

Corporate Social Responsibility Moderates Green Accounting and Technological Innovation on Firm Value

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Abstract: Firm value serves as an important measure of how investors assess a company's performance and future prospects. As the business environment continues to evolve, environmental practices, technological innovation, and corporate social responsibility (CSR) have become increasingly important factors shaping these assessments. This study examines the effects of Green Accounting and Technological Innovation on Firm Value and investigates the moderating role of CSR among industrial and consumer non-cyclical companies listed on the Indonesia Stock Exchange during 2020–2024. A quantitative associative research design was employed using secondary data collected from annual reports, sustainability reports, PROPER reports, the Indonesia Stock Exchange, and official company websites. Using purposive sampling, the study obtained a sample of 37 companies, representing 185 observations. The data were analyzed through panel data regression and Moderated Regression Analysis (MRA) using EViews 13. The findings show that Green Accounting has a negative effect on Firm Value, whereas Technological Innovation does not significantly affect Firm Value. CSR significantly moderates the relationship between Green Accounting and Firm Value by weakening the relationship, but does not significantly moderate the relationship between Technological Innovation and Firm Value. These results indicate that environmental practices, technological innovation, and CSR need to be managed and communicated in ways that clearly demonstrate their economic value and broader benefits to stakeholders.

Article history:

Received: 30 June 2026

Revised: 21 September 2026

Accepted: 21 September 2026

Published: 26 September 2026

Keyword:

Firm Value, Green Accounting,
Technological Innovation,
Corporate Social Responsibility

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How to cite: Agustyo, B. A., Rosini, I., Kusumaningsih, A., & Febriyanto, M. I. (2026). Corporate Social Responsibility Moderates Green Accounting and Technological Innovation on Firm Value. *Jurnal Ekonomi, Manajemen, dan Bisnis*, 4(3), 1410–1422. <https://doi.org/10.70716/emis.v4i3.695>

INTRODUCTION

Firm value reflects the extent to which the market evaluates a company's performance, future prospects, and capacity to generate economic benefits. From an investor's perspective, it represents the market's assessment of a company's financial position and potential for future growth. Companies with relatively high market valuations are often perceived as possessing favorable prospects, while fluctuations in market value may indicate changes in investors' responses to information about corporate performance and strategic decisions. One widely applied indicator of firm value is the Price-to-Book Value (PBV) ratio, which measures the relationship between a company's market price per share and its book value per share. Accordingly, PBV offers a market-oriented measure of how investors value a company in relation to the accounting value of its equity.

The relevance of firm value is particularly evident in the industrial sector because business activities in this sector are strongly connected with resource consumption, environmental consequences, technological advancement, and evolving stakeholder expectations. Stock price data for the industrial sector show considerable variation over the 2021–2024 period. The average stock price increased from IDR 994.90 in 2021 to IDR 1,215.89 in 2022, before declining to IDR 1,154.87 in 2023 and IDR 1,046.80 in 2024. These changes suggest that market valuation is subject to

fluctuations associated with a range of internal and external conditions. This situation provides an appropriate context for investigating corporate factors that may be related to changes in firm value.

Green Accounting has emerged as one factor that may be relevant to firm value. This approach integrates environmental considerations into accounting practices through the identification and reporting of information concerning environmental activities, performance, and expenditures. By implementing Green Accounting, companies can provide stakeholders with information about their environmental commitment and their efforts to manage environmental consequences. For investors, this information may constitute an additional consideration when assessing corporate sustainability and future business prospects. However, empirical findings regarding the association between Green Accounting and Firm Value remain inconsistent. Earlier studies have identified positive, negative, and statistically insignificant relationships. Such variation suggests that investors may interpret environmental accounting practices differently, particularly in terms of their implications for corporate performance and prospective economic benefits.

Technological Innovation constitutes another factor potentially related to Firm Value. It refers to a company's capacity to apply technological knowledge, systems, processes, and resources to enhance operational activities, develop products or services, and sustain competitive advantage. Expenditure on technological innovation can create opportunities for greater efficiency and long-term business development. Nevertheless, innovation activities often require considerable financial resources and may not generate financial benefits immediately. This characteristic may explain the inconsistent findings reported in previous research on the relationship between Technological Innovation and Firm Value. While some studies have identified a positive association, other studies have found either insignificant or negative effects.

Corporate Social Responsibility (CSR) offers an additional perspective for understanding how companies communicate their economic, social, and environmental commitments to stakeholders. CSR involves corporate initiatives and disclosures that reflect attention to the interests of stakeholders beyond purely financial considerations. Through CSR disclosure, companies can demonstrate their commitment to responsible business conduct while addressing social and environmental expectations. Consequently, CSR may shape stakeholders' interpretations of information associated with environmental management and technological development. Within this research context, CSR is therefore viewed not only as a form of corporate responsibility but also as a contextual factor that may alter the relationships between Green Accounting, Technological Innovation, and Firm Value.

The industrial and consumer non-cyclical sectors constitute a relevant context for examining these relationships because companies operating in these sectors encounter environmental, technological, and social considerations that may affect both corporate activities and stakeholder perceptions. Environmental management may require firms to dedicate resources to responsible production practices and environmental initiatives, whereas technological advancement may necessitate sustained investment to preserve competitiveness. Simultaneously, stakeholders increasingly expect companies to demonstrate responsible business conduct through CSR initiatives and related disclosures. These circumstances raise the question of whether environmental accounting and technological innovation are reflected in market-based firm valuation and whether CSR influences the manner in which these relationships are manifested.

The mixed findings reported in previous empirical studies reveal a research gap concerning the relationships among Green Accounting, Technological Innovation, CSR, and Firm Value. Differences in research contexts, measurement techniques, industry characteristics, and stakeholder responses may account for the divergent findings reported in earlier studies. More specifically, limited empirical evidence has addressed whether CSR modifies the relationship between environmental accounting and firm value and whether a comparable moderating effect occurs in the relationship between technological innovation and firm value. Further investigation is therefore warranted to obtain

empirical evidence from industrial and consumer non-cyclical companies listed on the Indonesia Stock Exchange.

This study draws upon Signaling Theory and Legitimacy Theory. Spence (1973) introduced Signaling Theory to explain how organizations communicate information to external parties in an effort to reduce information asymmetry between management and stakeholders. Within this perspective, Green Accounting and Technological Innovation may generate information that investors can consider when assessing corporate prospects and potential future economic benefits. In contrast, Legitimacy Theory, developed by Dowling and Pfeffer (1985), emphasizes the importance of maintaining consistency between organizational activities and prevailing expectations within society. From this perspective, CSR may function as a mechanism through which companies demonstrate their commitment to social and environmental responsibilities and maintain their legitimacy in the eyes of stakeholders.

Building on these considerations, this study investigates the effects of Green Accounting and Technological Innovation on Firm Value while examining Corporate Social Responsibility as a moderating variable. The analysis focuses on industrial and consumer non-cyclical companies listed on the Indonesia Stock Exchange during the 2020–2024 period. By examining the relationships among these variables simultaneously, this study seeks to provide empirical evidence on the extent to which environmental accounting, technological innovation, and CSR are associated with market-based measures of firm value.

The variables examined in this study are conceptually organized into a framework that illustrates the proposed relationships among Green Accounting, Technological Innovation, Corporate Social Responsibility, and Firm Value, as presented in Figure 1.

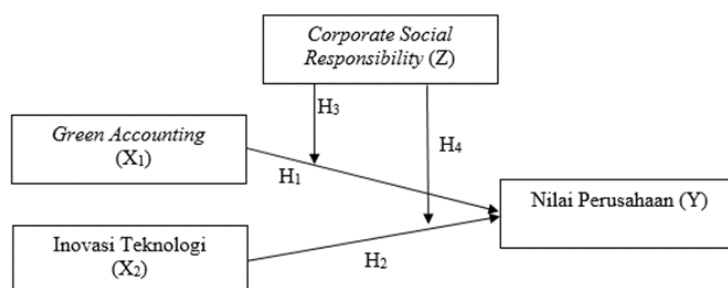


Figure 1. Conceptual Framework

Based on the conceptual framework presented in Figure 1, the hypotheses formulated in this study are as follows:

H1: Green Accounting has a positive effect on Firm Value.

H2: Technological Innovation has a positive effect on Firm Value.

H3: Corporate Social Responsibility strengthens the relationship between Green Accounting and Firm Value.

H4: Corporate Social Responsibility strengthens the relationship between Technological Innovation and Firm Value.

RESEARCH METHOD

This research employs a quantitative associative design to investigate the relationships among the variables examined in the study. Green Accounting and Technological Innovation are treated as the independent variables, Firm Value is specified as the dependent variable, and Corporate Social Responsibility (CSR) is positioned as the moderating variable. The analysis is based on secondary data obtained from corporate annual reports, sustainability reports, PROPER reports published by the

Ministry of Environment and Forestry, the Indonesia Stock Exchange, and official corporate websites for the 2020–2024 observation period.

Data processing and statistical analysis are performed using EViews 13 and Microsoft Excel 2024. The population consists of 197 companies listed on the Indonesia Stock Exchange, including 65 companies in the industrial sector and 132 companies in the consumer non-cyclical sector. Companies included in the sample are determined using purposive sampling according to the specified selection criteria. The sample selection procedure is summarized in Table 1.

Table 1. Sample Selection

Criteria	Elimination	Total
Industrial and consumer non-cyclical companies listed on the Indonesia Stock Exchange during 2020–2024		197
Companies publishing annual reports and sustainability reports during 2020–2024	(65)	132
Companies with PROPER ratings during 2020–2024	(8)	124
Companies with complete Technological Innovation data based on intangible asset disclosure	(88)	37
Selected research sample		37
Years of observation		5
Total observations		185

Source: Secondary data processed 2026

Firm Value is the dependent variable and is measured using the Price-to-Book Value (PBV) ratio. Green Accounting is measured using the PROPER rating issued by the Ministry of Environment and Forestry. For analytical purposes, the PROPER categories are converted into numerical scores, with Gold assigned a value of 5, Green a value of 4, Blue a value of 3, Red a value of 2, and Black a value of 1.

Technological Innovation is operationalized as the ratio of total intangible assets to total assets. Intangible assets may comprise innovation-related resources, including patents, copyrights, and software technology. Meanwhile, Corporate Social Responsibility (CSR) is measured using a disclosure index developed with reference to POJK No. 51/POJK.03/2017. Each CSR item disclosed by a company is assigned a value of 1, whereas an undisclosed item receives a value of 0. The number of disclosed items is then divided by the 50 disclosure indicators specified in the measurement framework. The operational definitions and measurement procedures for each research variable are presented in Table 2.

Table 2. Operational Variables

Variable	Indicator / Measurement	Scale	Reference
Firm Value (Y)	PBV = Share Price per Share / Book Value per Share	Ratio	Prayitno & Bayunitri (2020)
Green Accounting (X1)	PROPER rating: 5 = Gold; 4 = Green; 3 = Blue; 2 = Red; 1 = Black	Ordinal	Sholichah & Puspawati (2023)
Technological Innovation (X2)	Total Intangible Assets / Total Assets	Ratio	Bagna et al. (2021)
Corporate Social Responsibility (Z)	Total items disclosed / 50 POJK No. 51/POJK.03/2017 indicators	Ratio	Pratiti et al. (2024)

Source: Various sources adjusted to research variables, 2026

Two regression approaches are employed in the analysis, namely multiple linear regression and Moderated Regression Analysis (MRA). MRA is applied to determine whether the relationship between the independent variables and the dependent variable changes in the presence of the moderating variable. The analysis is represented through linear regression equations involving the relevant main effects and interaction terms. The regression models are specified as follows:

First Regression Model Equation:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon$$

Second Regression Model Equation:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 Z_{it} + \beta_4 X_{1it} * Z_{it} + \beta_5 X_{2it} * Z_{it} + \varepsilon$$

Information:

Y_{it}	: Firm Value
β_0	: Konstanta
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$	: Coefficients
X_{1it}	: Green Accounting
X_{2it}	: Technological Innovation
Z_{it}	: Corporate Social Responsibility
$X_{1it} * Z_{it}$	: Interaction Between CSR and Green Accounting
$X_{2it} * Z_{it}$	: Interaction Between CSR and Technological Innovation
ε	: Error term

RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive statistics were used to summarize the characteristics of the variables observed among companies operating in the industrial and consumer non-cyclical sectors in Indonesia. The descriptive results for each sector are presented separately in Tables 3 and 4.

Table 3. Descriptive Statistics Industrial Sector

Keterangan	Nilai Perusahaan (Y)	Green Accounting (X1)	Inovasi Teknologi (X2)	CSR (Z)
Mean	0.909442	3.272727	0.001667	0.838545
Median	0.819900	3.000000	0.000700	0.920000
Maximum	2.388100	4.000000	0.011500	1.000000
Minimum	0.253000	3.000000	0.000000	0.100000
Std. Dev.	0.474364	0.449467	0.002270	0.214816
Skewness	1.255865	1.020621	2.110816	-1.972.108
Kurtosis	4.468499	2.041667	8.100608	6.426539
Jarque-Bera Probability	19.39958	11.65328	100.4629	62.55793
Sum	50.01930	180.0000	0.091700	46.12000
Sum Sq. Dev.	12.15114	10.90909	0.000278	2.491884
Observations	55	55	55	55

Source: Data analysis using EViews version 13 (2026)

Table 4. Descriptive Statistics Consumer Non-Cyclical Sector

Keterangan	Nilai Perusahaan (Y)	Green Accounting (X1)	Inovasi Teknologi (X2)	CSR (Z)
Mean	3.509000	3.338462	0.019522	0.868923
Median	1.245350	3.000000	0.004000	0.960000
Maximum	56.79190	5.000000	0.129500	1.000000

Minimum	-0.821300	3.000000	0.000000	0.280000
Std. Dev.	8.783009	0.604298	0.034117	0.201314
Skewness	4.428549	1.591371	2.120196	-1.551.990
Kurtosis	22.04135	4.383058	6.208733	3.692330
Jarque-Bera	2388.865	65.23125	153.1665	54.78426
Probability	0.000000	0.000000	0.000000	0.000000
Sum	456.1700	434.0000	2.537900	112.9600
Sum Sq. Dev.	9951.222	47.10769	0.150156	5.228049
Observations	130	130	130	130

Source: Data analysis using EViews version 13 (2026)

The descriptive statistics indicate that the consumer non-cyclical sector records higher mean values than the industrial sector across all four variables, namely Firm Value, Green Accounting, Technological Innovation, and CSR. The consumer non-cyclical sector also exhibits greater standard deviations for Firm Value and Technological Innovation. This variation suggests that companies in the consumer non-cyclical sector differ more substantially in terms of market valuation and the proportion of intangible assets relative to companies in the industrial sector.

Panel Data Regression Estimation

Table 5. Conclusion of the Equation Model Test

No.	Metode	Pengujian	Hasil
1	Uji Chow	Common Effect Model vs Fixed Effect Model	Fixed Effect Model
2	Uji Hausman	Fixed Effect Model vs Random Effect Model	Fixed Effect Model

Source: Data analysis using EViews version 13 (2026)

Based on the results of the model selection test in Table 5, it was concluded that the model used is the Fixed Effects Model

Classic Assumption Test

Normality Test

A normality test was conducted on the residuals using the Jarque-Bera test with a significance level of 0.05. The following are the results of the normality test:

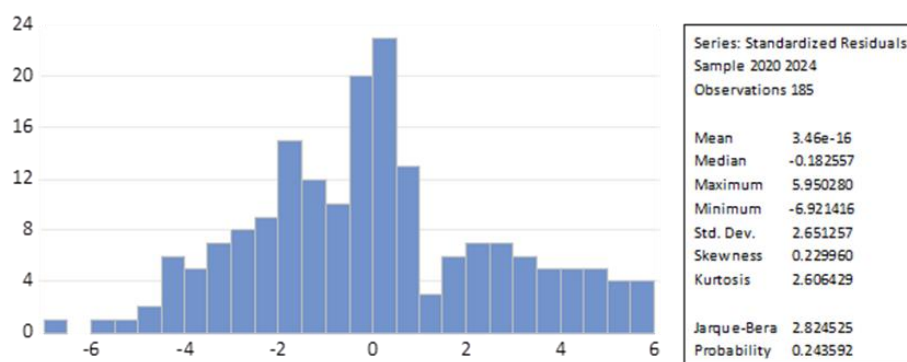


Figure 2. Normality Test

Source: Data analysis using EViews version 13 (2026)

Based on the normality test shown in Figure 2, the Jarque-Bera value was 2.824525 with a probability of 0.243592. Since this value is greater than 0.05, it can be concluded that the data was normal.

Multicollinearity Test

Multicollinearity was assessed by examining the correlation coefficients among the independent variables. According to Ghozali (2018:71), a correlation coefficient greater than 0.8 between independent variables may indicate a multicollinearity problem. The results are presented in Table 6.

Table 6. Multicollinearity Test

	Green Accounting	Technological Innovation
Green Accounting	1.000000	0.008797
Technological Innovation	0.008797	1.000000

Source: Data analysis using EViews version 13 (2026)

Based on the results of the multicollinearity test in Table 6, the correlation between X1 and X2 is 0.008797. Therefore, it can be concluded that there are no signs of significant multicollinearity among the independent variables tested in this analysis.

Heteroscedasticity Test

Heteroscedasticity can be tested using the ARCH test, a significant result is determined when the p-value is above 0.05, meaning there is no heteroscedasticity. The following are the results of the heteroscedasticity test:

Table 7. Heteroscedasticity Test

Heteroskedasticity Test: ARCH			
F-statistic	2.72614	Prob. F(10,109)	0.0937
Obs*R-squared	18.4054	Prob. Chi-Square(10)	0.0986

Source: Data analysis using EViews version 13 (2026)

Based on the results of the heteroscedasticity test in Table 7, using the ARCH test, the value of Obs*R-squared is 18.40535 and the Probability of Obs*R-squared is 0.0986. These results indicate that the regression model satisfies the assumption of heteroscedasticity because the value exceeds the significance level of 0.05. Therefore, it can be concluded that there is no heteroscedasticity in this data.

Autocorrelation Test

The Durbin-Watson test can be used to test the assumption of autocorrelation. The following are the results of the autocorrelation test:

Table 8. Autocorrelation Test

R-squared	0.837856	Mean dependent var	2.736158
Adjusted R-squared	0.795654	S.D. dependent var	7.454408
S.E. of regression	3.369735	Akaike info criterion	5.452417
Sum squared resid	1657.846	Schwarz criterion	6.131303
Log likelihood	-465.3486	Hannan-Quinn criter.	5.727553
F-statistic	19.85357	Durbin-Watson stat	1.802251
Prob(F-statistic)	0.000000		

Source: Data analysis using EViews version 13 (2026)

Based on the results of the autocorrelation test in Table 8, it can be seen that the Durbin-Watson value of 1.802251 falls between -4 and +4, or $-4 < 1.802251 < +4$. Therefore, it can be concluded that there is no autocorrelation in this study and that this model is appropriate for use.

Panel Data Regression Analysis

Regression analysis is a type of research that focuses on the relationship between a dependent variable and one or more independent variables.

Table 9. Panel Data Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.012979	3.696941	2.167462	0.0318
Green Accounting	-1.726981	1.092269	-1.581095	0.0160
Technological Innovation	32.00268	77.04997	0.415350	0.6785
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.837856	Mean dependent var		2.736158
Adjusted R-squared	0.795654	S.D. dependent var		7.454408
S.E. of regression	3.369735	Akaike info criterion		5.452417
Sum squared resid	1657.846	Schwarz criterion		6.131303
Log likelihood	-465.3486	Hannan-Quinn criter.		5.727553
F-statistic	19.85357	Durbin-Watson stat		1.802251
Prob(F-statistic)	0.000000			

Source: Data analysis using EViews version 13 (2026)

Based on the results of the panel data regression analysis in Table 10 above, the following regression results were obtained:

$$Y_{it} = 8.012979 - 1.726981 + 32.00268 + \varepsilon$$

Based on the regression equation, it can be concluded that:

1. The constant value of 8.012979 indicates that if the independent variable is considered absent, there will be an increase in Firm Value of 8.012979.
2. The Green Accounting variable has a coefficient of -1.726981, a negative regression coefficient indicating that for every 1% increase in Green Accounting, the Firm Value variable will experience a decrease of 1.726981.
3. The Technological Innovation variable has a coefficient of 32.00268, a positive regression coefficient indicating that for every 1% increase in Technological Innovation, the Firm Value variable will experience an increase of 32.00268.

Based on the results of the partial test/hypothesis test, the following results were found:

1. For the Green Accounting variable, the t-statistic is -1.581095 and the probability value is $0.0160 < 0.05$, indicating that Green Accounting has a negative effect on firm value.
2. For the Technology Innovation variable, the t-statistic is 0.415350 and the probability value is $0.6785 > 0.05$, indicating that Technology Innovation has no effect on Firm Value.

Moderated Regression Analysis

Table 10. Results of Moderated Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.235306	2.049345	0.114820	0.9087
Green Accounting	0.921173	0.645251	1.427619	0.0455
Technological Innovation	8.842684	9.303114	0.950508	0.3435
CSR	2.825609	1.947632	1.450792	0.1490
GA X CSR	-1.067622	0.609449	-1.751783	0.0419
TI X CSR	-2.445907	7.207505	-0.339356	0.7348

Source: Data analysis using EViews version 13 (2026)

Based on the results of the moderated regression analysis in Table 10 above, the following regression results were obtained:

$$Y_{it} = 0.235306 + 0.921173 + 8.842684 + 2.825609 - 1.067622 - 2.445907 + \varepsilon$$

Based on the regression equation, it can be concluded that:

1. In the first interaction, Corporate Social Responsibility moderates the relationship between Green Accounting and Firm Value, as evidenced by a probability value of $0.0419 < 0.05$, therefore, it can

be concluded that Corporate Social Responsibility moderates the relationship between Green Accounting and Firm Value. Based on the interaction coefficient of -1.067622 and the Green Accounting coefficient of 0.921173, it can be concluded that Green Accounting weakens the positive relationship between Green Accounting and Firm Value.

2. In the second interaction, Corporate Social Responsibility moderates the relationship between Technological Innovation and Firm Value. As can be seen from the interaction results, the probability value is $0.7348 > 0.05$, therefore, it can be concluded that CSR does not moderate the relationship between Technological Innovation and Firm Value.

Discussion

The Effect of Green Accounting on Firm Value

The first finding, based on the results reported in Table 9, shows a t-statistic of -1.581095 and a p-value of 0.0160. These results indicate a negative relationship between Green Accounting and Firm Value, leading to the rejection of H1. This finding is consistent with Anisah et al. (2025), Elvia et al. (2025), Erwanto (2024), Gantino et al. (2023), and Melawati and Rahmawati (2022), who reported negative effects of Green Accounting on Firm Value.

The finding suggests that although Green Accounting is intended to enhance environmental transparency and accountability, its implementation may not be sufficient to improve investor perceptions when it is not accompanied by demonstrable improvements in profitability, cost efficiency, or competitive advantage. In this context, the market may not yet interpret Green Accounting as a long-term strategic investment and may instead perceive the associated expenditures as environmental compliance costs.

From the perspective of Signaling Theory, Green Accounting is expected to reduce information asymmetry by providing investors with information regarding a company's management of environmental risks. However, the findings indicate that this signal may not be interpreted positively by the market. Investors may place greater emphasis on short-term financial indicators, including profitability, cash flow, and revenue growth, than on environmental performance. In sectors characterized by substantial production activities, resource consumption, supply-chain operations, emissions, and packaging waste, environmental compliance may require additional expenditure on waste management, energy efficiency, emission control, reporting, and sustainable technologies. When these expenditures are not accompanied by clear evidence of economic benefits, they may be associated with lower Firm Value.

The Effect of Technological Innovation on Firm Value

The second finding, based on Table 9, produces a t-statistic of 0.415350 and a probability value of 0.6785. The result indicates that Technological Innovation does not have a statistically significant effect on Firm Value, resulting in the rejection of H2. This finding is consistent with Nugroho and Dewi (2022), Riyani et al. (2022), and Syahrir et al. (2019), who likewise reported that innovation does not significantly affect Firm Value.

The absence of a significant relationship suggests that the contribution of innovation to Firm Value may not be determined solely by financial resources or the level of corporate assets. Other organizational factors, such as innovation culture, organizational structure, and the effectiveness of technology management, may also influence whether technological investments generate measurable economic value. Consequently, measuring Technological Innovation solely through intangible assets may not fully capture the broader innovation process considered by investors, as also suggested by Setyadi et al. (2025).

According to Signaling Theory, technological innovation can potentially function as a positive signal because it reflects a company's efforts to develop competitive advantages, improve operational efficiency, and support long-term growth. Intangible assets, including software, licenses, patents,

copyrights, and technological systems, may represent strategic resources that are relatively difficult for competitors to replicate. Nevertheless, the results indicate that the information conveyed through the selected measure of Technological Innovation is not sufficiently strong to produce a statistically significant response in Firm Value.

The Moderating Role of CSR in the Relationship between Green Accounting and Firm Value

The third finding, based on Table 10, concerns the interaction between Corporate Social Responsibility, Green Accounting, and Firm Value. The interaction term has a probability value of 0.0419, which is below the 0.05 significance level. Its coefficient is -1.067622, while the Green Accounting coefficient is 0.921173. These results indicate that CSR significantly moderates the relationship between Green Accounting and Firm Value. However, the negative interaction coefficient indicates a weakening moderating effect, leading to the rejection of H3.

The result differs from the findings of Febrianto et al. (2025), Hasibuan et al. (2023), and Putri et al. (2025), who reported that CSR strengthens the relationship between Green Accounting and Firm Value. Based on Legitimacy Theory, CSR may function as a mechanism through which companies establish and maintain social legitimacy. Through CSR disclosure, companies communicate that their business activities are aligned with prevailing social norms, values, and expectations. From a theoretical perspective, CSR could be expected to reinforce the contribution of Green Accounting by helping investors understand environmental expenditures and activities as components of a broader sustainability strategy. However, the present findings suggest that increased CSR disclosure does not necessarily lead to a more favorable market response to Green Accounting or strengthen its association with Firm Value.

The Moderating Role of CSR in the Relationship between Technological Innovation and Firm Value

The fourth finding, based on Table 10, concerns the interaction between CSR, Technological Innovation, and Firm Value. The interaction term has a probability value of 0.7348, which is greater than 0.05, with an interaction coefficient of -2.445907 and a Technological Innovation coefficient of 8.842684. The result indicates that CSR does not significantly moderate the relationship between Technological Innovation and Firm Value. Accordingly, H4 is rejected.

This finding differs from Choi and Yoo (2022), who reported that CSR strengthens the effect of technological innovation on Firm Value. From the perspective of Legitimacy Theory, CSR may provide legitimacy for corporate innovation by demonstrating that technological development is pursued not only for economic objectives but also with consideration for social and environmental interests. CSR disclosure may also help address concerns associated with innovation, including substantial development costs, uncertain outcomes, and potential implementation risks. However, the present findings indicate that CSR disclosure does not significantly alter the relationship between Technological Innovation and Firm Value. This may suggest that CSR is primarily interpreted in terms of corporate compliance and social responsibility, whereas the economic contribution of technological innovation may be assessed separately based on its ability to generate measurable financial or market value.

CONCLUSION

This study examines the role of Corporate Social Responsibility (CSR) in moderating the effects of Green Accounting and technological innovation on firm value in industrial and non-cyclical consumer sector companies during the 2020–2024 period. The findings indicate that Green Accounting has a negative effect on firm value, suggesting that its implementation has not received a fully positive response from investors because it may be perceived primarily as an environmental compliance mechanism that requires additional costs and may consequently reduce firm value. Technological innovation, on the other hand, has no significant effect on firm value. Technological innovation outputs recorded as intangible assets, including software, patents, licenses, copyrights, and

trademarks, have not yet provided sufficiently strong signals to investors regarding their potential economic benefits and therefore have not contributed significantly to increasing firm value.

Furthermore, Corporate Social Responsibility weakens the relationship between Green Accounting and firm value. The simultaneous implementation of Green Accounting and CSR may be perceived by the market as increasing compliance costs and social responsibilities, which can place pressure on profitability and subsequently affect firm value. However, Corporate Social Responsibility does not moderate the relationship between technological innovation and firm value. This finding indicates that CSR may not function as a source of legitimacy capable of strengthening firm value when companies do not clearly communicate the social, environmental, and economic benefits generated through technological innovation. Overall, the findings highlight the importance of integrating environmental accounting, technological innovation, and CSR strategies in a manner that can clearly demonstrate their economic and broader stakeholder benefits.

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