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The Effect of Green Accounting and Environment Performance on Sustainable Growth Rate with Profitability as a Moderating Variable

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ABSTRAK

Aktivitas perusahaan dalam upaya meningkatkan keuntungan (profit) yang maksimum tidak lepas dari penggunaan sumber daya alam yang sifatnya terbatas dan memerlukan waktu yang cukup lama untuk pulih. Perusahaan harus mampu mengelola keuangan untuk memperoleh profit juga harus memiliki kemampuan meminimalisir dampak negatif akibat aktivitas bisnisnya terhadap masyarakat dan lingkungan. Perusahaan dalam menjaga keseimbangan antara kepentingan bisnis, lingkungan dan masyarakat, perlu menerapkan *green accounting*. Berdasarkan isu-isu lingkungan dan pentingnya bisnis berkelanjutan bagi perusahaan, peneliti bertujuan untuk memperoleh bukti empiris bahwa 1). *Green accounting* memengaruhi *sustainable growth rate*. 2). Kinerja lingkungan memengaruhi *sustainable growth rate*. 3) *Green accounting* memengaruhi *sustainable growth rate* dengan dimoderasi variabel profitabilitas. 4) Kinerja lingkungan memengaruhi *sustainable growth rate* dengan dimoderasi variabel profitabilitas. Penelitian ini menggunakan pendekatan kuantitatif dengan unit analisis adalah perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia (BEI) dan yang mengikuti PROPER tahun 2020 - 2022. *Moderated regression analysis* atau uji interaksi digunakan dalam penelitian ini. Hasil penelitian *green accounting* dan kinerja lingkungan berpengaruh terhadap *sustainable growth rate*. *Green accounting* dapat memengaruhi secara negatif terhadap *sustainable growth rate* (SGR) dengan dimoderasi profitabilitas, dan profitabilitas tidak dapat memoderasi pengaruh kinerja lingkungan terhadap *sustainable growth rate*

ABSTRACT

Company activity in an effort to maximize profit cannot be separated from the use of natural resources, which are limited in nature and require a considerable amount of time to recover. Companies must be able to manage their finances to obtain profits must also have the ability to minimize the negative impacts of their business activities on society and the environment. In order to

maintain a balance between business, environmental, and community interests, companies need to implement green accounting. Based on environmental issues and the importance of sustainable business for companies, the researchers aim to obtain empirical evidence that 1). Green accounting affects the sustainable growth rate. 2). Environmental performance affects the sustainable growth rate. 3). Green accounting affects sustainable growth rate moderated by profitability variable. 4). Environmental performance affects the sustainable growth rate moderated by the profitability variable. The study uses a quantitative approach with unit of the analysis being manufacturing companies listed on the Indonesia Stock Exchange (IDX) and participating PROPER from 2020 to 2022. Moderated regression analysis or interaction tests are used in this study. The result of study show that green accounting can negatively affect the sustainable growth rate (SGR) moderated profitability, and profitability cannot moderate the effect of environmental performance on the sustainable growth rate,

INTRODUCTION

Sustainable business refers to a company's strategy to reduce the negative impact of its operations on the environment. Companies' efforts to maximize profits are inseparable from the use of natural resources, which are limited and require a long time to recover. These activities often have a negative impact on the environment, as found by the DKI Jakarta Environment Agency (LH) that out of 144 industrial activities, 48 cause pollution, including air pollution (Sutrina & Ihsanuddin, 2023). Based on data from the Ministry of Environment and Forestry (KLHK), hazardous and toxic waste (B3) that caused environmental pollution in 2021, amount to 60 million tons, produced by 2,8997 manufacturing industries (Marhaendratno, 2023). Companies need to have the ability not only to manage finances to make a profit, but also to use their funds to minimize the negative impact of their business activities on society and the environment so that future generations can have resources for their long-term needs (Ashari & Anggoro, 2021). In maintaining a balance between business, environment, and community interests, companies need to implement green accounting. Green accounting is necessary to reduce the adverse impacts caused by company activities. Green accounting encourages a focus not only on financial reports for profit purposes but also on social, community, and environmental transactions (Lolo, Alimuddin, Habbe, Mediaty, & Maulana, 2020). Green accounting helps organizations identify resource use and costs incurred. This technique records the costs and benefits of companies in the process of corporate sustainability (Singh, Singh, Arora, & Mittal, 2019). Company activities in generating profits while still caring for the environment will gain legitimacy from the community so that the company can grow or its

business sustainability will remain. When a company grows too fast, it requires more capital to keep compensate. If company management does not pay attention to this, it can cause financial problems. The sustainable growth rate (SGR) is a tool that helps determine how much a company can grow without running out of financial resources, taking into account factors such as profitability, asset turnover efficiency, and financing strategies. This helps managers ensure that the company can continue to grow without financial difficulties (Nasim & Irnama, 2015). Based on environmental issues and the importance of sustainable business, the researches formulated the following research questions: 1). Does green accounting affect the sustainable growth rate? 2). Does environmental performance affect the sustainable growth rate? 3). Does green accounting affect sustainable growth rate moderated by profitability variables? 4). Does environmental performance affect the sustainable growth rate when moderated by profitability variable?. The purpose of this study is to obtain empirical evidence for these research questions. This study is expected to provide a deeper understanding of green accounting and sustainable growth rate and contribute to the development of knowledge related to green accounting and business sustainability (sustainable development).

LITERATUR REVIEW

A. Legitimacy theory

Legitimacy theory is a theory that explains the relationship between a company and the community in which operates. Companies strive to align their business activities with the norms embraced by society can influence companies in the use of economic resources, so companies need to pay attention to the environment that can affect their performance in order to gain public legitimacy and green accounting as a form corporate commitment to minimize the adverse effects of their operations.

B. Stakeholder Theory

Stakeholder Theory explains that an operating entity needs to pay attention to the interests of stakeholders (Ghozali & Chariri, 2014). Based on stakeholder theory, companies have a responsibility to maximize profits for owners and not harm the community, the environment, and the government, so that the progress of the company is greatly influenced by stakeholders. Companies that implement green accounting reflect that the company cares about the environment and sustainable business, so that stakeholder trust can increase, which in turn can increase profitability.

C. Previous Research

Several researchers have produced different results, namely that green accounting affects sustainable progress, environmental performance does not affect sustainable progress,

and green accounting with profitability as a moderating variable affects sustainable progress (Muniroh, Nursasi, & Triani, 2023). Research conducted on manufacturing companies in the 2017-2018 period found that green accounting and environmental performance affect profitability (Chasbiandani, Rizal, & Satria, 2019). Research on all companies listed on the Indonesia Stock Exchange during the 2017-2021 period found that green accounting affects sustainable growth, while environmental performance and profit management do not affect sustainable growth (Nizar & Mulyani, 2023). Research conducted on manufacturing companies during the 2020-2022 period found that the implementation of green accounting and financial performance affect sustainable development (Somantri & Sudrajat, 2023). Research conducted on manufacturing companies in the 2016-2019 period found that environmental performance, debt policy, and profitability affect the sustainable growth rate (SGR), and that environmental performance and debt policy affect SGR mediated by profitability (Indriati, Nawasiah, & Retno, 2022).

D. The Influence of Green Accounting on Sustainable Growth Rate

Green accounting is a concept whereby companies operate using their resources as efficiently and effectively as possible so that they can develop sustainably and benefit society (Arofah, Maharani, & Kurniati, 2022). Companies that implement green accounting determine, measure, report, and disclose the costs and benefits of their operational activities that affect the environment and society, so that companies do not only focus on business interests but also on environmentally friendly activities. Thus, companies contribute to sustainable development and are expected to improve the welfare of society (Muniroh, et.al, 2023). Companies that pay attention to the environment and society can operate in line with the values that exist in society, thereby gaining legitimacy for the continuity of their business operations. Several studies show that green accounting affects sustainable growth (Muniroh, et.al, 2023), (Indriati, et.al., 2022), (Nizar & Mulyani, 2023). Based on this, the research hypothesis is formulated as follows:

H1: Green accounting affects the sustainable growth rate

E. The Effect of Environmental Performance on the Sustainable Growth Rate

Good environmental performance reflects how a company operates by striving to protect the environment, such as how it manages and disposes of waste so as to minimize damage to the environment surrounding the company. Environmental performance is assessed using the “Public Disclosure Program for Environmental Compliance (PROPER)”. Minister of Environment Regulation No. 1 of 2021 concerning the “Company Performance Rating Program in Environmental Management” regulates five PROPER rating categories. Companies with PROPER ratings contribute to increasing stakeholder trust, which has an impact on the

sustainability of the company's business. The results of research by (Indriati, et.al., 2022) show that environmental performance affects sustainable growth. Based on this description, the research hypothesis is formulated as follows:

H2: Environmental performance affects the sustainable growth rate

F. Green Accounting with Profitability as a Moderating Variable for Sustainable Growth Rate

The application of green accounting is an effort to achieve sustainable growth by implementing efficiency and effectiveness in environmental activities in order to maintain a mutually beneficial relationship with the community. Companies can implement one strategy, which is to produce quality products using minimal energy and resources (eco-efficiency), so that companies will get savings and profits (Niandari & Handayani, 2023). Companies that adopt green accounting signify a commitment to paying attention to the environmental impact of their business activities. The number of communities and governments that demand industry players to produce goods and services that are beneficial to the public and environmentally friendly products is increasing, so companies need to assess the costs and benefits incurred in addressing environmental issues. Environmental accounting is applied by companies to obtain potential profits from investing in environmental management and to avoid liability or legal claims related to environmental impacts. Companies strive to produce quality products in line with the demands of a society that is conscious of environmentally friendly products and by using minimal energy and resources, it is hoped that sales will increase, which will in turn increase profitability. Thus, it can increase the sustainable growth rate. (Pratiwi & Rahayu, 2018), (Muniroh, et.al, 2023) show that sustainable growth can be influenced by green accounting, moderated by profitability. Based on these statements, the following hypothesis is formulated:

H3: Profitability can moderate the relationship between green accounting and sustainable growth rate.

G. Environmental Performance with Profitability as a Moderating Variable on Sustainable Growth Rate

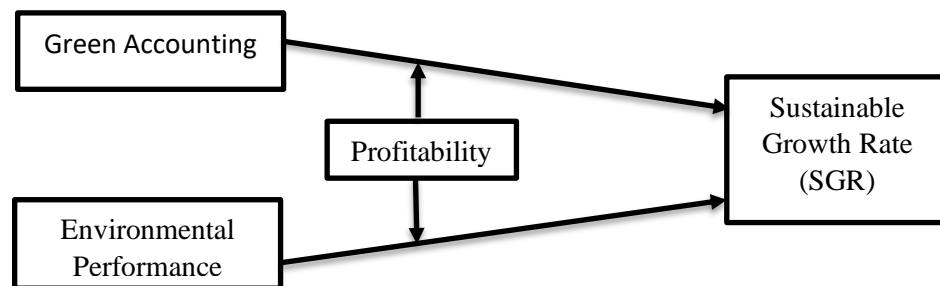
In an effort to meet the expectations of stakeholders, company management will strive to improve environmental performance and contribute positively to the company's development. A reduction in public health expenditures and an improvement in environmental performance can encourage sustainable growth. Companies with good environmental performance contribute to sustainable growth. Effective environmental management has an impact on a company's reputation. This good reputation is valued by investors and has an impact

on improving the company's financial performance. This can maintain long-term business continuity (Nizar & Mulyani, 2023). Several studies have found that environmental performance can affect sustainable growth, moderated by the variable of profitability (Indriati, et.al., 2022), (Muniroh, et.al, 2023). Based on these statements, the following hypothesis was formulated:

H4: Profitability can moderate the relationship between environmental performance and sustainable growth rate.

H. Research Model

Figure 1. Research Model



Source: Data processed in 2024

RESEARCH METHODOLOGY

A. Data and Data Sources

This study uses a quantitative approach and takes manufacturing companies listed on the Indonesia Stock Exchange (IDX) that participated in PROPER from 2020 to 2022 as the unit of analysis. Moderated regression analysis or interaction testing is used in this study with panel data (pooling data), which is a combination of cross-sectional data and time series data. The data collection method uses literature study and documentation. The population of this study was manufacturing companies listed on the IDX for the 2020-2022 period. Purposive sampling was used in this study, namely 1) companies listed on the IDX in 2020-2022 and participating in PROPER during the research period. 2) companies that published annual reports and sustainability reports during the research period.

B. Operational Definition and Measurement of Variables

1. Green accounting variables

Green accounting variables are accounting procedures that integrate costs, impacts, and environmental implications. These variables are measured by assigning a value to each criterion. If a company does not include environmental cost elements, such as research and development costs related to the environment, waste recycling costs, or environmental research and development costs, the value is 0 (zero). However, if the

company includes environmental cost elements in its annual or semi-annual reports, the value is 1, and the value is 2 (two) if the company includes environmental cost elements in its reports (Muniroh, et.al, 2023).

2. Environmental Performance Variable

Environmental performance is a measure that can be analyzed from an environmental management system. This variable is measured using PROPER, which has the following criteria: gold rating with a score of 5, green rating with a score of 4, blue rating with a score of 3, red rating with a score of 2, black rating with a score of 1 (Chasbiandani, et.al., 2019).

3. Profitability Variable

Profitability is the extent to which a company is able to generate profits from available resources (Lestari, Nadira, Nurleli, & Helliana, 2019). In this study, profitability was measured using ROA (Muniroh, et.al, 2023):

$$\text{ROA} = (\text{Net profit after tax}) / (\text{total assets})$$

4. Sustainable Growth Rate (SGR) Variable

SGR assesses the extent to which a company can increase sales to reach a maximum point without depleting its financial resources. This concept can be broken down into several parts that indicate the company's profit retention policy (retention rate), ability to manage costs (net profit margin), efficiency in utilizing assets (assets turnover), and financing approach (financial leverage), all of which play an important role in determining the company's performance results. The SGR variable measurement is $(\text{ROE} \times \text{R}) / (1 - (\text{R} \times \text{ROE}))$

where R (Retention Rate) = $1 - \text{DPR}$ (Nasim & Irnama, 2015).

C. Data Analysis

The researchers conducted tests consisting of: 1). Descriptive Statistical Analysis, which is a method used to describe and analyze data concisely. The purpose of descriptive analysis is to provide an overview of the characteristics of data. Descriptive statistical tests are needed to determine the nature of the data, identify patterns and anomalies, and provide background information before conducting statistical analysis and making decisions based on the data. 2) Classical Assumption Tests, consisting of: a) Data Normality Test, b) Multicollinearity Test, c) Heteroscedasticity Test, d) Autocorrelation. 3) Moderated Regression Analysis (MRA) with the following equation formula:

1. Equation for multiple regression:

$$\text{SGR} = a + b_1\text{GA} + b_2\text{PROPER} + e$$

2. Regression equation for the profitability variable (ROA) moderates the effect of GA on SGR:
 $ROA = a + b1GA$, to obtain the residual value, the residual value is then absolutized
 $SGR = a + b2 |resGA_ROA|$, if the result is significantly negative, then the ROA variable is a moderating variable
3. The profitability variable (ROA) regression equation moderates the effect of environmental performance (PROPER) on SGR:
 $ROA = a + b1GA$, to obtain the residual value, the residual value is then absolutized
 $SGR = a + b2 |resGA_ROA|$, if the result is significantly negative, then the ROA variable is a moderating variable
4. Test the coefficient of determination (R^2). 5) Test the hypothesis, namely the T-test and F-test

RESULT AND DISCUSSION

A. Description of Research Objects

Manufacturing companies listed on the Indonesia Stock Exchange (IDX) and participating in PROPER from 2020 to 2022. Based on the research criteria, 40 companies were selected as research samples, with an observation period of 3 years, resulting in a total sample of 120.

B. Descriptive Statistical Analysis

Based on the test results, the descriptive statistical test results are as follows:

Table 1. Descriptive Statistical Test
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	120	-0,21572905	0,27408667	0,0344633141	0,07059998690
SGR	120	-0,18686893	0,19851149	0,0221342638	0,08536417066
Valid N (listwise) 120					

Source: Data processed in 2024

Table 2. Frequency Distribution Analysis Results
Green Accounting

				<i>Cumulative</i>	
		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Percent</i>
Valid	0	20	16,7	16,7	16,7
	1	52	43,3	43,3	60,0

2	48	40,0	40,0	100.0
Total	120	100.0	100.0	

Source: Data processed in 2024

**Table 3. Frequency Distribution Analysis Results
PROPER**

		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Valid	2	21	17,5	17,5	17,5
	3	76	63,3	63,3	80,8
	4	22	18,3	18,3	99,2
	5	1	0,8	0,8	100.0
	Total	120	100.0	100.0	

Source: Data processed in 2024

Based on Table 2, the descriptive statistics can be explained as follows:

The profitability variable with ROA proxy has an average value of 0.0344633141 or 3.44%, which indicates that the average profit or return is 3.44%. The minimum or lowest value of -0.21572905 or -21.57% was obtained by PT Sentra Food Indonesia Tbk. The maximum value of 0.27408667 or 27.41% was obtained by PT Multi Bintang Indonesia Tbk.

The sustainable growth rate (SGR) variable with the lowest value of -0.18686893 or -18.68% was obtained by PT Garudafood Putra Putri Jaya Tbk, and the highest or maximum value of 0.19851149 or 19.85% was obtained by PT Delta Djakarta Tbk. The average value of 0.0221342638 or 2.21% indicates a company sales growth of 2.21%.

The green accounting variable, for companies that do not include environmental cost elements, such as environmental research and development costs, waste treatment costs, or costs for environmental research and development, there were 20 samples or 16.7%. A total of 52 samples or 43.3% of companies reported environmental costs in their annual reports, while 48 samples or 40% reported environmental cost elements in their annual reports. Based on these results, some companies have included environmental cost elements in their annual reports.

The environmental performance variable assessed through PROPER with a gold rating category indicates that the business and/or activity has consistently demonstrated excellence in environmental aspects during the production and/or service process. In addition, the company also operates ethically and is responsible to the community, amounting to 1 or 0.8%. The green rating indicates that a business and/or activity has managed the environment above the standards set by regulations through the implementation of a good environmental management system. In addition, the company has utilized resources efficiently and carried out its social responsibilities well, amounting to 22 or 18.3%. A blue rating indicates that the business and/or

activity has attempted to manage the environment in accordance with applicable regulations or laws, amounting to 76 or 63.3%. A red rating indicates a business that has attempted to manage the environment but has not met the criteria set by applicable regulations, amounting to 21 or 17.5%, and there are no black ratings.

C. Classical Assumption Test

1. Normality Test

The normality test uses the One-Sample Kolmogorov-Smirnov Test, obtained as follows:

Table 4. Normality Test
One-Sample Kolmogorov-Smirnov Test

		<i>Unstandardized Residual</i>
N		120
Normal Parameters ^{a,b}	Mean	0,0000000
	Std. Deviation	0,07861428
Most Extreme Differences	Absolute	0,072
	Positive	0,064
	Negative	-0,072
Test Statistic		0,072
Asymp. Sig. (2-tailed)		0,192 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Source: Data processed in 2024

Based on Table 4, the residual value of 0.192 is above 0.05, so the regression model meets the normality assumption.

2. Multicollinearity Test

Table 5. Multicollinearity Test

Coefficients ^a		
Model	Tolerance	VIF
1 (Constant)		
GA	0,956	1,046
PROPER	0,956	1,046

Source: Data processed in 2024

The results of the multicollinearity test in Table 5 show that the green accounting variable has a tolerance value of 0.956, which is greater than 0.10 (tolerance > 0.10), with a VIF value of 1.046, which is less than 10 (VIF < 10). Similarly, for the environmental performance variable using PROPER, the tolerance value is 0.956 and the VIF value is 1.046. This means that there is no multicollinearity.

3. Autocorrelation Test

Table 6. Autocorrelation Test

Durbin-Watson Test Results			
dU	dW	(4-dU)	Keterangan
1,7361	1,774	2,2693	Tidak terjadi autokorelasi

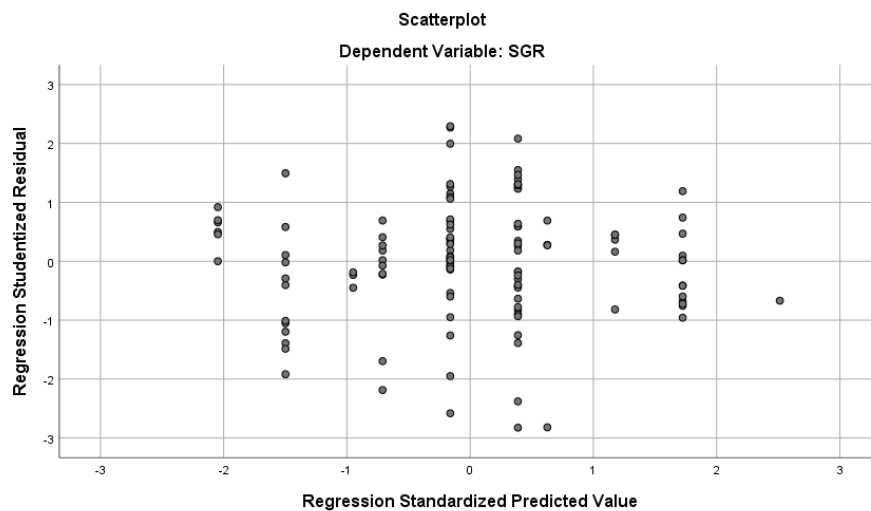
Source: Data processed in 2024

The autocorrelation test results show a dW value of 1.774, using a sample of 120 with two independent variables, a du value of 1.7361, and a dl value of 1.7361. Thus, $1.7361 < 1.774 < 2.2639$, indicating that there is no autocorrelation in the model.

4. Heteroscedasticity Test

The heteroscedasticity test results obtained from the graph shown in Figure 3 indicate that the points are scattered above and below zero on the y-axis, thus indicating that heteroscedasticity does not occur.

Figure 2. Heteroscedasticity Test



Source: Data processed in 2024

D. Hypothesis Test

Table 7. Regression Test Results

<i>Coefficients^a</i>							
<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>T</i>	<i>Sig.</i>	<i>Collinearity Statistics</i>	
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>			<i>Tolerance</i>	<i>VIF</i>
1 (Constant)	-0,135	0,036		-3,735	0,000		

The Effect of Green Accounting and Environment Performance on Sustainable Growth Rate with Profitability as a Moderating Variable

GA	0,018	0,010	0,154	1,766	0,040	0,956	1,046
PROPER	0,044	0,012	0,327	3,757	0,000	0,956	1,046

a. Dependent Variable: SGR

Source: Data processed in 2024

The test results from Table 7 can be explained by the following regression equation:

$$\text{SGR} = a + b_1\text{GA} + b_2\text{PROPER}$$

$$\text{SGR} = -0.135 + 0.018 \text{ GA} + 0.044 \text{ PROPER}$$

The constant value obtained for the sustainable growth rate (SGR) variable is -0.135, which means that if the independent variables of green accounting (GA) and environmental performance (PROPER) are zero, the SGR value is -0.135.

The green accounting coefficient value is 0.018, which means that if there is an increase in green accounting (GA) of one unit and the other variables remain constant, the sustainable growth rate (SGR) will increase by 0.018.

The environmental performance (PROPER) coefficient value shows a value of 0.044, which means that if there is an increase in environmental performance (PROPER) by one unit and other variables remain constant, the sustainable growth rate (SGR) will increase by 0.044.

E. Coefficient of Determination (R²)

The results of the coefficient of determination test are presented in Table 8 below:

Table 8. Results of the Coefficient of Determination Test

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted Square</i>	<i>RStd. Error of the Estimate</i>
1	0,390 ^a	0,152	0,137	0,07928335260

a. Predictors: (Constant), PROPER, GA

b. Dependent Variable: SGR

Source: Data processed in 2024

The R-squared value is 0.152 or 15.2%, which means that the independent variables of green accounting and environmental performance can explain the dependent variable of sustainable growth rate (SGR) by 15.2%, while the remaining 0.848 or 84.8% (1-0.152) is explained by other variables not examined in this study.

F. T-test

Based on Table 7, the t-test results are as follows:

The green accounting (GA) variable has a t-value of 1.766 with a significance value of 0.040 (0.040 < 0.05). This means that green accounting (GA) has a positive effect on the sustainable growth rate (SGR), so hypothesis 1 is accepted.

The environmental performance (PROPER) variable has a t-value of 3.757 and a significance value of 0.000 ($0.000 < 0.05$), which means that environmental performance (PROPER) has a positive effect on the sustainable growth rate (SGR), so hypothesis 2 is accepted.

Table 9. Results of the Moderation Test of the Effect of GA on SGR

		<i>Coefficients^a</i>		T	Sig.
		<i>Unstandardized Coefficients</i>	<i>Standardized Coefficients</i>		
Model		B	Std. Error	Beta	
1	(Constant)	0,045	0,011		4,175
	AbsResGA_R	-0,454	0,153	-0,264	-2,971
	OA				0,004

a. Dependent Variable: SGR

Sumber: Data diolah 2024

Table 10. Results of the Moderation Test of the Effect of Environmental Performance (PROPER) on SGR

		<i>Coefficients^a</i>		T	Sig.
		<i>Unstandardized Coefficients</i>	<i>Standardized Coefficient</i>		
Model		B	Std. Error	Beta	
1	(Constant)	0,036	0,011		3,430
	AbsResPROPER_R	-0,312	0,160	-.0,77	-1,954
	OA				0,053

a. Dependent Variable: SGR

Sumber: Data diolah 2024

Tables 9 and 10 show the results of the moderation test of the profitability variable (ROA) using the residual test, with the following regression equations:

1. The effect of green accounting (GA) on the sustainable growth rate (SGR) with the moderating variable of Profitability (ROA)
 - a. $ROA = a + b_1 GA$
 - b. $SGR = a - b_2 |resGA_ROA|$

The first equation is used to obtain the residual value, which is then made absolute. In the second equation, if the result is significantly negative, the ROA variable can moderate the green accounting (GA) variable on the sustainable growth rate (SGR). Based on the residual test results in Table 9, the absolute residual regression value of GA_ROA on SGR shows a t-value of -2.971 with a significance of 0.004, which is a significant negative effect, meaning that profitability (ROA) can moderate the effect of GA on SGR.

2. The effect of environmental performance (PROPER) on sustainable growth rate (SGR) with the moderating variable of profitability (ROA)
 - a. $ROA = a + b_1 \text{ PROPER}$
 - b. $SGR = a - b_2 |\text{resPROPER_ROA}|$

The second equation is used to obtain the residual value, which is then absolutized. In the second equation, if the result is significantly negative, then the ROA variable can moderate the environmental performance (PROPER) variable on the sustainable growth rate (SGR). Based on the residual test results in Table 10, the absolute residual PROPER_ROA regression value against SGR shows a t value of -0.312 with a significance of 0.053 or no effect. This means that profitability (ROA) cannot moderate the effect of environmental performance (PROPER) on SGR.

G. F Test

Tabel 11. Hasil Uji F ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0,132	2	0,066	10,477	0,000 ^b
	Residual	0,735	117	0,006		
	Total	0,867	119			

a. Dependent Variable: SGR

b. Predictors: (Constant), PROPER, GA

Source: Processed data 2024

H. Discussion

1. The Effect of Green Accounting on Sustainable Growth Rate

The results of the first hypothesis test show that green accounting (GA) affects the sustainable growth rate (SGR), so this hypothesis is accepted. Companies with environmental cost components such as costs for environmental research and development, costs for recycling waste, or costs for environmental research and development activities, measure and disclose company activities that have an impact on the environment, known as green accounting practices. Companies that implement green accounting can help managers obtain more complete information about the impact of business activities on the environment, identify the level of environmental cost efficiency incurred by the company, and assist companies in complying with environmental regulations and policies established by the government. Thus, companies will also gain a good image in the eyes of the public and other stakeholders, which will influence the sustainability of their business. This is in line with stakeholder theory, which states that company activities benefit both the company itself and its stakeholders. This study

supports the research of (Muniroh, et.al, 2023) and (Chasbiandani, et.al., 2019) that green accounting has an effect on sustainable growth. Green accounting can provide long-term financial benefits and open up opportunities for companies to strengthen their future sustainability (Wiranti, 2023). Research by (Ashari & Anggoro, 2021) shows that green accounting affects business sustainability in public hospitals.

2. The Effect of Environmental Performance on Sustainable Growth Rate

The results of the second hypothesis test show that environmental performance (PROPER) affects the sustainable growth rate (SGR), which means that hypothesis 2 is accepted. Companies that pay attention to the environment demonstrate their responsibility to the environment in which they operate, as evident in their environmental performance. Good environmental performance indicates that a company conducts its business operations in accordance with government environmental regulations and benefits the community surrounding the company, which will also have an impact on the sustainable growth of the company's business. A company that cares about the environment and society shows that it can operate in harmony with existing norms in the community, thereby gaining recognition for the continuity of its business. This study is in line with several previous studies that show that environmental performance affects sustainable growth in the manufacturing industry (Indriati, et.al., 2022). Research conducted on companies in the basic and chemical industries shows that environmental performance affects sustainable development (Somantri & Sudrajat, 2023).

3. The Effect of Green Accounting on Sustainable Growth Rate with Profitability as a Moderating Variable

The test results show that profitability (ROA) can moderate the effect of green accounting (GA) on sustainable growth rate (SGR) in a negative direction. Companies that implement green accounting invest in environmental management as an effort to avoid environmental-related legal problems and demonstrate the company's commitment to the environment affected by its business activities. The company's commitment to considering the impact of its activities on the environment will cause the company to incur costs that can reduce the company's profits, which in turn will affect the decline in the company's sustainability rate (SGR). The results of this study support the research by (Muniroh, et.al, 2023) that green accounting affects sustainable development mediated by profitability, but does not support the research conducted by (Indriati, et.al., 2022).

4. The Effect of Environmental Performance on Sustainable Growth Rate with Profitability as a Moderating Variable

The test results show that the profitability variable cannot moderate the effect of environmental performance on the sustainable growth rate. This is because environmental performance, which is measured using PROPER, has assessment criteria that prioritize environmental management systems, resource use, and community development (Puspita, 2015). Efforts to meet these criteria can be quite costly, which in turn can reduce a company's profit level, thereby not significantly affecting the level of business sustainability (SGR). The results of this study do not support the research by (Indriati, et.al., 2022) and (Muniroh, et.al, 2023).

CONCLUSION

The conclusion of this study is that green accounting (GA) has a positive effect on the sustainable growth rate (SGR). Companies that implement green accounting can manage their business activities by considering their impact on the environment, which can improve the company's image in the community and among other stakeholders, thereby influencing the sustainability of the company's business. Environmental performance (PROPER) affects the sustainable growth rate (SGR). Good environmental performance indicates that the company conducts its business operations in accordance with regulations and can obtain legitimacy from the surrounding community, thereby impacting the sustainability of the business. The green accounting variable can negatively affect the sustainable growth rate (SGR) when moderated by profitability (ROA). Companies that implement green accounting are committed to considering the impact of their activities on the environment, which requires significant expenditures that can cause the company's profits to decline and affect the decline in the company's sustainability (SGR). The profitability variable cannot moderate the effect of environmental performance on the sustainable growth rate. Companies striving to achieve optimal environmental performance may have to incur large costs, which could potentially reduce profit levels, thereby failing to influence the level of business sustainability (SGR). In this study, the R-square level was low at 15.2%, so future research could be conducted using other variables that are expected to influence SGR, such as debt policy.

REFERENCES

- Arofah, A. A., Alfianika Maharani, D., & Kurniati, R. (2022). Determinasi Implementasi Green Accounting Terhadap Corporate Sustainability dan Kinerja Keuangan Pada Perusahaan Manufaktur. *Jurnal E-Bis: Ekonomi Bisnis*, 6(2), 571–580. <https://doi.org/https://doi.org/10.37339/e-bis.v6i2.975>

- Ashari, M. H., & Anggoro, Y. (2021). the Effect of Green Accounting Practices and Organizational Size in Business Sustainability of Public Hospitals. *Jurnal Akuntansi*, 11(1), 1–15. <https://doi.org/10.33369/j.akuntansi.11.1.1-15>
- Chasbiandani, T., Rizal, N., & Satria, I. (2019). Penerapan Green Accounting Terhadap Profitabilitas Perusahaan Di Indonesia. *AFRE Accounting and Financial Review*, 2(2), 26–132. <http://jurnal.unmer.ac.id/index.php/afre>
- Ghozali, I., & Chariri, A. (2016). *Teori Akuntansi: International FinanciReporting System (IFRS)* (4th ed.). Badan Penerbitan Universitas Diponegoro.
- Indriati, T., Nawasiah, N., & Retno, B. (2022). Kinerja Lingkungan dan Kebijakan Hutang Pengaruhnya terhadap Sustainable Growth Rate Melalui Profitabilitas. *Account; Jurnal Akuntansi, Keuangan Dan Perbankan*, 9(1), 1631–1639.
- Lestari, R., Nadira, F. A., Nurleli, & Helliana. (2019). Pengaruh Penerapan Green Accounting Terhadap Tingkat Profitabilitas Perusahaan (Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi di BEI Tahun 2015-2017). *Jurnal Kajian Akuntansi*, 20(2), 124–131.
- Lolo, A. A. K. P., Alimuddin, Habbe, H., Mediaty, & K., A. M. (2020). Green Accounting and Its Implementation in Indonesia. *Jurnal Efektor*, 7(1), 59–72. <https://doi.org/https://doi.org/10.29407/e.v7i1.14414>
- Marhaendratno, M. H. (2023, May). Dampak Buruk Industri Manufaktur terhadap Lingkungan. *Kompasiana.Com*. <https://www.kompasiana.com/haelhaelkal/64758a4608a8b57093478166/dampak-buruk-industri-manufaktur-terhadap-lingkungan>
- Muniroh, M., Nursasi, E., & Triani, T. (2023). Pengaruh Penerapan Green Accounting Dan Kinerja Lingkungan Terhadap Sustainable Deveopment Dengan Profitabilitas Sebagai Variabe Moderasi. *Akses : Journal of Publik & Business Administration Science*, 5(2), 28–39. <https://doi.org/10.58535/jasm.v5i2.42>
- Nasim, A., & Irnama, F. R. (2015). Pengaruh Profit Margin, Assets Turnover dan Leverage terhadap Sustainable Growth Rate pada Perusahaan Sektor Jasa yang Terdaftar di Bursa Efek Indonesia Periode 2010-2012. *Jurnal Riset Akuntansi Dan Keuangan*, 3(1), 632-648. <https://doi.org/https://doi.org/10.17509/jrak.v3i1.6609>
- Niandari, N., & Handayani. (2023). Geen Accounting, Kinerja Lingkungan, dan Profitabilitas. *Jurnal Akuntansi Bisnis*, 6(1), 83–96. <https://doi.org/http://dx.doi.org/10.30813/jab.v16i1.3875>
- Nizar, M., & Mulyan, S. D. (2023). Pengaruh Penerapan Green Accounting, Environmental Performance dan Manajemen Laba terhadap Sustainable Growth. *Jurnal Informatika Ekonomi Bisnis*, 5(3), 1084–1089. <https://doi.org/https://doi.org/10.37034/infec.v5i3.628>
- Pratiwi, N., & Rahayu, Y. (2018). Pengaruh Penerapan Green Accounting terhadap Pertumbuhan Harga Saham dengan Profitabilitas sebagai Variabel Moderating. *Jurnal Ilmu Dan Riset Akuntansi*, 7(8), 1–15. <https://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/1074/1089>

- Puspita, D. (2015). Carbon Accounting: Apa, Mengapa dan Sudahkah Ber-Impikasi Pada Sustainability Reporting? (Based on 2012 th"PROPER with Gold Rank. *Jurnal JIBEKA*, 9(1), 29–36.
- Singh, S., Singh, A., Arora, S., & Mittal, S. (2019). Revolution of Green Accounting: A Conceptual Review. *2019 2nd International Conference on Power Energy, Environment and Intelligent Control (PEEIC) G. L. Bajaj Inst. of Technology and Management Greater Noida, U. P., India, Oct 18-19, 2019*, 481–485. <https://doi.org/10.1109/PEEIC47157.2019.8976544>
- Somantri, A. J., & Sudrajat, A. M. (2023). Pengaruh Penerapan Green Accounting dan Kinerja Lingkungan terhadap Sustainable Development (Pada Perusahaan Manufaktur Sektor Industri Dasar dan Kimia 2020-2022). *Jurnal Pendidikan Tambusai*, 7(3), 21397–21401.
- Sutrisna, T., & Ihsanuddin. (2023). *Dinas LH DKI: 48 Industri di Jakarta Cemari Lingkungan, Termasuk Sebabkan Polusi*. <https://megapolitan.kompas.com/read/2023/08/24/16161251/dinas-lh-dki-48-industri-di-jakarta-cemari-lingkungan-termasuk-sebabkan>
- Wiranti, B. N. (2023). Analisis Penerapan Green Accounting dan Dampaknya terhadap Laba Usaha. *Jurnal Informatika Ekonomi Bisnis*, 5, 943–949. <https://doi.org/10.37034/infeb.v5i3.532>