

The Effects of ESG Disclosure, Intellectual Capital, and Environmental Costs on Firm Value: The Moderating Role of Profitability

Rizki Risdianto¹, Susi Susilawati^{2,*}, Ridwan Saleh³, Samukri Samukri⁴, Maria Suryaningsih⁵

Universitas Teknologi Muhammadiyah Jakarta, Jakarta, Indonesia^{1,2,3,4,5}

Corresponding e-mail: susi.s@utmj.ac.id*

HISTORY

Submitted
28 May 2026

Last Revised
29 June 2026

Accepted
2 July 2026

ABSTRACT

Purpose: This study examines the effects of ESG disclosure, intellectual capital, and environmental costs on firm value. It also assesses the moderating role of profitability in companies listed on the Indonesia Stock Exchange.

Method: This study employed a quantitative research design using panel data regression analysis. The sample was selected through purposive sampling and consisted of 90 companies during 2021-2024, resulting in 360 firm-year observations.

Result: The empirical findings show that ESG disclosure, intellectual capital, environmental costs, and profitability do not significantly affect firm value. In addition, profitability does not moderate the effects of ESG disclosure, intellectual capital, and environmental costs on firm value.

Practical Implications for Economic Growth and Development: The findings indicate that the variables examined in this study do not significantly contribute to firm value. This suggests that the economic benefits of ESG disclosure, intellectual capital, environmental costs, and profitability have not been clearly reflected in market valuation. Therefore, further evaluation is needed to understand how these activities can create value that is recognized by investors.

Originality/Value: This study contributes to the existing literature by examining profitability as a moderating variable in the relationships between ESG disclosure, intellectual capital, environmental costs, and firm value across several industry sectors in Indonesia.

Keywords: *ESG Disclosure, Intellectual Capital, Environmental Cost, Profitability, Firm Value*

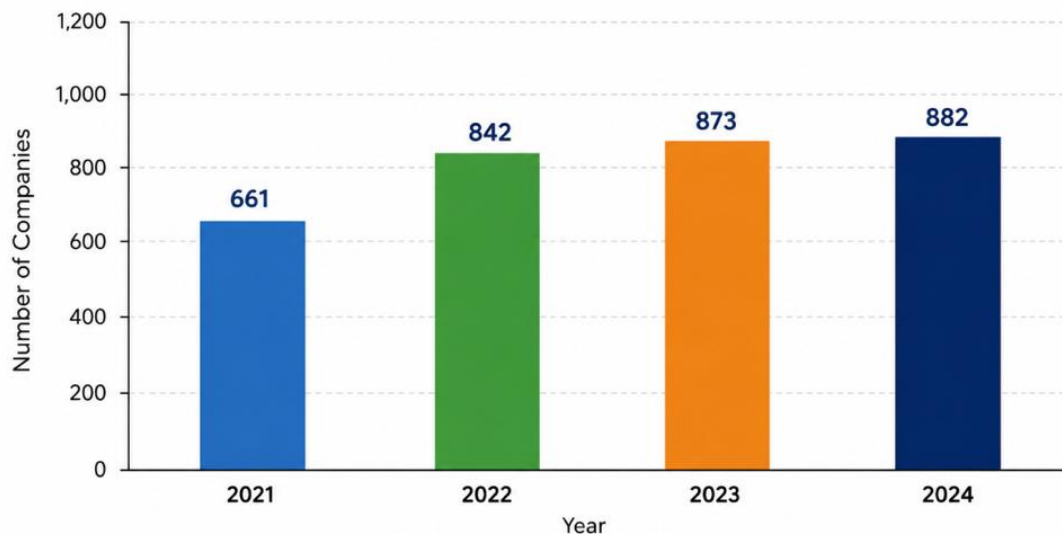
How to cite: Risdianto, R., Susilawati, S., Saleh, R., Samukri, S., & Suryaningsih, M. (2026). The Effects of ESG Disclosure, Intellectual Capital, and Environmental Costs on Firm Value: The Moderating Role of Profitability. *Journal of Enterprise and Development (JED)*, 8(2), 414–428. <https://doi.org/10.20414/jed.v8i2.15618>



INTRODUCTION

Firm value is an important indicator of how the market assesses a company's overall performance, growth prospects, and risk profile. However, global economic developments, growing awareness of sustainability issues, and shifts in investor behavior have made corporate valuation more complex (Aryati & Susilawati, 2025). Investors and stakeholders no longer consider only financial performance. They also pay attention to non-financial aspects that can create competitive advantage, support business sustainability, manage non-financial risks, and generate long-term value (Zumente & Bistrova, 2021). In this context, firm value reflects market perceptions of a company's future prospects and long-term sustainability. Wu et al. (2022) state that ESG positively influences firm value because sustainability performance can reduce corporate financing constraints, improve operational efficiency, and lower financial risk. This argument is relevant to the Indonesian context, where companies have increasingly prioritized sustainability initiatives not only to meet regulatory requirements but also as part of performance indicators that may affect firm value. According to Adlah and Febrianto (2023), ESG implementation signals a company's commitment to sustainable business practices. At the corporate level, the adoption of ESG practices has also been supported by Financial Services Authority regulations, which require publicly listed companies to prepare sustainability reports (Indonesia Stock Exchange, 2025). The implementation of these regulations is reflected in the increasing number of sustainability reports submitted by listed firms.

Figure 1. Trend in Number of Companies Reporting Sustainability Reports on the Indonesia Stock Exchange during 2021 to 2024



Source: The Indonesia Stock Exchange (2025)

By the end of December 2024, the number of companies submitting sustainability reports continued to increase, from 661 companies in 2021 to 842 companies in 2022, 873 companies in 2023, and 882 companies in 2024 (Indonesia Stock Exchange, 2025). Despite this upward trend, the extent to which ESG disclosure generates positive market responses remains uncertain. This condition highlights the need for further investigation into whether ESG disclosure contributes to firm value, particularly among Indonesian companies that have increasingly adopted sustainability reporting practices.

In addition to ESG disclosure, intellectual capital has become an important factor in enhancing firm value, especially in the era of the knowledge-based economy. In Indonesia, the development of intellectual capital still faces several challenges. Based on The Global

Sustainable Competitiveness Index 2024, Indonesia ranked 62nd in the intellectual capital aspect, with a score of 46.3. This position remains below several Southeast Asian countries, such as Vietnam and Singapore. This condition indicates that the optimization of knowledge-based resources in Indonesia has not been fully developed (SolAbility Sustainable Intelligence, 2024). Companies that manage intellectual capital effectively tend to achieve better efficiency, innovation, and competitiveness. These capabilities can increase investor confidence in the company's future prospects (Castro et al., 2019). The implementation of ESG and the management of intellectual capital also require accounting systems that can identify and measure sustainability-related costs more comprehensively. In this context, environmental cost becomes an important aspect for companies to consider. Environmental cost reflects corporate expenditures related to environmental management and protection activities (Chen et al., 2022).

Profitability is also relevant because it can strengthen or weaken the relationship between ESG disclosure, intellectual capital, environmental cost, and firm value. A higher level of profitability indicates a company's ability to generate earnings and use its resources effectively. Firms with strong profitability generally have greater financial flexibility to implement ESG initiatives, develop intellectual capital, and allocate environmental expenditures more efficiently (Andriani & Arsjah, 2022; Antonius & Ida, 2023). Therefore, profitability may increase investor confidence that corporate investment in sustainability practices and intellectual resources can generate long-term economic value.

Prior studies by Alsayegh et al. (2020) and Behl et al. (2022) explain that companies committed to environmental, social, and governance aspects tend to gain greater trust from investors and stakeholders, which can increase firm value. Comprehensive ESG disclosure can also strengthen corporate image, improve investor trust, and reduce concerns regarding potential non-financial risks faced by the company (Li et al., 2024; Talan et al., 2024). However, Gaweda (2025) finds that sustainability policy implementation may negatively affect firm value when it requires substantial investment that burdens corporate financial performance in the short term. Agustia et al. (2021) emphasize that intellectual capital reflects a company's ability to manage intangible assets, including human resource competence, innovation, technology, and organizational systems, to create competitive advantage. Ni et al. (2021) state that the global economic shift from physical asset-based economies to knowledge-based economies has positioned intellectual capital as a major source of value creation. This condition shows that intellectual capital has become a key factor in determining corporate competitiveness and firm value in the modern business environment (Buallay et al., 2020; Dessyla & Susanti, 2024).

Environmental cost management also plays an important role in supporting sustainability and firm value. Celestin (2018) explains that proper environmental cost management enables companies to improve operational efficiency, minimize environmental risks, and strengthen their commitment to sustainability. Yulyan et al. (2024) further emphasize that environmental cost reflects a company's seriousness in internalizing environmental impacts into its business activities. In addition, profitability is positively associated with firm value because investors often use profitability as one of the main indicators in evaluating investment opportunities (Al-Omari et al., 2024).

Despite the growing body of literature, studies that examine profitability as a moderating factor in the relationships between ESG disclosure, intellectual capital, environmental cost, and firm value remain limited, particularly across multiple industries in Indonesia, including healthcare, energy, consumer non-cyclicals, and industrial sectors. This issue is important because ESG disclosure reflects sustainability-related information, intellectual capital represents intangible strategic resources, and environmental cost indicates a company's commitment to environmental responsibility. Therefore, this study investigates the influence of sustainability and competitive advantage indicators, namely ESG disclosure, intellectual capital, and environmental cost, on firm value. Furthermore, this study examines the role of profitability as an indicator of a company's ability to generate economic returns from its resources in

influencing the relationships between ESG disclosure, intellectual capital, environmental cost, and firm value.

Hypotheses Development

ESG Disclosure and Firm Value

The adoption and disclosure of Environmental, Social, and Governance (ESG) practices have become increasingly important in contemporary corporate strategy. ESG disclosure reflects how a company addresses its responsibilities in environmental protection, social welfare, and corporate governance while responding to stakeholder expectations. Based on stakeholder theory, a company's long-term sustainability depends on its ability to maintain constructive relationships with stakeholders by providing transparent and meaningful information (Mahajan et al., 2023). When stakeholders and investors have greater confidence in a company's commitment to sustainable business practices, favorable market perceptions are more likely to emerge. These perceptions can increase investor trust and contribute to higher firm value (Adlah & Febrianto, 2023). Therefore, ESG disclosure is expected to have a positive effect on firm value.

H1: ESG disclosure has a significant positive effect on firm value.

Intellectual Capital and Firm Value

The emergence of a knowledge-based economy has positioned intellectual capital as a strategic asset that contributes to corporate competitive advantage (Susilawati et al., 2026). Intellectual capital is not limited to employee capabilities. It also includes innovation, organizational knowledge, technology, and business systems that support value creation. Companies that manage these intangible assets effectively are more likely to receive higher market valuation. In line with the resource-based view (RBV), firms that can manage unique, valuable, and difficult-to-imitate resources tend to achieve sustainable competitive advantage over their competitors (Agustia et al., 2021). Effective intellectual capital management can improve decision-making quality, accelerate innovation, and increase operational efficiency, which in turn enhances corporate performance (Buallay et al., 2021; Putri & Miftah, 2021; Rivandi, 2022). Therefore, companies with strong intellectual capital can increase investor confidence in future growth prospects, reduce perceived business risk, and support higher firm value.

H2: Intellectual capital has a significant positive effect on firm value.

Environmental Cost and Firm Value

Environmental cost can be viewed as both a strategic sustainability investment and a compliance cost. Based on stakeholder theory, firms are expected not only to pursue financial gains, but also to balance social and environmental responsibilities in order to maintain legitimacy and ensure long-term business sustainability (Dinniyah & Nuzula, 2021). Expenditures related to environmental activities may reflect a company's commitment to responsible and sustainable business practices, including energy efficiency, emissions control, and innovation in production processes. Companies that manage environmental costs effectively are generally viewed more positively by stakeholders because they are perceived as more attentive to environmental issues and sustainability concerns (Dinniyah & Nuzula, 2021; Putri et al., 2024). In addition to strengthening corporate image, proper environmental cost management may improve operational efficiency and reduce environmental risks that could weaken business performance. Although environmental costs may reduce short-term profits, the market may appreciate their long-term benefits because they can build investor trust and contribute to higher firm value.

H3: Environmental cost has a significant positive effect on firm value.

Profitability and Firm Value

Profitability, proxied by return on assets (ROA), is positioned as a direct determinant of firm value because it reflects a company's ability to generate income through the effective use of its resources. From the perspective of signaling theory, high profitability provides a positive signal to investors regarding the company's financial condition and future prospects. Companies that can maintain consistent profits are generally perceived as having stronger operational performance and greater potential to generate economic value (Novianti et al., 2024). This condition may increase investor trust, encourage greater demand for the company's shares, and ultimately increase firm value (Sihono, 2024).

H4: Profitability has a significant positive effect on firm value.

Profitability, ESG Disclosure, and Firm Value

Profitability often serves as a baseline indicator used by investors to assess overall business quality. When profitability is high, additional information disclosed by the company is more likely to be evaluated positively because investors already perceive the firm as financially sound and well managed. Under these conditions, ESG disclosure is less likely to be viewed merely as a symbolic communication strategy. Signaling theory suggests that credible signals require a foundation of demonstrated performance so that they can be interpreted as reliable by the market (Tansil & Tangke, 2025). In contrast, for firms with weaker profitability, ESG disclosure may carry less weight because investors may question whether the reported initiatives are supported by sufficient financial capacity and genuine commitment (Pramesti et al., 2024). This difference indicates that profitability can shape the extent to which ESG disclosure is translated into firm value. Therefore, profitability is expected to strengthen the positive effect of ESG disclosure on firm value.

H5: Profitability strengthens the positive effect of ESG disclosure on firm value.

Profitability, Intellectual Capital, and Firm Value

Intellectual capital refers to intangible assets such as knowledge, skills, innovation, technology, and organizational capabilities that support a firm's competitive advantage. Under the resource-based view (RBV), intellectual capital is regarded as a strategic resource that can improve corporate performance and increase firm value when managed effectively. Firms with higher profitability generally have greater financial capacity to develop, maintain, and optimize their intellectual capital. This condition allows the contribution of intellectual capital to be more clearly reflected in firm value (Amirullah et al., 2021; Yuliawati & Alinsari, 2022). Therefore, profitability is expected to strengthen the relationship between intellectual capital and firm value. Companies with stronger profitability are more capable of converting intellectual resources into innovation, efficiency, and competitive advantage that are valued by investors.

H6: Profitability strengthens the positive effect of intellectual capital on firm value.

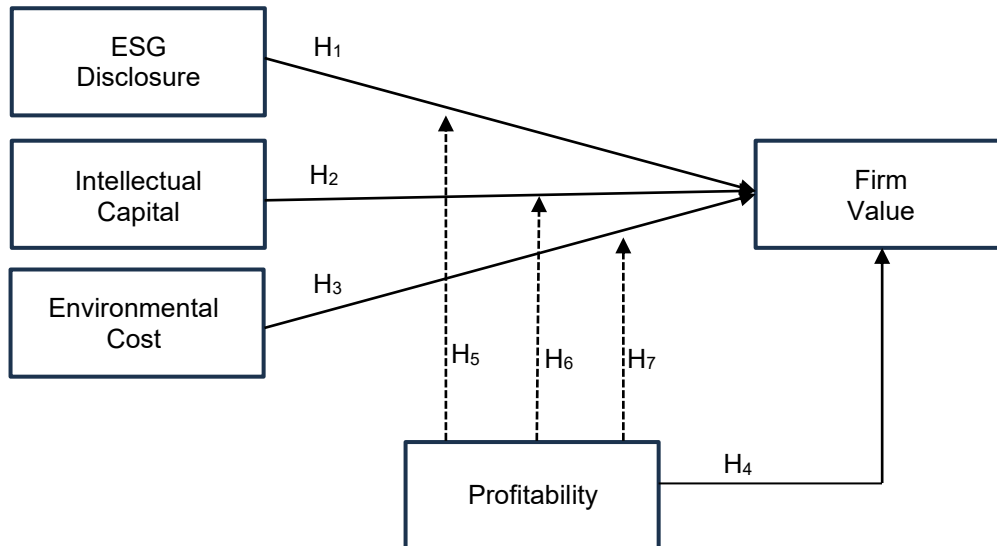
Profitability, Environmental Cost, and Firm Value

Environmental spending involves a trade-off between short-term resource allocation and long-term reputational benefits. Investor interpretation of this trade-off may depend on the firm's financial condition. Stakeholder theory views environmental cost as a signal of responsible corporate conduct. However, the credibility of this signal depends on the company's financial capacity to sustain environmental initiatives. When profitability is high, environmental cost is more likely to be interpreted as a deliberate investment in sustainability, which can reinforce its positive effect on firm value (Ilmi & Setyaningsih, 2025). In contrast, when profitability is low, the same spending may be viewed as a burden on limited financial resources, which can

weaken its effect on firm value (Tunggadi & Kampo, 2025). Therefore, profitability is expected to strengthen the positive effect of environmental cost on firm value.

H7: Profitability strengthens the positive effect of environmental cost on firm value.

Figure 2. Conceptual Framework



Source: Developed by the authors (2026)

METHOD

This study applies a quantitative approach with a causal research design. The sample was selected using purposive sampling, resulting in 90 companies. The sample consisted of companies from the healthcare sector (9 companies), energy sector (28 companies), consumer non-cyclicals sector (42 companies), and industrial sector (11 companies) listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. The selected sectors were considered relevant to the research variables. The energy and industrial sectors have substantial environmental responsibilities, making environmental cost an important aspect to examine. Meanwhile, the healthcare and consumer non-cyclicals sectors rely strongly on intellectual capital, operational reliability, and stakeholder trust in creating firm value. The sampling criteria were established in accordance with the research objectives. Companies with incomplete data during the observation period were excluded from the sample. In addition, firms with negative earnings after tax (EAT) were excluded because negative earnings may make profitability-based ratios, such as return on assets (ROA), less economically meaningful for the purpose of this study. Outlier detection was conducted using studentized residuals. Observations identified as outliers were removed from the sample to reduce estimation bias caused by extreme values. This procedure was applied systematically and consistently to all main research variables.

Table 1. Sampling Procedure

No.	Sample Criteria	Total
1	Healthcare, energy, consumer non-cyclicals, and industrial sector companies consecutively listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period	241
2	Companies that did not publish annual reports and/or sustainability reports, either as integrated reports or separate reports	(2)

No.	Sample Criteria	Total
3	Companies that did not provide complete data related to the research variables	(141)
4	Companies with outlier data	(8)
5	Total research sample	90
6	Total observations: 90 companies × 4 years	360

Source: Developed by the authors (2026)

The data analysis in this study used balanced panel data regression. This method was selected because it allows the analysis to incorporate both cross-sectional and time-series variations while maintaining the same number of observations for each firm across all periods. This structure improves estimation efficiency, reduces potential sample selection bias, and ensures comparability across firms and years. The regression model was determined based on the results of the best model selection tests, namely the Chow test, Hausman test, and Lagrange Multiplier test. The selected model was then evaluated through goodness-of-fit testing, classical assumption testing, statistical significance testing, and robustness testing before the regression coefficients were interpreted. All stages of data processing and statistical analysis were conducted using EViews Version 13. The regression model is formulated as follows:

$$\ln(FV)_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 IC_{it} + \beta_3 \ln(EC)_{it} + \beta_4 ROA_{it} + \beta_5 (ESG \times ROA)_{it} + \beta_6 (IC \times ROA)_{it} + \beta_7 (\ln(EC) \times ROA)_{it} + \epsilon_{it}$$

where $\ln(FV)_{it}$ represents the natural logarithm of firm value of company i in year t . ESG_{it} refers to ESG disclosure, IC_{it} represents intellectual capital, and $\ln(EC)_{it}$ indicates the natural logarithm of environmental cost. ROA_{it} represents profitability. Furthermore, the interaction terms $ESG \times ROA$, $IC \times ROA$, and $\ln(EC) \times ROA$ were included to examine the moderating role of profitability in the relationships between ESG disclosure, intellectual capital, environmental cost, and firm value. Meanwhile, ϵ_{it} represents the error term in the regression model.

The measurement of the research variables was based on proxies that have been widely used in prior studies. This approach was applied to strengthen the credibility, validity, and reliability of the research results. The operational definitions and measurements of the variables are presented in Table 2.

Table 2. Operational Variables

Variable	Code	Formula	Reference
Firm Value	FV	Tobin's Q = (Market Value + Total Debt) / Total Assets	Suseno et al. (2024); Yulianti (2023)
ESG Disclosure	ESG	$ESGDI = \sum Xi / N$, where ESGDI represents the ESG Disclosure Index, Xi denotes the score assigned to each disclosure item, with 1 for disclosed items and 0 for undisclosed items, and N represents the total number of ESG indicators. In this study, 39 ESG indicators were used.	Park and Jang (2021)
Intellectual Capital	IC	$VAIC = HCE + SCE + CEE$	Pulic (2004)
Environmental Cost	EC	$EC = \text{Environmental Expenditure} / \text{Earnings After Tax}$	Adyaksana and Pronosokodewo (2020)
Profitability	ROA	$ROA = \text{Net Income} / \text{Total Assets}$	Al-Omari et al. (2024)

Source: Developed by the authors (2026)

RESULT AND DISCUSSION

Descriptive Statistics

Descriptive statistical analysis was conducted using 360 observations. Firm value (FV) had a mean value of 1.4643, with values ranging from 0.2971 to 6.2702. Its standard deviation of 0.8972 indicates considerable variation in firm value among the sampled companies. The ESG disclosure variable had a mean value of 0.7355 and a standard deviation of 0.0939, suggesting that ESG disclosure levels were generally high and relatively consistent across the sampled firms. Intellectual capital (IC) recorded an average value of 6.3188, with a maximum value of 31.5460. Its standard deviation of 4.6823 indicates substantial differences in firms' ability to utilize and manage intellectual resources. Environmental cost (EC) had a mean value of 0.0446 and a standard deviation of 0.1029, while profitability, proxied by ROA, showed an average value of 0.1014 with a standard deviation of 0.0893. Overall, the descriptive statistics indicate that the research variables have different characteristics and levels of variability across the sampled firms during the observation period.

Table 3. Descriptive Statistics

Variable	Sample	Mean	Maximum	Minimum	Std. Dev.
FV	360	14.643	62.702	0.2971	0.8972
ESG	360	0.7355	0.9231	0.3846	0.0939
IC	360	63.188	315.460	14.929	46.823
EC	360	0.0446	10.551	0.0005	0.1029
ROA	360	0.1014	0.6163	0.0007	0.0893

Source: Processed data (2026)

Model Selection Test

This study used a significance level of 5% ($\alpha = 0.05$). The most appropriate panel data regression model was selected using the Chow test, Hausman test, and Lagrange Multiplier (LM) test. The Chow test produced a probability value of 0.000, indicating that the Fixed Effect Model (FEM) was more appropriate than the Common Effect Model. However, the Hausman test produced a probability value of 0.055, which is greater than 0.05, indicating that the Random Effect Model (REM) was preferred over the Fixed Effect Model. Furthermore, the LM test produced a probability value of 0.000, confirming that the Random Effect Model was more appropriate than the Common Effect Model. Based on the results of these three tests, the Random Effect Model (REM) was selected as the most suitable model for estimating the panel data regression in this study.

Table 4. Model Selection Test Results

Model Selection Test	Probability	Selected Model
Chow Test	0.000	Fixed Effect Model (FEM)
Hausman Test	0.055	Random Effect Model (REM)
Lagrange Multiplier Test	0.000	Random Effect Model (REM)

Source: Processed data (2026)

Classical Assumption Test

Normality testing was conducted using the Jarque-Bera (JB) test. The initial test produced a Jarque-Bera value of 1259.238 with a probability value of 0.000, indicating that the residuals were not normally distributed. To address this issue, natural logarithm transformations were applied to the firm value (FV) and environmental cost (EC) variables. The transformed variables, namely $\ln(FV)$ and $\ln(EC)$, were then used in the regression analysis. The transformation was applied because FV and EC showed relatively wide distributions and were

identified as potential sources of skewness and extreme observations. After the transformation, the Jarque-Bera statistic decreased to 1.8106, with a probability value of 0.4044. Since the probability value exceeded the 0.05 significance level, the residuals were normally distributed and appropriate for further analysis.

Multicollinearity was tested using two approaches, namely the pairwise correlation matrix among the independent variables and the variance inflation factor (VIF). The results show that all correlation coefficients were below 0.85. In addition, the VIF values were below the threshold of 10, ranging from 1.1812 to 4.1688 for the main variables and from 1.3643 to 2.5704 for the interaction terms. These findings indicate that multicollinearity does not pose a serious problem in the regression model. Therefore, the coefficient estimates can be considered reliable and stable.

Heteroscedasticity was evaluated using the Glejser test, which examines whether the absolute residual values are significantly associated with the independent variables. The results show that all independent variables and moderating interaction terms had probability values greater than the 0.05 significance level. These findings indicate that the residual variance was constant across observations. Thus, the regression model does not suffer from heteroscedasticity.

Hypotheses Testing

Based on the model selection results, the Random Effect Model (REM) was selected as the most appropriate model for this study. To improve the reliability of statistical inference in panel data analysis, robust standard errors were applied. Specifically, this study used White cross-section standard errors to obtain more consistent standard errors and reduce the risk of biased significance testing. Ashun et al. (2026) state that this approach improves the reliability of coefficient significance testing and helps avoid misinterpretation of regression results.

The estimated regression model is presented as follows:

$$\ln(FV)_{it} = 0.2533 - 0.3279ESG_{it} - 0.0006IC_{it} - 0.0095\ln(EC)_{it} + 5.5559ROA_{it} - 4.0207(ESG*ROA)_{it} - 0.0292(IC*ROA)_{it} + 0.1192(\ln(EC)*ROA)_{it} + \varepsilon_{it}$$

Table 5. Hypothesis Testing Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.2533	0.2996	0.8456	0.4599
ESG	-0.3279	0.4247	-0.7720	0.4963
IC	-0.0006	0.0066	-0.0941	0.9309
ln(EC)	-0.0095	0.0168	-0.5674	0.6101
ROA	55.559	24.239	22.921	0.1057
ROA × ESG	-40.207	25.233	-15.934	0.2093
ROA × IC	-0.0292	0.0100	-29.256	0.0612
ROA × ln(EC)	0.1192	0.1172	10.169	0.3841

Note: significance level at 5%

Source: Processed data (2026)

Regarding the direct effects, the results show that ESG disclosure does not have a significant effect on firm value. This is indicated by a coefficient of -0.3279 and a probability value of 0.4963, which is greater than the 5% significance level. Therefore, H1 is rejected. Intellectual capital also does not significantly affect firm value, as shown by a coefficient of -0.0006 and a probability value of 0.9309. Thus, H2 is rejected. Similarly, environmental cost does not have a significant effect on firm value, with a coefficient of -0.0095 and a probability value of 0.6101. Therefore, H3 is rejected. Profitability, proxied by ROA, shows a positive coefficient of 5.5559. However, its probability value of 0.1057 exceeds the 5% significance level. This

result indicates that profitability does not significantly affect firm value. Accordingly, H4 is rejected.

For the moderating effects, the interaction between profitability and ESG disclosure produces a coefficient of -4.0207 with a probability value of 0.2093. This result indicates that profitability does not significantly moderate the relationship between ESG disclosure and firm value. Therefore, H5 is rejected. The interaction between profitability and intellectual capital produces a coefficient of -0.0292 with a probability value of 0.0612. Since this value is greater than the 5% significance level, profitability does not significantly moderate the effect of intellectual capital on firm value. Thus, H6 is rejected. Finally, the interaction between profitability and environmental cost, represented by $ROA \times \ln(EC)$, produces a coefficient of 0.1192 with a probability value of 0.3841. This finding indicates that profitability does not significantly moderate the relationship between environmental cost and firm value. Therefore, H7 is rejected.

Discussion

Based on the hypothesis testing results, ESG disclosure has no significant effect on firm value. This finding is inconsistent with stakeholder theory, which argues that companies can increase firm value by meeting stakeholder interests through responsible business practices, improving reputation, and strengthening stakeholder relationships (Susilawati et al., 2025). ESG initiatives represent one way to achieve this objective. Although ESG practices may provide long-term benefits, such as risk reduction and reputation improvement (Zumente & Bistrova, 2021), their short-term effects are difficult to measure accurately because ESG outcomes are generally long-term oriented (Aryati & Susilawati, 2025). Therefore, ESG disclosure may not be immediately reflected in firm value. In addition, McBrayer (2018) states that the quality of sustainability reports, as part of ESG disclosure, often still reflects repeated disclosure from previous reports and is frequently viewed as a form of compliance. Thus, ESG disclosure does not affect firm value. This finding is consistent with Syahwallistiana and Yusuf (2025) and Fachrezi et al. (2024).

The next hypothesis testing result shows that intellectual capital has no significant effect on firm value. This finding indicates that firms' ability to manage intellectual assets has not directly improved market perceptions of firm value. Intellectual capital, which includes knowledge, innovation, human resource quality, and organizational systems, is intangible and difficult for investors to measure directly (Agustia et al., 2021). As a result, the Indonesian capital market may still place greater emphasis on tangible assets and financial performance than on knowledge-based resources. This finding is in line with Anik et al. (2021), who explain that although the resource-based view suggests that intellectual capital can generate sustainable competitive advantage, its benefits are long-term in nature and may not provide strong positive signals during the observation period.

The results also indicate that environmental cost does not significantly affect firm value. This suggests that environmental expenditure has not increased market appreciation of firms, possibly because investors still perceive such costs as expenses that reduce profit rather than as long-term investments in sustainability (Akib et al., 2025). Inconsistent and non-standardized environmental cost disclosure across firms may also limit investors' ability to interpret this information effectively (Wulandhari & Machdar, 2025). Although stakeholder theory suggests that environmental cost management can enhance corporate legitimacy, limited market attention to this information indicates that investors remain more focused on financial performance than environmental expenditure. This finding is consistent with Amira and Siswanto (2022) and Putri et al. (2024).

Profitability also has no significant effect on firm value. This finding contradicts signaling theory, which states that financial performance provides signals about a company's future prospects to investors. The insignificant effect of return on assets (ROA) as a proxy for profitability indicates that high or low ROA does not necessarily reflect market valuation. An increase or decrease in ROA does not always affect share price movement (Wiadnyani &

Artini, 2023). This suggests that ROA is not the only information considered by investors in making investment decisions. Investors may also consider other factors beyond profitability. Therefore, profitability does not influence firm value in this study. This finding differs from Sapna et al. (2025) and Amanatur et al. (2024).

The moderating effect of profitability on the relationship between ESG disclosure and firm value is not statistically significant. This result indicates that profitability does not strengthen or weaken the effect of ESG disclosure on firm value. In other words, companies with higher profitability do not receive greater market appreciation for their ESG disclosure practices compared to less profitable firms. This finding suggests that investors in the Indonesian capital market may not yet place strong emphasis on the combination of financial performance and sustainability disclosure when assessing firm value. As a result, the joint signal conveyed by profitability and ESG disclosure has not been strong enough to influence market valuation. This finding differs from Ambarwati and Vitaningrum (2021).

The results further show that profitability does not moderate the effect of intellectual capital on firm value. This finding indicates that the contribution of intellectual capital to firm value does not depend on profitability. From the resource-based view perspective, intellectual capital is a strategic asset that can create competitive advantage when it is valuable, rare, difficult to imitate, and non-substitutable (Castro et al., 2019). However, if intellectual capital is not optimally utilized or its economic benefits are not reflected in company performance, it cannot create value appreciated by the market. Profitability also reflects short-term financial performance, while intellectual capital generates long-term benefits that depend on a company's ability to convert knowledge-based assets into competitive advantage and sustainable performance (Xu & Liu, 2020). Therefore, high or low profitability does not strengthen the relationship between intellectual capital and firm value. This finding aligns with Maharanie (2025).

Profitability also has no significant moderating effect on the relationship between environmental cost and firm value. This finding suggests that even when companies have strong profitability, investors do not always interpret environmental spending as a factor that directly increases market valuation. Wulandhari and Machdar (2025) state that environmental commitment does not always increase firm value if it fails to create value perceived by stakeholders. Based on stakeholder theory, environmental cost can create value only when it meets stakeholder expectations and is perceived as a strategic investment that enhances corporate reputation and sustainability. However, if environmental cost is viewed merely as a compliance cost (Eku & Hasnawati, 2024) and does not provide clear benefits for stakeholders, investors may not respond positively. Under these conditions, profitability cannot change market perception or strengthen the relationship between environmental cost and firm value. This finding is consistent with Noor et al. (2022).

CONCLUSION

This study examines the influence of ESG disclosure, intellectual capital, and environmental cost on firm value, while also assessing the moderating role of profitability. The results show that ESG disclosure, intellectual capital, environmental cost, and profitability do not have a significant effect on firm value. These findings indicate that the market has not fully appreciated sustainability aspects and knowledge-based resources as determinants of firm value. ESG disclosure and environmental cost are still perceived mainly as forms of compliance rather than value-creating activities. Intellectual capital has not been effectively converted into economic value that can be recognized by investors. In addition, ROA does not serve as a primary signal for stakeholders in assessing firm value. Profitability also fails to moderate the relationships between ESG disclosure, intellectual capital, environmental cost, and firm value. This suggests that the market tends to view ESG disclosure, intellectual capital, and environmental cost as long-term signals that are not solely dependent on current profitability levels.

The findings imply that further evaluation is needed to understand how sustainability activities, intellectual capital, and environmental expenditure can be translated into value recognized by investors. Companies need to ensure that sustainability practices are not merely formalistic, but generate measurable impacts and are communicated effectively to the market. This can help strengthen investor confidence and potentially improve firm value. Future researchers are encouraged to expand the scope of industrial sectors, extend the observation period, and include other variables such as corporate governance, leverage, green innovation, or environmental uncertainty. These additions may provide a more comprehensive understanding of the factors influencing firm value in the Indonesian capital market. Future studies may also use alternative proxies to obtain more robust results.

REFERENCES

- Adlah, A., & Febrianto, R. (2023). The impact of environmental, social and governance on corporate value: The role of real earning management as moderating variable. *Journal of Accounting and Business*, 8(1), 76–90. <https://doi.org/10.32424/1.sar.2023.8.1.8270>
- Adyaksana, R. I., & Pronosokodewo, B. G. (2020). Apakah kinerja lingkungan dan biaya lingkungan berpengaruh terhadap pengungkapan informasi lingkungan? *InFestasi*, 16(2), 157–165. <https://doi.org/10.21107/infestasi.v16i2.8544>
- Agustia, D., Asyik, N. F., & Mudiantari, N. (2021). Intellectual capital terhadap financial performance dan sustainable growth. *EKUITAS: Jurnal Ekonomi dan Keuangan*, 5(2), 159–179. <https://doi.org/10.24034/j25485024.y2021.v5.i2.4744>
- Akib, A., Utami, S., Tikollah, M. R., & Hasyim, H. (2025). Nilai perusahaan di era hijau: Inovasi hijau, pengungkapan emisi karbon, biaya lingkungan, dan tipe industri sebagai variabel moderasi. *Bilancia: Jurnal Ilmiah Akuntansi*, 9(3), 321–330. <https://doi.org/10.35145/bilancia.v9i3.5231>
- Al-Omari, R., Oroud, Y., Makhlouf, M. H., Alshehadeh, A. R., & Al-Khawaja, H. A. (2024). The impact of profitability and asset management on firm value and the moderating role of dividend policy: Evidence from Jordan. *Asian Economic and Financial Review*, 14(1), 1. <https://doi.org/10.55493/5002.v14i1.4937>
- Alsayegh, M., Rahman, R., & Homayoun, S. (2020). Corporate economic, environmental, and social sustainability performance transformation through ESG disclosure. *Sustainability*, 12(9), 3910. <https://doi.org/10.3390/su12093910>
- Amanatur, A., Durya, N. P. M. A., Hapsari, D. I., & Septriana, I. (2024). Pengaruh likuiditas, ukuran perusahaan dan profitabilitas terhadap nilai perusahaan: Studi pada perusahaan pertambangan yang terdaftar di BEI tahun 2019–2023. *Innovative: Journal of Social Science Research*, 4(4), 12708–12722. <https://doi.org/10.31004/innovative.v4i4.13856>
- Ambarwati, J., & Vitaningrum, M. R. (2021). Pengaruh likuiditas dan profitabilitas terhadap nilai perusahaan. *COMPETITIVE Jurnal Akuntansi dan Keuangan*, 5(2), 128. <https://doi.org/10.31000/competitive.v5i2.4313>
- Amira, A., & Siswanto, S. (2022). Pengaruh penerapan akuntansi lingkungan terhadap nilai perusahaan consumer non-cyclicals yang terdaftar di Bursa Efek Indonesia. *Jurnal Pajak dan Keuangan Negara*, 4(1S), 200–210. <https://doi.org/10.31092/jpkn.v4i1S.1764>
- Amirullah, H. R., Dharma, F., & Putri, W. R. E. (2021). Pengaruh intellectual capital terhadap nilai perusahaan saat pandemi COVID-19 dengan profitabilitas sebagai variabel moderasi: Studi empiris pada perusahaan LQ45 yang terdaftar di Bursa Efek Indonesia. *Jurnal Akuntansi Bisnis dan Ekonomi*, 7(2), 2039–2050. <https://doi.org/10.33197/jabe.vol7.iss2.2021.781>
- Andriani, N., & Arsjah, R. J. (2022). Pengaruh intellectual capital dan ESG terhadap manajemen laba yang dimoderasi oleh profitabilitas. *Jurnal Ekonomi Trisakti*, 2(2), 595–610. <https://doi.org/10.25105/jet.v2i2.14646>
- Anik, S., Chariri, A., & Isgiyarta, J. (2021). The effect of intellectual capital and good corporate governance on financial performance and corporate value: A case study in

- Indonesia. *Journal of Asian Finance, Economics and Business*, 8(4), 391–402.
<https://doi.org/10.13106/jafeb.2021.vol8.no4.0391>
- Antonius, F., & Ida, I. (2023). Pengaruh ESG dan intellectual capital terhadap kinerja perusahaan. *Jurnal Ekobis: Ekonomi Bisnis & Manajemen*, 13(2), 126–138.
<https://doi.org/10.37932/nxw8ac86>
- Ariasinta, T., Indarwanta, D., & Utomo, H. J. N. (2024). Pengaruh environmental, social, and governance (ESG) disclosure dan intellectual capital terhadap firm value dengan firm size sebagai variabel moderasi: Studi pada perusahaan indeks LQ45 tahun 2018–2022. *Jurnal Administrasi Bisnis*, 22(2), 255–273.
<https://doi.org/10.31315/jurnaladmbisnis.v22i2.12832>
- Aryati, T., & Susilawati, S. (2025). Exploring the influence of ESG and prosperity disclosure score on financial performance. *Economics: Innovative and Economics Research Journal*, 13(1), 467–486. <https://doi.org/10.2478/eoik-2025-0017>
- Ashun, A. K., Alhassan, S. A., Abubakar, S., & Akoto, E. T. (2026). The impact of corporate governance and firm characteristics on financial performance of listed firms in Ghana. *Journal of Enterprise and Development*, 8(1), 44–58.
<https://doi.org/10.20414/jed.v8i1.14492>
- Behl, A., Kumari, P. S. R., Makhija, H., & Sharma, D. (2022). Exploring the relationship of ESG score and firm value using cross-lagged panel analyses: Case of the Indian energy sector. *Annals of Operations Research*, 313(1), 231–256.
<https://doi.org/10.1007/s10479-021-04189-8>
- Buallay, A., Abuhommous, A. A., & Kukreja, G. (2021). The relationship between intellectual capital and employees' productivity: Evidence from the Gulf Cooperation Council. *Journal of Management Development*, 40(6), 526–541. <https://doi.org/10.1108/JMD-05-2019-0210>
- Buallay, A., Hamdan, A. M., Reyad, S., Badawi, S., & Madbouly, A. (2020). The efficiency of GCC banks: The role of intellectual capital. *European Business Review*, 32(3), 383–404. <https://doi.org/10.1108/EBR-04-2019-0053>
- Castro, G. M., Díez-Vial, I., & Delgado-Verde, M. (2019). Intellectual capital and the firm: Evolution and research trends. *Journal of Intellectual Capital*, 20(4), 555–580.
<https://doi.org/10.1108/JIC-12-2018-0221>
- Celestin, M. (2018). The impact of sustainable cost accounting on business profitability: Balancing financial performance with environmental responsibility. *Brainae Journal of Business, Sciences and Technology*, 2(4), 694–705.
<https://doi.org/10.5281/zenodo.15049264>
- Chen, M., Liu, Q., Huang, S., & Dang, C. (2022). Environmental cost control system of manufacturing enterprises using artificial intelligence based on value chain of circular economy. *Enterprise Information Systems*, 16(8–9).
<https://doi.org/10.1080/17517575.2020.1856422>
- Dessyla, E., & Susanti, M. (2024). Pengaruh capital structure, firm size, intellectual capital dan profitability terhadap firm value. *Jurnal Paradigma Akuntansi*, 6(2), 733–742.
<https://doi.org/10.24912/jpa.v6i2.29711>
- Dinniyah, T., & Nuzula, N. F. (2021). The influence of environmental cost on profitability and firm value. In *Proceedings of the 3rd Annual International Conference on Public and Business Administration (AICoBPA 2020)* (pp. 277–280).
<https://doi.org/10.2991/aebmr.k.210928.054>
- Eku, R. T., & Hasnawati, H. (2024). Pengaruh biaya lingkungan dan pengungkapan lingkungan terhadap nilai perusahaan dengan dewan komisaris independen sebagai pemoderasi. *Journal of Creative Student Research*, 2(1), 97–116.
<https://doi.org/10.55606/jcsrpolitama.v2i1.3464>
- Fachrezi, M. F., Fauziah, S., Iqbal, M., & Firmansyah, A. (2024). ESG risk dan nilai perusahaan di Indonesia. *Akuntansiku*, 3(2), 64–76.
<https://doi.org/10.54957/akuntansiku.v3i2.691>
- Gawęda, A. (2025). Does environmental, social, and governance performance elevate firm value? International evidence. *Finance Research Letters*, 73, 106639.
<https://doi.org/10.1016/j.frl.2024.106639>

- Ilmi, N., & Setiyaningsih, T. A. (2025). Pengaruh kinerja lingkungan dan biaya lingkungan terhadap nilai perusahaan dengan profitabilitas sebagai variabel intervening. *Innovative: Journal of Social Science Research*, 5(1), 955–966. <https://doi.org/10.31004/innovative.v5i1.17796>
- Indonesia Stock Exchange. (2025, January 22). *Perkuat transparansi data ESG, BEI luncurkan ESG reporting untuk perusahaan tercatat* (Press release No. 007/BEI.SPR/01-2025). <https://www.idx.co.id/id/berita/siaran-pers/2306>
- Li, L., Saat, M., & Jiayi, W. (2024). The effect of ESG disclosure on firm value: An empirical evidence from Chinese listed companies. *International Journal of Academic Research in Business and Social Sciences*, 14. <https://doi.org/10.6007/IJARBS/v14-i1/20524>
- Mahajan, R., Lim, W. M., Sareen, M., Kumar, S., & Panwar, R. (2023). Stakeholder theory. *Journal of Business Research*, 166, 114104. <https://doi.org/10.1016/j.jbusres.2023.114104>
- Maharani, C. F. (2025). The effect of intellectual capital and corporate governance on firm value with profitability as a moderating variable. *Journal of Social Research*, 5(1). <https://doi.org/10.55324/josr.v5i1.2960>
- McBrayer, G. A. (2018). Does persistence explain ESG disclosure decisions? *Corporate Social Responsibility and Environmental Management*, 25(6), 1074–1086. <https://doi.org/10.1002/csr.1521>
- Ni, Y., Cheng, Y. R., & Huang, P. (2020). Do intellectual capitals matter to firm value enhancement? Evidences from Taiwan. *Journal of Intellectual Capital*, 22(4), 725–743. <https://doi.org/10.1108/JIC-10-2019-0235>
- Noor, A. A. A., Hartikasari, A. I., Fakhruddin, I., & Mudjiyanti, R. (2022). The effect of eco-efficiency on firm value with financial performance as a moderating variable. *Innovation Business Management and Accounting Journal*, 1(4), 117–128. <https://doi.org/10.56070/ibmaj.v1i4.21>
- Novianti, M., Abbas, D. S., & Aulia, T. Z. (2024). Pengaruh likuiditas dan profitabilitas terhadap nilai perusahaan. *Jurnal Mutiara Ilmu Akuntansi*, 2(1), 56–66. <https://doi.org/10.55606/jumia.v2i1.2276>
- Oktrivina, A., Nelyumna, N., Harnovinsah, H., Atikah, S., & Sujana, A. P. (2025). Pengaruh ESG score terhadap kinerja keuangan. *Jurnal Akuntansi dan Manajemen*, 22(2), 117–134. <https://doi.org/10.36406/jam.v22i2.186>
- Park, S. R., & Jang, J. Y. (2021). The impact of ESG management on investment decision: Institutional investors' perceptions of country-specific ESG criteria. *International Journal of Financial Studies*, 9(3), 48. <https://doi.org/10.3390/ijfs9030048>
- Pramesti, W. C., Sudarma, M., & Ghofar, A. (2024). Environmental, social, and governance (ESG) disclosure, intellectual capital and firm value: The moderating role of financial performance. *Jurnal Reviu Akuntansi dan Keuangan*, 14(1), 103–121. <https://doi.org/10.22219/jrak.v14i1.32849>
- Pulic, A. (2004). Intellectual capital: Does it create or destroy value? *Measuring Business Excellence*, 8(1), 62–68. <https://doi.org/10.1108/13683040410524757>
- Putri, A. S., & Miftah, D. (2021). Pengaruh intellectual capital, leverage, profitabilitas, dan likuiditas terhadap nilai perusahaan. *CURRENT: Jurnal Kajian Akuntansi dan Bisnis Terkini*, 2(2), 259–277. <https://doi.org/10.31258/jc.2.2.259-277>
- Putri, Indriani, E., & Hudaya, R. (2024). Analisis pengaruh kinerja lingkungan dan biaya lingkungan terhadap nilai perusahaan dengan kinerja keuangan sebagai variabel intervening. *Innovative: Journal of Social Science Research*, 4(1), 6337–6351. <https://doi.org/10.31004/innovative.v4i1.8300>
- Rivandi, M. (2022). Pengaruh intellectual capital disclosure dan profitabilitas terhadap nilai perusahaan. *Jurnal Akuntansi Trisakti*. <https://doi.org/10.25105/jat.v8i1.7631>
- Sapna, A., Said, S., & Mellisyah, M. (2025). Pengaruh struktur modal, kebijakan dividen, dan profitabilitas terhadap nilai perusahaan: Studi kasus perusahaan perbankan yang terdaftar di Bursa Efek Indonesia periode 2020–2023. *Paradoks: Jurnal Ilmu Ekonomi*, 8(2), 1126–1144. <https://doi.org/10.57178/paradoks.v8i2.1284>

- Sihono, A. (2024). Does dividend policy, audit quality, capital structure and profitability affect firm value? *Klabat Accounting Review*, 5(1), 12–23.
<https://doi.org/10.60090/kar.v5i1.1046.12-23>
- SolAbility Sustainable Intelligence. (2024). *Global Sustainable Competitiveness Index 2024*.
<https://solability.com/pdfs/gsci-report-2024.pdf>
- Suseno, G., Putri, E., Sari, N., & Meilita, W. (2024). Tobin's Q as a mediating variable in the relationship between financial ratios and stock prices: An analysis. *E-Jurnal Akuntansi*, 34(5), 1078–1092. <https://doi.org/10.24843/EJA.2024.v34.i05.p01>
- Susilawati, S., Mufliha, A. S., Samukri, & Suryaningsih, M. (2026). Nilai perusahaan sektor property dan real estate: Peran intellectual capital, business risk, dan financial distress. *Jurnal Akuntansi dan Governance*, 6(2), 151–180.
<https://doi.org/10.24853/jago.6.2.151-180>
- Susilawati, S., Suryaningsih, M., Saleh, R., & Risdianto, R. (2025). Sustainability challenges: The moderation of sustainability transparency for tax avoidance and green innovation in improving company performance. *International Journal of Sustainable Development and Planning*, 20(9), 3837–3846.
<https://doi.org/10.18280/ijstdp.200915>
- Syahwallistiana, N., & Yusuf, N. (2025). Pengaruh financial leverage, kinerja keuangan dan environmental social and governance (ESG) terhadap nilai perusahaan. *Jurnal Nusa Akuntansi*, 2(2), 852–876. <https://doi.org/10.62237/jna.v2i2.243>
- Talan, G., Sharma, G. D., Pereira, V., & Muschert, G. W. (2024). From ESG to holistic value addition: Rethinking sustainable investment from the lens of stakeholder theory. *International Review of Economics & Finance*, 96, 103530.
<https://doi.org/10.1016/j.iref.2024.103530>
- Tansil, V. F., & Tangke, P. (2025). The impact of environmental, social, and governance disclosure on firm value with profitability as a moderating variable. *AJAR*, 8(2), 211–233. <https://doi.org/10.35129/t3xk6s74>
- Tunggadi, M., & Kampo, K. (2025). The effect of environmental performance on firm value: Role of profitability. *AJAR*, 8(2), 292–306. <https://doi.org/10.35129/jz1hxx79>
- Wiadnyani, D. A. P. M., & Artini, L. G. S. (2023). Influence of NPL, BOPO, LDR, and ROA on firm value: Study of banking sub-sector companies on the Indonesia Stock Exchange 2019–2021. *European Journal of Business and Management Research*, 8(4), 261–266. <https://doi.org/10.24018/ejbr.2023.8.4.2062>
- Wu, S., Li, X., Du, X., & Li, Z. (2022). The impact of ESG performance on firm value: The moderating role of ownership structure. *Sustainability*, 14(21), 14507.
<https://doi.org/10.3390/su142114507>
- Wulandhari, K., & Machdar, N. M. (2025). Kontribusi biaya lingkungan, green accounting, CSR, dan ukuran perusahaan dalam meningkatkan profitabilitas perusahaan. *Jurnal Mutiara Ilmu Akuntansi*, 3(3), 40–54. <https://doi.org/10.55606/jumia.v3i1.3552>
- Xu, J., & Liu, F. (2020). The impact of intellectual capital on firm performance: A modified and extended VAIC model. *Journal of Competitiveness*, 12(1), 161–176.
<https://doi.org/10.7441/joc.2020.01.10>
- Yulianti, Y. (2023). Company value analysis using ratio models Tobin's Q at PT Gudang Garam Tbk from 2012 to 2021. *Indonesian Financial Review*, 3(1), 34–46.
<https://doi.org/10.55538/ifr.v3i1.24>
- Yuliawati, R., & Alinsari, N. (2022). Pengaruh modal intelektual terhadap nilai perusahaan dengan profitabilitas sebagai variabel moderasi. *Owner: Riset dan Jurnal Akuntansi*, 6(3), 2808–2818. <https://doi.org/10.33395/owner.v6i3.939>
- Zumente, I., & Bistрова, J. (2021). ESG importance for long-term shareholder value creation: Literature vs. practice. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 127. <https://doi.org/10.3390/joitmc7020127>