DiE: Jurnal Ilmu Ekonomi dan Manajemen
Universitas 17 Agustus 1945 Surabaya

# The Moderating Role of Gender Diversity in the Relationship Between ESG Performance and Firm Value in ESG Leader Index Companies Listed on the IDX

**Suwarno**[1], **Fena Ulfa Aulia** [2], **Uly Mabruroh Halida**[3]
1. Universitas Muhammadiyah Gresik, Indonesia
2. IAIN Madura, Indonesia
3. IAIN Madura, Indonesia
E-mail: suwarno2@gmail.com[1]ulyhalida@gmail.com[2] auliaulfaf@gmail.com[3],

Received: February, 2025; Accepted: March, 2025; Published: April, 2025
**Permalink/DOI:** https://doi.org/10.30996/die.v15i2

## Abstract

This study aims to examine the impact of ESG performance on firm performance and firm value, as well as the moderating role of gender diversity on boards of directors. The sample used in this study consists of 83 companies listed on the ESG Leader Index in 2022. Using Structural Equation Modeling-Partial Least Squares (SEM-PLS), the findings reveal that ESG performance positively influences firm performance yet exerts a short-term negative effect on firm value. Gender diversity moderates the relationship between ESG performance and firm performance, enhancing the effectiveness of ESG practices in creating sustainable firm value. However, gender diversity does not significantly moderate the relationship between ESG performance and firm value

**Keywords:** ESG, Firm Performance, Firm Value, Gender Diversity, Stakeholder Theory

## INTRODUCTION

Currently, the world is facing severe challenges, as the Earth confronts triple planetary challenges: climate change, biodiversity loss, and pollution. The rise in global temperatures has led to extreme heatwaves in various regions, including Indonesia, as a consequence of the greenhouse effect caused by industries (Ministry of Environment and Forestry, 2024). One of Indonesia's efforts to maintain the Earth's temperature is outlined in the Paris Agreement, where the country has committed to reducing greenhouse gas emissions by 2030. The Indonesian government, through the Ministry of Environment and Forestry (MoEF), in the agenda item 'Environment and Sustainable Development', has explained the efforts undertaken to maintain a healthy environment and sustainable development by addressing plastic pollution and the illegal wildlife trade. Therefore, it is crucial for corporations to not only focus on profits but also to consider Environmental, Social, and Governance (ESG) factors. Today, ESG is a tool used by companies to convey their commitment to supporting sustainability and social responsibility to stakeholders (Fatemi & Fooladi, 2018).

Sustainability performance of firm (ESG) emphasizes the importance of corporate social responsibility, not only to comply with regulations, but also to but also to protect the interests of the community and other stakeholders such as the government (Fuadah et al., 2022) (Dincă et al., 2022). In the wake of the global financial crisis, attention to ESG has increased along with awareness of the impact of corporate activities on the environment and society (Kong et al., 2023). Many companies are beginning to realize that traditional approaches that focus solely on financial performance are no longer sufficient to maintain long-term sustainability (Kölbel et al., 2020). The global trend toward ESG (environmental, social, and governance) investing is gaining momentum. In Asia, over 5,000 investors have expressed interest in funding companies committed to sustainability and ESG principles. You might be among them. The substantial surge in global ESG investment value over the past eight years has significantly fueled investor interest in this model. Between 2012 and 2018, the total value of global ESG investments skyrocketed by 170.48%, climbing from USD 11.35 trillion to USD 30.7 trillion.

Empirical studies consistently show the positive impact of ESG performance on company value. Research by Whelan et al., (2021) and Espinosa-Méndez et al., (2023) that companies with low ESG performance (low risk), result in lower capital costs and higher valuations, as stakeholders increasingly value long-term sustainability (Cohen, 2023) (Dincă et al., 2022). Liang dan Renneboog (2020) further found that companies with high ESG scores benefited from increased market valuations, driven by increasing investor interest in sustainable investments. (Eccles et al., 2019) highlighting that such companies also enjoy a competitive advantage through increased brand loyalty and customer satisfaction, strengthening their market position and increasing value. (Chen et al., 2020) observed that positive ESG ratings correlated with stronger stock performance and reduced volatility, reflecting investor confidence in socially responsible companies. Moreover, Fatemi dan Fooladi (2018) shows that strong ESG policies increase stakeholder trust, which translates into measurable financial benefits, while (Busch & Friede, 2021) affirming that ESG-conscious companies attract greater investor interest, which further strengthens their judgments. Together, these findings show that high ESG performance not only reduces risk but also serves as a catalyst for long-term financial growth and company valuations, aligning with evolving global capital market expectations.

His previous literature has shown that gender diversity or the number of women on the board of directors can increase a company's sensitivity to social and environmental issues, reinforcing the positive impact of ESG on company value (Bernile et al., 2018). Gender diversity is able to consider a broader perspective, encouraging the implementation of ESG strategically and more comprehensively (Kolev et al., 2019). Another study shows that companies with high gender representation on boards are more responsive to sustainability demands and better able to strengthen their reputations, potentially increasing company value (Post & Byron, 2015a) Moreover (Liu et al., 2020) found that gender diversity in the board of directors is related to a greater commitment to ESG initiatives, which increases investor perception of the company's stability and long-term prospects. Studi oleh (García Martín & Herrero, 2020; García-Sánchez et al., 2017) also shows that companies with high gender diversity show better ESG performance, which has a significant impact on the company's value, especially in a strict regulatory environment and for multinational companies facing high expectations regarding transparency and social responsibility.

While many studies show a positive relationship between ESG and financial performance, some studies also reveal that the implementation of ESG can negatively impact a company's performance and, ultimately, lower a company's value (Miralles-Quirós et al., 2018) (Kim & Koo, 2023). Implementing ESG requires significant investments, both in terms of resources and operational costs, which can increase short-term costs and reduce profitability. Research from Cheng et al. (2014) shows that companies that are heavily focused on ESG initiatives often experience increased operational costs and decreased efficiency, which can reduce net profit. In addition, a study from Hong and Kacperczyk (2009) found that companies that allocate large funds for social responsibility actually experience a decrease in profitability, especially in the capital-intensive industrial sector. Garcia-Castro et al. (2010) also support this view by pointing out that overly strict ESG implementation can reduce companies' financial flexibility and hinder their ability to respond to urgent business opportunities. Finally, based on the research of Brammer et al. (2006), too much focus on ESG can distract from the main profitability goal, ultimately lowering the company's attractiveness for some investors, especially those who prioritize short-term profits.

Finally, the results of the study on the topic of the influence of ESG performance on company value show inconsistent results. Research conducted by Cheng at. All (2020) shows negative results when excessive ESG implementation will increase capital costs. Due to inconsistencies in previous research findings, this study conducted further research to reaffirm the impact of ESG on firm value. By incorporating gender diversity, this study aims to strengthen the relationship between ESG performance and firm performance, ultimately increasing firm value as a novel contribution to the literature. This research contributes to scientific development, especially the company's sustainability performance. The stakeholder theory, introduced by Freeman in 1984, posits that companies bear responsibilities not only to shareholders but also to a broader array of stakeholders affected by their operations, including employees, customers, suppliers, local communities, and the environment. This theory argues that long-term corporate success depends on effectively balancing the interests and expectations of these diverse stakeholders (Awa, 2024) (Russo & Perrini, 2009). By integrating these interests into decision-making processes, companies can create sustainable value and secure enduring support from their business ecosystem (Tanggamani et al., 2017). Empirical studies suggest that companies responsive to non- financial stakeholder needs, such as environmental and societal demands, can cultivate a more positive reputation, which subsequently enhances financial performance (Tamimi & Sebastianelli, 2017) (Di & Wang, 2019).

Focusing on ESG practices has proven to improve operational efficiency and reduce risks, thus contributing to better overall firm performance. (Tamimi & Sebastianelli, 2017) found that companies emphasizing material ESG aspects achieve higher efficiency, which supports profitability and mitigates reputational risks (Issa & Hanaysha, 2023) . Moreover, effective ESG implementation can strengthen relationships with stakeholders, enhance customer loyalty, and gain community support, which in turn bolsters long-term financial performance (Pan, 2012; Menicucci & Paolucci, 2022). However, there is also an argument that an excessive focus on social and environmental aspects at the expense of profitability may reduce corporate efficiency, potentially leading to lower financial performance (Di & Wang, 2019; Buertey, 2021).

Gender diversity on corporate boards also plays a critical role in reinforcing the relationship between ESG and firm performance. Gender-diverse boards can enrich strategic decision-making perspectives, heightening attention to social and environmental issues and balancing various stakeholder interests (Monteiro, 2024) (Arayssi et al., 2016) (Arayssi et al., 2016) demonstrated that board gender diversity enhances governance effectiveness, thereby strengthening ESG contributions to financial performance (Kaymak & Bektaş, 2017). Further research shows that gender-diverse boards are more responsive to sustainability issues, improving stakeholder perceptions and optimizing firm value (Noureldin, 2022).

H1 : ESG Performance affects Firm Performance
H2 : ESG performance affects Firm Value
H3 : Firm Performance affects Firm Value
H4 : Gender diversity moderates the relationship between ESG Performance and firm value
H5 : Gender diversity moderates the relationship between ESG Performance and firm performance

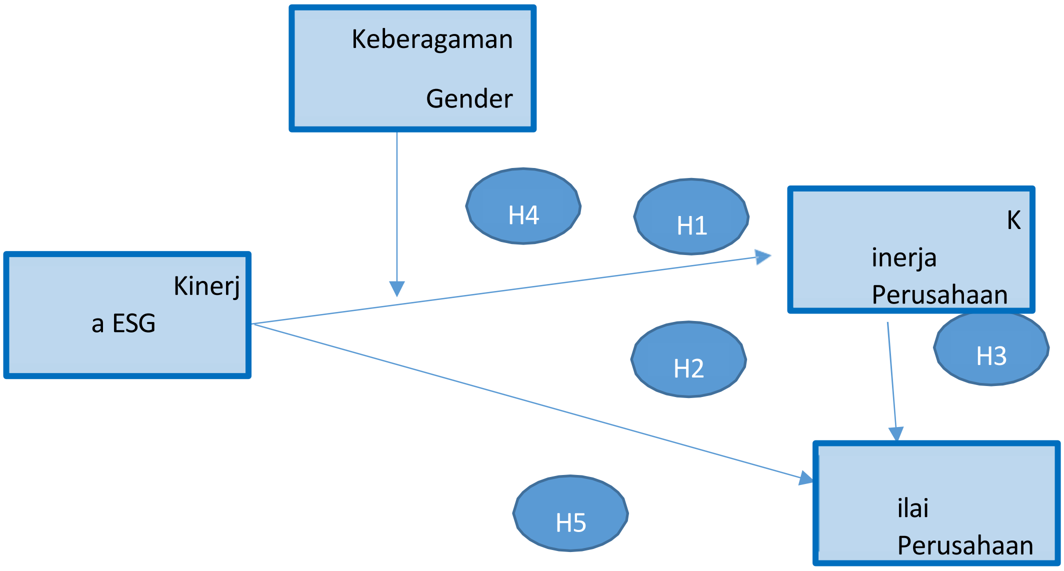
## METHOD

The research sample was 83 companies listed on the ESG Leader index of the Indonesia Stock Exchange (IDX) in 2022. IDX collaborates with Sustainalytics in providing ESG data. Sustainalytics is a leading independent institution engaged in ESG research and Corporate governance. The sample was chosen because the companies in this index actively report their ESG performance, making it relevant to examine the relationship between ESG, company performance, company values, and gender diversity.

Table 1 : Variable Measurement

| Variabel | Definition | Measurement |
|---|---|---|
| ESG Performance | The company's performance in environmental, social and governance aspects | Score index ESG |
| Firm Performance | Ratio of net profit to total equity | ROE |
| Firm's Values | The ratio of the market price of the stock to the book value of the stock | PBV |
| Gender Diversity | The proportion of women on the board of directors. | Number of women divided by total Total Board of Directors |

The inner model test aims to test the relationship between variables in the research model, including: (1) Path Coefficient; (2) The value of the significant coefficient (p-value < 0.05) indicates a strong relationship; (3) R-Squared ($R^2$), a high $R^2$ value indicates a good model. The following research design was utilized in this study:




## RESULTS AND DISCUSSION

Based on table 1 of the descriptive statistical results, the ESG (Environmental, Social, and Governance) variable in the research sample consisted of 83 companies with a minimum ESG score of 10.96 and a maximum of 53.10, and the average ESG score was 27.93. Based on the ESG risk category, the average score is in the Medium category, which means that the companies in the sample are considered to have moderate ESG risk. In addition, the maximum ESG score of 53.10 puts several companies in the Severe category. This indicates that there are companies in the sample that still have major challenges in the sustainability aspect.

**Table 2 : Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| ESG | 83 | 10.96 | 53.10 | 27.9304 | 9.24264 |
| ROE | 83 | -.32 | 1.34 | .1631 | .18663 |
| PVB | 83 | .00 | 43.24 | 2.8023 | 5.11119 |
| GD | 83 | .00 | .75 | .1789 | .16908 |
| Valid N (listwise) | 83 | | | | |

Source : processed data (2024)

The ROE variable shows an average of 0.1631, indicating most companies have managed to make a profit on their equity. PVB with an average of 2.8. This average value shows that the companies in the sample are, in general, valued by the market at about 2.8 times their book value. Most companies are above book value, which shows a positive perception from investors.

The GD variable measured by the proportion of women on the board of directors, was found to have an average of 0.1789 and a standard deviation of

0.1691, indicating that gender representation in companies is still low. A fairly large standard deviation indicates significant differences between companies in terms of gender diversity. Several companies show a high proportion of women on the board of directors (up to 75%), which has the potential to make a positive contribution to corporate governance and response to ESG risks.

Table 3 : Path Coeffecients

| | **Original sample** | **T statistics** | **P values** | **Result** |
|---|---|---|---|---|
| ESG □ PVB | -0.156 | 2.024 | 0.043 | Significant |
| ESG □ ROE | 0.007 | 2.083 | 0.037 | Significant |
| GD □ ROE | 0.633 | 1.834 | 0.067 | Not Significant |
| ROE □ PVB | 18.772 | 1.888 | 0.059 | Not Significant |
| GD **x** ESG □ ROE | -0.027 | 1.992 | 0.046 | Significant |
| GD **x** ESG □ PVB | -0.506 | 1.266 | 0.206 | Not Significant |

Source : processed data (2024)

Table 3 presents the results of the analysis of the relationship between variables based on the original sample values (coefficients), T-statistics, p-values, and significance. The following is an explanation: The relationship between ESG and PVB shows a coefficient of influence of -0.156 and a p-value of 0.043 (< 0.05). This result indicates that ESG has a negative and significant effect on PVB. The relationship between ESG and ROE shows a coefficient of 0.007 and a p-value of 0.037 (< 0.05). ESG has a positive and significant effect on ROE, which means that ESG performance... [Note: The sentence seems incomplete. Please provide the complete sentence for a more accurate translation]. The relationship between GD and ROE shows a coefficient of 0.633 and a p-value of 0.067 (> 0.05). This result indicates that GD does not have an effect on ROE. The relationship between ROE and PVB shows a coefficient of 18.772 and a p-value of 0.059 (> 0.05). This result indicates that ROE does not have an effect on PVB.The moderation of GD on the relationship between ESG and ROE shows an interaction coefficient of -0.027 and a p-value of 0.046 (< 0.05). This result indicates that the interaction between GD and ESG has a significant effect on ROE. The moderation of GD on the relationship between ESG and PVB shows an interaction coefficient of -0.506 and a p-value of 0.206 (> 0.05). This relationship indicates that the interaction between GD and ESG does not have an effect on PVB.

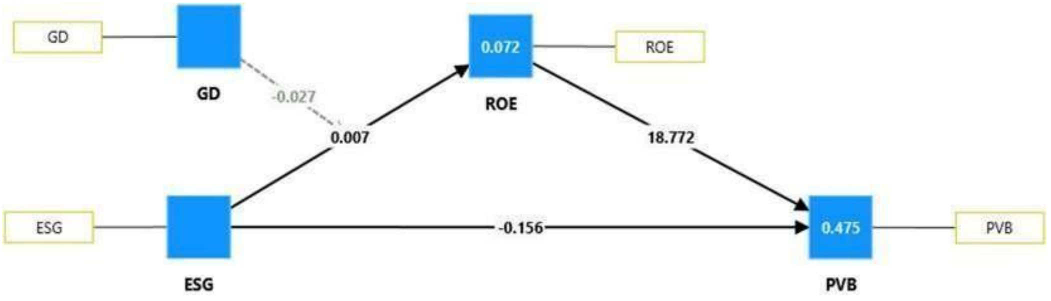


Figure 1 above shows the coefficient of determination ($R^2$), where the relationship between ESG and PVB is indicated by an $R^2$ value of 0.475 (47.5%). This suggests that 47.5% of the variation in PVB can be explained by ESG, while the remaining 52.5% is attributed to other factors not included in the research model.

**H1 : ESG Performance affects Firm Performance**

Studies have found a significant positive correlation between ESG performance and overall company performance, as evidenced by a coefficient of 0.007 and a p-value of 0.037. By enhancing operational efficiency, fostering investor trust, and establishing a competitive edge, ESG practices have a direct impact on a company's bottom line. The adoption of ESG principles signifies a company's commitment to long-term sustainability, aligning with the expectations of stakeholders. This finding supports signaling theory, which suggests that strong ESG performance conveys positive signals to the market, thereby attracting increased investment and building stakeholder trust. (Friede et al., 2015) (Gillan et al., 2021).

Furthermore, these findings are consistent with previous studies. Whelan et al. (2021) and Espinosa-Méndez et al. (2023) demonstrated that companies with high ESG performance tend to have lower costs of capital and higher market valuations, as stakeholders increasingly value long-term sustainability. Liang and Renneboog (2020) also suggested that higher ESG scores increase a company's market valuation, driven by investor interest in sustainable investments. Eccles et al. (2019) further asserted that companies with strong ESG enjoy higher brand loyalty and customer satisfaction, which strengthens their market position. Chen et al. (2020) support these findings by showing that positive ESG is correlated with stronger stock performance and lower volatility, reflecting investor confidence in socially responsible companies. Thus, the results of this study reinforce that ESG performance not only mitigates risk but also drives improved company performance and increased company value over the long term.

**H2 : ESG performance affects the firm's Value**

The test results (table 3) show that ESG performance has a negative relationship with the company's value, with the original sample value of -0.156 and the p-value of 0.043, which shows a significant relationship at the level of 5%. These results show that improving ESG performance can reduce the company's value in the short term. This decline can be attributed to the high initial costs for ESG implementation or the existence of a conservative market perception of ESG investments, which are still considered non-productive expenditures in some industries (Fatemi et al., 2018; García Martín & Herrero, 2020). Nonetheless, other literature suggests that ESG benefits can be seen in the long term as companies begin to feel improved reputations and decreased operational risks (Kölbel et al., 2020)

**H3 : Company Performance affects Company Value**

The results of the hypothesis test (Table 3) indicate that firm performance has no significant impact on firm value, with an original sample size of 18,772 and a p-value of 0.059, which is approaching significance at the 10% level. This finding is consistent with the research of MuharramahTasliyah & Hakim (2021), which showed that firm performance (proxied by leverage and profitability) cannot influence firm value. Although not significant at the conventional 5% level, these results suggest a tendency for increased firm performance to be positively correlated with firm value. This finding is in line with previous research indicating that better financial performance of firms, as measured by indicators such as ROE, can increase firm value by sending positive signals to investors and stakeholders about the firm's profitability and stability (Gillan et al., 2021; Menicucci & Paolucci, 2022). There are two factors that can influence firm value: internal and external factors. Internal factors that affect firm value consist of DER, ROE, and asset growth, with a positive correlation. Meanwhile, external factors that can affect firm value include inflation, with a positive correlation, and exchange rates, with a negative correlation (Pasaribu et al., 2019).

**H4 : Gender diversity moderates the relationship between ESG and firm performance**

The results of the study (table 2) show that gender diversity moderates the relationship between ESG performance and company performance, with the original sample value of -0.027 and the p-value of 0.046, which is significant at the level of 5%. This suggests that gender diversity can reduce the negative impact of ESG performance on company performance, supporting the view that a more gender-diverse board is able to provide a broader perspective and improve responsiveness to sustainability issues. Several studies have shown that gender diversity in the board of directors can strengthen corporate governance effectiveness and improve corporate response to ESG-related stakeholder demands, which can ultimately support the achievement of better corporate values (Bernile et al., 2018; (Liu, 2023).

**H5 : Gender diversity moderates the relationship between ESG and Firm Value**

The test results (table 3) show that gender diversity has no significant moderation effect on the relationship between company performance and company value, with the original sample value of -0.506 and the p-value of 20% (>5%), which is above the conventional significance threshold. These results suggest that gender diversity may not significantly strengthen the direct relationship between ESG and company value. These findings support the literature that states that the role of gender diversity as moderators is more relevant in the context of sustainability or corporate social responsibility issues, rather than in traditional financial relationships such as between financial performance and company value (Post & Byron, 2015b); García Martín & Herrero, 2020). However, gender diversity is still considered an important element in shaping a company's strategy that is more inclusive and responsive to various stakeholders, which can indirectly affect the company's long-term reputation and stability.

## CONCLUSION

The study concludes that ESG performance has a significant effect on company performance and value, with the role of gender diversity moderation that strengthens the relationship between ESG and company value. The results show that although ESG performance is positively related to company performance (measured through ROE), its impact on company value (PVB) tends to be negative in the short term, which may be due to the market's perception of ESG implementation costs. Gender diversity on the board of directors increases the effectiveness of ESG in creating sustainable corporate value, although it does not have a significant effect on moderating the relationship between financial performance and company value. These findings underscore the importance of ESG and gender diversity approaches to achieve more inclusive and sustainable outcomes for stakeholders.

This research contributes to science by enriching literature related to corporate governance and sustainability, especially in the role of ESG and gender diversity as a strategic element in corporate value creation. In addition to supporting stakeholder theory, these findings offer insights for future research to explore additional factors that can moderate or mediate the relationship between ESG and company values, such as organizational culture or industry characteristics. Thus, this research provides direction for academics and practitioners in integrating ESG principles and diversity in corporate strategies, in order to improve long-term financial performance and sustainability.

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