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GREEN ACCOUNTING AND FINANCIAL PERFORMANCE: EVIDENCE FROM BASIC MATERIALS MANUFACTURING COMPANIES

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Abstract:

This study investigates the impact of environmental costs and environmental performance on financial performance in manufacturing companies within the basic materials sector listed on the Indonesia Stock Exchange (IDX) during the 2021–2023 period. The research aims to provide empirical evidence on how green accounting practices influence profitability, measured by Return on Assets (ROA). The study employs a quantitative approach with a causal-comparative design, using purposive sampling to select 25 companies that consistently published financial reports and participated in the Ministry of Environment and Forestry's PROPER program. A total of 75 panel data observations were analyzed. Data were collected through documentation of financial statements, annual reports, and PROPER assessments, and further supported by literature review. Statistical analysis was conducted using descriptive statistics, classical assumption tests, and multiple linear regression with SPSS version 30.0. The results reveal that both environmental costs and environmental performance partially influence financial performance, while simultaneously they significantly affect ROA. These findings indicate that companies in the basic materials sector can achieve a balance between environmental responsibility and financial goals. The study supports legitimacy theory and stakeholder theory, suggesting that proactive environmental strategies not only fulfill regulatory compliance but also enhance firm value. This research contributes theoretically to green accounting in emerging markets and provides practical implications for management in formulating sustainability policies aligned with financial performance.

Keywords: *Green Accounting, Environmental Costs, Environmental Performance, Financial Performance, Basic Materials*

INTRODUCTION

In the midst of globalization and social pressure on environmental conservation, the demand for companies not only to pursue financial profits but

also to be responsible for ecological impacts is getting stronger. Industrial activities, particularly in the manufacturing sector, are often a major source of air, water, and ecosystem degradation. Therefore, the business paradigm is no longer enough to focus on production efficiency and profitability alone, but must also include elements of sustainability (*Sustainability*) in corporate strategy. In this context, traditional accounting is considered inadequate to explain the environmental impact that occurs due to the company's operational activities. In line with that, the concept *Green Accounting* or environmental accounting emerged as an integrative approach that connects economic, environmental, and social aspects simultaneously (Norouzi, 2022). *Green accounting* Enable companies to identify, measure, record, and report environmental costs and environmental performance as part of the company's reporting system. Thus, users of the report such as investors, regulators, and the public are given a more comprehensive picture of the company's performance(Salma Dewi Ambarsari et al., 2024). In the Indonesian context, environmental policies and regulations as well as sustainability reports are increasingly strengthened so that the practice of *Green Accounting* be relevant and urgent.

Regulations in Indonesia are increasingly encouraging the integration of environmental aspects into formal business practices. For example, Presidential Regulation No. 92 of 2020 and Law No. 32 of 2009 mandate corporate responsibility in preventing and overcoming environmental pollution and degradation. In addition, the Financial Services Authority (OJK) through POJK No. 51/POJK.03/2017 requires issuers and public companies to publish sustainable reports (*Sustainability Report*) which includes environmental, social, and governance (ESG) aspects. With this regulation, public companies in Indonesia can no longer ignore the disclosure of non-financial aspects, including environmental elements. The policy creates external pressure for companies to be more transparent in presenting environmental data and its implications for their finances (Aresteria et al., 2024). In practice, *Green Accounting* It is a means for companies to meet regulatory demands and account for environmental impacts in a systematic way. Thus, adoption *Green Accounting* Not just an effort *Compliance*, but also becomes a strategic activity to maintain reputation and create a competitive advantage. Therefore, research on the influence of green accounting in Indonesia remains very relevant in the framework of sustainable business practices.

A number of recent empirical studies have examined the relationship between *Green Accounting*, environmental performance, and financial performance, but the results have not been consistent. For example, a study on the mining industry in Indonesia found that environmental performance (*Environmental Performance*) has a significant positive influence on financial performance, while practice *Green Accounting* on its own it did not show a significant influence(Aulia et al., 2025). Instead, study on industry"*High Profile*" shows that *Green Accounting* has no effect on profitability, but *Environmental Performance* has a positive effect (Tjoa & Patricia, 2022). Another study using

data from manufacturing companies in Indonesia reported that *Green Accounting* Contribute positively to financial performance through cost efficiency and reputation in the eyes of stakeholders(Rakhmawati, 2025). Other studies have also found that *Environmental Performance* Have a positive impact on profitability (Sidarta et al., 2023). More comprehensive studies on service companies also show that good *Green Accounting* And *Environmental Performance* has an influence on financial performance(Tjandrakirana DP et al., 2024).

However, there are still important research gaps to fill. First, most studies use samples from the mining industry or '*high profile*' companies, while research that focuses on the *basic materials sector* is still relatively limited. In fact, the *basic materials* sector (such as steel, cement, basic chemicals) has a very high environmental intensity and a large potential ecological impact. Second, some studies only examine the effect *of green accounting* or environmental performance separately on financial performance, while the simultaneous influence of the two has rarely been empirically tested, especially in modern Indonesian samples. Third, the lack of analysis of the current period that reflects post-pandemic conditions and the implementation of stricter sustainability regulations. Fourth, most studies do not explicitly link environmental cost expenditure as a long-term investment that can affect investor perception and corporate legitimacy in the Indonesian capital market. Thus, there is a need for research that combines environmental cost variables, environmental performance (e.g. through PROPER) and tests the simultaneous influence on financial performance in the context of manufacturing companies in *the basic materials* sector.

This research has novelty in three main aspects, namely the selection of samples of *the basic materials sector* which is still rarely researched in the green accounting literature in Indonesia, the use of the 2021–2023 observation period which represents the latest post-pandemic conditions and the implementation of sustainability regulations, as well as simultaneous testing between environmental costs and environmental performance on financial performance. The combination of these three aspects provides a theoretical contribution in expanding the understanding of environmental accounting in the context of *emerging markets* as well as a practical contribution in the form of policy recommendations for companies to balance regulatory compliance with increasing company value.

According to Apte et al., (2022) Environmental costs are all expenditures incurred by a company related to the prevention, detection, recovery or repair of environmental damage caused by its operational activities. This includes the cost of pollution mitigation, waste management, environmental remedies, and compliance with environmental regulations. The legitimacy theory explains that a company seeks to maintain its existence by gaining public recognition through actions that are in accordance with social norms and values, including environmental impact management. By spending environmental costs, the company shows a real commitment to social norms

and environmental regulations, so that it can gain legitimacy from stakeholders and the community. As part of the *Green Accounting*, environmental costs are not only considered a burden, but can be seen as a long-term investment to maintain the reputation and sustainability of the business. Research-Recent research in Indonesia generally found that financially significant environmental costs can negatively affect a company's profitability if they are not offset by reputational benefits or operational efficiency(Tiara & Muthya, 2025).

Environmental performance refers to how well a company manages the negative impact of its operations on the environment, which can be measured through indicators such as resource use efficiency, emissions, waste management, and compliance with environmental regulations such as PROPER in Indonesia(Triwahyuni et al., 2022). Stakeholder theory reinforces the importance of environmental performance because external stakeholders—including the surrounding community, government, and customers—tend to evaluate the company not only from a financial perspective but also from an environmental perspective. With good performance, the company receives support and trust from stakeholders, which can have a positive impact on access to capital, public trust, and image that affects financial performance. Studies conducted by Rizky (2024) about *Green Accounting* in Indonesia shows that legitimacy theory is the most widely used theory in green accounting research in Indonesia, followed by *stakeholder theory*. Environmental performance measured through PROPER ratings, for example, is often used as a proxy in many Indonesian empirical studies.

A company's financial performance is measured through *Return on Assets* (ROA), which is the company's ability to generate net profit after tax relative to the total assets used in operations (Madina et al., 2022). ROA describes the efficiency of using available assets to generate profits and is often considered a key indicator for investors and stakeholders about a company's operational performance. Within the framework of legitimacy theory, good financial performance is seen as evidence that the company is not only meeting social expectations but also remaining productive and economically sustainable; While *stakeholder theory* stating that stakeholders will support companies that not only care about the environment but are also able to maintain or increase their profitability. The rationale is that if a company successfully manages environmental costs and demonstrates good environmental performance, it can translate into positive financial results through reputation, regulatory compliance, and operational efficiency.

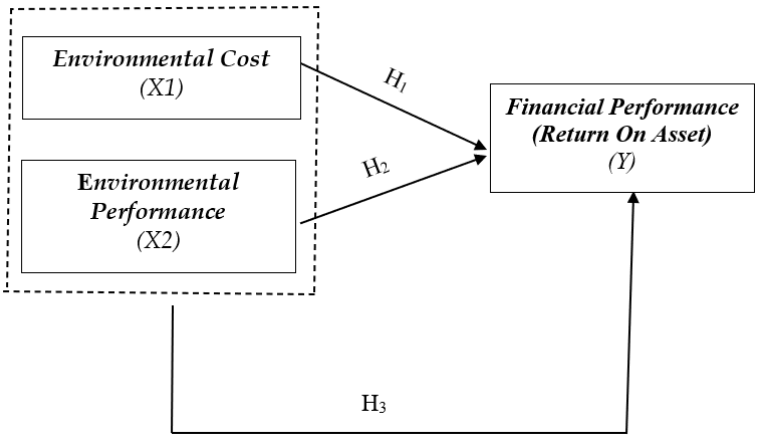
The formulation of this research problem is: (1) Does environmental costs affect the financial performance (ROA) of manufacturing companies in the basic materials sector in 2021–2023? (2) Does environmental performance affect the company's ROA? and (3) Do environmental costs and environmental performance simultaneously affect ROA? The focus of this research is to place both environmental aspects (*cost and performance*) not only as single explanatory variables, but as components that can interact with each other in influencing profitability. This study uses a quantitative approach with secondary data, so

that it can be tested systematically and can be generalized in a limited way.

Based on the formulation of the problem, the hypothesis of this study is as follows:

- **H1**: Environmental costs affect financial performance (ROA) in manufacturing companies in *the basic materials* sector listed on the IDX for the 2021–2023 period.
- **H2**: Environmental performance affects the financial performance (ROA) of manufacturing companies in the *basic materials sector* listed on the IDX for the 2021–2023 period.
- **H3**: Environmental costs and environmental performance simultaneously affect the financial performance (ROA) of manufacturing companies in the *basic materials sector* listed on the IDX for the 2021–2023 period.

Figure 1. Conceptual Framework



RESEARCH METHODS

This study uses a quantitative approach with a causal-comparative design, namely to test the influence of independent variables in the form of environmental costs and environmental performance on bound variables in the form of financial performance (ROA).

Table 1. Variable Operationalization

Yes	Variable	Definition	Indicators	Scale
1	Environmental Costs	Expenses that must be paid by the company because they are related to environmental damage caused by the company's operations (Sari,	Environmental Cost = Total Expenditure Activity for Environmental Activity. Source: (Sari, 2023)	Ratio

		2023).		
2	Environmental Performance	The company's efforts to preserve the environment and overcome negative operational impacts (Martha Angelina & Enggar Nursasi, 2021)	PROPER Rating: Gold = 5Green = 4Blue = 3Red = 2Black = 1Source: Regulation of the Ministry of Environment No.5 Article 4, 2011.	Ratio
3	Financial Performance	The determination of certain measures in measuring the success of the company in generating profits.	The financial performance variable measured by ROA is expressed by the formula: $\text{LENGTH} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}} \times 100\%$ Source: (Martha Angelina & Enggar Nursasi, 2021)	Ratio

Table 2. PROPER Rating Indicator

Rank	Information
Gold (5)	For businesses or activities that have consistently demonstrated environmental excellence in the production process and/or services, carry out ethical and responsible business to the community.
Green (4)	For businesses or activities that have carried out environmental management more than what is required in the regulations (beyond compliance) through the implementation of an environmental management system and they have utilized resources efficiently and carried out social responsibilities well.
Blue (3)	For businesses or activities that have carried out environmental management efforts, which are required in accordance with the provisions or applicable laws and regulations.

Red (2)	For businesses or activities that have carried out environmental management efforts but have not complied with the requirements as stipulated in laws and regulations.
Black (1)	It is given to those who, in carrying out their business or activities, have deliberately committed acts or committed acts or negligence that result in pollution or environmental damage, as well as violate applicable laws and regulations or do not carry out administrative sanctions.

Source: Regulation of the Ministry of Environment and Forestry of the Republic of Indonesia No.5 Article 4, 2011.

The object of the research is a manufacturing company *in the basic materials* sector listed on the Indonesia Stock Exchange (IDX) in 2021–2023. The research population amounted to 112 companies, but through *purposive sampling techniques* based on the criteria for consistency in financial statement publication and participation in the Company Performance Rating Assessment Program (PROPER) of the Ministry of Environment and Forestry (KLHK), 25 companies were obtained as samples. With a three-year period, the total observations used were 75 panel data.

Table 3. Criteria for Manufacturing Companies in the *Basic Materials Sector*

Information	Sum
The number of manufacturing companies in the *basic materials* sector listed on the IDX in 2021-2023.	112
The number of manufacturing companies in the *basic materials* sector that did not publish financial statements consistently during 2021-2023.	(26)
The number of manufacturing companies in the *basic materials sector* that are not registered with the Ministry of Environment and Forestry to participate in the Company Performance Rating Assessment Program or PROPER on an ongoing basis.	(61)
Number of samples	**25**

Source: Indonesia Stock Exchange, Secondary Data Processed, 2025.

The data collection technique in this study uses documentation methods and literature studies. Secondary data is obtained from the company's financial statements and annual reports published through the official website of the IDX (www.idx.co.id), the company's official website, and PROPER documents from the Ministry of Environment and Forestry. Literature studies are carried out by reviewing literature in the form of books, articles, and journals that are relevant about *green accounting*, environmental costs, environmental performance, and financial performance. This collection

technique was chosen because the data used has been officially published and verified, so it has a high level of reliability.

Data analysis was carried out quantitatively with the help of SPSS software version 30.0. The analysis stages include descriptive statistical tests to describe the characteristics of the data, classical assumption tests (normality and multicollinearity) to ensure the feasibility of the model, and multiple linear regression analysis to test the influence of independent variables on dependent variables. Hypothesis testing was carried out with a t-test to test for partial influences, an F-test to test for simultaneous influences, and a determination coefficient (R^2) to find out how much the independent variable was able to explain the bound variable. With this method, the research is expected to provide empirical evidence regarding the relationship of green accounting to financial performance in the *basic materials sector* in Indonesia.

FINDINGS AND DISCUSSION

Descriptive Statistics

According to Revelation (2020), "Descriptive statistics are basically a process of transforming research data into a form that is easier to understand and interpret. Tabulation presents a summary, organization, organization of data in numerical and graphical form. Descriptive statistics are generally used by researchers to provide information about the characteristics of research variables while supporting the variables being studied. Activities related to descriptive statistics such as calculating means, medians, modes, looking for standard deviations and looking at data distribution gaps and so on."

Data analysis in this study was carried out using descriptive statistics to present and process data through statistical calculations to provide a clearer understanding of the conditions or characteristics of the data being studied. Through the process of statistical calculation, this analysis provides a comprehensive picture of the data based on the maximum, minimum, mean, and standard deviation values resulting from the research variables consisting of dependent variables, namely financial performance (ROA) (Y) and independent variables, namely environmental costs (X1) and environmental performance (X2) Based on this research sample with a total of 75 (n) observations. Descriptive data of variables in this study can be seen in the following results.

Table 4. Descriptive Statistical Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Environmental Costs	75	14,9123	27,6684	22,2795	2,5286
Environmental Performance	75	2	5	3,2933	0,7493

Financial Performance	75	-0,1555	0,2055	0,0468	0,0656
Valid N (listwise)	75				

Source: Data, Processed (2025)

Based on the results of *the Descriptive Statistics* calculation from 75 observation data, the environmental cost variable has a minimum value of 14.9123 and a maximum of 27.6684, with a mean value of 22.2795 and a standard deviation of 2.5286. The environmental performance variables show a minimum value of 2 and a maximum of 5, with a mean value of 3.2933 and a standard deviation of 0.7493. The Financial Performance variable has a minimum value of -0.1555 and a maximum of 0.2055, with a mean of 0.0468 and a standard deviation of 0.0656.

Normality Test

The normality test is performed to find out whether the data from the bound variable and the free variable have a distribution pattern that follows the normal distribution or not. In this study, the normality test used was the *one sample kolmogorov smirnov test.* If the test results show a significance value above 5% or 0.05, then the data is normally distributed and vice versa. The results of the normality test are shown in the following table 5.

Table 5. Normality Test

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			75
Normal Parameters, b	Mean		0,0000
	Std. Deviation		0,0629
Most Extreme Differences	Absolute		0,0946
	Positive		0,0946
	Negative		-0,0649
Test Statistic			0,0946
Asymp. Sig. (2-tailed)[c]			0,0934
Monte Carlo Sig. (2-tailed)[d]	Sig.		0,0910
	99% Confidence Interval	Lower Bound	0,0836
		Upper Bound	0,0984
a. Test distribution is Normal.			
b. Calculated from data.			
c. Lilliefors Significance Correction.			
d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.			

Source: Data, Processed (2025)

Based on the results of the normality test *of the One Sample Kolmogorov-Smirnov* data, it is known that the value of Asymps. Sig. (2-tailed) of 0.0934 is greater than 0.05 (0.0934 > 0.05) indicating that the residual of the regression model is normally distributed. Thus, the assumption of normality is met.

Multicollinearity Test

The multicollinearity test is part of the classical assumption test in multiple linear regression analysis which aims to find out whether there is an intercorrelation (strong relationship) between independent variables. VIF values and Tolerance values in the SPSS program were used for multicollinearity tests in this study. If the VIF value is > 10 and the Tolerance value is < 0.10, then there is a multicollinearity disorder. On the other hand, multicollinearity interference does not occur if the VIF value is < 10 and the Tolerance value is > 0.10. The results of the multicollinearity test are shown in the following table 6.

Table 6. Multicollinearity Test

Coefficient								
Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIVID
1	(Constant)	-0,094	0,066		-1,423	0,159		
	Environmental Costs	0,008	0,003	0,311	2,524	0,014	0,838	1,193
	Environmental Performance	-0,012	0,011	-0,136	-1,100	0,275	0,838	1,193
a. Dependent Variable: Financial Performance								

Source: Data, Processed (2025)

Based on the results of the multicollinearity test in table 6, it can be seen that *the tolerance* value of environmental costs is 0.838, environmental performance is 0.838 which means that these values are greater than 0.10 or 0.838 > 0.10. The VIF value of environmental costs is 1.193 and the VIF value of environmental performance is 1.193 which means that these values are less than 10.00 or 1.193 < 10.00, so it can be concluded that the data used in this study do not occur multicollinearity.

Multiple Linear Regression

Multiple linear regression analysis is used to find out whether each independent variable has a positive or negative relationship to the dependent variable. In this study, it was used to test the influence of independent variables (environmental costs and environmental performance) on dependent variables (financial performance). The results of the multiple linear regression test are shown in the following table 7.

Table 7. Multiple Linear Regression Test

Coefficient

Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0,094	0,066		-1,423	0,159
	Environmental Costs	0,008	0,003	0,3114	2,524	0,014
	Environmental Performance	-0,012	0,011	-0,136	-1,100	0,275
a. Dependent Variable: Financial Performance						

Source: Data, Processed (2025)

Based on the test results in the table above, the relationship between independent variables and dependent variables can be seen with the regression equation as follows:

$$Y = \alpha + \beta 1.\ X1 + \beta 2.\ X2 + e$$

$$Y = -0.094 + 0.008\ X1 + (-0.012\ X2) + e$$

Based on the model of the equation obtained, it is known that:

- The Intercept constant is -0.094, this constant shows that if the variables of environmental cost and environmental performance are both zero, then the basic value of the company's financial performance is -0.094 units. This means that without the influence of these two independent variables, financial performance remains at the negative value.
- The environmental cost coefficient is 0.008, the regression coefficient for the environmental cost variable is 0.008 indicating that every 1 unit increase in environmental cost will improve financial performance by 0.008 units, assuming the other variables are constant. In addition, a significance value of 0.014 (0.014 < 0.05) indicates that the effect of environmental costs on financial performance is statistically significant at a significance level of 5%.
- The Environmental Performance Coefficient is -0.012, The regression coefficient for the environmental performance variable is -0.012 indicating that every 1 unit increase in environmental performance tends to decrease financial performance by 0.012 units, assuming the other variables are constant. However, the significance value is 0.275 (0.275 > 0.05), so the effect of environmental performance on financial performance is not statistically significant at a significance level of 5%.

Hypothesis Testing Results

Hypothesis testing aims to prove the truth of the hypothesis which states that all independent variables have an influence on bound variables so that objective and measurable decisions can be made in research. In this study, the independent variables are environmental costs (X1) and environmental performance (X2) as well as financial performance-bound variables (Y), so that hypothesis testing to see whether the environmental cost variables (X1) and environmental performance (X2) have an effect on financial performance variables (Y), then the hypothesis test is a t-test used to test the influence of each independent variable partially on the dependent variable, the F test which is

used to test the influence of all independent variables simultaneously on the dependent variable as well as the determination coefficient (R2) test which shows how large the proportion of variation of the dependent variable can be explained by the independent variable in a regression model.

Partial Test (t)

The t-test or called partial test is a test that basically shows how far an individual explanatory variable influences in explaining the variation of the bound variable. Test result criteria:

a. Sig. > 0.05 then H1 is rejected
b. Sig. < 0.05 then H1 is accepted

The results of the partial test (t) are shown in the following table 8.

Table 8. T Test

Coefficient						
Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0,094	0,066		-1,423	0,159
	Environmental Costs	0,008	0,003	0,3114	2,524	0,014
	Environmental Performance	-0,012	0,011	-0,136	-1,100	0,275
a. Dependent Variable: Financial Performance						

Source: Data, Processed (2025)

Based on the *Coefficients Table* above, it is known that the significance value for the environmental cost variable (X1) on Financial performance (Y) is 0.014 smaller than the significance value of 0.05 (0.014 < 0.05), this means that H1 is accepted. Thus, it can be concluded that environmental costs have a significant effect on the Company's financial performance. Meanwhile, the significance value for the Environmental performance variable (X2) on Financial performance (Y) is 0.275 greater than the significance value of 0.05 (0.275 > 0.05), this means that H2 is rejected. Thus, it can be concluded that environmental performance does not have a significant effect on the Company's financial performance.

Simultaneous Test (F)

The F test, often referred to as a simultaneous test, aims to determine the influence of independent variables together (simultaneously) on the dependent variables significantly. Test result criteria:

a. Sig. < 0.05 then H0 is rejected
b. Sig. > 0.05 then H0 is accepted

The results of the simultaneous test (F) are shown in the following table 9.

Table 9. Test F

NEW ERA					
Type	Sum of Squares	Df	Mean Square	F	Sig.

1	Regression	0,026	2	0,013	3,189	.047b
	Residual	0,292	72	0,004		
	Total	0,318	74			
a. Dependent Variable: Financial Performance						
b. Predictors: (Constant), Environmental Performance, Environmental Cost						

Source: Data, Processed (2025)

Based on the results of the Simultaneous Test, it is known that the F value is calculated as 3.189 with a significance value of 0.047. This significance value is smaller than 0.05 (0.047 < 0.05) so it can be concluded that H3 is accepted and the regression model is simultaneously statistically significant at a significance level of 5%. This means that the variables of environmental costs (X1) and environmental performance (X2) together affect financial performance (Y).

Coefficient of Determination (R2)

The R2 test is used to find out what percentage of the influence the independent variable (X) exerts simultaneously on the dependent variable (Y). The results of the determination coefficient (R2) test are shown in the following table 10.

Table 10. Determinant Coefficients

Model Summary				
Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.285a	0,081	0,056	0,0637
a. Predictors: (Constant), Environmental Performance, Environmental Cost				

Source: Data, Processed (2025)

Based on the test results, it is known that the R Square is 0.081. This shows that 8.1% of the variation in financial performance can be explained by environmental cost variables and environmental performance together. Meanwhile, the remaining 91.9% was influenced by other factors outside of the variables studied.

Discussion

The Effect of Environmental Costs on Financial Performance

Based on the results of the test using the SPSS application Version 30.0.0.0 (172) in table 4.4 above, the value of the environmental cost variable (X1) on financial performance (Y) was obtained with a calculated t value = 2.524 with a significance of 0.014 where this value is smaller than 0.05 (0.014 < 0.05) so that it can be said that H1 is accepted, meaning that environmental costs have a significant effect on the company's financial performance.

The results of this study show that the greater the environmental costs incurred by companies in the context of environmental management and conservation, the greater the positive impact on improving financial performance. This influence can arise because good environmental management efforts are able to increase operational efficiency, strengthen the company's image and reputation, and minimize legal risks and social pressures

that have the potential to be financially detrimental. Therefore, companies that consistently allocate funds for environmental management activities have the opportunity to show better financial performance. This can ultimately increase investor confidence, customer loyalty, and strengthen the company's competitiveness in the long run.

The Effect of Environmental Performance on Financial Performance

Based on the test results using the SPSS application Version 30.0.0.0 (172) in table 4.4 above, the value of the environmental performance variable (X2) on financial performance (Y) was obtained with a value of t calculated = -1.100 with a significance of 0.275 where this value is greater than 0.05 (0.275 > 0.05) so that it can be said that H2 is rejected, meaning that environmental performance does not have a significant effect on the company's financial performance.

The results of this study show that there is no influence of environmental performance using the PROPER indicator in managing the environment on financial performance even though the company has made environmental management efforts in accordance with PROPER requirements. In addition, not all investors make environmental performance a key consideration in making investment decisions, as good environmental performance does not necessarily reflect a company's ability to provide financial benefits to investors. This is because the main focus of environmental performance is on efforts to prevent and manage environmental impacts caused by company activities, not on increasing profits.

The Effect of Environmental Costs and Environmental Performance on Financial Performance

Based on the test results using the SPSS application Version 30.0. (172) obtained a value of F calculated = 3.189 with a significance of 0.047 where this value is smaller than 0.05 (0.047< 0.05) so that it can be concluded that H3 is accepted which means that environmental costs (X1) and environmental performance (X2) simultaneously affect financial performance (Y).

This means that investment in environmental cost management and the achievement of good environmental performance is not only limited to meeting regulations, but also being able to improve financial performance. Companies that allocate costs for pollution control, energy efficiency, and waste treatment programs tend to get a positive image from stakeholders. This image encourages an increase in consumer and investor confidence which ultimately has implications for the company's profitability. Thus, the results of this study are in line with legitimacy theory and stakeholder theory that emphasizes the importance of environmental responsibility as a sustainable business strategy.

In addition, these findings reinforce the concept *of green accounting* which states that environmental costs should be seen as a form of long-term investment, not just a burden on the company. Good environmental performance, measured through the PROPER program, is an indicator of the company's success in integrating sustainability aspects into its operational strategy. When environmental costs and environmental performance are

managed synergistically, companies are able to reduce legal risks, improve operational efficiency, and expand market opportunities. The results of the study also signal to management that spending in the environmental field can generate real economic benefits. Thus, the integration of environmental costs and environmental performance has been proven to have a positive impact on the achievement of the company's financial performance. This conclusion confirms that sustainability strategies can be aligned with the company's financial goals in the *basic materials sector*.

This also explains that company management that is able to improve environmental performance will make consumers have a good view of the company's image, so that consumers have trust and interest in the company so that it has an impact on increasing the company's profit. As profits increase, the financial performance of companies proxied through ROA will also increase.

In addition, the relationship between environmental costs and financial performance can be explained through stakeholder theory, where it is stated that the success of the company is not only determined by the capital owner, but also by all parties who have an interest in the company's activities, such as customers, society, government, and the environment. In other words, companies cannot operate only for internal interests, but must also pay attention to the social and environmental impacts of their activities.

CONCLUSION

Based on the results of the analysis of manufacturing companies in the *basic materials sector* listed on the Indonesia Stock Exchange for the 2021–2023 period, it is concluded that the implementation of green accounting through environmental costs and environmental performance has a significant relationship with the financial performance of companies in the *basic materials* sector in Indonesia in the 2021–2023 period. The results show that companies that consistently allocate costs for environmental impact management and actively participate in the PROPER program tend to be able to maintain and improve their financial performance, as measured through Return on Assets (ROA). These findings reinforce the view that environmental management is not just a regulatory obligation, but can also be a business strategy that contributes to the creation of corporate value. Thus, this study provides empirical evidence that integrating environmental accounting into managerial practice can bridge economic and sustainability interests.

The recommendation that can be given is the need for companies in the *basic materials* sector to continue to strengthen their commitment to sustainable environmental practices, not only as an effort to meet legal obligations, but also as a long-term competitiveness improvement strategy. In addition, further research can extend the object to other industry sectors and consider additional variables such as corporate governance and the quality of environmental disclosures, so that the understanding of green accounting in emerging markets is more comprehensive.

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