THE EFFECT OF GREEN ACCOUNTING AND FIRM SIZE ON FINANCIAL REPORT PERFORMANCE
(EMPIRICAL STUDY OF MINING SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE IN 2017-2021)

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Abstract

This study aims to be able to explain the effects of green accounting, firm size and financial statement performance by taking empirical studies on mining sector companies listed on the Indonesia Stock Exchange (IDX) for 2017-2021. The sample in this study is a mining sector company that is considered to have a lot of impact on the environment and has a high risk of environmental damage. This is due to natural resources being taken by companies continuously. The analysis in this study is an analysis carried out using the statistical application Econometric Views (EViews) version 12. Based on the calculation results, it is found that green accounting has no effect on financial statement performance. Meanwhile, it is known that firm size influences the performance of financial statements.

Keywords: Green Accounting, Firm Size, Financial Statement Performance

1. Introduction

Financial report performance is a result or achievement that has been achieved by company management in carrying out its function of managing company assets effectively during a certain period. Financial performance is needed by company management in knowing and evaluating the level of success of the company based on the financial activities carried out (Istiq et al., 2021). In addition to financial company performance, it is very important for parties who have a role in the company, such as investors. So that this financial performance will have a broad impact on the sustainability of the company.

No	Code	EVA				
		2017	2018	2019	2020	2021
1	ADRO	13.663.396	13.026.623	11.021.863	4.025.087	26.726.207
2	BSSR	1.947.207	1.696.606	736.221	759.093	4.718.276
3	BYAN	7.598.802	12.542.380	5.843.994	8.993.440	32.762.901
4	GEMS	2.603.221	2.347.670	1.484.225	2.110.970	7.485.879
5	HRUM	1.626.209	928.373	548.927	1.666.100	2.656.471
	Average	5.487.767	6.108.330	3.927.046	3.510.938	14.869.947

It can be seen from the table above that the Economic Value-Added value for companies with the mining sector during the 2017-2021 period has fluctuated. This can be seen from the average value in the table starting from 2017 at 5,487,767 then increasing in 2018 so that it is at 6,108,330. Then it decreased to 3,927,046 in 2019. Not only in 2019 but also in 2020 it decreased to 3,510,938. Finally, there was a significant increase in 2021 of 14,869,947. This indicates that the performance of the financial statements

represented by the EVA calculation has fluctuated or experienced an increase and decrease every year. One of the factors that can influence the development of financial report performance is costs related to the environment and environmental performance (Asjuwita & Agustin, 2020).

Based on news on CNNindonesia.com. PT Timah, Tbk is one of Inalum's subsidiaries engaged in tin mining or exploration. In semester 1 of 2020 PT Timah, Tbk's financial statements posted a net loss of IDR 390.07 billion based on the company's financial statements, the net loss owned by PT Timah, Tbk had a different achievement from the previous year's period. In the previous year's period, the company recorded a profit (net profit) of up to IDR 205.29 billion. From the company's financial reports, it can be seen that the company's performance has worsened due to a decrease in company revenue by 18.48% on an annual basis in semester 1 2020. It is recorded in the financial statements in semester 1 2020 that the income of the largest tin producing company in Indonesia has revenues of IDR 7.97 trillion until the end of June 2020, from the previous Rp. 9.78 trillion. Apart from PT Timah, Tbk.

The decline in financial performance was also experienced by PT Aneka Tambang, Tbk. It was recorded in the financial statements of PT Aneka Tambang, Tbk in semester 1 2020 that the company had decreased by 80.18% from net profit in the same period in 2019. This was due to the very high burden borne by the company accompanied by a decrease in sales of up to 36.06 %. Based on the two circulating news related to the financial performance of mining companies listed on the Indonesia Stock Exchange, it can be concluded that the financial performance of mining companies has experienced a decline in financial performance, one of the causes of which is the excessive expenses incurred in carrying out company activities.

2. Theoretical Background
A. Grand Theory
a. Legitimacy Theory (Grand Theory)
Legitimacy Theory is a theory that has a main view on the interaction between companies, society and the environment. Legitimacy Theory was originally a theory that had an orientation towards organizational systems or an entity that would be seen as part of the social and environmental aspects if the activities and performance of the organization were able to be accepted by the wider community (Prena, 2021)

b. Stakeholder Theory (Grand Theory)
Stakeholder theory is a theory which states that all stakeholders have the right to be able to obtain information about all company activities that will influence stakeholder decision making (Prena, 2021). This theory explains that companies are obliged to maintain relationships with their stakeholders by accommodating the wishes and needs of their stakeholders, especially for stakeholders who have power over the availability of resources used for the company's operational activities (Sapulette & Limba, 2021)

B. Development of Hypotheses
a. Green accounting on the performance of financial reports
Environmental accounting or commonly called green accounting for company owners has many benefits, one of which is that it can trigger positive developments and can improve the company's name in the public eye. So that this can increase the selling value of the company's products produced by the company. Not only increasing

the selling value of the company to consumers but also to investors who have invested their shares in the company.

H1: Green accounting has an effect on the performance of financial reports

b. Firm size on the performance of financial reports

Large companies basically have greater financial strength in supporting performance but on the other hand companies are faced with bigger agency problems (Erawati et al., 2022). According to Meiyana & Aisyah (2019) said that companies that have a large size have large sources of funding that will make more extensive disclosures and be able to provide information for internal purposes.

H2: Firm size has an effect on the performance of financial statements

3. Methods
A. Population and Sample

In this study the population used is all companies in the mining sector that are listed on the Indonesia Stock Exchange in 2017-2021. With the sampling method using purposive sampling method. Mining sector companies that meet all the specified criteria to be able to become research samples are as many as 12 companies with a 5-year research year. So that the amount of data to be used in this study is 60 data to be observed.

B. Definition and Measurement of Variable
1. Independent Variable
a. Green Accounting

Green accounting variables can be measured using the content analysis method. If the company has a prevention cost component, internal failure cost component, external failure cost and environmental development & research costs in the annual report each indicator will be given a value of 1 so that the total score is 4. If there is no environmental cost component in the annual report then it will get a score of 0 (Chasbiandani et al., 2019).

$$\text{Disclosure Level} = \frac{\text{Disclosure of the number of scores fulfilled}}{\text{Maximum number of scores}}$$

b. Firm Size

According to Dita & Ervina (2021) Company size is measured using the natural log of total assets, with the following scale:

$$\textit{Firm Size = LN (Total Aktiva)}$$

2. Dependent Variable
a. Financial Statement Performance

Financial statement performance calculations in this study use the Economic Value Added (EVA) formula because EVA has a role for companies in terms of investment and decision making related to company sustainable policies. The higher the EVA value, the higher the rate of return (Tinambunan & Andati, 2021).

$$\text{EVA} = \text{NOPAT} - \textit{Capital Charges}$$

C. Panel Data Analysis Techniques

In this study, the data analysis technique used was panel data regression analysis with the help of statistical software EViews version 12.0. By using the panel data regression model which is formulated as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it}$$

Description:

Y = Dependent Variable

β = Constant

β1, 2, = Independent Variable Regression Coefficient

X1, 2, = Independent Variable

i = Firm

t = Times

ε = Residual / Error

4. Results dan Discussion
A. Descriptive Statistical Analysis

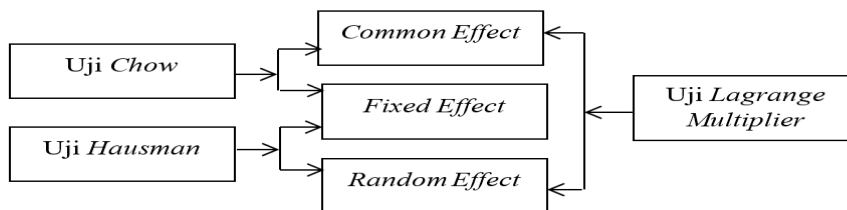|	EVA	GA	SIZE
Mean	21.65147	0.783333	28.94130
Median	21.52350	0.750000	29.82931
Maximum	25.45110	1.000000	31.21797
Minimum	18.71650	0.500000	23.51703
Std. Dev.	1.645862	0.213261	2.240735

The table above shows the results of the descriptive table of green accounting variables, company size and financial statement performance as follows:

The dependent variable of financial statement performance represented by Economy Value Added has an average or mean value of 21.65147. Meanwhile, the median value is stated at 21.52350. The minimum value is 18.71650 and the maximum value is 25.45110 and has a deviation value of 1.645862. The company with the lowest value in the Economy Value Added calculation is PT J Resources Asia Pasifik Tbk in 2020. Meanwhile, the company with the highest economic value-added value is PT Kapuas Prima Coal Tbk in 2019.

The green accounting variable for the companies PT Bayan Resource, PT Golden Energy Mines, PT Harum Energy, and PT Indo Tambangraya Megah has a minimum value of 0.50 and with a maximum value of 1 which is owned by the companies PT Adaro Energy, PT Baramulti Suksessarana, PT Aneka Mine, PT Mitrabara Adiperdana, and PT Astrindo Nusantara Infrastructure. The median value obtained by the green accounting variable is 0.7500 while the standard deviation value is 0.213261 and the average value of the green accounting variable is 0.78333. This indicates that the average company has carried out environmental financing. as a result of good operation.

The firm size variable calculated using the size formula obtains a minimum value of 23.51703 which was obtained by PT Indo Tambangraya Megah in 2020. Meanwhile, the maximum value obtained by PT Bukit Asam in 2021 is 31.21797. The median value shown is 29.82931 and the standard deviation value is 2.240735, besides that the company also gets an average value of 28.94130. This shows that companies in the mining sector have relatively low average assets, namely 289%.

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B. Panel Data Regression Model Selection

a. Chow Test

The hypothesis in carrying out the chow test is:

H0 : The model will follow the common effect model

H1 : The model will follow the fixed effect model

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	20.173500	(11,45)	0.0000
Cross-section Chi-square	106.814604	11	0.0000

Based on the results obtained from the Chow test that has been carried out, it can be seen that there is a Cross-section F Probability value showing a number of 0.0000 and a Chi-square Cross-section value of 0.0000. This is able to explain that the value is seen to be smaller than the test significance level of 0.05, so it can be concluded that H1 is accepted, meaning that the good model used in this study is the Fixed Effect Model (FEM) when compared to the Common Effect Model (CEM).

b. Hausman Test

The hypothesis in carrying out the Hausman test is:

H0 : The model will follow the Random effect model

H1 : The model will follow the fixed effect model

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.254098	3	0.0026

Based on the results of the hasuman test that has been carried out, it is obtained that the Probability (Prob.) value of random cross-section shows the number 0.0026 which can be interpreted that this number is smaller than the test significance level of 0.05. So it can be concluded that H1 is accepted as the best model that is more feasible to use in this study, namely the Fixed Effect Model (FEM) compared to the Random Effect Model (REM).

c. Lagrange Multiplier Test

The hypothesis in conducting the lagrange multiplier test is:
H0: The model will follow the Common effect model
H1: The model will follow the Random effect model

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided
   (all others) alternatives

	Cross-section	Test Hypothesis Time	Both
Breusch-Pagan	53.85945 (0.0000)	0.293701 (0.5879)	54.15315 (0.0000)

Based on the results of the Lagrange Multiplier test that has been carried out, it is obtained that the Breusch-pagan Cross-section Probability value has a value of 0.0000, so it can be concluded that H1 is accepted as a feasible model to use, namely the Random Effect Model (REM) compared to the Common Effect Model (CEM) because the value Breusch-pagan cross-section probability $<α$ 0.05.

d. Model Conclusion

Based on the results obtained from the model selection test in the research that has been carried out, it can be concluded that the panel data regression model that will be used in hypothesis testing and the panel data regression equation is the Fixed effect model (FEM).

Dependent Variable: EVA
Method: Panel Least Squares
Date: 12/04/22   Time: 21:06
Sample: 2017 2021
Periods included: 5
Cross-sections included: 12
Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-19.08593	13.28157	-1.437023	0.1576
GA	-1.065229	1.085907	-0.980957	0.3319
SIZE	1.472679	0.461660	3.189963	0.0026

Effects Specification

Cross-section fixed (dummy variables)

C. Classic Assumption Tests

In this study, 2 classic assumption tests were carried out namely:

a. Multicollinearity Test

	EVA	GA	SIZE
EVA	1.000000	-0.252033	-0.346027
GA	-0.252033	1.000000	0.195129
SIZE	-0.346027	0.195129	1.000000

Based on the results of the data processing shown in the table, it can be seen that there are no independent variables that have a value of more than 0.8 so it can be concluded that in the regression model of this study there is no multicollinearity

b. Heteroscedasticity Test

Residual Cross-Section Dependence Test
Null hypothesis: No cross-section dependence (correlation) in residuals
Equation: Untitled
Periods included: 5
Cross-sections included: 12
Total panel observations: 60
Cross-section effects were removed during estimation

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	85.86997	66	0.0507
Pesaran scaled LM	1.729459		0.0837
Bias-corrected scaled LM	0.229459		0.8185
Pesaran CD	1.257164		0.2087

Based on the results of the data test in the table above, it can be concluded that the panel data regression model does not occur heteroscedasticity. This can be assessed based on the Breusch-Pagan LM value which states that the value states 0.0507, which means greater than the 0.05 level, so it can be concluded that the model regression does not occur heteroscedasticity

D. Hypotheses Tests
a. F- Test

Root MSE	0.566221	R-squared	0.879639
Mean dependent var	21.65147	Adjusted R-squared	0.842194
S.D. dependent var	1.645862	S.E. of regression	0.653816
Akaike info criterion	2.200335	Sum squared resid	19.23636
Schwarz criterion	2.723921	Log likelihood	-51.01005
Hannan-Quinn criter.	2.405138	F-statistic	23.49119
Durbin-Watson stat	2.119518	Prob(F-statistic)	0.000000

In the results of the data processing above presented using a table, it can be seen that the value of F-Statistics, while the F table with a level of $\alpha = 0.05/5\%$ with DF1 (k-1) = 3 and DF2 (n-k) = 56 obtained an F table value of 2.77 . Thus F-Statistic (23.49119) > F Table (2.77) and with a Prob (F-Statistic) value of 0.000000 $<\alpha$ 0.05, it can be concluded that Ha is accepted which explains that the independent variables (X) in this study namely Green Accounting and Firm Size Simultaneously or jointly affect the dependent variable (Y), namely the Performance of Financial Statements.

b. R^2 Test

Root MSE	0.566221	R-squared	0.879639
Mean dependent var	21.65147	Adjusted R-squared	0.842194
S.D. dependent var	1.645862	S.E. of regression	0.653816
Akaike info criterion	2.200335	Sum squared resid	19.23636
Schwarz criterion	2.723921	Log likelihood	-51.01005
Hannan-Quinn criter.	2.405138	F-statistic	23.49119
Durbin-Watson stat	2.119518	Prob(F-statistic)	0.000000

The table above shows that there is an Adjusted R-Square value of 0.842194 which illustrates that the dependent variable (Y) namely Financial Report Performance can be explained by the independent variable (X) namely Green Accounting and Firm Size of 84.2% while the percentage the remaining 15.8% is explained by other variables not examined in this study.

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c. t- Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-19.08593	13.28157	-1.437023	0.1576
GA	-1.065229	1.085907	-0.980957	0.3319
SIZE	1.472679	0.461660	3.189963	0.0026

From the table above it can be concluded that:

1) The t-Statistic Green Accounting (GA) value is – 0.980957, while t Table with a level of α = 0.05 or 5%, with a DF value (n-k) = 56, the t Table value is 1.67252. Thus, the t-Statistic GA (– 0.980957) < t Table (1.67252) is obtained and the value obtained for Prob. 0.3319 > 0.05. This can illustrate that the Green Accounting (GA) variable has no partial effect on the Financial Report Performance variable. These results are supported by the t-statistic value which is smaller than the t table and the probability value which is greater than 0.05, causing the Green Accounting variable to have no effect on the performance of financial statements.

2) The value of the t-Statistic of Firm Size (SIZE) is 3.189963, while t Table with a level of α = 0.05 or 5%, with a value of DF (n-k) = 56, the value of t Table is 1.67252. Thus the t-Statistic SIZE (3.189963) > t Table (1.67252) and the Prob value. 0.0026 <0.05, it can be concluded that the variable firm size has a partial effect on the financial statement performance variable. The coefficient value of the variable Firm Size (SIZE) of 1.472679 can illustrate that the variable Company Size affects the Performance of Financial Statements, so Ha is accepted. These results are supported by the t-statistic value which is smaller than the t table and the probability value which is greater than 0.05, causing the variable company size to affect the performance of financial statements.

5. Conclusion

Based on the results of the analysis that has been carried out on the data held along with the explanations that have been explained, it can be concluded from this research as follows: 1) green accounting does not affect the performance of financial statements because consumer or public trust has not been obtained through allocating funds to environment on the company's products so that it cannot affect the increase in the economic value of a company. It is known that so far green accounting records have been considered as records that will have an impact on reporting related to sustainability reports and have not been able to have an impact on the sustainability of a company's financial reporting. It can be concluded that stakeholders still prioritize fundamental elements in determining a policy or decision because until now the surrounding community has not been able to fully understand that the creation of a green accounting recording system is a company's sustainability investment effort, not just the costs incurred by the company to create environmental improvement. However, the company that is the object of this research has provided complete information in its annual report regarding the environmental responsibility of the company by displaying the costs included in the Green Accounting assessment indicator as a form of a company's sustainability investment. 2) Company size affects the performance of financial reports. These results explain that company size has become one of the considerations for stakeholders in making decisions, the size of a company will have an impact on the performance of the company's financial statements. The larger the size of a company, the more access it will have to obtain large sources of outside funding, because a large company has a much greater chance of being able to survive and compete in the industry. So that the economic value will increase in accordance with the increase in the size of the company. By

increasing the size of the company, it will be an advantage for the company in improving financial performance through income and investment from outside. Many consumers/communities have more trust in the products owned by large companies compared to small companies. This is precisely what makes the increase in profits and large investment from outside the company.

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