that, unlike the Tobin's Q model, the decline in firm value across years is not strongly captured when PBV is used as the dependent variable. Nevertheless, the overall model fit remains strong, with an R-squared of 0.520 in the full model, indicating that the explanatory variables account for approximately 52.0% of the variation in PBV.

Overall, the robustness test confirms that the main finding is qualitatively consistent across alternative firm value measures. Environmental disclosure remains the only ESG dimension that is positively and statistically associated with firm value, although the significance level is weaker in the PBV model. This supports the central argument of this study that environmental disclosure is the ESG dimension that matters most for firm value, compared with social and governance disclosure.

#### *Relative Importance Analysis: Which ESG Dimension Matters Most?*

To directly answer the main research question of this study, a relative importance analysis was conducted to compare the explanatory contribution of each ESG dimension to firm value. While the regression results in Table 4 show whether each ESG dimension has a statistically significant association with Tobin's Q, the relative importance analysis provides additional evidence on which dimension contributes the largest share of ESG-related explanatory power in the firm value model.

This analysis is important because the three ESG dimensions may differ not only in statistical significance but also in their substantive contribution to explaining variation in firm value. Therefore, this section compares the relative contribution of environmental disclosure, social disclosure, and governance disclosure to the model's explanatory power.

Table 6. Relative Importance Analysis of ESG Dimensions

| ESG Dimension            | Dominance R <sup>2</sup> Contribution | Share of ESG Contribution | Rank |
|--------------------------|---------------------------------------|---------------------------|------|
| Environmental Disclosure | 0.0361                                | 65.73%                    | 1    |
| Social Disclosure        | 0.0139                                | 25.33%                    | 2    |
| Governance Disclosure    | 0.0049                                | 8.94%                     | 3    |
| Total ESG Contribution   | 0.0549                                | 100.00%                   |      |

Notes: The relative importance analysis is based on the full Tobin's Q model including firm-level control variables and year effects. The dominance R<sup>2</sup> contribution indicates the relative explanatory contribution of each ESG dimension to firm value.

The results in Table 6 show that environmental disclosure provides the largest contribution to explaining firm value, with a dominance R<sup>2</sup> contribution of 0.0361. This represents 65.73% of the total ESG-related explanatory contribution. This finding indicates that, among the three ESG dimensions, environmental disclosure has the strongest explanatory relevance for Tobin's Q.

Social disclosure ranks second, with a dominance R<sup>2</sup> contribution of 0.0139, accounting for 25.33% of the total ESG contribution. Although social disclosure does not show a statistically significant coefficient in the main regression model, the relative importance analysis suggests that it still contributes some explanatory power to firm value. This implies that social disclosure may contain market-relevant information, although its effect is not sufficiently strong to emerge as statistically significant in the full regression model.

Governance disclosure has the smallest contribution, with a dominance R<sup>2</sup> value of 0.0049, representing only 8.94% of the total ESG-related contribution. This result is particularly interesting because governance disclosure has the highest average score in the descriptive statistics. In other words, governance disclosure is the most widely reported ESG dimension among the sample firms, but it contributes the least to explaining variation in firm value. This suggests that high disclosure intensity does not necessarily translate into stronger market valuation relevance.

Taken together, the relative importance analysis strengthens the main regression findings. The regression results show that environmental disclosure is the only ESG dimension that is positively and statistically associated with Tobin's Q. The relative importance analysis further confirms that environmental disclosure contributes the largest share of ESG-related explanatory power. Therefore, the evidence consistently indicates that environmental disclosure is the ESG dimension that matters most for firm value.

This finding has important theoretical and practical implications. From a theoretical perspective, the result suggests that the capital market may place greater emphasis on environmental transparency than on social or governance disclosure when evaluating firm value. This is consistent with the view that environmental disclosure reduces information asymmetry concerning environmental risk, regulatory exposure, resource efficiency, pollution control, and long-term sustainability performance. From a practical perspective, the finding implies that Indonesian listed firms may obtain greater market valuation benefits when they improve the quality, credibility, and completeness of environmental disclosure.

The result also highlights a meaningful distinction between disclosure prevalence and valuation relevance. Governance disclosure appears to be the most established ESG practice,

as reflected in its high average disclosure score. However, environmental disclosure appears to be more value-relevant from the perspective of market participants. This suggests that investors may perceive environmental disclosure as a more informative signal of future risk management, legitimacy, and long-term corporate sustainability.

Overall, the relative importance analysis provides a direct answer to the research question: among environmental, social, and governance disclosure, environmental disclosure matters most for firm value in the Indonesian listed-firm context examined in this study.

### *Discussion*

This study investigates which ESG disclosure dimension matters most for firm value in the Indonesian listed-firm context. The empirical results show that environmental disclosure is positively and significantly associated with firm value, measured by Tobin's Q. The robustness test using PBV also confirms a positive association between environmental disclosure and firm value, although the level of statistical significance is weaker. In contrast, social disclosure and governance disclosure show positive but statistically insignificant coefficients. Furthermore, the relative importance analysis indicates that environmental disclosure provides the largest ESG-related explanatory contribution to firm value, followed by social disclosure and governance disclosure. These findings provide a direct answer to the central research question: among the three ESG dimensions, environmental disclosure appears to matter most for firm value.

The finding is consistent with stakeholder theory, which argues that firms create value by responding to the expectations of multiple stakeholder groups, including investors, regulators, communities, creditors, employees, and environmental stakeholders. In this study, environmental disclosure may be valued by the market because it provides information about how firms manage pollution, energy use, emissions, waste, resource efficiency, and environmental compliance. This is especially relevant in emerging markets, where environmental risks may generate regulatory exposure, reputational costs, and operational uncertainty. The result supports the argument that ESG information is increasingly incorporated into corporate valuation because investors consider sustainability-related risks and opportunities in assessing long-term firm value (Gillan et al., 2021; Whelan et al., 2021).

The result also supports legitimacy theory. Environmental disclosure may help firms maintain social legitimacy by showing that their operations are aligned with public expectations regarding environmental responsibility. In Indonesia, many listed firms operate in sectors exposed to public scrutiny, regulatory pressure, and environmental concerns. Therefore, environmental disclosure may function as a legitimacy mechanism that reduces the gap between corporate activities and societal expectations. This interpretation is aligned with Christensen et al. (2021), who argue that sustainability reporting has economic consequences because it affects transparency, accountability, and stakeholder interpretation of corporate responsibility. It is also consistent with Behl et al. (2022), who show that the relationship between ESG and firm value may evolve over time, suggesting that sustainability-related information has long-term valuation implications.

From the perspective of signaling theory, environmental disclosure may serve as a credible signal of superior environmental risk management and long-term sustainability capability. Investors may interpret stronger environmental disclosure as an indication that the

firm is better prepared to manage environmental regulation, resource constraints, climate-related risk, and future sustainability challenges. This is consistent with Broadstock et al. (2021), who find that ESG performance became particularly relevant during the COVID-19 crisis, suggesting that ESG can act as a signal of resilience under uncertainty. Similarly, Lu et al. (2022) show that firms with stronger sustainability performance tend to be more resilient during crisis periods. The positive coefficient of environmental disclosure in this study therefore suggests that the Indonesian capital market may reward firms that provide clearer environmental risk information.

The environmental result also aligns with recent studies emphasizing the financial relevance of environmental responsibility. Agovino et al. (2026) find that environmental commitment is positively associated with Tobin's Q after correcting for selection bias in ESG reporting. He et al. (2025) show that ESG performance enhances corporate value in China's energy sector, particularly in high-pollution industries and regions with stronger green policy attention. Bhue et al. (2025) further demonstrate that environmental and social practices can improve firm financial performance under high product market competition. These studies support the interpretation that environmental disclosure is value-relevant when investors perceive environmental risk management as economically material.

However, this study also differs from several prior findings. Aydoğmuş et al. (2022) find that overall ESG performance is positively associated with firm value, but their disaggregated analysis shows that social and governance dimensions are more significant than the environmental dimension. In contrast, the present study finds that environmental disclosure is the strongest and most significant ESG dimension. This difference may reflect contextual variation between countries, sectors, measurement approaches, and institutional environments. It may also indicate that environmental disclosure carries stronger informational value in the Indonesian context, especially when firms face growing sustainability pressure, environmental scrutiny, and demand for transparent reporting.

The insignificant result for social disclosure deserves careful interpretation. Although the coefficient of social disclosure is positive, it is not statistically significant in the main regression or robustness test. This does not necessarily mean that social disclosure has no value. Rather, it may indicate that social disclosure is less directly priced by investors than environmental disclosure. Social disclosure often relates to employee welfare, community development, human rights, customer responsibility, and diversity. These aspects may generate long-term intangible benefits, but such benefits may not be immediately reflected in Tobin's Q or PBV. This interpretation is consistent with Whelan et al. (2021), who note that ESG-related benefits may arise through reputation, innovation, risk management, and stakeholder trust, but the financial effects may vary across ESG components. It also aligns with Raghunandan and Rajgopal (2022), who caution that ESG-oriented activities do not always translate directly into stakeholder-friendly or market-valued outcomes.

The insignificant social disclosure result may also reflect investor awareness and measurement issues. Social activities may be valued only when stakeholders can observe their credibility and economic relevance. If social disclosure is perceived as general, symbolic, or compliance-oriented, investors may not treat it as a strong valuation signal. This interpretation is consistent with Berg et al. (2022), who show that ESG ratings diverge substantially across providers, creating uncertainty in how ESG information is interpreted. Gibson Brandon et al.

(2021) also find that ESG rating disagreement affects capital market outcomes. Thus, social disclosure may require higher credibility, comparability, and assurance before it becomes strongly value-relevant.

Governance disclosure also shows a positive but statistically insignificant relationship with firm value. This result is interesting because governance disclosure has the highest average score in the descriptive statistics, but it contributes the least in the relative importance analysis. This suggests an important distinction between disclosure prevalence and valuation relevance. Governance information may be widely disclosed because it is more standardized and closely linked to formal corporate reporting requirements. However, because many firms disclose similar governance information, its incremental explanatory power for firm value may be limited. This finding differs from Aydoğmuş et al. (2022) and Yücel et al. (2025), who report that governance-related measures are positively associated with firm value. It also differs from the broader corporate governance literature that views governance as a central mechanism for reducing agency problems and strengthening investor protection (Gillan et al., 2021).

One possible explanation is that governance disclosure in Indonesia may be more compliance-driven than value-differentiating. If most firms disclose similar board, audit, and ownership information, investors may not perceive governance disclosure as a unique signal of superior firm quality. Governance may still matter, but disclosure quantity alone may not fully capture governance effectiveness. This point is consistent with Christensen et al. (2021), who emphasize that sustainability reporting effects depend not only on disclosure existence but also on implementation, enforcement, comparability, and credibility. Therefore, future studies may need to distinguish between governance disclosure quantity and governance quality.

The negative coefficient of firm size also provides an additional insight. Larger firms in this study tend to have lower Tobin's Q and PBV, suggesting that larger firms may have more mature asset structures and lower growth opportunities. This result indicates that firm value in the sample may be driven more by growth expectations and market perceptions than by asset scale alone. It also reinforces the importance of controlling for firm characteristics when examining ESG–firm value relationships. Prior studies have shown that firm size may affect ESG disclosure and ESG ratings because larger firms have greater visibility, more resources, and stronger reporting capacity (Azmi et al., 2021; Hamdouni, 2025). However, larger size does not automatically lead to higher valuation if investors perceive lower growth potential.

The negative coefficient of the high-profile industry dummy is also noteworthy. Although high-profile firms tend to face greater public and environmental scrutiny, they may also face higher compliance costs, greater regulatory exposure, and stronger reputational risk. This finding is consistent with studies showing that ESG effects may differ across industries and market conditions (Kumar et al., 2022; Singh & Das, 2025; Wong & Zhang, 2022). It also supports the view that ESG disclosure may not produce uniform valuation effects across all firms. Instead, investors may consider the balance between sustainability benefits and the costs or risks associated with ESG-sensitive industries.

The robustness test using PBV strengthens the main conclusion. Environmental disclosure remains positively associated with firm value when PBV is used as an alternative dependent variable. Although the significance level is weaker than in the Tobin's Q model, the

direction of the effect is consistent. This suggests that environmental disclosure is not only related to one specific valuation proxy but is broadly relevant to market-based firm value. This finding is consistent with studies showing that ESG disclosure may enhance value creation by reducing information asymmetry, strengthening stakeholder trust, and improving market confidence (Hamdouni, 2025; Pedersen et al., 2021).

The relative importance analysis is a key contribution of this study. Many prior studies examine ESG using either aggregate ESG scores or separate regression coefficients for E, S, and G dimensions. However, regression coefficients alone do not fully indicate which ESG dimension contributes the most to explaining firm value. By applying relative importance analysis, this study provides additional evidence that environmental disclosure accounts for the largest share of ESG-related explanatory contribution. This methodological distinction differentiates the present study from prior work such as Aydoğmuş et al. (2022), Behl et al. (2022), and Broadstock et al. (2021), which examine ESG value relevance but do not directly rank the explanatory contribution of each disclosure dimension in the Indonesian context.

## Conclusion

Therefore, the main difference between this study and previous research lies in three aspects. First, this study focuses on ESG disclosure dimensions rather than only aggregate ESG performance. Second, it examines the Indonesian listed-firm context, where ESG reporting is still developing and the valuation relevance of sustainability information remains underexplored. Third, it uses relative importance analysis to determine which ESG dimension matters most for firm value. This allows the study to move beyond the general question of whether ESG matters and provide a more precise answer: environmental disclosure is the most value-relevant ESG dimension in this empirical setting.

Overall, the findings suggest that Indonesian listed firms should not treat all ESG dimensions as having identical market relevance. While social and governance disclosure remain important for stakeholder accountability and corporate transparency, environmental disclosure appears to provide the strongest valuation signal. For managers, this implies that improving the quality, credibility, and specificity of environmental disclosure may generate greater market benefits. For investors, the result suggests that environmental disclosure can serve as an important signal when assessing long-term firm value. For regulators, the findings highlight the need to strengthen environmental reporting standards, comparability, and assurance mechanisms so that environmental information becomes more decision-useful for capital market participants.

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