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# The Moderating Role of ESG Disclosure on The Relationship Between Growth Opportunities, Financial Constraints, and Investment Decisions

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**Abstract**

This study investigated the role of ESG disclosure in moderating the relationship between growth opportunities, financial constraints, and corporate investment decisions. While growth opportunities usually encourage firms to invest more, financial constraints often limit their capability to do so. ESG performance, reflecting a company's commitment to sustainable and responsible practices, influences how firms navigate these two conflicting forces. 174 firm-year observations of publicly listed manufacturing companies in Indonesia from 2017–2023 were analyzed and processed using the Least Squares Dummy Variable (LSDV) estimator, clustered by year, in Stata 19. The results showed that ESG disclosure significantly moderated the relationship between financial constraints and investment decisions, but did not moderate the relationship between growth opportunities and investment decisions. The result suggests that manufacturing firms should adopt more ESG practices to improve access to financing and make better investment decisions.

**Keywords:** Growth Opportunities, Financial Constraints, ESG, Investment Decisions.

## 1. Introduction

ESG initiatives and investments have become more substantial and continue to expand. Companies and policymakers are exploring different ways to embed ESG factors into business decisions and national sustainability strategies. One key approach is integrated reporting, which helps align corporate disclosures with the Sustainable Development Goals (SDGs). A McKinsey quarterly report showed that more than 90% of S&P 500 companies publish ESG reports, reflecting how deeply ESG has become part of corporate practice (Pérez et al., 2022).

ESG factors, such as reducing carbon emissions, managing waste responsibly, using energy efficiently, ensuring fair labor practices, maintaining good employee relations, and strong governance, directly influence financial performance and the company's reputation (Murè et al., 2021). Increasingly, financial institutions, investors, asset managers, and other stakeholders review ESG reports to evaluate companies' performance relative to peers (Huber & Comstock, 2017). Firms that disclose their ESG also experience a lower cost of capital and a higher valuation than non-disclosing ESG firms (Pastor et al., 2022).

The trend of ESG-oriented investing also gains momentum among Indonesian investors, partly due to the increasing global awareness and concern over environmental, social, and governance issues (Brooks & Oikonomou, 2018; Khan et al., 2024; Mohammad & Wasiuzzaman, 2021; Wan et al., 2024; Wong et al., 2021; Yu et al., 2023; Zheng et al., 2023). A study on the Sustainability Asia Pacific Institutional Investor Study 2022 found that the number of investors in the Asia Pacific region focusing on sustainable investment was growing (Schroders, 2022). Despite Europe and the United States becoming the dominant players, sustainable investment in Asia, including Indonesia, is also on the rise (TaxPrime, 2025).

The manufacturing sector in Indonesia plays a vital role in the economy. It contributes the most to the country's GDP at 18.67%, ranking 12$^{th}$ globally, and outperforming other ASEAN countries (Indonesian National Police, 2025). Unfortunately, despite its significant positive role in economic performance, the manufacturing sector poses environmental and social challenges, including hazardous waste, pollution, workplace accidents, and weak corporate governance (Adenina & Sudrajat, 2024). This contrast raises the question of whether implementing ESG practices in the manufacturing sector can influence investment decisions.

Past research often analyzed how financial constraints and growth opportunities affected investment decisions (Almeida & Campello, 2007; Kim et al., 2024; Zhong & Gao, 2017; Kothari, 2014; Adu-Ameyaw et al., 2022; Zeng et al., 2019; Hai et al., 2022) and plenty research about ESG have been discussed in relation to firm value (Wong et al., 2021; Zheng et al., 2023; Ronald & Semuel, 2022), firm performance (Nguyen et al., 2022), cash holding (Soetanto & Agustia, 2025), innovation (Tang, 2022), and stock return (Yu et al., 2023). However, few (Braun et al., 2025; Kim et al., 2024) have examined how ESG influences the impact of financial constraints and growth opportunities on investment decisions, particularly in the manufacturing sector in Indonesia, which is characterized by dual impacts. That is why this research aims to fill the gap by analyzing publicly listed Indonesian manufacturing firms from 2017 to 2023 and their Bloomberg

ESG scores. The research questions are: (1) Does ESG disclosure moderate the relationship between financial constraints and investment, and (2) Does ESG disclosure moderate the relationship between growth opportunities and investment? The current research contributes to the existing literature on the impact of ESG disclosure on corporate investment, particularly by showing how ESG disclosure helps enterprises secure policy preferences and comprehensive support, reduce production costs, allocate resources efficiently, and expand financing channels.

## 2. Literature Review

### 2.1. Financial Constraints and ESG Disclosure to Investment

Firms have increasingly recognized the significance of ESG disclosure in their investment decisions. Stakeholders are exerting pressure on enterprises to implement environmental protection, social welfare, and strong corporate governance to enhance the enterprises' financial and ESG performance (Lee & Raschke, 2023). More managers are incorporating ESG activities into their business strategies to support their companies' long-term sustainability goals and to share more information that presents their companies as responsible and trustworthy (Dhaliwal et al., 2012). Information about ESG is incorporated into investment decisions when it provides value to investors, who may view socially responsible companies as less risky and more likely to deliver stronger financial performance (Khemir et al. 2019). Prior research substantially supports this by showing that ESG information influences investment choices and that most investors respond very positively to it. Amel-Zadeh and Serafeim (2018) found that investors depend on ESG information because it is financially relevant to investment decisions, and they believe that firms can drive changes in business practices to address ESG issues.

Tang (2022) mentioned that ESG (Environmental, Social, Governance) is a set of standards used to assess firms' sustainability and their capacity to generate value for stakeholders rather than solely for shareholders. The environmental pillar primarily focuses on addressing climate change, including reducing greenhouse gas emissions and waste. The social pillar encompasses protecting workers' rights and safety, fostering integration with local communities, and promoting human rights and diversity. The governance pillar involves measures to examine the rights and obligations of a company's management, including how to balance between the interests of management and shareholders. When these factors align, they reflect a company's commitment to sustainability and its ability to adapt to new challenges.

Freeman and McVea (2001) defined stakeholders as individuals or groups affected by an organization's activities when it pursues its goals. Stakeholders' expectations are a dominant factor for business sustainability, making ESG reporting is often related to stakeholder theory, which emphasizes that firms should meet both explicit and implicit needs of their stakeholders. Another theory explaining why firms pursue sustainability is legitimacy theory, which argues that firms engage in sustainability practices to maintain their legitimacy, protect their reputations, and secure their long-term survival (Yusoff & Alhaji, 2012).

Furthermore, Kraussl et al. (2024), Lian et al. (2023), and Zerbib (2019) have demonstrated that ESG-focused companies can enhance their financing conditions by lowering the capital costs. This enhancement may arise from companies possessing superior ESG ratings, thereby rendering them intrinsically less risky, or from confident investors' willingness to offer financing at more advantageous rates. Cost of capital represents the average information risk encountered by investors and exhibits a non-monotonic relationship with the proportion of ESG-motivated investors in the market (Goldstein et al., 2021). If investors recognize the value of ESG signals but do not actually care about sustainability, ESG scores will not predict abnormal returns, since the information is already reflected in stock prices. But if investors do value sustainability, higher ESG scores lower a firm's cost of capital and allow it to issue a higher share price (Pedersen et al., 2021).

The ratings and scores from ESG indices are key tools for assessing a company's sustainability performance (Sharma et al., 2020). The positive effects of greater ESG ratings on easier access to financing will be especially important for companies that have trouble getting money and therefore, miss out on profitable investments because they do not have enough funds.

In accordance with Almeida and Campello (2007), we presuppose that a company optimizes its investment value within the constraints of its budget, a condition referred to as financial constraints. In order to finance its investment, a company must utilize either internal funds or external funds, and it generates value through physical investment. Raising funds externally often incurs additional costs due to imperfections in capital markets. Hence, firms tend to depend on internal sources, and those firms that face financial constraints may have to skip profitable investment opportunities due to the high costs of using external funds. The financial constraints hypothesis suggests that when a firm's cash flow is below what it needs, it is more prone to funding problems, and the investment depends more on the free cash flow that a firm has (Fazzari et al., 1988).

Zhang and Lucey (2022) posited that ESG performance had a significant and positive effect on firm per-

formance by diminishing financial constraints and improving external financing, long-term, and short-term debt. Li et al. (2025) found that ESG disclosure makes it easier to get external financing, thereby increasing investment, and encourages long-term sustainability. This is aligned with Braun et al. (2025), who posited that in emerging markets, high ESG ratings are related to fewer financial constraints and more effective investment allocation. Firms with stronger ESG performance tend to rely less on equity financing, have lower equity costs, and enjoy higher credit ratings (Henriksson et al., 2019). They are easier to attract external capital, reduce financing expenses, and ease their financing constraints. Thus, we can hypothesize as follows:

$H_1$: ESG disclosure moderated the impact of financial constraints on investment.

### 2.2. Growth Opportunities and ESG Disclosure to Investment

The classic Q theory of investment states that managers should invest only when growth opportunities exist—that is, when the market value of a firm's assets exceeds their replacement cost. Growth opportunities are the ability for firms to expand and increase profits in the future. This makes growth opportunities a central factor in shaping a firm's investment behavior (Tobin, 1969; Hayashi, 1982). However, corporate investment is not always a direct matter since Stein (2003) points out that financing frictions and agency problems are two key factors that can distort firms' investment decisions.

Based on Peters and Taylor (2017), growth opportunity explains a firm's identifiable intangible investment better than it explains physical capital investment, and its explanatory power is more pronounced in investment behaviour. Similar findings were also reported by Kothari (2014), showing that a firm's growth opportunities are more sensitive to future investment behaviour than to current investment level. Adu-Ameyaw et al. (2022) studied 213 non-financial, non-utility firms in the UK FTSE 350 between 2007 and 2015 (a total of 1,748 firm-year observations) to examine how growth opportunities shaped firms' investment policies and how managerial incentives affected this relationship. Drawing on the neo-classical investment theory (Tobin's Q), the findings show that firms with strong growth opportunities tend to invest more in intangible assets while scaling back on tangible capital investments.

Sustainable growth requires firms to be responsible for environmental protection, including green energy, low-carbon emissions, and climate change mitigation. This action is also expected to be accompanied by high economic growth, which requires sufficient funds and investment (Zhang & Lucey, 2022). Companies that have transparent policies and well-structured organizations face lower risks of scandals, employee conflicts, or management problems. Since ESG practices help safeguard firms against such risks, they become more attractive to investors seeking stable, long-term growth when firms face no financial constraints. In that sense, the hypothesis is formulated as follows:

$H_2$: ESG disclosure moderated growth opportunities for investment.

## 3. Methods

This current research uses non-financial manufacturing firms listed on the Indonesian Stock Exchange from 2017 to 2023. Financial institutions are excluded because their operations, investments, and funding differ from those of other businesses. The population criteria are: 1) Have an ESG score by Bloomberg, and 2) Have all data related to all variables used, including control variables. The final data sample consists of 174 firm-year observations, since not many Indonesian firms have a Bloomberg ESG score. The ESG disclosure score is sourced from the Bloomberg Database and ranges from 0 to 100. It consists of three pillars: Environmental, Social, and Governance score, where the higher the score, the better the firms are at disclosing all activities related to ESG. Other variables are taken from the Refinitiv database and further processed using the Least Squares Dummy Variable (LSDV) clustered by year in Stata 19.

We also winsorize observations in the 1% tails of the main regression variables to reduce the influence of outliers. The panel regression analysis uses a dummy variable or LSDV, since the firm's fixed effect for year is used to control for heterogeneity and potential omitted-variable bias that might be correlated (Chen et al., 2011).

Following Braun et al. (2025), we adopt the formula to test whether a firm's ESG disclosure moderates the relationships of these variables:

$$Invest_{ij} = constant + \beta_1 Grow_{ij} + \beta_2 Fin_{ij} + \beta_3 ESGP_{ij} + \beta_4 (ESGP_{ij} x Grow_{ij}) + \beta_i Controls + error \quad (1)$$

$$Invest_{ij} = constant + \beta_1 Grow_{ij} + \beta_2 Fin_{ij} + \beta_3 ESGP_{ij} + \beta_4 (ESGP_{ij} x Fin_{ijj}) + \beta_i Controls + error \quad (2)$$

$$Invest_{ij} = constant + \beta_1 Grow_{ij} + \beta_2 Fin_{ij} + \beta_3 ESGP_{ij} + \beta_4 (ESGP_{ij} x Grow_{ij}) + \beta_5 (ESGP_{ij} x Fin_{ijj}) + \beta_i Controls + error \quad (3)$$

$Invest_{ij}$ is the measurement of firm investment i in year j measured by the ratio of capital expenditures and R&D expenditures over the lagged value of total assets. The baseline measures, which are growth opportunities

firm i in year j ($Grow_{ij}$), were calculated from Tobin's Q. At the same time, $Fin_{ij}$ is the financial constraint of firm i in year j, measured by cash flow to lagged total assets, to capture the internal resources. $ESGP_{ij}$ is the ESG rating disclosure of firm i in year j. Following Braun et al. (2025), the control variables include firm size (measured by Log(Total Assets)), firm age (the length of time a firm has been public), and profitability (measured by return on assets (ROA)).

## 4. Result

Table 1 reports the descriptive statistics of all variables used in this study. Among the variables of interest, ESG disclosure has the highest standard deviation (12.179) with the average value of 42.414. On the other hand, variable InvCap has the lowest standard deviation (0.05) with the average value of 0.048.

**Table 1**. Descriptive statistics

| Variable | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| InvCap | .048 | .05 | 0 | .64 |
| TobinsQ | 1.995 | 3.507 | .336 | 47.926 |
| ESG | 42.414 | 12.179 | 16.45 | 76.02 |
| CashFlow | .133 | .336 | -7.354 | .669 |
| Fsize | 13.346 | .506 | 11.815 | 14.649 |
| FAge | 20.165 | 9.04 | 3 | 35 |
| ROA | .058 | .108 | -1.287 | .599 |

Notes: InvCap-Investment, ESG-ESG Disclosure, L.TobinsQ-Lagged Growth Opportunities, CashFlow-Financial Constraint, Fsize- Firm size, FAge-Firm age, ROA-Profitability

The Pearson correlation in Table 2 shows that growth opportunities and cash flow are significantly correlated with investment cap, whereas ESG is not. All control variables (firm size, firm age, and ROA) show significant correlations with investment cap. Firm size and ROA are positively correlated with investment cap, while firm age shows the strongest negative correlation (- 0.20). This suggests that the longer a firm has been public, the lower its investment tends to be. All variables, except ESG, show significant correlations with growth opportunities, with ROA having the strongest (0.25). Unlike others, firm size negatively affects growth opportunities (-0.20), implying that smaller firms have greater growth opportunities than larger firms. Cash flow has no significant positive correlation with ESG, while firm size, firm age, and ROA do. Among the three, firm size correlates with ESG the strongest. ROA is positively correlated with cash flow, and firm age is positively correlated with firm size. Furthermore, none of the correlations exceeds 0.8, indicating no multicollinearity problem (Gujarati & Porter, 2009).

Table 3 column 1 displays the regression of growth opportunities (Tobin's Q) toward investment moderated by ESG disclosure (ESG), and Table 3 column 2 displays the regression of financial constraints (CashFlow) toward investment moderated by ESG disclosure (ESG). Furthermore, a regression incorporating both growth opportunities and financial constraints, moderated by ESG disclosure, is presented in column 3. The relationship between financial constraints and investment displays a negative ($\beta$=–0.134) and significant (p-value<0.1) result in column 2 and column 3 ($\beta$=–0.150, p-value<0.1), which means that the higher the financial constraints, the lower the investment. The interaction coefficient of ESGxCashFlow shows a positive ($\beta$=0.05) and statistically significant (p-value<0.05) effect on investment. As a result, $H_1$ is accepted, and it can be concluded that ESG disclosure strengthens the relationship between financial constraints and investment in both columns 2 and 3.

**Table 2**. Pearson correlations

| Variable | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| (1) InvCap | | | | | | |
| (2) Tobins | 0.17* | | | | | |
| (3) ESG | 0.00 | 0.04 | | | | |
| (4) CF | 0.15* | 0.08* | 0.02 | | | |
| (5) Fsize | 0.15* | -0.2* | 0.34* | 0.05 | | |
| (6) FAge | -0.2* | 0.08* | 0.17* | -0.05 | 0.09* | |
| (7) ROA | 0.11* | 0.25* | 0.08* | 0.15* | 0.00 | 0.05 |

Notes: InvCap-Investment, ESG-ESG Disclosure, L.TobinsQ-Lagged Growth Opportunities, CF-Financial Constraint, Fsize- Firm size, FAge-Firm age, ROA-Profitability

**Table 3.** Regression financial constraint, growth, esg and investment

| | 1 | 2 | 3 |
|---|---|---|---|
| L.TobinsQ | 0.002 | 0.0015*** | 0.005 |
| | (0.0045) | (0.0004) | (0.004) |
| ESG | -0.00009 | -0.0008*** | -0.0007** |
| | (0.0003) | (0.0003) | (0.0003) |
| ESGxL.TobinsQ | -0.000008 | | -0.00007 |
| | (0.00009) | | (0.00009) |
| CF | 0.0585* | -0.134* | -0.150* |
| | (0.0319) | (0.0774) | (0.0824) |
| ESGxCF | | 0.0047** | 0.005** |
| | | (0.00193) | (0.00199) |
| Fsize | 0.0064 | 0.007 | 0.0067 |
| | (0.0046) | (0.0045) | (0.005) |
| FAge | -0.0009** | -0.0011*** | -0.00105** |
| | (0.0005) | (0.0004) | (0.0004) |
| ROA | 0.0048 | 0.0066 | 0.0082 |
| | (0.0222) | (0.023) | (0.0215) |
| _cons | -0.028 | -0.0068 | -0.0064 |
| | (0.0574) | (0.0584) | (0.0587) |
| N | 174 | 174 | 174 |
| Adj. R-squared | 0.149 | 0.206 | 0.205 |
| F-stat | 3.437 | 3.373 | 3.382 |
| FE Year | Yes | Yes | Yes |

Notes: ESG-ESG Disclosure, L.TobinsQ-Lagged Growth Opportunities, CashFlow-Financial Constraint, Fsize- Firm size, FAge-Firm age, ROA-Profitability, Standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

On the other hand, Table 3 column 1 shows that growth opportunities and the interaction coefficients

(ESGxL.TobinsQ) are not statistically significant for investment (p-value>0.1), which means that there is no effect between growth opportunities and investment. In addition, column 1 shows that ESG disclosure is not significantly related to investment (p-value>0.1), indicating that ESG does not contribute to any changes in a firm's investment when we include growth opportunities and the interaction. These insignificant results are still consistent in column 3, where growth opportunities do not affect investment (p-value>0.1), nor does the moderating effect of ESG disclosure (p-value>0.1). Thus, $H_2$ is rejected.

Among the control variables, only firm age displays a significant relationship with investment, consistent with the findings of previous studies by Braun et al. (2025), Li et al. (2025), and Zhang and Lucey (2022).

### 4.1. Robustness Test

To confirm the results of the main regressions, we conduct a robustness test using a different proxy for investment, measured as the changes in total assets divided by lagged total assets (Braun et al., 2025). The results of the robustness test in Table 4 are consistent with those in Table 3, indicating that, as financial constraints increase, investment decreases, and ESG has a strong effect on this relationship.

**Table 4**. Regression financial constraint, growth, esg, and investment-robustness test

| | (1) | (2) | (3) |
|---|---|---|---|
| L.TobinsQ | 0.0055 | 0.0035** | 0.0186 |
| | (0.0231) | (0.0015) | (0.017) |
| ESG | -0.001 | -0.004** | -0.0038* |
| | (0.001) | (0.002) | (0.002) |
| ESGxL.TobinsQ | -0.00003 | | -0.0003 |
| | (0.0005) | | (0.00035) |
| CF | 0.0827 | -0.774* | -0.840* |
| | (0.180) | (0.446) | (0.428) |
| ESGxCF | | 0.0211* | 0.0223* |
| | | (0.0126) | (0.0123) |
| Fsize | 0.0439* | 0.0467* | 0.0454* |
| | (0.0250) | (0.0243) | (0.0248) |
| FAge | -0.0028 | -0.0035* | -0.0034 |
| | (0.00223) | (0.00206) | (0.002) |
| ROA | 0.179* | 0.187** | 0.195** |
| | (0.0924) | (0.093) | (0.088) |
| _cons | -0.445 | -0.351 | -0.349 |
| | (0.329) | (0.315) | (0.316) |
| N | 174 | 174 | 174 |
| Adj. R-squared | 0.0690 | 0.121 | 0.119 |
| F-stat | 2.824 | 2.288 | 2.671 |
| FE Year | Yes | Yes | Yes |

Notes: ESG-ESG Disclosure, L.TobinsQ-Lagged Growth Opportunities, CashFlow-Financial Constraint, Fsize- Firm size, FAge-Firm age, ROA-Profitability, Standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

## 5. Discussion

H1 is supported, indicating that ESG disclosure can serve as a moderating factor in the relationship between financial constraints and investment decisions. This finding aligns with stakeholder theory and legitimacy theory (Yusoff & Alhaji, 2012), showing that firms engage in ESG practices to maintain relationships with their stakeholders and protect their legitimacy, reputation, and sustainability. The significant relationship between financial constraints and investment decisions is similar to that in the study by Almeida and Campello (2007), who posit that firms seek to maximize their investment value subject to budget constraints and, to finance such investments, may draw on internal or external funding sources. Companies often prefer to use their own internal funds rather than seek outside financing. However, when firms face financial constraints, they may be forced to give up profitable investment opportunities to avoid the high costs associated with external funding. The significant relationship is also aligned with the financial constraints hypothesis (Fazzari et al., 1988), which states that when a firm's cash flow falls below the level it needs, it becomes more vulnerable to funding difficulties, making its investment decisions more dependent on the amount of free cash flow available. In this case, ESG helps companies manage financial constraints and get easier access to funding for better investment decisions, consistent with the findings of Braun et al. (2025) and in contrast to those of Kim et al. (2024), Li et al. (2025), Zhang and Lucey (2022), and Nguyen et al. (2022).

The results show that H2 is not supported, indicating that growth opportunities do not affect a firm's investment when ESG is included. This is further confirmed by the interaction between growth opportunities and ESG, which is also not statistically significant for investment (p-value>0.1). As a result, our results do not support the neo-classical investment theory (Tobin's Q), which suggests that firms with strong growth opportunities invest more in intangible assets while scaling back tangible capital investments. This result is not aligned with the study by Kothari (2014) and Adu-Ameyaw et al. (2022). Moreover, this finding is also not in line with stakeholder theory and legitimacy theory (Yusoff & Alhaji, 2012), which posit that ESG initiatives are incorporated into business strategy to achieve long-term sustainability goals and to signal responsibility and trustworthiness to stakeholders (Dhaliwal et al., 2012). Investors use ESG information to make investment decisions, perceiving socially responsible firms as less risky and thus expecting better financial performance (Khemir et al., 2019). One possible reason for this insignificant relationship is that, despite the winsorized process that has been done, the range of growth

opportunities data for non-financial firms in Indonesia from 2017 to 2023 is very wide (Table 1), and none of the firms can reach perfect efficiency in investment (maximum InvCap<1).

Furthermore, the robustness test yields results consistent with those of the primary analyses, confirming that ESG disclosure moderates the relationship between financial constraints and investment, but not between growth opportunities and investment.

## 6. Conclusions

This study aims to analyze the role of ESG disclosure in moderating the relationships among financial constraints, growth opportunities, and investment in Indonesia's manufacturing sector. Amid the rise of sustainable investment, the manufacturing sector is an interesting object to discuss the role of ESG due to its dual nature: contributing positively to economic growth, while simultaneously having negative environmental and social impacts. The result shows that ESG disclosure has a significant moderating role on the relationship between financial constraints and investment. This means that ESG disclosure helps manufacturing companies mitigate the impact of financial constraints on investment decisions, thereby making the impact less severe than it would be without ESG. On the other hand, ESG disclosure did not moderate the relationship between growth opportunities and investment.

There are two practical implications from this research. The findings show that ESG disclosure significantly moderates the relationship between financial constraints and investment, suggesting that investors and stakeholders have greater trust in companies with stronger ESG practices, thereby facilitating easier access to financing and better investment decisions. As a result, manufacturing firms are encouraged to improve their quality and transparency of ESG practices. Second, understanding the importance of ESG practices, policymakers in Indonesia can design incentives, e.g., tax benefits, lower financing costs, or priority access to government funding, for firms that have done ESG practices well. Hopefully, such benefits will enhance sustainable development that is not only economically vital but also environmentally and socially responsible.

This study has a limitation that should be considered when interpreting the results. This research focuses solely on the manufacturing sector in Indonesia, which may limit the generalizability of the findings to other industries or countries with different regulations and ESG reporting practices. Therefore, future research can explore other sectors to provide more insights into the role of ESG disclosure beyond the manufacturing sector.

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