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The Relationship Between Green Accounting and Environmental Performance With Financial Performance

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ABSTRACT

In the current era, economic competition is highly intense. Consequently, companies are striving to enhance their financial performance by generating profits or gains, often without considering environmental management practices that may lead to environmental damage.
The purpose of this study was to examine the relationship between green accounting and financial performance, the relationship between environmental performance and financial performance, and the combined impact of green accounting and environmental performance on financial performance. The population for this research consists of energy companies listed on the Indonesia Stock Exchange during the period 2018-2022. The research employs purposive sampling, and based on the specified criteria, a total of 11 companies were selected as samples. The results of this research indicate that green accounting does not have a positive relationship with financial performance. However, environmental performance is positively relationship with financial performance. Moreover, green accounting and environmental performance, when considered simultaneously, exhibit a positive relationship with financial performance measured using return on assets.
This finding contributes to understanding the importance of environmental factors in the context of corporate finance, thereby encouraging companies to pay more attention to environmental management practices in their efforts to enhance financial performance.

INTRODUCTION

In the current era, economic competition is highly intense. Various companies strive to optimize their profits and business value. One effort that can be used to maximize these profits and business value is by improving the financial performance of the company. The achieved financial performance results from a series of decisions made by individuals associated with the company, generally presented in the form of financial reports. However, in the pursuit of increasing profits, companies often overlook environmental management, leading to the emergence of environmental damage due to operational activities. Economic growth should ideally align with environmental management practices. However, the reality is that many companies still disregard the consequences on the surrounding environment and the social implications of their operational activities, especially among those that exploit natural resources in their operations.

Currently, companies are not only required to achieve good financial performance but also obligated to carry out social responsibilities. This indicates that if a company neglects its social responsibility towards the environment, it may have a poor reputation both socially and environmentally.

Indonesia and several other countries are currently facing an ecological crisis contributing to the emergence of ecological and social disasters with significant and threatening impacts on human survival. Issues such as climate change, global warming, and environmental degradation have emerged as serious threats. A considerable body of literature generally indicates that the root of these problems stems from the greedy behavior of nations, corporations, and communities in advancing economic development and national progress. In this context, even the field of accounting is suspected to play a role in exacerbating this situation. The principles and standards of accounting that support conventional accounting processes often neglect aspects related to social and environmental issues, leading to unfavorable behaviors. Therefore, the urgent need for reform and transformation of conventional accounting towards the concept of green accounting is emphasized, with the hope that it can be the best solution to address the ecological and social crises threatening Indonesia (Lako, 2018). Consequently, the implementation of green accounting can be a crucial effort for companies to disclose and protect the environment (Rounaghi, 2019).

Companies dealing with environmental issues more often focus on optimizing long-term financial performance by cultivating a positive image among stakeholders. As stated by Wahyuni, Meutia, and Syamsurijal (2019), the efficient implementation of green accounting has the potential to enhance environmental performance, and this improvement is a targeted goal for entities due to its beneficial impact on the sustainability of business operations. The environmental performance focus lies in a company's efforts to maintain environmental sustainability and reduce negative consequences resulting from its operational activities. In Indonesia, corporate awareness of environmental performance is still limited, as evidenced by the decline in the Environmental Performance Index presented on the website www.epi.yale.edu. In 2020, Indonesia ranked 116 out of 180 countries with a score of 37.8 on the Environmental Performance Index. However, in 2022, Indonesia's position in the Environmental Performance Index experienced a decline to 164th place with a score of 28.2 out of a total of 180 countries worldwide. Therefore, in the effort to promote the development of corporate environmental management performance, the government through the Ministry of

Environment and Forestry established PROPER. PROPER can also enhance consumer loyalty by improving the purchase of company products, enabling companies to enhance their financial performance.

Currently, public awareness regarding environmental protection has increased, thereby altering consumer preferences towards products from industries implementing environmentally-friendly practices. Consequently, the outcomes of implementing green accounting and environmental performance can be linked to financial performance, underscoring the importance of sufficient information about environmental costs through the green accounting system. By adopting efficient sustainability practices, companies can enhance resource efficiency, reduce production waste, thereby saving production costs and improving profitability (Pramono, et al., 2023).

There are several studies discussing the relationship between green accounting and environmental performance with financial performance. However, there is a gap and inconsistency in the research findings. In the study by Wahyuni, Meutia, and Syamsurijal (2019), it is stated that there is an influence of green accounting on financial performance. However, contrasting results are found in the research by Dita and Ervina (2021) and Riyadh, et al. (2020), indicating that green accounting does not affect financial performance. In the research conducted by Sejati, Zakaria, and Aidha (2020), it is mentioned that there is an impact of environmental performance on financial performance, contradicting the findings of Abdullah, et al. (2019), which indicate that environmental performance does not affect financial performance.

The differences in the research results have sparked the author's interest in reexamining the relationship between green accounting and environmental performance with financial performance, through a study titled "The Relationship between Green Accounting and Environmental Performance with

Financial Performance." This research was conducted on energy companies listed on the Indonesia Stock Exchange during the period 2018-2022. Based on the background outlined above, the main problem formulation in this study is as follows: (1) Is green accounting related to the financial performance of a company? (2) Is environmental performance related to the financial performance of a company? (3) Are green accounting and environmental performance together related to the financial performance of a company?

LITERATURE REVIEW

The Relationship between Green Accounting and Financial Performance

According to Sidarta, et al. (2023), green accounting is an accounting approach that identifies, measures, evaluates, and communicates costs associated with a company's environmental activities. The management of environmental costs significantly impacts the company's profits and enhances corporate performance, leading many companies to report and disclose environmental information. Therefore, environmental disclosure through green accounting significantly influences the consistency and disclosure of environmental information in annual reports (Riyadh et al., 2020).

The results of the study by Dura and Suharsono (2022) suggest that there is an influence of green accounting on financial performance, proxied by profitability. In their research, green accounting is considered by investors when deciding whether to invest in a company or not. Therefore, the use of green accounting serves as an indicator of a company's long-term sustainability, reflecting the company's commitment to the environment. This, in turn, contributes positively to the environment and builds a positive image of the company in the eyes of the public. As a result, it provides significant support for the company in optimizing profits by stimulating sales growth. These findings align with the research by Sidarta, et al. (2023), which asserts that the implementation of green accounting has a positive impact on profitability. Integrating elements such as environmental costs, waste recycling, as well as research and development costs into the company's operations reinforces the standards accepted by customers and investors. Including environmental costs can also build consumer trust, impacting sales volume and profitability, thus potentially enhancing the financial performance of the company. Referring to the research findings described earlier, the first hypothesis proposed in this study is:

H_1 : Green accounting has a positive correlation with financial performance

The Relationship between Environmental Performance and Financial Performance

In its operational activities, companies typically generate waste or negative impacts on the environment. Therefore, effective environmental performance management is required to reduce the risk of environmental pollution and fulfill the company's responsibility to preserve its surroundings (Ramadhani, Saputra, and Wahyuni, 2022). Referring to legitimacy theory, the impact perceived by society at large can often determine the distribution of financial and economic resources. In such circumstances, companies usually leverage environmental performance outcomes and the dissemination of environmental data as a means to persuade public opinion about their actions. However, if there is a mismatch between the principles of the company and those held by the community, the company is at risk of losing legitimacy, ultimately threatening its sustainability (Sulistiawati and Dirgantari, 2016). Therefore, it can be indicated that there is a relationship between environmental performance and the financial performance of the company.

According to the research conducted by Sejati, Zakaria, and Aidha (2020), it was found that environmental performance has a positive impact on financial performance. The evaluation of environmental performance through the PROPER assessment has the potential to influence the interest of stakeholders, especially among investors and the general public. Companies receiving higher PROPER ratings may generate greater recognition and a more positive perception in society. These findings align with the research conducted by Suleman et al. (2020), who reported that environmental performance plays a positive role in financial performance. Companies focusing on environmentally friendly policies and

strategies can enhance financial performance by reducing waste, practicing recycling, remanufacturing, reusing, and adopting environmentally friendly production processes. These policies and procedures will ensure the sustainability and competitive position of the company in the market with higher financial performance. Referring to the research findings described earlier, the second hypothesis proposed in this study is:

H_2 : Environmental performance has a positive correlation with financial performance

The Relationship between Green Accounting and Environmental Performance with Financial Performance

A company operating by utilizing natural resources needs to commit to maintaining environmental harmony. In conducting business, a company should create a green background to have a more significant positive impact on the environment or industry. According to Purbosanjoyo, Pratiantrie, and Egidia (2018), the implementation of green accounting can be utilized to incorporate environmental performance. Based on the relationships between the variables outlined earlier, it can be concluded that all these factors have the potential to influence a company's financial performance. If all variables collectively have a connection to a company's financial performance, then all these elements will interact simultaneously to impact the company's financial performance.

This is supported by the research findings of Ramadhani, Saputra, and Wahyuni (2022), who have successfully obtained empirical evidence indicating that the implementation of green accounting and environmental performance has a positive impact on financial performance measured through profitability levels. Before deciding to invest, investors can consider aspects such as environmental performance and the principles of green accounting applied by companies in efforts to enhance corporate financial performance. Similarly, the research results of Sidarta, et al. (2023) found that green accounting and environmental performance positively influence profitability. Companies that disclose environmental information through the implementation of green accounting and achieve good environmental performance ratings from the Ministry of Environment and Forestry can send positive signals to investors and provide incentives for creditors to extend credit. Referring to the research findings described earlier, the third hypothesis proposed in this study is:

H_3 : Green accounting and environmental performance have a positive correlation with financial performance.

RESEARCH METHODS

The population in this study is a energy company listed on the Indonesia Stock Exchange for the period 2018 to 2022. The sampling method used is a non-probability method with purposive sampling techniques. Criteria this sampling method is the second company implementing PROPER for the period 2018 to 2022, and the company that uses green accounting practices published in annual reports and financial statements. Based on these criteria, 11 companies were collected. Since the observation period lasted for 5 years, a total of 55 data were processed. Secondary data, or data collected through intermediaries, was used in the study. Secondary data in the form of financial statement documents of the Indonesia Stock Exchange. The data analysis technique used is path analysis processed with Statistical Product and Service Solutions (SPSS) version 25.

The research is based on quantitative data. The research objects encompass the variables currently under investigation. The objects of this study are green accounting and environmental performance as independent variables, with financial performance as the dependent variable. The following provides an explanation of these independent and dependent variables, along with measurements for each variable:

Table 1. Variable Operational

Research Variable	Variable Definition	Measurement
Green Accounting (X_1)	Green Accounting is a concept in which companies, throughout their production processes, emphasize efficiency and effectiveness in the long-term utilization of resources in business development, taking into consideration environmental impacts and providing positive value to society (Abdullah and Amiruddin, 2020).	Determining of green accounting with a nominal scale, where this green accounting variable is measured using dummy variables. If a company includes any environmental cost component in the annual report, it receives a score of 1. If the company does not include an environmental cost component in the annual report, it receives a score of 0.
Environmental Performance (X_2)	Environmental performance is the assessment of the performance carried out by companies regarding how they empower and demonstrate concern for their environment, both within their operational scope and beyond their areas of activity (Ramadhani, Saputra, and Wahyuni, 2022)	Determining the level of environmental performance using an ordinal scale. The environmental performance is measured using color ratings in PROPER, as follows: gold color receives a score of 5, green color receives a score of 4, blue color receives a score of 3, red color receives a score of 2, and black color receives a score of 1.
Financial Performance (Y)	Financial performance is an assessment conducted to determine the extent of a company's performance by referring to appropriate and optimal financial performance standards (Dura and Suharsono, 2022).	etermining financial performance with a ratio scale. Financial performance is measured using Return on Assets (ROA).

The analysis tools in this study are as follows:

1. Descriptive Statistical Analysis

Descriptive statistics is a type of statistical analysis that employs statistical methods to accurately analyze data, allowing it to precisely reflect the information contained in the collected data, without aiming to generate universally applicable conclusions. Descriptive statistics, such as calculating the mean, standard deviation, as well as maximum and minimum values, are applied to describe each research variable using the SPSS computer application.

1. Classical Assumption Test

a. The normality test is conducted to determine whether data can be considered to have a normal distribution or not, as indicated by the normal distribution of error values. The normality test used in this research is the Kolmogorov-Smirnov (K-S) Statistical Analysis/Test. One way to evaluate the results of the Kolmogorov-Smirnov test is through the analysis of the significance value from the Monte Carlo test (2-tailed), with criteria including, if the significance value for Monte Carlo (2-tailed) > 0.05 or 5%, then

the data is considered to have a normal distribution. On the other hand, if the significance value for Monte Carlo (2-tailed) < 0.05 or 5%, then the data is considered not to have a normal distribution.

b. The multicollinearity test is conducted to determine whether there are two or more independent variables in regression that are (highly) correlated. If a strong correlation exists, it indicates a multicollinearity problem. A regression model is considered good when the independent variables are not correlated with each other. This study employs the Tolerance and Variance Inflation Factor (VIF) methods, with the criteria that if the Tolerance values are less than 0.10 or VIF is greater than 10, multicollinearity is deemed not to occur. On the other hand, if the Tolerance values are less than 0.10 or VIF is greater than 10, multicollinearity is considered to be present.

c. The heteroskedasticity test is conducted to determine whether there are disturbances affecting the regression function, which can be observed from the non-uniform variation in residuals for all observations in the regression model. A good regression model is one in which heteroskedasticity does not occur. In this study, the heteroskedasticity test is carried out using the Glejser method. If the significance value is > 0.05, then the data does not exhibit heteroskedasticity. On the other hand, if the significance value is < 0.05, then heteroskedasticity is present in the data.

d. The autocorrelation test is conducted to examine whether there is a relationship between residuals at time period (t) and residuals in the previous period (t-1) in a regression model. A regression model is considered good when there is no autocorrelation, so the presence of autocorrelation in the regression model is avoided. The decision-making basis for autocorrelation is carried out by performing the Durbin-Watson Test (DW Test) through SPSS, with criteria including: if DU < DW < 4-DU, then there is no autocorrelation; if DW < dl > 0, then there is positive autocorrelation; if DW > 4-dl < 0, then there is negative autocorrelation; and if dl DW DU or 4-DU DW 4-dl, then no absolute conclusion is drawn.

2. Multiple Linear Regression Analysis

Multiple linear regression is a type of regression model that involves multiple independent variables. Researchers use this analysis when they want to estimate how the dependent variable behaves when two or more independent variables are changed in their capacity as predictor factors. Therefore, multiple linear regression analysis is conducted when there are at least two independent variables. The purpose of implementing multiple linear regression analysis in this research is to identify the extent and direction to which the independent variables, namely green accounting and environmental performance, are related to the dependent variable, which is financial performance (measured through profitability). The equation used in the calculation of multiple linear regression is as follows:

$$Y = a + b_1X_1+b_2X_2+e$$

Financial Performance = constant value + regression coefficient of green accounting + regression coefficient of environmental performance + error

Information:

Y = Financial Performance

a = Constant

b1 = Regression Coefficient of X1 (Green Accounting)

b2 = Regression Coefficient of X2 (Environmental Performance)

X1 = Independent Variable 1 (GreenAccounting)

X2 = Independent Variable 2 (Environmental Performance)

e = Error

1. T Test

The T-test is conducted to examine the extent of the relationship of an independent variable individually in explaining the variation of the dependent variable. This research will be tested for the

presence or absence of a negative relationship on the independent variables, namely green accounting and environmental performance, with financial performance, at a significance level of 0.05 (5%). The author conducted a 2-tailed test, with the benchmark for hypothesis testing as follows: Ha is accepted if sig < 0.05, meaning that the partial relationship of variables X_1 and X_2 to ROA is significant. Ha is rejected if sig > 0.05, meaning that the partial relationship of variables X_1 and X_2 to ROA is not significant.

2. F Test

A F-test was conducted to determine whether all independent variables included in the regression model have a simultaneous relationship with the dependent variable. The author established a significance level of 0.05 (5%) as a benchmark for hypothesis testing in this research, employing a two-tailed F-test. Specifically, the null hypothesis (H0) is accepted if the F-significance (sig F) is ≤ 0.05, indicating that variables X_1 and X_2 collectively influence ROA. Conversely, the null hypothesis is rejected if sig F > 0.05, signifying that variables X_1 and X_2, as a whole, do not impact ROA.

3. Determination Coefficient Test

The determination coefficient (R^2) test is conducted to measure how well the model can explain the fluctuations of the dependent variable. The determination coefficient can be calculated using the formula Kd = R^2 × 100%. The determination coefficient values range between one and zero, with the benchmark being that if R^2 is small, it means that the independent variable only provides a partial explanation of the variance in the dependent variable. Conversely, if R^2 approaches 1, it means that the independent variable provides almost a complete explanation of the variance in the dependent variable.

RESULT AND DISCUSSION

This study analyzes the relationship between green accounting and environmental performance with financial performance in energy companies on the Indonesia Stock Exchange for the period 2018-2022.

1. Results of Descriptive Statistics

Table 2. Descriptive Statistics Results

	N	Min	Max	Mean	Std Deviation
Green Accounting	55	0	1	0.91	0.29

2. Classical Assumption Test Results

a. Normality Test

Table 3. Normality Test Results

N		55
Normal Parameters	Mean	0.0000000
	Std. Deviation	0.15882385
Most Extreme Differences	Absolute	0.170
	Positive	0.170
	Negative	-0.098

Test Statistic 0.170 Asymp. Sig. (2-tailed) 0.000
Monte Carlo Sig. (2-tailed) Sig. 0.074
99% Confidence Interval Lower Bound 0.067
Upper Bound 0.080

b. Multicollinearity Test

Table 4. Multicollinearity Test Results

Collinearity Statistics	Model	Tolerance	VIF
1	Green Accounting	0.917	1.090
	Environmental Performance	0.917	1.090

c. Heteroscedasticity Test

Table 5. Heteroscedasticity Test Results

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Eror	Standardized Coefficient Beta	t	Sig
1	Green Accounting	0.92	0.052	0.247	1.786	0.80
	Environmental Performance	0.17	0.020	0.117	0.851	0.399

d. Autocorrelation Test

Table 6. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	0.336	0.113	0.078	0.14992	1.763

3. Result of Multiple Linear Regression Analysis

Table 7. Multiple Linear Regression Results

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Eror	Standardized Coefficient Beta	t	Sig
1	Green Accounting	0.064	0.079	0.109	0.802	0.426
2	Environmental Performance		0.067	0.031	0.295	2.168	0.035

4. T-Test Result

Table 8. T-Test Results

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Eror	Standardized Coefficient Beta	t	Sig
1	Green Accounting	0.064	0.079	0.109	0.802	0.426
2	Environmental Performance		0.067	0.031	0.295	2.168	0.035

5. F-Test Result

Table 9. F-Test Results

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	0.181	2	0.091	3.458	0.039
	Residual	1.362	52	0.026		
	Total	1.543	54			

6. Determination Coefficient Test Result

Table 10. Determination Coefficient Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.343	0.117	0.083	0.161849

DISCUSSION

The Relationship between Green Accounting and Financial Performance

The first hypothesis proposed in this research is that green accounting has a positive relationship with financial performance. Based on the results of the T-test presented in Table 8, it is shown that the green accounting variable has a significance value of 0.426. Where this significance value is greater than the significance level, which is 0.426 > 0.05, it means that there is no significant partial relationship between the

green accounting variable and financial performance. Therefore, it is concluded that the first hypothesis is rejected.

Green accounting, considered a long-term investment for companies, has yet to prove its effectiveness in this study. This can be observed from the research results, which indicate that there is no correlation between the implementation of green accounting and the financial performance of companies. The findings reveal that currently, companies allocating environmental cost components in their business processes have not successfully convinced consumers to engage in transactions or instilled confidence in investors when making investment decisions. Therefore, this research suggests that the implementation of green accounting has not reached a point where its positive impact is evident in the financial performance of companies. Further consideration is needed to enhance its effectiveness as a long-term investment strategy.

With the disclosure of green accounting, it appears that it has not yet conveyed a positive signal to stakeholders. The disclosure of green accounting is expected to send a positive signal as an effort to enhance the company's image and simultaneously have a positive impact on financial performance, but this may require a longer time to materialize. The process of improving the company's image and financial performance resulting from the disclosure of green accounting may involve changes in consumer behavior, increased investor confidence, and other factors that cannot be measured directly in a short period. Although environmental costs have been incurred, the economic benefits are not immediately felt because this transformation process takes time to generate tangible effects.

The findings of this research align with those of Faizah (2020) and Riyadh et al. (2020), stating that green accounting does not affect financial performance. This is attributed to the companies' need to implement green accounting to allocate environmental costs specifically, treating these costs as expenses that can reduce corporate profits.

The Relationship between Environmental Performance and Financial Performance

The second hypothesis proposed in this study is that environmental performance has a positive relationship with financial performance. Based on the results of the T-statistic test presented in Table 8, it is indicated that the environmental performance variable has a significant value of 0.035. This significant value is smaller than the significance level, namely $0.035 < 0.05$, indicating a significant partial relationship between the environmental performance variable and financial performance. Therefore, it is concluded that the second hypothesis is accepted.

The PROPER rating, aimed at assisting stakeholders in better understanding how a company manages its environmental aspects, is considered capable of influencing the interests of stakeholders, particularly investors and the public. This is evident from the test results in research, where there is a connection between environmental performance and financial performance. Companies with higher environmental performance ratings in PROPER will receive greater appreciation from the public. Therefore, the increased appreciation and loyalty of the public contribute to higher sales of products manufactured by the company, ultimately enhancing the company's profit, which serves as an indicator of financial performance (Sejati, Zakaria, and Aidha, 2020).

Improving environmental performance can drive cost savings through long-term reduction in operational expenses and mitigate legal risks associated with environmental issues. Additionally, the company's reputation is likely to enhance, enabling broader access to environmentally conscious consumers. Therefore, companies committed to sustainable business practices can expect positive impacts not only on the environment but also on their financial stability. As stated by Braam et al. (2016), companies choosing to significantly enhance their environmental performance over time tend to experience an increase in financial resources and management capabilities. Furthermore, companies will enjoy tangible economic benefits following improvements in their environmental performance compared to those opting not to change their environmental performance. Conversely, companies undergoing a significant decline in environmental performance are inclined to experience a relative decrease in financial resources and management capabilities.

According to signal theory, obtaining a positive environmental performance assessment from the Ministry of Environment and Forestry through the PROPER can be considered a positive signal for stakeholders. This indicates that the company has conducted environmental activities in accordance with

applicable regulations, thereby reducing the negative impact of the company's business operations. This positive signal is expected to enhance trust and positive perceptions among stakeholders, especially investors and consumers. Information regarding environmental performance is seen as a signal influencing stakeholder perceptions, which, in turn, can affect investment decisions, consumer loyalty, and overall business processes. Therefore, companies that pay attention to environmental aspects can not only enhance their corporate reputation but also potentially improve financial performance through positive responses from stakeholders.

The findings of this study are consistent with the research conducted by Sulistiawati and Dirgantari (2016) as well as Suleman, et al. (2020), indicating that improved environmental performance has a positive impact on financial performance. Companies that focus on environmentally friendly policies and strategies can enhance financial performance by reducing waste, implementing recycling, remanufacturing, reusing, and adopting environmentally friendly production processes. These policies and procedures will ensure the sustainability and competitive positioning of the company in the market with higher financial performance.

The Relationship between Green Accounting and Environmental Performance with Financial Performance

The third hypothesis proposed in this study is that green accounting and environmental performance have a positive relationship with financial performance. Based on the results of the F-statistic presented in Table 9, it is shown that the variables of green accounting and environmental performance have a significant value of 0.039. Where this significant value is smaller than the significance level, namely 0.039 < 0.05, indicating a simultaneous positive relationship between green accounting and environmental performance with financial performance. Therefore, it is concluded that the third hypothesis is accepted.

The research findings indicate a positive relationship between green accounting and environmental performance simultaneously with financial performance. When both variables are tested together, there is a positive association with the financial performance of the company. This suggests that the implementation of green accounting and the enhancement of environmental performance, when considered simultaneously, can have a positive impact on the financial performance of the company. However, upon closer examination of the partial testing results, green accounting does not exhibit a significant relationship with financial performance. Despite companies allocating environmental costs in financial reports, this does not directly contribute to a positive impact on financial performance.

Therefore, to achieve maximum positive impact on financial performance, the implementation of green accounting should go hand in hand with improving environmental performance. Consequently, environmental performance can actively drive green accounting to collectively influence financial performance. Companies that successfully integrate environmental aspects into their accounting practices and exhibit strong environmental performance tend to generate good financial results. This can create added value, both in the long term and in terms of corporate reputation in the eyes of stakeholders such as consumers and investors. In line with signal theory, this can serve as a positive signal influencing stakeholders' perceptions in making their business decisions.

The findings of this research align with those of Sidarta, et al. (2023), who discovered that green accounting and environmental performance have a positive influence on profitability. Companies that disclose environmental information through the implementation of green accounting and establish good environmental performance with a favorable rating from the Ministry of Environment and Forestry can send positive signals to investors and provide incentives for creditors to extend credit. Moreover, this can assist companies in building a positive image and a good reputation among consumers and users of annual reports. This is considered to play a more meaningful role in environmental conservation efforts and gradually reduce the negative impacts of corporate business operations

CONCLUSIONS

Based on the results of the hypothesis testing conducted, the conclusions obtained are as follows: (1) Green accounting does not have a positive relationship with financial performance measured using ROA. The allocation of environmental cost components has not been able to serve as a convincing benchmark for stakeholders in making business decisions. Additionally, environmental costs are usually absorbed as part

of production costs or cost of goods sold, which is not sufficiently adequate for accurate measurement, reporting, and analysis. Thus, the implementation of green accounting has not yet reached a point where its positive impact is evident in the financial performance of the company. (2) Environmental performance has a positive relationship with financial performance measured using ROA. Companies with higher environmental performance ratings, as indicated by PROPER, will experience increased appreciation and loyalty from the community, leading to potential increases in product sales. Furthermore, improved environmental performance can also drive cost savings through long-term operational cost reductions and mitigate legal risks related to environmental issues. Therefore, companies that consider environmental aspects can not only enhance their corporate reputation but also potentially improve financial performance through positive responses from stakeholders. (3) Green accounting and environmental performance simultaneously have a positive relationship with financial performance. The implementation of green accounting and the enhancement of environmental performance can have a positive impact on financial performance only when implemented together. Therefore, to achieve maximum positive impact on financial performance, the implementation of green accounting should be accompanied by an improvement in environmental performance. Thus, environmental performance can collectively drive green accounting to influence financial performance.

Although this research provides insights, there are several limitations that need to be acknowledged. Among them, related to the research timeframe, the limited observation period may not reflect significant changes that may occur in green accounting practices and corporate environmental performance over time. Additionally, the selection of samples limited to energy companies on the Indonesia Stock Exchange may also restrict the generalization of findings to be applied to other industries, and the sample is only from companies in Indonesia that have not entirely implemented environmental disclosure. Therefore, readers are encouraged to consider these limitations when evaluating the implications and generalizations of the findings from this research.

The subsequent research can complement financial performance indicators such as Net Profit Margin, Return on Equity, Earning Per Share, and others. Other environmental performance indicators, such as ISO (ISO 14001 for Environmental Management System and ISO 17025 for Environmental Testing Certification) and GRI (Global Reporting Initiative), can also be included. Additionally, it can replace green accounting with a ratio scale using indicators measured by the formula:

$$Gr.\ Acc = \frac{Enviromental\ Cost}{\text{Total Production Cost}}$$

Moreover, researchers can add independent and control variables, such as company size, industry type, environmental regulations, and others, to obtain more varied results that can better explain the research phenomenon. Subsequent research could also broaden its scope to other company sectors, thus extracting more samples to enhance the optimal distribution of data.

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