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The Effect Of Green Accounting, Environmental Performance, And Environmental Costs On Financial Performance With CSR As A Moderating Variable

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Abstract

Growing environmental concerns have encouraged companies to integrate environmental considerations into their business activities while maintaining financial performance. Green accounting, environmental performance, and environmental costs have therefore become important aspects of corporate environmental management. This study examines the effects of green accounting, environmental performance, and environmental costs on financial performance, with corporate social responsibility as a moderating variable in non-cyclical consumer companies listed on the Indonesia Stock Exchange during 2020-2024. This quantitative study uses secondary data obtained from annual reports, sustainability reports, and PROPER decision letters. The sampling technique used was purposive sampling, resulting in a sample of 155 observations were selected and analyzed using Moderated Regression Analysis (MRA). The results indicate that green accounting and environmental performance have no significant effect on financial performance, while environmental costs have a significant negative effect. Furthermore, corporate social responsibility does not moderate the effects of green accounting, environmental performance, or environmental costs on financial performance. These findings suggest that environmental practices do not necessarily improve financial performance, while environmental costs may create financial burdens for companies.

Keywords: Green Accounting, Environmental Performance, Environmental Costs, Financial Performance, Corporate Social Responsibility.

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INTRODUCTION

The increasingly rapid development of the global economy has intensified competition among companies. Companies are required to effectively manage their financial performance and all their resources (Khairunisa & Pohan, 2022). Financial performance is crucial for companies because it reflects their ability to manage assets and generate profits. However, the majority of non-cyclical consumer companies had return on assets (ROA) below 5% during 2020-2024. This situation indicates that the utilization of assets to generate profits is still not optimal.

Sustainability practices are becoming an increasingly relevant factor for companies. The implementation of sustainability practices makes all costs arising from environmental practices more transparent, thereby impacting cost structures and managerial decision making (Husda & Azmiana, 2023). Researchers believe that green accounting, environmental performance, and environmental costs influence financial performance by managing a company's environmental impacts. However, previous research has yielded inconsistent results regarding the effects of these factors.

Previous research has shown inconsistent results regarding the relationship between environmental practices and financial performance. Ramadhani et al. (2022) and Putri et al. (2024) found that green accounting has a positive effect on financial performance. However, Angelina & Nursasi (2021) and Rachmayanti & Achyani (2024) found that green accounting has a negative effect on financial performance. This is because the implementation of green accounting does not increase customer trust, so its impact on the company's sales and profitability is minimal. Similar inconsistencies were also found in environmental performance, where Ramadhani et al. (2022) and Nurdiniah et al. (2024) found a positive effect, while Angelina & Nursasi (2021) and Harsanti et al. (2024) found no effect. Furthermore, environmental costs also showed different results, with Shah et al. (2023) and Harsanti et al. (2024) finding a positive effect, whereas Nurdiniah et al. (2024) and Wulandari et al. (2025) found a negative effect. This is because the more a company spends on environmental initiatives, the greater the impact on the stability of its financial performance, as these expenses can reduce profits.

These differences in research findings indicate that the relationship between environmental practices and financial performance remains inconclusive, thus requiring further research using different research objects and periods. This study aims to determine the effect of green accounting, environmental performance, and environmental costs on financial performance. In addition, this study examines the role

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of Corporate Social Responsibility (CSR) in moderating the effects of green accounting, environmental performance, and environmental costs on financial performance. The study focuses on non-cyclical consumer companies listed on the Indonesia Stock Exchange from 2020 to 2024. This sector was selected based on its production activities, which involve the use of resources, waste generation, and product packaging.

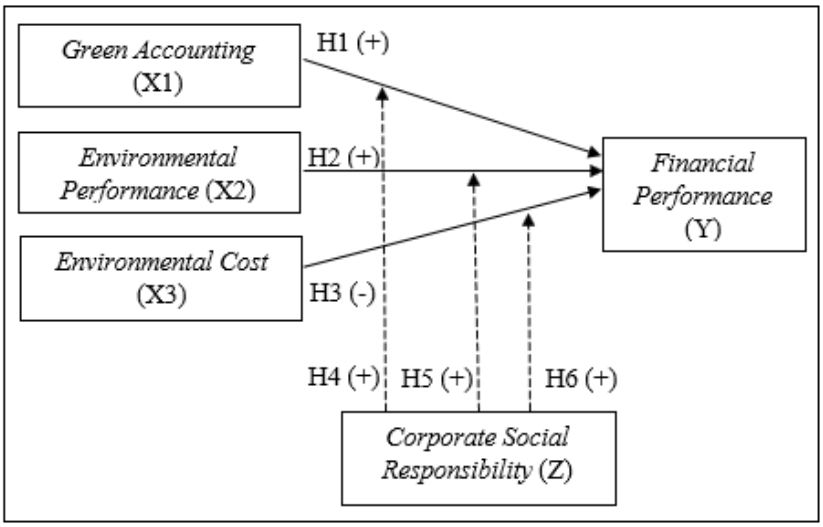


Figure 1: Conceptual Network

METHOD

This study is a quantitative study that uses numerical data and statistical analysis. The population of this study consists of non-cyclical consumer companies listed on the Indonesia Stock Exchange (IDX). The data used in this study are secondary data in the form of annual reports and/or sustainability reports of non-cyclical consumer companies listed on the Indonesia Stock Exchange for the 2020-2024 period, obtained from the IDX website (www.idx.co.id), and PROPER decision letters for the 2020-2024 period from the Ministry of Environment and Forestry website (proper.menlhk.go.id). The sampling technique used in this study was purposive sampling, which is a method of selecting a sample based on specific criteria. The data analysis methods used in this study were moderated regression analysis (MRA) using SPSS version 26.

RESULT AND DISCUSSION

Result

Descriptive statistics are used to provide an overview of the characteristics of the research data, including the maximum value, minimum value, mean, and standard

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deviation of each variable. This study used a sample of 31 non-cyclical consumer companies listed on the Indonesia Stock Exchange during the 2020-2024 period, resulting in a total of 155 observations.

Table 1: Descriptive Statistic Result

Descriptive Statistics					
Variabel	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
Green Accounting (X1)	155	0.0000	1.0000	0.7290	0.4459
Environmental Performance (X2)	155	2.0000	5.0000	3.0516	0.3914
Environmental Cost (X3)	155	0.0001	2.7822	0.0783	0.3119
Financial Performance (Y)	155	0.3097	34.8851	9.9201	6.7172
CSR (Z)	155	0.1099	0.7802	0.3846	0.1322
Valid N (listwise)	155				

Classical assumption tests are requirements that must be met in multiple linear regression analysis to determine whether the research model exhibits classical assumptions; these include tests for normality, multicollinearity, heteroscedasticity, and autocorrelation.

Normality Test

The normality test was conducted using the one-sample Kolmogorov-Smirnov test. The initial test indicated that the residuals were not normally distributed. Therefore, a square root (SQRT) transformation was performed.

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Table 2: Normality Test Result

	Unstandardized Residual
N	155
Asymp. Sig. (2-tailed)	0.200

After data transformation, the results of the one-sample Kolmogorov-Smirnov test showed an Asymp. Sig. (2-tailed) value greater than 0.05, specifically 0.200. This indicates that the residual data are normally distributed.

Multicollinearity Test

Multicollinearity test was conducted by examining the tolerance and variance inflation factor (VIF) values. The following are the results of the multicollinearity test:

Table 3: Multicollinearity Test Result

Variabel	Tolerance	VIF
Green Accounting (X1)	0.962	1.039
Environmental Performance (X2)	0.706	1.416
Environmental Cost (X3)	0.698	1.432
CSR (Z)	0.959	1.043

Based on the results of the multicollinearity test, the tolerance value was greater than 0.10 and the variance inflation factor (VIF) was less than 10 for each variable. Therefore, it can be concluded that there is no multicollinearity in the regression equation.

Heteroscedasticity Test

To determine whether heteroscedasticity is present in this study, the park test was conducted. The following are the results of the park test:

Table 4: Heteroscedasticity Test Result

Coefficients[a]					
		Unstandardized Coefficients			
Model		B	Std. Error	t	Sig.
1	(Constant)	.818	3.119	.262	.794

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	X1_Trans	-.527	.368	-1.431	.155
	X2_Trans	-.583	1.831	-.318	.751
	X3_Trans	.030	.831	.036	.971
	Z_Trans	-1.240	1.498	-.828	.409
a. Dependent Variable: LnRes3					

Based on the results, the significance values for all variables are above 0.05. Therefore, it can be concluded that the regression model in this study does not exhibit heteroscedasticity.

Autocorrelation Test

To determine whether autocorrelation is present in this study, the Durbin-Watson (DW) test was conducted. The initial autocorrelation test resulted in a Durbin-Watson value of 0.738, indicating the presence of autocorrelation. Therefore, the Cochrane-Orcutt procedure was applied to address the autocorrelation problem. After the correction, the Durbin-Watson value increased to 1.973. The following are the results of the autocorrelation test using the Durbin-Watson test:

Table 5: Autocorrelation Test Result

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.506[a]	.256	.236	.70808	1.973
a. Predictors: (Constant), Lag_Z, Lag_X3, Lag_X1, Lag_X2					
b. Dependent Variable: Lag_Y					

After performing the calculations and comparing the results with the Durbin-Watson table, the Durbin-Watson values were found to be 1.7906 < 1.973 < 2.2094; therefore, it can be concluded that there is no autocorrelation issue in the regression model used in this study.

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Moderated Regression Analysis

Table 6: Moderated Regression Analysis Test Result

Model	*Unstandardized Coefficients*	*t*	*Sig.*
	B		
(Constant)	1.264	2.538	0.012
Green Accounting (X1)	-0.065	-0.352	0.725
Environmental Performance (X2)	0.002	0.002	0.998
Environmental Cost (X3)	-2.017	-4.897	0.000
GA*CSR (X1*Z)	-1.456	-1.367	0.174
KL*CSR (X2*Z)	-0.844	-0.626	0.532
BL*CSR (X3*Z)	0.823	0.398	0.691

Based on the results of the moderated regression analysis, the regression equation obtained is as follows:

Y = 1,264 - 0,065GA + 0,002KL - 2,017BL - 1,456GA*CSR - 0,844KL*CSR + 0,823BL*CSR + e

Hypothesis Testing

Coefficient of Determination Test

Table 7: Coefficient of Determination Test Result

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.516[a]	.267	.237	.70758
a. Predictors: (Constant), X3Z, X1Z, Lag_X1, Lag_X2, X2Z, Lag_X3				

The adjusted R-squared value obtained was 0.237. This indicates that the variables green accounting, environmental performance, and environmental costs along with the moderating variable of corporate social responsibility, explain 23.7% of the variance in the financial performance, while the remaining 76.3% is influenced by factors outside the scope of this study.

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Simultaneous Test (F-Test)

Table 8: Simultaneous Test Result

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.749	6	4.458	8.904	.000[b]
	Residual	73.599	147	.501		
	Total	100.348	153			

a. Dependent Variable: Lag_Y
b. Predictors: (Constant), X3Z, X1Z, Lag_X1, Lag_X2, X2Z, Lag_X3

Based on the results of the F-test, it is found that the significance value is 0.000, which means that 0.000 < 0.05, and the calculated F value of 8.904 is greater than the table F value of 2.43 (df1 = k-1 = 5-1 = 4 and df2 = n-k = 155-5 = 150). Therefore, it can be concluded that the independent variables simultaneously influence the dependent variable, or Ha is accepted.

Partial Test (t-Test)

The basis for decision-making in this t-test can be seen in the significance level of 0.05, the calculated t-value, and the critical t-value. If the significance level is < 0.05 and the calculated t-value is > the critical t-value, then the independent variable has an effect on the dependent variable. The critical t-value is calculated using the formula df (n-k), resulting in a critical t-value of 1.976.

Table 9: Partial Test Result

Model	*Unstandardized Coefficients*		*t*	*Sig.*
	B	Std. Error		
(Constant)	1.264	0.498	2.538	0.012
Green Accounting (X1)	-0.065	0.185	-0.352	0.725
Environmental Performance (X2)	0.002	0.762	0.002	0.998
Environmental Cost (X3)	-2.017	0.412	-4.897	0.000

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GA*CSR (X1*Z)	-1.456	1.065	-1.367	0.174
KL*CSR (X2*Z)	-0.844	1.348	-0.626	0.532
BL*CSR (X3*Z)	0.823	2.068	0.398	0.691
a. Dependent Variable: Lag_Y				

DISCUSSION

The Effect of Green Accounting on Financial Performance

The results show that green accounting has no significant effect on financial performance, with a significance value of 0.725 > 0.05 and a t-value of 0.352 < 1.976. Thus, H1 is rejected. This finding indicates that the implementation of green accounting has not yet provided direct economic benefits or increased asset efficiency, as measured by ROA. Although green accounting can support corporate legitimacy and reputation, its benefits may require a longer period to translate into financial performance. Therefore, other factors such as economic conditions, management strategies, and operational efficiency likely exert a stronger influence on financial performance.

The Effect of Environmental Performance on Financial Performance

The results indicate that environmental performance has no significant effect on financial performance, with a significance value of 0.998 > 0.05 and a t-value of 0.002 < 1.976. Therefore, H2 is rejected. Based on legitimacy theory, good environmental performance is expected to enhance corporate image and stakeholder acceptance. In addition, environmental performance does not directly improve asset efficiency or profitability, as financial performance is influenced by other factors such as business strategies, economic conditions, and internal factors.

The Effect of Environmental Costs on Financial Performance

The results show that environmental costs have a significant negative effect on financial performance, with a significance value of 0.000 < 0.05 and a t-value of 4.897 > 1.976. Therefore, H3 is accepted. Environmental expenditures, such as waste management, pollution control, and energy conservation, increase the financial burden and may reduce company profits. Although these expenditures can enhance corporate reputation, stakeholder trust, and business sustainability, such benefits tend to be

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realized in the long term. Thus, higher environmental costs may lead to lower financial performance in the short term.

The Moderating Role of CSR in the Relationship between Green Accounting and Financial Performance

The results indicate that CSR does not moderate the effect of green accounting on financial performance, with a significance value of 0.174 > 0.05 and a t-value of 1.367 < 1.976. Therefore, H4 is rejected. CSR disclosure in this study has not become a primary consideration for stakeholders, particularly investors, in making economic decisions. CSR activities do not directly improve operational efficiency or profitability, and the extent of CSR disclosure does not guarantee effective asset utilisation. Thus, CSR is unable to strengthen the effect of green accounting on financial performance.

The Moderating Role of CSR in the Relationship between Environmental Performance and Financial Performance

The results indicate that CSR does not moderate the effect of environmental performance on financial performance, with a significance value of 0.532 > 0.05 and a t-value of 0.626 < 1.976. Therefore, H5 is rejected. This finding is inconsistent with stakeholder theory, which suggests that CSR disclosure can enhance stakeholder trust and strengthen the benefits of environmental performance. However, CSR disclosure in this study has not significantly increased stakeholder perceptions or provided additional financial benefits. The limited quality of CSR disclosure may reduce the value of environmental information to stakeholders. Thus, CSR is unable to strengthen the effect of environmental performance on financial performance.

The Moderating Role of CSR in the Relationship between Environmental Costs and Financial Performance

The results show that CSR does not moderate the effect of environmental costs on financial performance, with a significance value of 0.691 > 0.05 and a t-value of 0.398 < 1.976. Therefore, H6 is rejected. This finding is inconsistent with stakeholder and legitimacy theories, which suggest that CSR disclosure can enhance stakeholder trust and provide legitimacy for environmental expenditures. However, CSR disclosure has not changed stakeholders' perceptions of environmental costs as expenses that reduce profits.Thus, CSR is unable to weaken the negative effect of environmental costs on financial performance.

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CONCLUSION

Green accounting and environmental performance have no significant effect on financial performance, while environmental costs have a significant negative effect on financial performance in consumer non-cyclical companies listed on the Indonesia Stock Exchange during 2020–2024. Furthermore, Corporate Social Responsibility (CSR) does not moderate the effects of green accounting, environmental performance, or environmental costs on financial performance. These findings indicate that environmental practices and CSR disclosure have not yet provided direct financial benefits to companies during the study period. Therefore, companies need to integrate environmental and CSR activities more effectively into their long-term business strategies to generate economic value while maintaining environmental responsibility.

REFERENCES

Angelina, M., & Nursasi, E. (2021). Pengaruh penerapan green accounting dan kinerja lingkungan terhadap kinerja keuangan. Jurnal Manajemen Dirgantara, 14(2), 211–224.

Harsanti, P., Tri Handayani, R., & Ayu Susanti, D. (2024). Antecedents and Consequences of Corporate Social Responsibility Disclosure in Perspective Legitimation Theory. KnE Social Sciences, 2024, 384–394.

Husda, A. P., & Azmiana, R. (2023). Analisis Penerapan Green Accounting dan Environmental Performance Terhadap Kinerja Perusahaan Tambang. Measurement: Jurnal Akuntansi, 17(2), 346–351.

Khairunisa, S., & Pohan, H. T. (2022). Pengaruh Pengungkapan Emisi Karbon, Kinerja Lingkungan dan Biaya Lingkungan Terhadap Kinerja Keuangan Perusahaan. Jurnal Ekonomi Trisakti, 2(2), 283–292.

Nurdiniah, D., Meita, I., & Lestari, B. (2024). Analysis of the influence of environmental performance and environmental costs on financial performance: The role of corporate social responsibility (CSR) as a moderating variable. AKURASI: Jurnal Riset Akuntansi Dan Keuangan, 6(3), 367–384.

Putri, I. W. H., Widiasmara, A., & Murwani, J. (2024). Pengaruh Green Accounting, Kinerja Lingkungan Terhadap Kinerja Keuangan dengan Corporate Sosial Resposibility Sebagai Variabel Moderasi (Studi In SIMBA: Seminar Inovasi Manajemen Bisnis Dan Akuntansi)

Rachmayanti, F. E., & Achyani, F. (2024). The Effect Of Implementation Of Green Accounting And Environmental Performance On Financial Performance with

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Good Corporate Governance As A Moderation Variable (Empirical Study Of Mining Companies Listed On The Indonesian Stock For The 2017-2020 Period) E. Management Studies and Entrepreneurship Journal, 5(2), 4551–4562.

Ramadhani, K., Saputra, M. S., & Wahyuni, L. (2022). Pengaruh Penerapan Green Accounting Dan Kinerja Lingkungan Terhadap Kinerja Keuangan Dengan Tata Kelola Perusahaan Perusahaan Sebagai Variabel Moderasi. Jurnal Akuntansi Trisakti, 9(2), 227–242.

Shah, T. F., Puspitasari, O. R., & Hamzah, A. (2023). The Influence of Environmental Performance, Environmental Costs, Institutional Ownership, and Managerial Ownership on Financial Performance. Journal Socio Humanities Review (JSHR), 3(2), 2808–4144.

Wulandari, A. R., Christmawan, P. E. E., & Sumadi, B. M. S. (2025). Pengaruh Biaya Lingkungan Dan Kinerja Lingkungan Terhadap Kinerja Keuangan. EQUILIBRIUM: Jurnal Bisnis & Akuntansi (EJBA), 19(2), 217–225.

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