
From Environmental Responsibility to Profitability: The Role of Green Accounting and Environmental Performance in Indonesia's Manufacturing Firms

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Keywords

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Abstract

In the modern business landscape, environmental sustainability has become a strategic necessity, especially for manufacturing companies in the food and beverage industry. Growing environmental awareness and corporate social responsibility pressures have led firms to adopt green accounting practices and improve environmental performance as part of corporate accountability. This study examines how green accounting and environmental performance influence the financial performance of food and beverage manufacturing firms listed on the Indonesia Stock Exchange (IDX) during 2022–2023. Using a quantitative research design, the study employed a purposive sampling technique and selected 30 companies that consistently published annual reports and PROPER environmental performance data. Secondary data were obtained from the IDX official website and PROPER reports issued by the Ministry of Environment and Forestry. Data analysis was conducted using multiple linear regression in SPSS 26, supported by t-tests and F-tests to evaluate partial and simultaneous effects. The results show that both green accounting ($t = 2.340$) and environmental performance ($t = 4.812$) significantly and positively affect financial performance, with all t-values exceeding the critical threshold. The F-test further confirms that these variables together have a significant combined effect ($F = 14.638$; $p < 0.001$). The regression model explains 61.9% of the variation in financial performance, indicating strong explanatory power. Moreover, environmental performance has a more substantial impact ($\beta = 12.495$) compared to green accounting ($\beta = 2.221$). In conclusion, the study demonstrates that integrating environmental considerations into accounting systems and operational activities strengthens corporate sustainability while simultaneously improving financial outcomes. The evidence supports the idea that environmentally responsible practices generate tangible economic benefits, especially in sectors highly exposed to ecological concerns such as food and beverage manufacturing.

1. Introduction

This study seeks to re-examine the influence of green accounting and environmental performance on financial performance among food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2022–2023 period. This research is expected to strengthen empirical evidence regarding the role of green accounting in enhancing corporate sustainability and profitability. This study aims to analyze the extent to which green accounting and environmental performance influence the financial performance of food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2022–2023 period. In the modern industrial era, environmental sustainability has become a major concern, particularly for the food and beverage manufacturing sector. Companies increasingly recognize that their operational activities not only affect the environment but also have an impact on financial performance (Suhendri et al., 2024). Therefore, the implementation of green accounting, or environmental accounting, is essential as an effort to mitigate ecological risks and enhance operational efficiency. Green accounting integrates environmental costs and benefits into a company's accounting system to assess the impact of business activities on the natural environment (Cohen & Robbins, 2011; Aniela, 2020; (Zuo et al., 2025)). Through this approach, companies can manage resources more efficiently, reduce environmental costs such as waste management and energy consumption, and strengthen their reputation in the eyes of the public and investors (Suhendri et al., 2024). In addition, environmental performance serves as an important indicator in assessing the extent to which a company contributes to environmental preservation (Suhendri et al., 2025).

1.1 Literature Review

The Indonesian government, through the PROPER program, evaluates corporate commitment to managing environmental impacts (Setyaningsih & Asyik, 2016)(Reliantoro et al., 2023). Previous studies show varied results: (Siregar et al., 2019) found that environmental costs do not affect financial performance, whereas environmental performance has a positive influence. Conversely, (Setyaningsih & Asyik, 2016) found no significant relationship between environmental performance, CSR, and financial performance.

These differences indicate a research gap that is important to investigate further.

Various previous studies have shown that green accounting and environmental performance play an important role in improving corporate financial performance, particularly in the manufacturing sector listed on the Indonesia Stock Exchange (IDX). However, earlier findings still show inconsistencies due to differences in observation periods, methods, and the mediating variables used. Several prior studies employed quantitative causal approaches using multiple linear regression techniques or Partial Least Squares (PLS). Research samples generally consisted of manufacturing companies listed on the IDX, with research periods ranging from 2016 to 2021. The variables used included green accounting, environmental performance, CSR (Corporate Social Responsibility), GCG (Good Corporate Governance), environmental costs, and earnings management as mediating or additional variables.

(Handoko & Santoso, 2023) found that green accounting has a negative effect on financial performance but an indirect positive effect through CSR, while environmental performance positively affects financial performance. Das Prena (2021) reported that green accounting does not have a significant effect, although environmental performance significantly affects financial performance. (Cahyani & Puspitasari, 2023) concluded that environmental performance and public share ownership have a positive influence, whereas green accounting, environmental costs, and capital structure do not affect financial performance. as well as (Herdiansyah & Ghozali, 2021)highlighted the role of CSR and GCG in financial performance, showing a direct positive effect on financial performance, although the results vary when mediated by earnings management. (Subakhtiar et al., 2022) found that environmental performance and firm size positively influence financial performance, while environmental costs have a negative effect.

In general, prior studies show that environmental performance tends to have a positive influence on financial performance, whereas the effect of green accounting remains inconsistent, depending on the research model and the presence of mediating variables such as CSR. The main similarity among these studies lies in their focus

on manufacturing companies listed on the IDX and the use of quantitative methods with variables such as green accounting, environmental performance, and financial performance.

The main differences include the research period (2016–2021 vs. 2022–2023), specific sectors (general manufacturing vs. food and beverage), as well as the existence of mediating or additional variables such as CSR, GCG, or environmental costs. The current study seeks to update the analysis period (2022–2023) and focus on the direct relationship between green accounting and environmental performance on financial performance without mediating variables, in order to provide a more concentrated understanding of the impact of sustainability practices in the manufacturing sector.

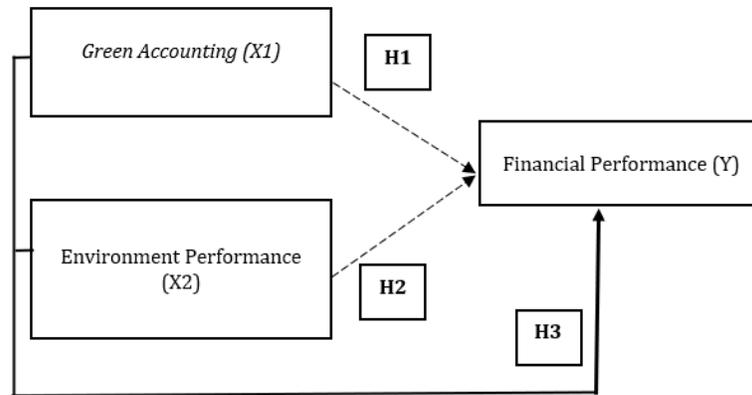


Figure 1. Conceptual Framework Sources : Rodiah, S., & Jayengsari, P. A. (2024).

Information :

Based on the theoretical review, previous research, and the conceptual framework, the hypotheses of this study are as follows:

H1: The implementation of green accounting has a positive effect on the company's financial performance.

H2: Environmental performance has a positive effect on the company's financial performance.

H3: The implementation of green accounting moderates the effect of environmental performance on the company's financial performance.

2. Research Methods

This study employs an explanatory research design, which aims to explain the influence of the independent variables (green accounting and environmental performance) on the dependent variable (financial performance). The data used in this research are secondary in nature. More specifically, the study adopts a cross-sectional design that collects data at a specific point in time, namely during the 2021–2023 period. The data collected include information on the implementation of green accounting, environmental performance, and financial performance of food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2022–2023 period.

The research design used in this study is an exploratory design that relies on testing the relationships between variables using a quantitative method. This design aims to explain whether there is an influence between the implementation of green accounting and environmental performance on the financial performance of companies listed on the Indonesia Stock Exchange (IDX), particularly food and beverage manufacturing companies for the 2022–2023 period. More specifically, this study employs a cross-sectional design that collects data at a specific point in time, namely during the 2022–2023 period. The data collected include

information on the implementation of green accounting, environmental performance, and financial performance of food and beverage manufacturing companies listed on the IDX for the 2022–2023 period.

The population of this study consists of all companies in the trading sector listed on the Indonesia Stock Exchange (IDX), selected because they are required to publish annual and sustainability reports that provide relevant information on green accounting, environmental performance, and financial performance. From approximately 40–50 manufacturing companies, the sample was determined using purposive sampling based on specific criteria, resulting in about 30 food and beverage manufacturing firms for the 2022–2023 period. The population of this study consists of all companies in the trading sector listed on the Indonesia Stock Exchange (IDX), selected because they are required to publish annual and sustainability reports that provide relevant information on green accounting, environmental performance, and financial performance.

From approximately 40–50 manufacturing companies, the sample was determined using purposive sampling based on specific criteria, resulting in about 30 food and beverage manufacturing firms for the 2022–2023 period (Source: Indonesia Stock Exchange / www.idx.co.id & PROPER Research 2025). The sample criteria are: (1) food and beverage manufacturing companies listed on the IDX in 2022–2023, (2) Companies in the food and beverage industry that published annual financial reports on the Indonesia Stock Exchange during the 2022–2023 period, and (3) companies that report green accounting and environmental performance using the PROPER method during the same period. Based on these criteria, a total of 30 companies were selected as the sample. Accordingly, the dataset consists of 60 observations (30 companies × 2 reporting years). The data collection methods in this study involve two main approaches: secondary data from annual reports and PROPER data, which are then compiled into research tables for analysis using SPSS 26 and Excel. The documentation method was carried out by collecting secondary data from the Indonesia Stock Exchange (IDX) through the website www.idx.co.id, including company annual reports, as well as from the official websites of the companies being studied, along with environmental data obtained from PROPER.

Multiple Linear Regression: This method is used to measure the extent to which the implementation of green accounting and environmental performance simultaneously influence financial performance. The regression model can be written as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

Notes:

Y = Financial Performance

X1 = Implementation of *Green accounting*

X2 = Environmental Performance

α = Konstanta

β_1, β_2 = Koefisien regresi

ϵ = Error term

3. Result and Discussion

Descriptive Statistical Analysis is used to provide an overview of the variables studied. According to Ghazali (2018:19), descriptive statistical tests include the mean, minimum value, maximum value, and standard deviation of each independent variable—Green Accounting (X1) and Environmental Performance (X2)—as well as the dependent variable, Financial Performance of Food and Beverage Manufacturing Companies listed on the IDX (Y) for the 2022–2023 period.

Table 1. Descriptive Statistical Analysis Results Source : Primary data processed using SPSS 26. (2025)

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Green accounting (X1)	60	3,00	4,00	3,2333	,42652
Environmental Performance (X2)	60	3,00	4,00	3,0333	,18102
Financial Performance (Y)	60	,13	88,00	15,9660	19,99880
Valid N (listwise)	60				

Based on the results of the descriptive statistical analysis, this study— which involved 60 observations data from thirty food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2022–2023 period—reveals several notable findings, including the following : (1) The Green Accounting variable (X1) has an average value of 3.2333, with a minimum of 3.00 and a maximum of 4.00, and a standard deviation of 0.42652. This indicates that the companies in the sample have generally implemented Green Accounting practices well, although some variation in the level of implementation remains, (2) The Environmental Performance variable (X2) also shows positive results, with an average value of 3.0333, a minimum of 3.00, and a maximum of 4.00. The relatively small standard deviation of 0.18102 indicates that environmental performance among the companies in the sample is relatively uniform and consistent, (3) Meanwhile, the Financial Performance variable (Y) exhibits substantial variation, with an average value of 15.9660, a minimum of 0.13, and a maximum of 88.00. The standard deviation of 19.99880 indicates considerable differences in financial performance among the companies in the sample. These descriptive results provide an initial overview of the characteristics of the data used in the study and serve as a basis for further analysis. The following are the results of the multiple linear regression analysis :

Table 2. Linier Multiple Regression Test Source : Primary data processed using SPSS 26. (2025)

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	61,048	44,379		7,376	,004
	Green accounting (X1)	2,221	6,534	,047	2,340	,035
	Environmental Performance (X2)	12,495	15,394	,113	4,812	,020

Variable	B Unstandardized Coefficients	Information
	Constant 61,048	
(X ₁)	2,221	Positif
(X ₂)	12,495	Positif

According to Sugiyono (2017), the multiple linear regression test is used to determine the direction of influence, whether positive or negative, with a significance level of 0.05. If the p-value is less than 0.05, the influence of the independent variables on the dependent variable is considered significant. A positive influence indicates a mutually reinforcing relationship between variable X and variable Y. Based on the table, a regression equation can be constructed to measure the extent of influence of the independent variables—Green Accounting (X1) and Environmental Performance (X2)—on the dependent variable, Financial Performance (ROA), of Food and Beverage Manufacturing Companies listed on the Indonesia Stock Exchange (IDX) (Y) for the 2022–2023 period, using the following regression model:

$$\hat{Y} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

$$Y = 61,048 + 2,221 X_1 + 12,495 X_2$$

Based on the regression equation, it can be interpreted that the constant value of 61.048 for the dependent variable, namely the Financial Performance (ROA) of Food and Beverage Manufacturing Companies listed on the Indonesia Stock Exchange (IDX) (Y) for the 2022–2023 period, indicates that the financial performance is already high before being influenced by the independent variables Green Accounting and Environmental Performance. In other words, the constant value of 61.048 suggests that even without the influence of the independent variables (Green Accounting and Environmental Performance), the Financial Performance (ROA) of Food and Beverage Manufacturing Companies listed on the IDX (Y) for the 2022–2023 period is already at a high level. Thus, with the inclusion of these factors, the company's financial performance tends to be high. If the values of variables X1 and X2 increase by 14.716, the total effect becomes 75.764. Accordingly, the meaning of each regression coefficient is as follows:

Y = The Financial Performance (ROA) of Food and Beverage Manufacturing Companies listed on the IDX (2022–2023), which serves as the dependent variable and whose value is predicted by the independent variables Green Accounting (X1) and Environmental Performance (X2).

X1 = The regression coefficient of Green Accounting (X1) is 2.221, with a significance level of 0.05, and a p-value of $0.035 < 0.05$, indicating that the independent variable significantly affects the dependent variable. The positive coefficient shows that Green Accounting (X1) has a positive influence on the Financial Performance (ROA) of Food and Beverage Manufacturing Companies (Y). This implies that the implementation of Green Accounting has a significant positive effect on the company's financial performance, particularly in the food and beverage manufacturing sector listed on the IDX, as measured by Return on Assets (ROA). In other words, the better a company applies Green Accounting principles—such as consistently managing and increasing CSR-related expenditures—the higher its financial performance will be. This finding indicates that investment in environmentally responsible accounting practices not only enhances the company's reputation but also improves operational efficiency and effectiveness, ultimately contributing to increased profitability.

X2 = The regression coefficient of Environmental Performance (X2) is 12.495, with a significance level of 0.05, and a p-value of $0.020 < 0.05$, indicating that the independent variable significantly affects the dependent variable. The positive coefficient shows that Environmental Performance (X2) positively influences the Financial Performance (ROA) of Food and Beverage Manufacturing Companies listed on the IDX (Y). This means that a company's Environmental Performance has a significant positive effect on its Financial Performance, as measured by Return on Assets (ROA). The better the company—particularly food and beverage manufacturers listed on the IDX—manages and enhances its environmental performance, the higher its financial performance will be. This suggests that companies capable of effectively managing environmental impacts and achieving high environmental performance standards, as reflected in PROPER awards with gold and blue ratings, tend to exhibit better financial performance. The positive influence of Environmental Performance on financial performance demonstrates that investment in environmental management not only enhances corporate reputation and reduces environmental risks but also improves operational efficiency and revenue generation. Companies with strong environmental performance are often better able to reduce costs through more efficient resource use, waste reduction, and improved productivity. Additionally, PROPER awards with gold and blue ratings indicate that the company has achieved an excellent and sustainable level of environmental performance. Based on the regression equation, Environmental Performance (X2) is found to have the dominant influence on the Financial Performance (ROA) of Food and Beverage Manufacturing Companies listed on the IDX for the 2022–2023 period, with a regression coefficient of 12.495.

Data Normality Test Using the Kolmogorov–Smirnov Method

According to Latan and Temalagi (2013), a normality test is conducted to assess whether the research data are normally distributed. A good regression model requires its residuals to be normally distributed. If the residuals are not normally distributed, the statistical conclusions become invalid or biased. In this study, the researcher employed the second approach, namely the statistical method using the Kolmogorov–Smirnov test. In the One-Sample Kolmogorov–Smirnov test, if the probability value (p-value) is greater than 5% (0.05), it can be concluded that the regression model follows a normal distribution.

Based on the results of the One-Sample Kolmogorov–Smirnov normality test, the findings can be explained in the following table:

Table 3. One-Sample Kolmogorov-Smirnov Test Results Source : Primary data processed using SPSS 26. (2025)

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N	60	
Normal Parameters ^{a,b}	Mean	,0000000
	Std. Deviation	19,81152495
Most Extreme Differences	Absolute	,229
	Positive	,229
	Negative	,206
Test Statistic		,229
Asymp. Sig. (2-tailed)		,200 ^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Based on the results of the One-Sample Kolmogorov–Smirnov normality test, the Asymp. Sig. (2-tailed) value is greater than 5% (0.05), specifically $0.200 > 0.05$. This indicates that the regression model used in this study is normally distributed.

Multicollinearity Test

The classical assumption test for multicollinearity aims to determine whether there is any correlation among the independent variables in the regression model. According to Temalagi and Latan (2013), the recommended criteria indicating the absence of multicollinearity problems are a Tolerance value greater than 0.10 and a Variance Inflation Factor (VIF) value less than 10. The following table presents the results of the multicollinearity test.

Table 4. Multicollinearitas Test Source : Primary data processed using SPSS 26. (2025)

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	61,048	44,379		7,376	,004		
	Green accounting (X1)	2,221	6,534	,047	2,340	,035	,887	1,128
	Environmental Performance (X2)	12,495	15,394	,113	4,812	,020	,647	1,583
a. Dependent Variable: Financial Performance (Y)								

Based on Table 4, it can be concluded that for the independent variable Green Accounting (X1), the Tolerance value is 0.887 (> 0.10) and the VIF value is 1.128 (< 10.000). For the Environmental Performance variable (X2), the Tolerance value is 0.647 (> 0.10) and the VIF value is 1.538 (< 10.000). Thus, all independent variables indicate no symptoms of multicollinearity, as evidenced by Tolerance values greater than 0.10 and VIF values less than 10.000.

Heteroscedasticity Test

According to Latan and Temalagi (2018), if the variance of the residuals is constant, the condition is referred to as homoscedasticity, whereas differing variances indicate heteroscedasticity. A good regression model is one that meets the homoscedasticity assumption or does not exhibit heteroscedasticity problems. In this study, the researcher employed the Glejser statistical test. The Glejser test is conducted by transforming the residual values into absolute residuals and regressing them against the independent variables in the model (Gujarati and Porter, 2019). If the significance value for the independent variables is greater than 0.05, it can be concluded that heteroscedasticity is not present. The following table presents the results of the heteroscedasticity test:

Table 5. Results of Heteroscedasticity Test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	53,976	30,463		1,772	,082
	Green accounting (X1)	2,655	4,485	-,082	,592	,556
	Environmental Performance (X2)	10,325	10,567	-,135	,977	,333
a. Dependent Variable: ABS_res						

Based on Table 5, it can be concluded that the independent variable Green Accounting (X1) has a significance value of 0.556 > 0.05, and Environmental Performance (X2) has a significance value of 0.333 > 0.05. Thus, none of the independent variables exhibit heteroscedasticity, as indicated by significance values greater than 0.05 for each variable.

Autocorrelation Test

The autocorrelation test is part of the regression analysis, which aims to determine whether the value of the dependent variable is influenced by its own previous values. The Durbin-Watson (DW) statistic is used to detect the presence of autocorrelation in this study. The criteria for the Durbin-Watson test indicate that if the DW value is close to 2 and not less than 1.5 nor greater than 2.5, then no autocorrelation is present. The Durbin-Watson criteria can be described as follows:

- If DW is less than dl or greater than $(4 - dl)$, autocorrelation is present.
- If DW is between du and $(4 - du)$, no autocorrelation is present.
- If DW lies between dl and du , or between $(4 - du)$ and $(4 - dl)$, a definite conclusion cannot be drawn (Caraka & Yasin, 2017).

Table 6. Autocorrelation Test Results based on the Durbin Watson Scale (DW) Source: Primary data processed using SPSS 26. (2025)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,137 ^a	,019	-,016	20,15610	2,443
a. Predictors: (Constant), Environmental Performance (X2), Green accounting (X1)					
b. Dependent Variable: Financial Performance (Y)					

Based on Table 6, the DW value of 2.443 falls within the Durbin-Watson range that is close to 2, not less than 1.5, and not greater than 2.5. This indicates that no autocorrelation is present in the research model. Therefore,

in this context, the null hypothesis (H_0), which states that there is no autocorrelation in the model, is accepted. This means that the model is free from autocorrelation, and consequently, the parameter estimates derived from the model can be considered reliable.

Hypothesis Testing

t-Test (Partial Test)

According to Ghozali (2018), the t-test is conducted to determine the partial effect of each independent variable. If the significance value produced by the t-test is less than 0.05, it can be concluded that the independent variable has a significant partial effect on the dependent variable. Similarly, if the t-statistic exceeds the t-table value, it can be concluded that the independent variable has a significant partial influence on the dependent variable (Latan & Temalagi, 2013). In this study, the t-test is used to examine whether the independent variables Green Accounting (X_1) and Environmental Performance (X_2) significantly influence the dependent variable Financial Performance (ROA) of Food and Beverage Manufacturing Companies listed on the Indonesia Stock Exchange (IDX) (Y) for the 2022–2023 period. The magnitude of each variable's effect on the dependent variable can be observed in the following t-test table:

Table 7. Uji t Source : Primary data processed using SPSS 26. (2025)

Variable	t hitung	t Table	Sig t
(X_1)	2,340	2,002	0,035
(X_2)	4,812		0,020

The results of the t-test calculations to determine the effect of each variable are as follows:

1. **Green Accounting (X_1)** has a significant effect on the Financial Performance of Food and Beverage Manufacturing Companies listed on the IDX (Y) for the 2022–2023 period, as indicated by a t-value of 2.340 > t-table value of 2.002 and a significance value of 0.035 ($p < 0.05$). Therefore, H_1 is accepted. This means that the implementation of Green Accounting positively influences the company's financial performance.
2. **Environmental Performance (X_2)** has a significant effect on the Financial Performance of Food and Beverage Manufacturing Companies listed on the IDX (Y) for the 2022–2023 period, as indicated by a t-value of 4.812 > t-table value of 2.002 and a significance value of 0.020 ($p < 0.05$). Therefore, H_2 is accepted. This implies that strong Environmental Performance—reflected through PROPER ratings such as gold, blue, or green—positively affects the Financial Performance (ROA) of Food and Beverage Manufacturing Companies listed on the IDX for the 2022–2023 period, enhancing their credibility in the eyes of consumers and even internationally.

F-Test(Simultaneous)

According to Sugiyono (2021), the simultaneous F-test is a statistical test used to determine the combined effect of the independent variables. If the probability (significance) value is less than 5% (0.05), the independent variables collectively have a significant effect on the dependent variable. In this study, the simultaneous effect of the independent variables Green Accounting (X_1) and Environmental Performance (X_2) on the dependent variable Financial Performance of Food and Beverage Manufacturing Companies listed on the IDX (Y) for the 2022–2023 period was tested. Based on the analysis conducted, the results of the hypothesis testing are presented in the following table:

Table 8. Uji F Source : Primary data processed using SPSS 26. (2025)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	439,862	2	219,931	14,638	,000 ^b
	Residual	23157,295	57	406,268		
	Total	23597,157	59			
a. Dependent Variable: Financial Performance (Y)						
b. Predictors: (Constant), Environmental Performance (X2), <i>Green accounting</i> (X1)						

The results of the F-test show that the calculated F-value (14.638) is greater than the critical F-value (3.16), with a significance level of 0.000. This indicates that, jointly, Green Accounting (X1) and Environmental Performance (X2) have a significant and positive effect on the dependent variable, Financial Performance (ROA), of Food and Beverage Manufacturing Companies listed on the IDX (Y) for the 2022–2023 period. Therefore, H3 is accepted. This study demonstrates that the combined implementation of Green Accounting and strong Environmental Performance has a significant and positive impact on the financial performance of food and beverage manufacturing companies. In other words, when companies apply Green Accounting principles—particularly those related to CSR expenditures—and achieve favorable environmental performance ratings (as reflected in the PROPER awards), their financial performance improves. This indicates that investments in environmentally responsible accounting practices and sound environmental management not only enhance corporate reputation but also improve operational efficiency, reduce costs, and increase revenue.

Coefficient of Determination (R²) Test

According to Ghozali (2021), the coefficient of determination (R²) essentially measures the extent to which the model is capable of explaining the variation in the dependent variable. The value of R² ranges between zero and one. A low R² value indicates that the independent variables have a very limited ability to explain variations in the dependent variable, whereas a value close to one suggests that the independent variables provide nearly all the information needed to predict variations in the dependent variable. The results of the Coefficient of Determination (R²) test are presented below.

Table 9. Coefficient of Determination (R²) Test Source: Primary data processed using SPSS 26. (2025)

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,137 ^a	,619	,016	20,15610
a. Predictors: (Constant), Environmental Performance (X2), <i>Green accounting</i> (X1)				
b. Dependent Variable: Financial Performance (Y)				

The analysis results show that the R-squared value is 0.619 (Model 1), indicating that Green Accounting (X1) and Environmental Performance (X2) jointly contribute 61.9% to the Financial Performance (ROA) of Food and Beverage Manufacturing Companies listed on the Indonesia Stock Exchange (IDX) (Y) for the 2022–2023 period. The implementation of Green Accounting and the enhancement of Environmental Performance can improve a company's financial performance. This finding suggests that companies that adopt environmental accounting practices and demonstrate strong environmental performance tend to achieve better financial outcomes.

The remaining 0.381 or 38.1% is explained by other variables, such as: 1. Environmental Costs. Environmental costs incurred by a company to manage and mitigate environmental impacts may influence financial performance. Previous studies indicate that environmental costs may have either positive or negative effects on financial performance, depending on how these costs are managed and invested, 2. Sustainability Report Disclosure. Sustainability reporting enhances corporate transparency and accountability in managing environmental and social impacts. This variable, often measured using GRI (Global Reporting Initiative) standards, can affect financial performance by increasing stakeholder trust, 3. Corporate Social Responsibility

(CSR). CSR encompasses corporate initiatives aimed at improving social and environmental well-being. This variable, typically measured through CSR disclosures in annual reports, may influence financial performance by strengthening corporate reputation and customer loyalty.

Effect of Green Accounting Implementation on the Financial Performance (ROA) of Food and Beverage Manufacturing Companies Listed on the IDX for the 2022–2023 Period

The analysis results demonstrate that the implementation of Green Accounting has a statistically significant (partial) and positive (regression coefficient) effect on Financial Performance (ROA) among food and beverage manufacturing companies listed on the Indonesia Stock Exchange for the 2022–2023 period. This is evidenced by a t-value of 2.430 > t-table value of 2.002, with a significance level of 0.035 ($p < 0.05$), indicating that H1 is accepted. The regression coefficient for X1 is 2.221, signifying that the independent variable has a significant and positive effect on the dependent variable.

The implementation of Green Accounting plays an important role in improving the financial performance of food and beverage manufacturing companies. The findings indicate that companies that effectively adopt Green Accounting principles tend to achieve better financial outcomes. This is understandable, as Green Accounting enables companies to be more transparent and accountable in managing the environmental impacts generated by their operational activities.

These findings are consistent with the study conducted by Cahyani & Puspitasari (2023), (Bellamy et al., 2023), (Gayatri & Sari, 2024) and (Heriyah & Salsabila, 2023), which examined the effect of Environmental Performance, Environmental Costs, Public Share Ownership, Green Accounting, and Capital Structure on Financial Performance. The study focused on companies in the Basic and Chemical Industry, Miscellaneous Industry, and Consumer Goods Industry listed on the Indonesia Stock Exchange (IDX) for the 2017–2021 period, using multiple linear regression analysis. The results showed that (1) Environmental Performance and Public Share Ownership had a positive effect on Financial Performance, while (2) Environmental Costs, Green Accounting, and Capital Structure had no significant effect on Financial Performance.

By implementing Green Accounting, companies can identify and manage potential environmental risks, thereby reducing costs and increasing revenues. Moreover, Green Accounting enhances stakeholder trust—including that of investors and consumers—which may ultimately influence financial performance. In today's business context, companies that demonstrate environmental responsibility and implement environmentally friendly accounting practices can enhance their reputation and differentiate themselves from competitors. This can have a positive long-term impact on financial performance.

Therefore, food and beverage manufacturing companies should prioritize the adoption of Green Accounting as part of their business strategy to achieve long-term success. Effective implementation of Green Accounting can also help companies improve operational efficiency and reduce costs. Consequently, companies can enhance financial performance while simultaneously contributing positively to the environment and society. In the long run, Green Accounting may become one of the key factors in improving corporate success and maintaining competitive advantage in the market.

The Effect of Environmental Performance on the Financial Performance of Food and Beverage Manufacturing Companies Listed on the IDX for the 2022–2023 Period

The analysis results demonstrate that Environmental Performance has a statistically significant (partial) and positive (regression coefficient) effect on Financial Performance (ROA) of food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2022–2023 period. This is evidenced by a t-value of 4.812 > t-table value of 2.002 and a significance level of 0.020 ($p < 0.05$), indicating that H2 is accepted. The regression coefficient (X2) of 12.495 further confirms that the independent variable significantly affects the dependent variable, with the positive sign indicating that Environmental Performance (X2) has the strongest influence among the predictors.

Environmental Performance is proven to have a significant and positive impact on the financial performance of food and beverage manufacturing companies. The findings show that companies exhibiting strong environmental performance tend to achieve better financial outcomes. This is understandable because sound environmental performance enhances corporate reputation, reduces environmental risks, and improves operational efficiency.

These findings support the study by Subakhtiar et al. (2022) and (Tjoa & Widianingsih, 2022), which examined the influence of Environmental Performance, Environmental Costs, and Firm Size on Financial Performance among companies listed on the Indonesia Stock Exchange. The study focused on food and beverage companies for the 2019–2020 period and employed a quantitative approach using multiple linear regression analysis. The results revealed that environmental performance had a positive effect on financial performance, environmental costs had a negative and significant effect, firm size influenced financial performance, and collectively, all three independent variables—environmental performance, environmental costs, and firm size—had a significant simultaneous effect on company performance.

Companies with strong environmental performance tend to build greater stakeholder trust, including trust from investors and consumers, which ultimately influences financial performance. Moreover, strong environmental performance enables companies to better identify and manage potential environmental risks, thereby reducing costs and increasing revenue. In today's business landscape, environmental performance has become a critical factor in determining corporate success. Companies that prioritize environmental responsibility and demonstrate strong environmental performance can differentiate themselves from competitors and enhance their competitive advantage.

Therefore, food and beverage manufacturing companies need to prioritize environmental performance as part of their long-term business strategy. The findings of this study also indicate that environmental performance has the most dominant positive influence on a company's financial performance. This demonstrates that companies with strong environmental performance can significantly enhance their financial outcomes. Consequently, environmental performance should be considered a key factor in improving corporate success and sustaining competitive advantage in the marketplace.

The Influence of Green Accounting and Environmental Performance on the Financial Performance of Food and Beverage Manufacturing Companies Listed on the IDX for the 2022–2023 Period

The analysis results indicate that the implementation of Green Accounting and Environmental Performance has a significant and positive simultaneous effect on the Financial Performance of food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2022–2023 period. This is evidenced by an F-value of 14.638, which is greater than the F-table value of 3.16, and a significance level of 0.000, thereby confirming that H3 is accepted. The findings demonstrate that the simultaneous application of Green Accounting and strong Environmental Performance significantly and positively influences the financial performance of food and beverage manufacturing firms. Companies that adopt Green Accounting principles and exhibit strong environmental performance tend to achieve better financial outcomes. This can be attributed to the fact that Green Accounting and sound environmental practices enhance operational efficiency, reduce costs, and increase corporate revenue.

The results of this study are consistent with the findings of Sucitra (2024), which revealed that Green Accounting and corporate profitability jointly influence financial performance within the context of Islamic economics (a case study on food and beverage manufacturing companies listed on the Indonesia Stock Exchange for the 2020–2023 period). Furthermore, the study aligns with research by (Ramadhani et al., 2022), which showed that the application of Green Accounting and Environmental Performance significantly affects financial performance, with corporate governance acting as a moderating variable. Their study, titled *The Influence of Green Accounting Implementation and Environmental Performance on Financial Performance in Food and Beverage Manufacturing Companies Listed on the Indonesia Stock Exchange from 2020 to 2024*, is supported by two theoretical foundations: 1. Legitimacy Theory, proposed by Dowling and Pfeffer (1975),

which asserts that companies must secure social legitimacy by demonstrating strong environmental performance; and 2. Stakeholder Theory, proposed by Freeman (1984), which emphasizes that companies must consider the interests of stakeholders, including environmental stakeholders. Overall, the present study reinforces the importance of integrating Green Accounting practices and maintaining strong environmental performance as strategic components for improving the financial performance and long-term competitiveness of food and beverage manufacturing companies.

4. Conclusions

The results of this study demonstrate that both Green Accounting implementation and Environmental Performance exert a statistically significant and positive influence on the financial performance (ROA) of food and beverage manufacturing companies listed on the Indonesia Stock Exchange for the 2022–2023 period. Green Accounting contributes to improved financial outcomes by enhancing transparency, accountability, and environmental risk management, which collectively strengthen corporate credibility and operational efficiency. Similarly, Environmental Performance is shown to be the most dominant predictor of financial performance, indicating that companies with superior environmental practices tend to achieve higher profitability through enhanced reputation, reduced environmental risks, and better resource utilization.

The simultaneous effect of Green Accounting and Environmental Performance further confirms that the integration of environmentally responsible practices creates synergistic benefits that significantly enhance financial outcomes. These findings are consistent with prior empirical research (Cahyani & Puspitasari, 2023; Subakhtiar et al., 2022; Sucitra, 2024; Ramadhani et al., 2022), and they reinforce the theoretical propositions of both Legitimacy Theory and Stakeholder Theory, which assert that companies that manage environmental responsibilities effectively are more likely to sustain positive stakeholder relationships and achieve superior financial performance. Overall, the study underscores the strategic importance of environmental responsibility as a key determinant of long-term competitiveness and corporate success.

Based on these findings, several practical recommendations can be proposed:

- 1. Strengthen the integration of Green Accounting into corporate strategy.**
Companies should institutionalize Green Accounting as part of their core financial and environmental management systems. This will enable firms to more accurately assess environmental costs, reduce inefficiencies, and improve financial outcomes.
- 2. Enhance Environmental Performance through proactive environmental initiatives.**
Firms should intensify efforts to improve their environmental practices—such as waste reduction, pollution control, and energy efficiency—given its dominant positive impact on financial performance.
- 3. Develop sustainability reporting that aligns with stakeholder expectations.**
Transparent reporting on environmental initiatives and Green Accounting practices will strengthen stakeholder trust, particularly among investors and consumers who increasingly prioritize sustainability in their decision-making.
- 4. Leverage environmental performance as a competitive advantage.**
Companies should recognize that strong environmental performance not only reduces risks but also differentiates them in a competitive market, enhancing brand reputation and long-term profitability.
- 5. Encourage regulatory bodies and industry associations to promote Green Accounting adoption.**
Policymakers and industry regulators should provide incentives, training, and standardized guidelines to facilitate broader adoption of Green Accounting and environmentally responsible practices across the manufacturing sector.

Overall, the results highlight that sustainable environmental practices are not merely compliance obligations but strategic investments that contribute meaningfully to financial success. Food and beverage manufacturing

companies should therefore prioritize both Green Accounting and Environmental Performance to maintain competitiveness and achieve sustainable long-term growth.

5. References

- Bellamy, A., Handajani, L., & Waskito, I. (2023). Pengaruh Penerapan Green Accounting dan Kinerja Lingkungan Terhadap Kinerja Perusahaan. *Valid Jurnal Ilmiah*, 20(2), 52–61. <https://doi.org/DOI.10.53512/valid.v20i2.284>
- Cahyani, R. S. A., & Puspitasari, W. (2023). PENGARUH KINERJA LINGKUNGAN, BIAYA LINGKUNGAN, KEPEMILIKAN SAHAM PUBLIK, GREEN ACCOUNTING, DAN STRUKTUR MODAL TERHADAP KINERJA KEUANGAN. *Jurnal Akuntansi Trisakti*, 10(2), 198–208. <https://doi.org/http://dx.doi.org/10.25105/jat.v10i2.17846>
- Dowling, J., & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *Pacific Sociological Review*, 18(1), 122–136. <https://doi.org/10.2307/1388226>
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Boston: Pitman.
- Gayatri, P. A., & Sari, D. A. K. R. (2024). PENGARUH PENERAPAN GREEN ACCOUNTING DAN KINERJA LINGKUNGAN TERHADAP KINERJA KEUANGAN (Studi Empiris Pada Perusahaan Indeks Kompas100 Yang Terdaftar Di Bursa Efek Indonesia Periode 2018-2022). *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi) Universitas Pendidikan Ganesha*, 15(4), 969–979.
- Handoko, J., & Santoso, V. (2023). The Impact Of Green Accounting. *Nominal Barometer Riset Akuntansi Dan Manajemen*, 12(1), 84–101.
- Herdiansyah, I., & Ghozali, I. (2021). Dampak Tanggung Jawab Sosial Perusahaan (Csr) Dan Tata Kelola Perusahaan (Gcg) Terhadap Kinerja Keuangan Menggunakan Manajemen Laba Sebagai Variabel Mediasi. *Diponegoro Journal of Accounting*, 10(3), 14.
- Heriyah, N., & Salsabila, N. A. (2023). Pengaruh Penerapan Green Accounting Terhadap Economic Performance (Studi Pada Perusahaan Sektor Manufaktur yang Terdaftar di Bursa Efek Indonesia Tahun 2019-2022). *In Search – Informatic, Science, Entrepreneur, Applied Art, Research, Humanism*, 142–147.
- 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*, Vol. 9, No. 2 (2022):227-242, <http://dx.doi.org/10.25105/jat.v9i2.14559>. *Jurnal Akuntansi Trisakti*, 9(2), 229–244.
- Reliantoro, S., Laksono, T., Silaban, M. D., Rahayu, B. B., Adiwana, R. E., Haikal, M., Suwanda, Rafael, A., Nurhidayati, D., & Berlianto, M. (2023). GREEN LEADERSHIP : Extraordinary Turnarounds - Program Penilaian Peringkat Kinerja Perusahaan Dalam Pengelolaan Lingkungan Hidup. *Dirjen Pengendalian Pencemaran Dan Kerusakan Lingkungan - Dirjen Pengelolaan Sampah, Limbah Dan B#*, 1–348.
- Setyaningsih, R. D., & Asyik, N. F. (2016). PENGARUH KINERJA LINGKUNGAN TERHADAP KINERJA KEUANGAN DENGAN CORPORATE SOCIAL RESPONSIBILITY SEBAGAI PEMODERASI. *Jurnal Ilmu Dan Riset Akuntansi*, 5(4), 1–15.
- Siregar, I. F., Rasyad, R., & Zaharman. (2019). Pengaruh Implikasi Biaya Lingkungan dan Kinerja Lingkungan Terhadap Kinerja Keuangan Perusahaan Pertambangan Umum Kategori Program Penilaian Peringkat Kinerja Perusahaan Dalam Pengelolaan Lingkungan Hidup (PROPER). *Jurnal Ekonomi Dan Bisnis Dharma Andalas*, 21(2), 198–209.
- Subakhtiar, F. R., Sudaryanti, D., & Anwar, S. A. (2022). PENGARUH KINERJA LINGKUNGAN, BIAYA LINGKUNGAN, DAN UKURAN PERUSAHAAN TERHADAP KINERJA KEUANGAN PADA PERUSAHAAN YANG TERDAFTAR DI BURSA EFEK INDONESIA. (Studi Kasus Pada Perusahaan Food and Beverage Tahun 2019-2020). *E-Jurnal Ilmiah Riset Akuntansi*, 11(2), 81–93. <https://jim.unisma.ac.id/index.php/jra/article/view/15099/11279>

- Suhendri, H., Aditia, D., & Gunawan, C. I. (2025). Peran Stakeholder dalam Mendukung Ketahanan Mangrove Berkelanjutan di Banyuurip Mangrove Center, Jawa Timur. *Jurnal KRISNA: Kumpulan Riset Akuntansi*, 16(2), 279–290.
- Suhendri, H., Handayanto, A. J., Putri, S. A., & Hendra. (2024). Evaluasi Hubungan Kredit Macet, Penyaluran Kredit, dan Sustainability Report pada Kemampulabaan Bank Umum Milik Negara yang Tercatat di Bursa Efek Indonesia (BEI). *Referensi : Jurnal Ilmu Manajemen Dan Akuntansi*, 12(2), 50–55.
- Tjoa, E. V., & Widianingsih, L. P. (2022). GREEN ACCOUNTING, ENVIRONMENTAL PERFORMANCE, AND PROFITABILITY: EMPIRICAL EVIDENCE ON HIGH PROFILE INDUSTRY IN INDONESIA. *RESEARCH IN MANAGEMENT AND ACCOUNTING*, 5(2), 93–105.
<https://doi.org/https://doi.org/10.33508/rima.v5i2.4158>
- Zuo, Y., Zeng, S., & Wu, S. (2025). The Impact of Institutional Investors on Firm Carbon Information Disclosure: Evidence from Chinese Industrial Listed Firms. *Sustainability*, 17(10624), 1–18.
<https://doi.org/https://doi.org/10.3390/su172310624>