

# The Effect of Green Accounting, Environmental Performance, Leverage, and Firm Size on Financial Performance

(Empirical Study of Manufacturing Companies Listed on the Indonesian Stock Exchange in 2019-2021)

Fisabella Diniati<sup>1)</sup> Nursiam<sup>2)</sup>

1) Faculty of Economics and Business, University of Muhammadiyah Surakarta, Indonesia

2) Faculty of Economics and Business, University of Muhammadiyah Surakarta, Indonesia

**Abstract:** The production process from the manufacturing sector contributes significantly to environmental problems such as pollution, waste, product safety, and labor. This study aims to analyze the effect of green accounting, environmental performance, DAR, DER, and firm size on financial performance. This research uses descriptive quantitative research methods. The population in this study is manufacturing companies listed on the Indonesia Stock Exchange in 2019-2021. Sampling was carried out using the purposive sampling method which resulted in 37 companies that met the criteria. The analysis method used is multiple regression analysis using the SPSS program. Based on the results of the research conducted, it shows that partially the variables of green accounting, environmental performance, DER, and firm size have no effect on financial performance. In comparison, DAR has a negative and significant effect on financial performance. The variables of green accounting, environmental performance, DAR, DER, and firm size have a simultaneous effect on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021.

**Keywords:** Green Accounting, Environmental Performance, Leverage, Firm Size, Financial Performance

## I. INTRODUCTION

The rapid development of technology nowadays has had a positive impact on the progress of the manufacturing industry. In line with these advances, it is related to problems that arise as a negative impact of the use of technology, namely the occurrence of environmental damage. The negative impact arises from the company's activities, especially in exploiting natural resources as its main material as well as in the production process.

Manufacturing companies have a considerable contribution in environmental issues such as pollution, waste, product safety and labor (Bahri and Cahyani, 2016). According to Meiyana and Aisyah (2019), it is undeniable that the production process of the manufacturing company will leave waste, if the waste is not processed in such a way, the company's contribution to the environment is by polluting. In addition to the application of green accounting, there is also the application of environmental performance in the company. Environmental performance is translated as performance with respect to the environment, especially with regard to environmental impact (Putri and Herawati, 2017). Environmental performance can be seen through the results of measuring environmental management systems, which are related to the control of aspects over the environment.

Nowadays, there are many companies that are only oriented towards making a profit. Companies are required to increase innovation in order to improve their financial performance. On the basis of wanting to show maximum profit results, some companies ignore the impact of company activities such as their impact on the environment and surrounding communities. These companies compete with each other in their efforts to create quality and high-value products and

focus on improving their financial performance, so the focus of this orientation is obviously still not right if you look at the fact that there are environmental problems that arise as a result of waste from production. According to Ningsih & Rachmawati (2017), the negative impacts caused by the use of natural resources are a must for companies to be able to commit to the social environment and the environment. The presence of technological transformation in the industrial world should be utilized wisely by companies while still paying attention to the triple bottom line principle, namely profit (profit), people (people), and the environment (planet). Companies are required to provide maximum profits to shareholders, but on the other hand the company must also show its responsibility and concern for other aspects, such as social, community and environmental. The Company will always maintain and ensure the sustainability of the company's operations against the fierce business competition in the global economy. Business competition requires companies to always be able to produce maximum performance with the aim of improving quality and maintaining their market share.

According to Angelina (2011), the company's financial performance is the result of several objects that become decisions from individuals continuously by the management concerned. Assessment of the financial performance of a company can be done by analyzing its financial performance. The financial performance report is used as a source of information to shareholders and the general public about the extent of the business carried out and what achievements have been obtained by the company. A financial report published by a company must contain information related to the company's finances used to make managerial decisions. Financial information published by a company, analyzed in advance so that the financial statements are relevant to the goals and interests of individuals who need the financial statements, so as to produce an appropriate business decision and are considered to provide mutual benefits for parties who interested in seeking company financial information (Effendy, 2009). ROA is an indicator used by researchers to measure a company's financial performance. Currently, the assessment of the company's financial performance by only looking at the profitability ratio can no longer be relevant. This is due to the exploitative behavior shown in the use of natural resources and the lack of responsibility to the environment (physical and social) which sometimes leads to a lack of social relations with society.

Along with the increasing number of companies causing negative influences on the environment, many people urge companies to immediately overcome and control these negative influences quickly so that they can be minimized and not become bigger. From the company's efforts to increase concern for the environment, a science that is included in accounting has developed that studies more deeply about the company's relationship with its environment called Green Accounting. According to Aniela (2012) green accounting is an accounting process in identifying, measuring, assessing, and disclosing costs for company activities related to the environment. The United States Environment Protection Agency defines green accounting in Wulandari (2019), "Green accounting is a process of identifying and calculating the cost of materials and environmental activities, and the results of the information obtained can be used to consider decision-making related to environmental management. The aim is to be able to identify and minimize the negative impact of activities and systems on the environment". Environmentally friendly industrial practices are implemented through the application of eco-efficiency in management practices or green accounting in accounting practices. However, currently the implementation of green accounting in Indonesia has not been running effectively and there are still many companies that rule out the environmental impacts that can be caused by their company's activities.

The level of development that occurs rapidly in each region with this autonomy sometimes overrides environmental aspects that are realized or not will eventually become the main cause of environmental problems. Environmental activists in Indonesia consider that the environmental damage that has occurred so far is caused by the inconsistency of the government in implementing regulations. For manufacturing companies, the discussion of environmental management is a form of the company's concern for the surrounding environment. The role that accounting has in its efforts to preserve the environment is stated in the voluntary disclosures or environmental disclosures contained in the financial statements released by the company regarding its responsibility through environmental costs.

According to Bahri and Cahyani (2016), disclosure of environmental performance as a form of corporate social responsibility can affect financial performance because companies that have good environmental performance, then indirectly they have good social information as well, so as to increase company value. The Company Performance Rating Assessment Program (PROPER) organized by the Ministry of Environment and Forestry of the Republic of Indonesia aims to measure and assess how its environmental performance is. This will provide its own benefits for the industry in applying for credit because Bank Indonesia issued Bank Indonesia Regulation Number 7/2/PBI/2005 which contains the quality of assets rated by Commercial Banks which makes the environment one aspect for applying for corporate credit (Governor of BI, 2005).

Leverage is the use of assets and sources of funds for companies that have fixed costs or fixed expenses intended to increase the profit of shareholders. Financial leverage describes a fixed cost and business risk that must be borne by the company to outside parties such as lenders or creditors. Companies that have high financial leverage due to the amount of debt compared to assets owned by the company, are suspected of manipulating data in financial statements because

the company is threatened with default which causes the company's poor performance due to not being able to fulfill its obligations in paying debts on time.

According to Al-shubiri (2010) defines Firm Size as a form of comparison of the size or size of a business by a company or organization that can support positive signals for investors or creditors who will invest in investing in the company so as to increase external fund users. The size of the size of a company can be reflected through the total assets it has. A company is said to be large if it has a good ability in managing assets and selling them so that they can generate large profits.

Several studies that have been conducted previously on the influence of financial performance have shown different results. Research by Maryadi, A., & Dermawan, S. E. (2019) shows that firm size (SIZE) has a positive and significant influence on financial performance (ROA). Financial leverage (DER) has a negative and insignificant influence on financial performance (ROA). Research by Erawati, T., & Wahyuni, F. (2019) shows that Firm Size, and leverage negatively affect the company's financial performance. Research by Dita, E. M., & Ervina, D. (2021) shows the results that green accounting does not affect financial performance, environmental performance affects financial performance and Firm Size does not affect financial performance. research by Angelina, M., & Nursasi, E. (2021) shows that green accounting and environmental performance do not affect the financial performance of a company.

Based on the background description that has been described above and the differences in the results of previous research, the researcher conducted a study with the title: "The Effect of Green Accounting, Environmental Performance, Leverage, and Firm Size on Financial Performance (Empirical Study on Manufacturing Companies Listed on the Indonesia Stock Exchange in 2019-2021)".

## **II. THEORETICAL BACKGROUND**

### **2.1 Legitimacy Theory**

Legitimacy theory is a corporate management system that is oriented towards partiality towards society, government, individuals and community groups (Gray et al, 1996). The theory of legitimacy is one of the most mentioned theories in the field of social and environmental accounting (Tilling, 2004). Likewise, Naser, AlHussaini, Al-Kwari, and Nuseibeh (2006) state that legitimacy theory has been used in accounting studies to develop theories of social and environmental responsibility disclosure. According to Ghazali and Chariri (2007), the basis for the theory of legitimacy is due to the existence of a social contract that occurs between the company as a party that operates and uses economic resources and the surrounding community. The existence of this theory allows its course In the theory of legitimacy it can be concluded that the company has a contract or obligation to adjust to society or the surrounding environment. The form of adjustment made is by carrying out company operational activities in accordance with the norms and values that apply in the community as well as efforts in meeting the needs of the community or developing the welfare and life of the environment in which the company operates.

This theory is one of the theories that can provide motivation for companies in submitting sustainable reports. The benefit of this theory is that it can assess the organizational behavior of the company and also limit it through norms in its concern for the environment. His efforts, it can be used as a vehicle to formulate corporate strategies, especially related to positioning themselves in the midst of an increasingly advanced community environment.

### **2.2 Financial Performance**

The definition of financial performance according to the Indonesian Institute of Accountants (2007) is the company's ability to manage and control its resources. Financial performance is a description of the level of success achieved by the company on the effort to increase profits determined at a certain size (Rudianto, 2013: 189). Financial performance is the determination of a certain measure in measuring a company's success in making a profit.

### **2.3 Green Accounting**

The definition of green accounting by Aniela (2012) is an accounting process in which it identifies, measures, presents, and discloses costs related to the relationship between company activities and the environment. The dummy method was used in this study to measure green accounting variables. The determination of this method is based on measurements carried out by Amelia (2013), namely if a company has one of the components of environmental costs, environmental operational costs, product re-cycle costs, and costs for environmental development and research in its annual financial report (annual report).

### **2.4 Environmental Performance**

According to Suratno, et al. (2006), environmental performance is the company's performance in creating a green environment. The company's environmental performance is measured by the company's achievements in participating in

the PROPER program which is one of the efforts made by the Ministry of Environment and Forestry (MoEF) to encourage company structuring in environmental management through information instruments.

## 2.5 Leverage

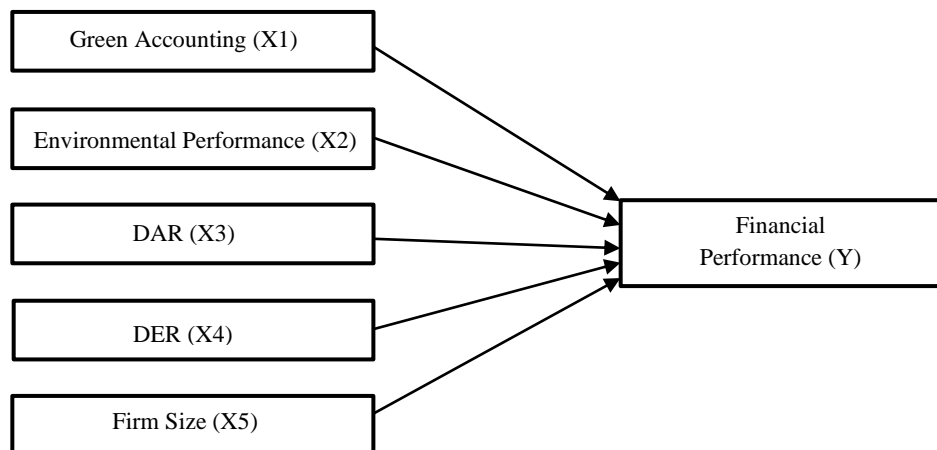
According to (Savitri and Pramudya, 2012), financial leverage shows the amount of funds used by management for the benefit of the company's operational costs financed by debt (debt). The amount of a company's financial leverage is a direct result of the use of a company's loan funds. The higher the financial leverage, the greater the company's financial risk. So the company's financial managers must be able to make good financial considerations between the risks that will be received by the company and the value of utilizing financial leverage. This study used 2 calculation indicators in this variable, namely debt to asset ratio (DAR) and debt to equity ratio (DER). The first indicator is the debt to asset ratio (DAR). DAR is a ratio used to measure how much a company's assets are financed with debt. According to Horne and Wachowicz (2009:59), the higher the ratio of debt to total assets, the bigger financial risk.

The second indicator of leverage calculation is the debt to equity ratio (DER). DER is a ratio used to measure how much of your total own capital is financed with total debt. The lower this ratio indicates that the higher the level of funding provided by the owner and will have an impact on improving the financial performance of a company and vice versa (Kasmir, 2012: 151).

## 2.6 Firm Size

Murhadi (2013) states that Firm Size is assessed by converting the company's total assets into a natural logarithm. The size of the company calculated by Log Natural Total Asset to reduce excessive data fluctuations. The size of the company is the scale that determines the size of a company.

### 1.1 Research Framework



Based on this frame of mind, the hypotheses formulated in this study are:

- H<sub>1</sub> : Green Accounting affects Financial Performance
- H<sub>2</sub> : Environmental Performance affects Financial Performance
- H<sub>3</sub> : DAR affects Financial Performance
- H<sub>4</sub> : DER affects Financial Performance
- H<sub>5</sub> : Firm Size affects Financial Performance

## II. METHODOLOGY

### Research Design

This research is a descriptive quantitative study. used to describe the overall facts and relationships between the variables studied as well as the path of collecting, processing, analyzing and integrating data and relationships between variables through statistical hypothesis testing. Statistical hypothesis testing is carried out through the stages of data collection, data processing, data analysis, interpreting the results of such data and looking for relationships that occur between its variables.

### Population, Sample and Sampling Techniques

The population used in this study is manufacturing companies listed on the Indonesia Stock Exchange in 2019-2021. The total population in this study was 214 companies. The sampling technique in this study used the purposive sampling method and obtained a sample of 37 companies that met the criteria. In this study, the deletion of outlier data or extreme data values was carried out, resulting in a final sample of 98 research data samples during 2019-2021.

Table 3.1 Sampling

Information	Total
Research population of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021	214
Manufacturing companies that do not follow PROPER	(151)
Manufacturing companies that do not publish consecutive Financial Statements or Annual Reports during 2019-2021	(4)
Manufacturing companies that do not report profits in the 2019-2021 Financial Statements	(22)
Companies that meet the criteria	37
Total companies for sample from 2019-2021 (37 x 3)	111
Outlier Data	(13)
<b>Number of samples used in the study</b>	<b>98</b>

### Data

Data collection is carried out using documentation techniques. The data collected is obtained from annual reports, financial reports, and sustainability reports of manufacturing companies published on the Indonesia Stock Exchange (IDX) website, namely www.idx.co.id and company websites, journals, and other information media that can be used to solve problems and relate to the theme in this study.

### Operational Definition and Variable Measurement

#### 1. Dependent Variable

The dependent variable in this study is financial performance. Financial performance is the determination of a certain measure in measuring a company's success in making a profit. financial performance is measured by Return On Asset (ROA).

$$ROA = \frac{Net\ Income}{Total\ Aset}$$

#### 2. Independent Variable

##### a. Green Accounting

Green accounting by Aniela (2012) is an accounting process in which it identifies, measures, presents, and discloses costs related to the relationship between company activities and the environment. In measuring green accounting variables, it uses the dummy method. This measurement method was chosen based on measurements that had previously been carried out by Amelia (2013): if a company has one of the components of environmental costs, environmental operational costs, product recycling costs, and environmental development and research costs in its annual report (annual report) it will be given a score of 1, If it does not have it then it is given a score of 0.

##### b. Environmental Performance

Environmental performance is the company's performance in creating a green environment. The company's environmental performance is measured by the company's achievements in participating in the PROPER program which is one of the efforts made by the Ministry of Environment and Forestry (MoEF) to encourage company structuring in environmental management through information instruments. Through PROPER, a company's

environmental performance is measured using colors, ranging from the best gold, green, blue, red, to the worst black. Color giving is carried out using the following scale:

**Table 3.2 PROPER Assessment**

Color	Score	Predicate
Gold	5	Excellent
Green	4	Good
Blue	3	Good Enough
Red	2	Bad
Black	1	Very Bad

**c. DAR**

Debt to asset ratio (DAR) is a ratio used to measure how much a company's assets are financed with debt. According to Fahmi (2014:72) the debts to assets ratio (DAR) can be formulated as follows:

$$DAR = \frac{Total\ Debt}{Total\ Asset} \times 100\%$$

**d. DER**

Debt to equity ratio (DER) is a ratio used to measure how much of your total own capital is financed with total debt. According to Fahmi (2014:73) the debt to equity ratio (DER) can be formulated as follows:

$$DER = \frac{Total\ Debt}{Total\ Equity} \times 100\%$$

**e. Firm Size**

Firm size is a scale to determine the size of the company measured using the total assets owned by the company.

$$Firm\ Size = Ln\ Total\ Assets$$

**Analysis Methods**

Data analysis in this study is using descriptive statistical analysis methods. Descriptive statistics to analyze data by describing the data that has been collected as it is without intending to make conclusions that apply to the public. According to Ghozali (2012) descriptive statistical analysis is to provide an overview or description of a data seen from the average value (mean), standard deviation, variance, maximum, minimum. The descriptive analysis in this study is to describe and the characteristics of the data from the sample used with the variables green accounting (X1), environmental performance (X2), DAR (X3), DER (X4), firm size (X5) and ROA (Y). Before conducting a hypothesis test, a devotee is performed Ian classical assumptions in the form of normality tests, autocorrelation tests, heteroskedasticity tests, multicollinearity tests and multiple linear regressions first to avoid errors. Then proceed with conducting hypothesis tests in the form of partial tests (T test), simultaneous tests (F test), and determination coefficient tests. The entire test used the IBM SPSS 26 program.

**III. RESULTS**

**Descriptive Statistics Results**

Descriptive Statistics are general statistics used as the basis for testing that aims to explain research data through minimum values, maximum values, averages (mean), and standard deviations for each of its variables.

**Table 4.1 Descriptive Statistics**

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Green Accounting	98	.00	1.00	.8367	.37151
Environmental Performance	98	3.00	4.00	3.2449	.43224
DAR	98	.11	.79	.4218	.16083
DER	98	.12	3.82	.9068	.70065
Firm Size	98	20.62	33.54	29.3640	2.20363
ROA	98	.00	.17	.0604	.04388
Valid N (listwise)	98				



Source: Processed data, 2022

Based on the results of statistical tests conducted using the IBM SPSS 26 program are as follows:

- a. Green Accounting (X1) minimum value 0 and the maximum value is 1. The mean value is 0.837 and the standard deviation value is 0.372.
- b. Environmental Performance (X2) minimum value is 3 and the maximum value is 4. The mean value is 3.245 and standard deviation value is 0.432.
- c. DAR (X3) minimum value is 0.11 and the maximum value is 0.79. The mean value in the DAR variable is 0.422 and the standard deviation value is 0.161.
- d. DER (X4) minimum value is 0.12 and the maximum value is 3.82. The mean value in the DER variable is 0.907 and the standard deviation value is 0.701.
- e. Firm Size (X5) minimum value is 20.62 and the maximum value is 33.54. The mean value is 29.364 and the standard deviation value is 2.204.
- f. Financial Performance (ROA) minimum value is 0.00 and the maximum value is 0.17. The mean value is 0.060 and the standard deviation value is 0.044.

**Classic Assumption Test  
Normality Test Results**

**Table 4.2 Normality test**

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		98
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	.03485573
Most Extreme Differences	Absolute	.061
	Positive	.061
	Negative	-.057
Test Statistic		.061
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

Source: Processed data, 2022

Based on the Kolmogorov-Smirnov table above, it can be concluded that there is a significant value of 0.200, which means a significance value > 0.05. So it can be concluded that the data is normally distributed.

**Autocorrelation Test Results**

**Table 4.3 Autocorrelation test results**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.607a	.369	.335	.03579	2.085

Source: Processed data, 2022

Based on the table of autocorrelation test results, Durbin Watson's (DW) value of 2.085 was obtained, which is greater than dU and less than 4-du (1.7795 < 2.085 < 2.2205). So it can be concluded that there is no autocorrelation in this study.

**Heteroscedasticity Test Results**

**Table 4.4 Heteroscedasticity test results**

Variable	Sig. (2-tailed)	Standard	Conclusion
Green Accounting (X <sub>1</sub> )	0,939	Sig. > 0,05	There is no heteroscedasticity
Environmental Performance (X <sub>2</sub> )	0,948		There is no heteroscedasticity
DAR (X <sub>3</sub> )	0,810		There is no heteroscedasticity
DER (X <sub>4</sub> )	0,810		There is no heteroscedasticity
Firm Size (X <sub>5</sub> )	0,518		There is no heteroscedasticity

Source: Processed data, 2022

Based on the table above shows that all variables have a significance value above 0.05 (sig> 0.05), so it can be concluded that the regression model in this study does not occur heteroscedasticity.

**Multicollinearity Test Results**

**Table 4.5 Multicollinearity test results**

Variable	Tolerance	VIF	Conclusion
Green Accounting	0.932	1.073	There is no multicollinearity
Environmental Performance	0.844	1.185	There is no multicollinearity
DAR	0.145	6.902	There is no multicollinearity
DER	0.147	6.803	There is no multicollinearity
Firm Size	0.840	1.190	There is no multicollinearity

Source: Processed data, 2022

Based on the table above, the results of the multicollinearity test with the SPSS program show that each independent variable (broad scope, timeliness, aggregation, and integration) is not linearly correlated with each other. This is shown from all tolerance values > 0.10 and Variance Inflation Factors/VIF < 10. Thus the multiple linear regression model in this study does not occur multicollinearity.

**Multiple Linear Regression Analysis**

**Table 4.6 Results of Multiple Linear Regression Analysis**

Variable	Unstandardized Coefficients	T	Sig.	Conclusion
	B			
(Constant)	.063	1.254	.213	
Green Accounting	-.010	-1.026	.308	Not Significant
Environmental Performance	.003	.330	.742	Not Significant
DAR	-.241	-4.065	.000	Significant
DER	.019	1.429	.156	Not Significant
Firm Size	.003	1.523	.131	Not Significant

Source: Processed data, 2022

Based on the table above, a multiple linear regression equation is obtained as follows :

$$ROA = (0,063) + (-0,010)GA + (0,003)EP + (-0,241)DAR + (0,019)DER + (0,003)FS + e$$

**Interpretation :**

- The constant value of 0.063 means that if the variables Green Accounting (GA), Environmental Performance (EP), DAR, DER, and Firm Size (FS) are zero, then the financial performance proxied by ROA is worth 0.063.
- Green Accounting, the value of the regression coefficient of the independent variable green accounting of -0.010 shows a negative sign. This means that if green accounting increases by 1 unit while other independent variables are constant, then the ROA value as a financial performance proxy will decrease by -0.010.
- Environmental Performance, the value of the environmental performance regression coefficient of 0.003 shows a positive sign. This means that if environmental performance decreases by 1 unit while other independent variables are constant, then the ROA value as a financial performance proxy will increase by 0.003.
- DAR, the value of the DAR independent variable regression coefficient of -0.241 indicates a negative sign. This means that if DAR increases by 1 unit while other independent variables are constant, then the ROA value as a financial performance proxy will decrease by -0.241.
- DER, the value of the DER regression coefficient of 0.019 indicates a positive sign. This means that if the DER decreases by 1 unit while other independent variables are constant, then the ROA value as a financial performance proxy will increase by 0.019.
- Firm Size, the value of the regression coefficient of firm size of 0.003 shows a positive sign. This means that if the size of the company decreases by 1 unit while other independent variables are constant, then the ROA value as a financial performance proxy will increase by 0.003.



**Hypothesis Test**

**T-test Results**

**Table 4.7 T-test Results**

Variable	t <sub>count</sub>	t <sub>table</sub>	Sig.	Information
Green Accounting	-1.026	1,662	.308	H <sub>1</sub> is rejected
Environmental Performance	.330	1,662	.742	H <sub>2</sub> is rejected
DAR	-4.065	1,662	.000	H <sub>3</sub> is accepted
DER	1.429	1,662	.156	H <sub>4</sub> is rejected
Firm Size	1.523	1,662	.131	H <sub>5</sub> is rejected

Source: Processed data, 2022

Based on the table above, it can be seen that Green Accounting has a  $t_{count} < t_{table}$  ( $1,026 < 1,662$ ) with a significant level of  $0,308 > 0,05$ . So it can be concluded that green accounting has no effect on Financial Performance (ROA).

Environmental Performance (X<sub>2</sub>) has a  $t_{count} < t_{table}$  ( $0,330 < 1,662$ ) with a significant level of  $0,742 > 0,05$ . So it can be concluded that environmental performance has no effect on Financial Performance (ROA).

DAR (X<sub>3</sub>) has a  $t_{count} > t_{table}$  ( $4,065 > 1,662$ ) with a significant level of  $0,000 < 0,05$ . So it can be concluded that DAR affects on Financial Performance (ROA).

DER (X<sub>4</sub>) has a  $t_{count} < t_{table}$  ( $1,429 < 1,662$ ) with a significant level of  $0,156 > 0,05$ . So it can be concluded that DER has no effect on Financial Performance (ROA).

Firm Size (X<sub>5</sub>) has a  $t_{count} < t_{table}$  ( $1,523 < 1,662$ ) with a significant level of  $0,131 > 0,05$ . So it can be concluded that firm size has no effect on Financial Performance (ROA).

**F-test Results**

**Table 4.8 F-test Results**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.069	5	.014	10.754	.000 <sup>b</sup>
	Residual	.118	92	.001		
	Total	.187	97			

Source: Processed data, 2022

Based on the test results contained in the table above, it can be seen that the variables of green accounting, environmental performance, DAR, DER, and firm size have a simultaneous effect on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021. This is evidenced by a calculated F value of 10.754 and a significance level of  $0.000 < 0.05$ .

**Test Results of The Coefficient of Determination (R<sup>2</sup>)**

**Table 4.9 Test results of the coefficient of determination (R<sup>2</sup>)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.607 <sup>a</sup>	.369	.335	.03579	2.085

Source: Processed data, 2022

Based on these tests, an R value (correlation coefficient) of 0.607 was obtained, which means the relationship between independent variables and dependent variables of 60.7%, an Adjusted R Square value of 0.335 meaning that 33.5% of financial performance can be explained by independent variables, namely green accounting, environmental performance, DAR, DER, and firm size, while the remaining 66.5% is explained by other variables that are not tested.

**Discussion of Research Results**

**The Effect of Green Accounting on Financial Performance**

The first hypothesis in this study states that green accounting affects financial performance in manufacturing companies listed on the IDX in 2019-2021. Green accounting in this study was measured by the dummy method, namely by giving a score of 1 for companies that disclose environmental costs in their annual report and giving a score of 0 for those who did not disclose them. Based on the results of statistical tests that have been carried out, it shows that the coefficient of the green accounting variable shows the calculated value of  $t_{count} < t_{table}$  ( $1.026 < 1.662$ ) and the significance

value of  $t > \alpha$  ( $0.308 > 0.05$ ). This shows that the green accounting variable has no effect on financial performance. Several companies have disclosed and presented the environmental cost component in their annual reports, this aims to provide information to stakeholders and shareholders in need. However, this does not necessarily improve financial performance. Environmental costs incurred by the company can reduce profits or profits from the company due to its use for the use of environmental-based production tools, conservation and maintenance of the environment.

The results of this study support research conducted by Dita, E. M., & Ervina, D. (2021) which resulted in green accounting not affecting financial performance. However, these results are not in line with the research conducted by Putri et al. (2019) with the results of the study showing that green accounting has a significant effect on ROA profitability.

#### **The Effect of Environmental Performance on Financial Performance**

The second hypothesis in this study states that environmental performance affects financial performance in manufacturing companies listed on the IDX in 2019-2021. Based on the results of the analysis presented, it can be seen that the calculated value of  $t_{\text{count}} < t_{\text{tabel}}$  ( $0.330 < 1.662$ ) and the significance value of  $t > \alpha$  ( $0.742 > 0.05$ ). So it can be concluded that environmental performance variables proxied with PROPER have no effect on financial performance. Although the average PROPER rating received by the company is quite good, it is the blue category. It can be interpreted that the proper assessment aspect carried out by the Ministry of Environment, does not directly touch the interests of the community, aspects of compliance assessed by the PROPER committee include environmental permits, supervisory permits, and the provision of company data, so that the results of environmental performance cannot be felt directly by the community. This can have an impact on the company's financial performance because for the sustainability of the company, PROPER ratings play a role in maintaining the company's image and good name.

The results of this study are in line with research conducted by Angelina, M., & Nursasi, E. (2021) which shows that environmental performance has no significant effect on the company's financial performance. These results are different and not in line with the results of Setiadi's research, I. (2021) which states that environmental performance has a positive and significant effect on financial performance.

#### **The Effect of DAR on Financial Performance**

The third hypothesis in this study states that the Debt to Asset Ratio (DAR) affects the financial performance of manufacturing companies listed on the IDX in 2019-2021. Based on the results of the analysis presented, it can be seen that the calculated value of  $t_{\text{count}} > t_{\text{tabel}}$  ( $4.065 > 1.662$ ) and the significance value of  $t < \alpha$  ( $0.000 < 0.05$ ). So it can be concluded that the DAR variable has a significant effect on financial performance. The results show that the size of DAR affects the ups and downs of the company's financial performance proxied by ROA. The higher the DAR will affect the magnitude of a company's financial performance. Profitable companies generally borrow in small amounts because profitable companies have abundant internal funds. According to pecking order theory, explaining why profitable companies generally borrow small amounts. This is not because the company has a low debt ratio target, but because the company requires little external financing.

The results of this study are in accordance with research conducted by Astutik and Anggraeni (2019) that DAR has a significant effect on ROA. These results are different and not in line with the research of Erawati, T., & Wahyuni, F. (2019) which states that DAR has no effect on financial performance.

#### **The Effect of DER on Financial Performance**

The fourth hypothesis in this study states that the Debt to Equity Ratio (DER) affects the financial performance of manufacturing companies listed on the IDX in 2019-2021. Based on the results of the analysis presented, it can be seen that the calculated value of  $t_{\text{count}} < t_{\text{tabel}}$  ( $1.429 < 1.662$ ) and the significance value of  $t > \alpha$  ( $0.156 > 0.05$ ). So it can be concluded that the DER variable has no effect on financial performance. This shows that the larger or smaller the DER does not affect the ups and downs of the company's financial performance proxied by ROA. The company becomes less good if it uses large amounts of debt obtained from loans because the company's management becomes more difficult in making predictions of the company's future operations. As a result, the company's profitability will further decrease. The factors that are likely to cause research results that state DER has no effect on the company's financial performance (ROA) are because during the research period the company is in the initial year of investment or also because it is in the situation of the COVID-19 Pandemic which hinders the course of the economy and industry so that it has not made a profit. The existence of new investments can be seen from the increase in the number of fixed assets on the balance sheet of an enterprise.

The results of this study are in line with research conducted by Ardianto, B. T., & Sha, T. L. (2020) which shows the results that DER has no significant effect on financial performance. These results are not in line with research by Teng, S. H., Sitohang, P. R., Feronika, P. C., & Damanik, R. O. (2022) which states that DER affects financial performance.

### **The Effect of Firm Size on Financial Performance**

The fifth hypothesis in this study states that firm size affects the financial performance of manufacturing companies listed on the IDX in 2019-2021. Based on the results of the analysis presented, the size of the company using Ln (total assets) yields a calculated value of  $t_{\text{count}} < t_{\text{tabel}}$  ( $1.523 < 1.662$ ) and a significance value of  $t > \alpha$  ( $0.131 > 0.05$ ). So it can be concluded that the variable size of the company has no effect on financial performance. These results indicate that the higher the size of the company as measured by total assets does not necessarily have an impact on increasing or decreasing return on assets (ROA). The size of the company that in theory should have an impact on ROA becomes influential because in that year there are other influencing factors, such as total sales and market capitalization, so the size of the company cannot be used to guarantee that a large company has good performance. So it can be concluded that the variable Firm Size does not affect the financial performance of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021.

The results of this study are in line with research conducted by Dita, E. M., & Ervina, D. (2021) which shows the results that the size of the company has no effect on financial performance. These results are not in line with research conducted by Ardianto, B. T., & Sha, T. L. (2020) showing that the Firm size variable has a positive but not significant effect on financial performance..

## **IV. CONCLUSION**

Based on the results of testing and discussion that has been carried out in the previous chapter, the author can provide the following conclusions:

1. Green accounting has no effect on financial performance, as evidenced by the value of  $t_{\text{count}} < t_{\text{tabel}}$  ( $1,026 < 1,662$ ) with a significant level of  $0,308 > 0,05$ . Thus the first hypothesis is rejected
2. Environmental performance has no effect on financial performance, as evidenced by the value of  $t_{\text{count}} < t_{\text{tabel}}$  ( $0,330 < 1,662$ ) with a significant level of  $0,742 > 0,05$ . Thus the second hypothesis is rejected.
3. DAR affects on financial performance, as evidenced by the value of  $t_{\text{count}} > t_{\text{tabel}}$  ( $4,065 > 1,662$ ) with a significant level of  $0,000 < 0,05$ . Thus the third hypothesis is accepted
4. DER has no effect on financial performance, as evidenced by the value of  $t_{\text{count}} < t_{\text{tabel}}$  ( $1,429 < 1,662$ ) with a significant level of  $0,156 > 0,05$ . Thus the fourth hypothesis is rejected.
5. Firm size has no effect on financial performance, as evidenced by the value of  $t_{\text{count}} < t_{\text{tabel}}$  ( $1,523 < 1,662$ ) with a significant level of  $0,131 > 0,05$ . Thus the fifth hypothesis is rejected.
6. The variables of green accounting, environmental performance, DAR, DER, and firm size have a simultaneous effect on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021. This is evidenced by a calculated F value of 10.754 and a significance level of  $0.000 < 0.05$ .

### **Research limitations :**

This research has several limitations that can be used as evaluation material and consideration for further research so that better results can be obtained in the future, including:

1. The population in this study only focuses on manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021, so the results of this study cannot be generalized or represent companies in other sectors listed on the Indonesia Stock Exchange (IDX).
2. The research period used in this study is only 3 years, namely 2019 to 2021, so it has not produced maximum results. The research period used in this study is only 3 years, namely 2019 to 2021, so it has not produced maximum results.
3. The results of the analysis showed that the independent variable was only able to reveal its effect on financial performance, which was 33.5% and the remaining 66.5% was influenced by other variables outside the tested model.

### **Suggestions :**

Based on the conclusions and limitations of this study that have been explained previously, the suggestions that can be given by researchers so that the next researcher can get better results include:

1. Researchers can then use other sectors to expand the scope of research subjects so that the population taken is more representative and the results of the study can be representative or generalized to other sectors such as the mining, agriculture, basic and chemical industries, health, and others.
2. Researchers can then increase the period or year to be studied so that the results are maximized.
3. Researchers can then add other variables to be studied so that they are able to represent more factors that can affect financial performance, such as good corporate governance, capital structure, liquidity, financial distress, sales growth, and others.

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