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Environmental Disclosure as a Determinant of Profitability: An Analysis of Environmental Performance

Muhammad Akbar Faturrahman [1], Rafi Rafsanjani [2], Rini Lestari [3]
Department of Accounting, Universitas Islam Bandung, Indonesia

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ABSTRACT

This research begins with the phenomenon of environmental violations which have an impact on the sustainability of an energy company. Environmental violations that occur are caused by poor environmental performance of a company and not reporting the company's environmental activities. The impact for energy companies that receive environmental violations causes the company's profitability to decrease. This is what the author pays attention to in this research and is the focus of this research. The aim of this research is to determine the effect of environmental performance and environmental disclosure on the level of profitability in energy sector companies listed on the Indonesia Stock Exchange for the 2019-1022 period. The research method used in this research is explanatory with a quantitative approach. This research uses secondary data obtained from the Indonesian Stock Exchange. The sample used in this research was purposive sampling so that a sample of 18 energy sector companies was obtained. The research results show that environmental performance influences the level of company profitability and environmental disclosure influences the level of company profitability.

Corresponding Author:
Muhammad Akbar Faturrahman
Separtment of Accountin Universitas Islam Bandung
Bandung
Emailakbarfatur01@gmail.com

INTRODUCTION

Most of the goals of a company are to make a profit or profit in carrying out its activities so that the company continues to stand and can continue to grow. In the increasingly fierce competition, many companies have to do many things to survive and continue to earn profits. Many efforts can be made by companies to remain competitive, including by making innovations that can make the company have its own selling power in the market, reducing operating costs or reducing production costs in order to provide products/services at affordable prices, improving the quality of products/services offered in order to provide the best products/services in the market, and many other efforts that can be made.

All efforts made are intended so that the company can make high sales and increase the level of profitability of the company. Because high sales will affect the company's profitability, this is revealed by profitability reflects how a company generates profits over a certain time by taking into account the earnings, equity, assets owned by the company.

On the other hand, companies must think well about how they use company resources well to get a profit or profit, because as described by profitability is the company's ability to manage company resources owned to generate profits.

In reality, there are still many company problems related to poor environmental management, such as what happened to PT RMK Energy, which experienced a decline in the price of shares listed on the Indonesia Stock Exchange (IDX). As said by the coordinator of K-MAKI South Sumatra, the share price of PT RMK Energy which started at 680 points, dropped to 660 points and ended with a share price of 675 points. This decline in share price was caused by the sealing of the company's port located in Muara Belida District, Muara Enim by the Directorate General of Gakkum of the Ministry of Environment and Forestry (LHK) due to environmental violations.

The Head of Sarikat Hijau Indonesia (SHI) Aceh Tamiang District stated that one of the companies that received a red PROPER rating was in Aceh Province located in Kampung Alur Manis, Rantau District, namely PT Bumi Sama Gandha which is engaged in the palm oil sector. This is because it has violated the rules or does not meet the criteria set by the Ministry of Environment and Forestry and is not compliant in environmental management.

There are companies that get problems in profitability caused by rising commodity prices as said as CGS CIMB Sekuritas Indonesia analysis. The company is PT Mayora Indah Tbk (MYOR). The price of raw materials such as coffee 24%, wheat 12%, CPO by 17%. This price increase cannot be matched by the performance of PT Mayora Indah Tbk. (MYOR) to maintain their profit margin. With the increase in commodity prices, the net profit of PT Mayora Indah Tbk. (MYOR) decreased by 25% on an annual basis and will likely drop to 34% by the end of the year.

Based on the phenomenon that has been described, there are still companies that have a poor level of profitability. One of the causes of the poor level of profitability of the Company described in the phenomenon above is environmental problems. This triggers the urgency of the company's sensitivity to the importance of maintaining the environment around the company must be further enhanced. One way to answer this urgency is to apply Green Accounting to the Company. Green Accounting according to is a process of recognition, value measurement, recording, summarizing, reporting, and disclosing reports on the company's economic, social, and environmental events / activities to society, the environment, and the company itself in the unity of reporting accounting information that is interconnected / interrelated in order to have benefits for company stakeholders in making economic and non-economic decisions.

With the application of Green Accounting, companies are expected to be sensitive to the environment by assessing, measuring, recording, and reporting information related to social accounting and environmental accounting in accounting information reporting. With that the company will pay attention to how the condition of the environment around the company and will preserve the environment in order to maintain the company's image. On the other hand, preserving the surrounding environment is an obligation of the company as stated in Articles 66 and 74 of Law No. 40 of 2007 concerning limited liability companies and PP No.47/2012 concerning social and environmental responsibility of limited liability companies.

Based on the background that has been described, the problem formulation in this study is as follows:

1. Does environmental performance affect the level of profitability in energy sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2022 period?
2. Does disclosure affect the level of profitability in energy sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2022 period?

Furthermore, based on the background that has been described, the objectives in this study are:

1. To explain empirically the effect of environmental performance on the level of profitability in energy sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2022 period.
2. To explain empirically the effect of environmental disclosure on the level of profitability in energy sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2022 period.

LITERATURE REVIEW

The Effect of Environmental Performance on the Company's Profitability Level

Environmental performance is how the company preserves the company's environment from all impacts arising from all activities carried out by the company (Lankoski (2000) in . Environmental performance in this study acts as one of the measurement tools of the application of Green Accounting to the level of profitability. The level of profitability is the company's capacity to earn profits from the use of the company's economic resources and operations carried out by the company.

With a good level of corporate environmental performance, it can increase the company's profitability. This is because if a company has good environmental performance, the company can minimize the costs incurred for environmental damage that occurs due to

company activities. Good company performance can also preserve the environment around the company and improve company performance better. With good environmental performance, it can improve the company's image of public trust and also stakeholders who are believed to be able to increase sales and attract investors because they have a good corporate image. On the other hand, with good environmental performance, the company can avoid sanctions from the government for environmental pollution for activities carried out by the company.

The relationship between the implementation of company performance and the level of profitability is strengthened by research conducted by which states that environmental performance has a positive effect on the level of company profitability. Based on the explanation above, the following hypothesis can be proposed:

H 1 : Environmental performance affects the company's profitability level

The Effect of Environmental Disclosure on the Company's Profitability Level

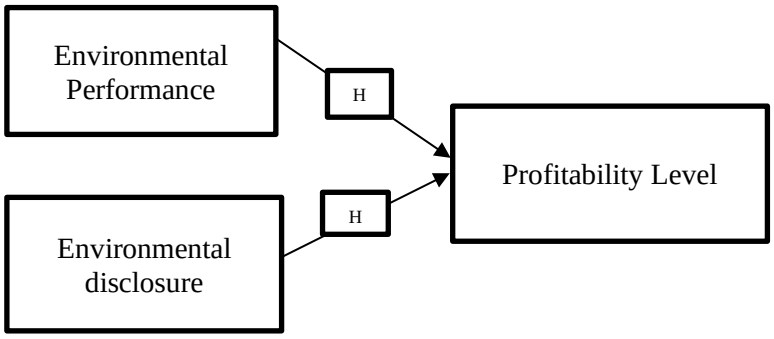
Environmental disclosure is the disclosure of qualitative and quantitative information relating to environmental accounting by containing the activities carried out by the company. Environmental disclosure in this study acts as one of the measurement tools of the application of Green Accounting to the level of profitability. The level of profitability is the company's capacity to earn profits from the use of the company's economic resources and operations carried out by the company.

Environmental disclosure that companies can do is by reporting their company activities related to environmental accounting information in the annual report which can increase the level of profitability. This is because the company reporting environmental activities will make a positive reflection on the company and can attract the attention of the public and also stakeholders. By making the company look positive towards the environment, it will make the company have a good image and will have an impact on the company's profitability level.

The relationship between the application of corporate disclosure and the level of profitability is strengthened by research conducted by which states that environmental disclosure affects the level of corporate profitability. Based on the explanation above, the following hypothesis can be proposed:

H 2 : *Environmental disclosure affects the company's profitability level*

Based on the development of hypotheses based on the framework above, a theoretical model can be obtained in this study as shown below:



Picture 1
Thinking Framework

RESEARCH METHODS

The research method used in this study uses an explanatory method, an explanatory method, namely research with the aim of describing a generalization or explaining the relationship between variables and other variables, therefore, this method uses a hypothesis. With a quantitative approach which is a research method that aims to find out the relationship

between variables and other variables by testing hypotheses statistically. This method is used by the author to describe the relationship between the influence of environmental performance and environmental disclosure on the level of profitability of the Company.

Variable and Measurement

Environmental performance is measured through the company's achievement in participating in PROPER. The program is held by the Ministry of Environment (KLH) in an effort to encourage the structuring of companies in environmental management. The rating system in PROPER is expressed in 5 colors, namely:

a. Gold: Has carried out environmental management more than required and made continuous community development efforts.
b. Green: companies that have carried out environmental management more than required, already have:
    1. Biodiversity
    2. Environmental Management System
    3. 3R Solid Waste
    4. 3R Hazardous Waste
    5. Water Pollution Load Reduction Conservation
    6. Emission Reduction
    7. Energy Efficiency
c. Blue: the company has carried out the required environmental management efforts in accordance with the applicable provisions or regulations (has fulfilled all aspects required by KLH) this is the minimum value that must be achieved by all companies in the field:
    1. Water Governance Assessment
    2. Land Damage Assessment
    3. Marine Pollution Control
    4. Hazardous Waste Management
    5. Air Pollution Control
    6. Water Pollution Control
    7. EIA Implementation
d. Red: the company has made efforts to manage the environment, but has only partially achieved results that are in accordance with the requirements as stipulated in the laws and regulations in the field:
    1. Water Governance Assessment
    2. Land Damage Assessment
    3. Marine Pollution Control
    4. Hazardous Waste Management
    5. Air Pollution Control
    6. Water Pollution Control
    7. EIA Implementation
e. Black: the lowest rank in managing the environment, Has not made efforts in environmental management as required so that it has the potential to pollute the environment, and is at risk of being closed by the MOE in the field of business licenses:
    1. Water Governance Assessment
    2. Land Damage Assessment

3. Marine Pollution Control
4. Hazardous Waste Management
5. Air Pollution Control
6. Water Pollution Control
7. EIA Implementation

Environmental disclosure is measured based on the globally recognized global reporting initiative (GRI). In general, the disclosure of the 2014 GRI G4 special standard has three categories. However, in this study the category that will be used is the environmental category.

Environmental disclosures contained in GRI G4 2014 consist of 12 categories with 34 items consisting of; material, energy, water, biodiversity, emissions, effluent and waste, products and services, compliance, transportation, others, supplier assessment of the environment, grievance mechanism for environmental issues. The materials category includes 2 environmental disclosure items, the energy category includes 4 environmental disclosure items, the water category includes 4 environmental disclosure items, the biodiversity category includes 4 environmental disclosure items, the emissions category includes 7 environmental disclosure items, the effluent and waste category includes 5 environmental disclosure items, the products and services category includes 2 environmental disclosure items, the compliance category includes 1 environmental disclosure item, the transportation category includes 1 environmental disclosure item, the miscellaneous category includes 1 environmental disclosure item, the supplier assessment of the environment category includes 2 environmental disclosure items, the environmental grievance mechanism category includes 1 environmental disclosure item.

The next stage after the scoring process is to analyze each item disclosed and accumulate the scores obtained. To determine the level of environmental accounting disclosure, use the following formula:

$$\text{Environmental disclosure index} = \frac{\sum (\text{Weight of disclosure form x Total Score for each category})}{\text{Total items that must be disclosed by the company}}$$

(Nurleli & Faisal, 2016)

The level of profitability means that the level of profitability is a benchmark used by business people to measure their achievements and justify their claims for compensation. The level of profitability in this study is proxied by ROA.

Profitability in this study is measured by *Return On Assets* (ROA). ROA is used as a measurement of profitability because it can see how the company is performing. Another reason is that this ROA ratio is a comprehensive measure where everything that affects the financial statements is reflected in this ratio and also in the analysis of this ratio is easy to calculate, easy to understand, and meaningful in absolute terms.

According to , the formula for this ratio is as follows:

$$Return\ On\ Assets = \frac{Net\ Income}{Total\ Assets}$$

Data collection sources and techniques

According to the data source, it can be divided into two, namely primary data and secondary data. Secondary data is data that comes from sources that do not directly provide data to data collectors, such as through documents. The definition of secondary data according to is data published or used by organizations that are not processing it. In this study, researchers used secondary data obtained from annual reports on the official website of the Indonesia Stock Exchange in 2019-2022.

Data collection is a process of collecting primary and secondary data. As according to data collection is a way to obtain materials, information, facts, and reliable information. The data collection technique used in this research is the documentation method. According to the documentation method is aimed at obtaining data directly from the research site, including

relevant books, regulations, activity reports, photographs, documentary films, data relevant to the research.

Population and Sample

The population in this study were all oil, gas and coal energy sector companies listed on the IDX (Indonesia Stock Exchange) in 2019-2022. The technique used in this research is Purposive Sampling. Purposive sampling is a sampling technique with certain considerations put forward. The criteria that will determine the sample to be used in this study are as follows:

1. Oil, gas and coal energy sector companies listed on the IDX (Indonesia Stock Exchange) in 2019-2022.
2. Oil, gas and coal energy sector companies listed on the IDX (Indonesia Stock Exchange) that present annual reports.
3. Oil, gas and coal energy sector companies listed on the IDX (Indonesia Stock Exchange) that present annual reports every consecutive year in 2019-2022.
4. Oil, gas and coal energy sector companies listed on the IDX (Indonesia Stock Exchange) that are registered with the PROPER program every year in a row in 2019-2022.

Hypothesis Testing Design

Descriptive Statistics

Descriptive statistics are numerical and graphical techniques used to organize, analyze, and present data (Murray & Andrea, 2009: 93). Descriptive statistics are used to help understand and describe certain data by providing brief and summary observations about the sample, which can help identify patterns (Conner & Johnson: 2017: 52). Descriptive statistics consist of mean, maximum, minimum, and standard deviation values (Diamonalisa et al., 2022). These descriptive statistics were carried out for each variable in the study.

Panel Data Regression Model Estimation

Panel data regression is a combination of time series and cross section data (Diamonalisa et al., 2022). Panel data regression is done by choosing the best model between common effect, fixed effect or random effect (Zulfikar, 2018).

1. General Effect Model

It is the simplest approach called CEM or *pooled least square* estimation. In this approach it is assumed that the intercept value of each variable is the same as well as the slope of the coefficient for all *cross-section* and *time series* units based on this assumption, the CEM model is expressed as follows:

$$Yit = \alpha + \beta\, Xit + uit\,; i = 1,2,\dots,N; t = 1,2,\ \ ,T$$

2. Fixed effect model

One way to consider cross-section units in panel regression models is to allow different intercept values for each cross-section unit but still assume the slope of the coefficient is fixed. The FEM model is expressed as follows:

$$= \alpha i + \beta\, Xit + uit\,; i = 1,2,\dots,N; t = 1,2,\ \ ,T$$

3. Random Effect Model

In the REM model, it is assumed that aj is a random variable with mean a) so that the intercept can be expressed as ai = a0 + i with ti is a random error having mean O and varianceri, ti is not directly observed or also called latent variable. The REM model equation is as follows:

$$Yit = \alpha 0 + \beta\, Xit + wit\,; i = 1,2,\dots,N; t = 1,2,\ \ ,T$$

To determine which model is most appropriate / in accordance with the research objectives, testing will be carried out, there are three tests that can be used as a tool in selecting panel data regression models (CE, FE or RE) based on the characteristics of the data they have, namely the *F test (chow test), Hansman Test, Langrangge Multiplier (LM) test.* (Dani Rahman et al., 2023: 82)

A. F test (chow Test)

It is conducted to compare/select the best model between CE and FE. The test criterion is to note the probability value for Cross-section F. The hypotheses in this test are:

Ho: Common Effect Model chosen (sig>0.05)

Ha: Fixed Effect model selected (sig <0.05)

If the value is > 0.05 (pre-determined as the significance level or alpha) then the selected model is CE, but if it is < 0.05 then the selected model is FE.

B. Hansman Test

Conducted to compare/select which model is the best between FE and RE. The test criterion is to note the cross-section random probability value (Prob.). The hypothesis in this test is:

Ho: Random Effect Model (sig>0.05)

Ha: Fixed Effect model selected (sig <0.05)

If the value is > 0.05 then the selected model is RE, but if < 0.05 then the selected model is FE.

C. *Langrangge Multiplier (LM) Test*

Conducted to compare/select which model is the best between CE and RE. The test criterion is to note the Breusch-Pagan Cross-Section probability value (Prob.). The hypothesis in this test is:

Ho: Random Effect Model (sig>0.05)

Ha: Common Effect model selected (sig <0.05)

If the value is > 0.05 then the selected model is RE, but if < 0.05 then the selected model is CE.

Normality Test

According to Ghozali (2011) the normality test is carried out to determine whether the dependent variable and the independent variable in the regression model have a normal data distribution or not. Normality tests need to be carried out in studies that use average parameters in their research as a measure of research success (Nasrum, 2018: 1).

Das & Imon (2016: 6) revealed that the normality test can be done using various methods, such as histograms, stem-and-leaf plots, normal percent-percent plots, Kolmogorov-smirnov test, shapiro-wilk test, and d'agostino-pearson omnibus test. The method that will be used in this research is the Kolmogorov-Smirnov test. According to Berger & Zhou (2014), the Kolmogorov-Smirnov test is used to test the suitability of a particular set of data with a theoretical distribution. The Kolmogorov-smirnov test decision-making criteria are if p> 0.05 then the data is normally distributed.

Classical Assumption Test

Multicollinearity Test

The multicollinearity test is used with the aim of knowing whether the regression model finds a correlation between independent variables (Ghozali, 2011). The tolerance value and variance inflation factor (VIF) test can be used to determine the level of multicollinearity in a regression model (Daoud, 2017). If the tolerance value> 0.1 or VIF value < 10, then there is no multicollinearity.

Autocorrelation Test

The autocorrelation test is conducted to test that there is no correlation between the dependent variable and itself sorted by time. Santosa & Ashari (2005: 240) argue that the

meaning of correlation is that the value of the dependent variable in the study is not related to the value of the variable itself. Ghozali (2011) reveals that the Durbin Watson test can be used to analyze the presence of autocorrelation in a regression model. Deciding whether there is a correlation in the dependent variable is:

1. If the DW value lies between the upper limit (dU) and (4-dU), then the correlation coefficient is equal to zero. This result indicates there is no autorelation.
2. If the DW value is less than the lower limit value (dL), the correlation coefficient is greater than zero. This result indicates positive autocorrelation.
3. If the DW value is greater than (4-dL), the correlation coefficient is less than zero. This result indicates negative autocorrelation.
4. If the DW value lies between (4-dU) and (4-dL), the result is inconclusive.

Heteroscedasticity Test

Ghozali (2011) states that the heteroscedasticity test is carried out with the aim of knowing whether the residual variables in the regression model have the same observation or not. The decision to test heteroscedasticity in this study is if the significant level is above 0.05, then there is no heteroscedasticity. In this study, the heteroscedasticity test used is the Glejser test. Godfrey (1996: 275) shows that the Glejser test for heteroscedasticity is valid under conditional symmetry. The glejser test is used because the results of this test are stated to be more accurate (Im, 2000: 187).

Test Goodness Fit of Model

Simultaneous Test (F)

Ghozali (2011) revealed that the simultaneous test is used to test whether the independent variables will simultaneously affect the dependent variable significantly. This test uses the F test by comparing F count with F table. The decision making in the F test is:

1. If the probability value of F < 0.05 then Ho is rejected, meaning that the independent variables simultaneously affect the dependent variable.
2. If the probability value of F> 0.05 then Ho is accepted, meaning that the independent variables simultaneously have no effect on the dependent variable.

Hypothesis Test (t)

The t test is used with the aim of proving a significant effect between the independent variable and the dependent variable (Ghozali, 2011). The test in this study uses the observation of the significance value of t at the level a used (level a used at 5%). Decision making in the t test is:

1. If the probability value t ≤ 0.05 then Ho is rejected, meaning that the independent variable significantly affects the dependent variable.
2. If the probability value of t > 0.05 then Ho is accepted, meaning that the independent variable does not significantly affect the dependent variable.

The hypotheses to be tested in this study are as follows:

$H01_1$: β=0 : The implementation of environmental performance has no effect on the level of profitability.

$Ha1_1$: β=0 : Implementation of Environmental Performance affects the level of profitability.

$H01_1$: β=0 : Implementation of Environmental Disclosure has no effect on the level of profitability.

$Ha1_1$: β=0 : Implementation of Environmental Disclosure affects the level of profitability.

RESEARCH RESULTS AND DISCUSSION

RESEARCH RESULTS

Panel Data Regression model testing

The model used in this research is panel data regression. Panel data regression can be done by selecting the best model among common effect, fixed effect, and random effect.

1. common effect,

Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/25/24 Time: 16:25
Sample: 2019 2022
Periods included: 4
Cross-sections included: 18
Total panel (balanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.234429	0.089331	-2.624266	0.0107
PROPER	0.092641	0.025615	3.616735	0.0006
GRI	-0.026617	0.150139	-0.177280	0.8598

R-squared	0.193676	Mean dependent var	0.122007
Adjusted R-squared	0.170304	S.D. dependent var	0.163025
S.E. of regression	0.148496	Akaike info criterion	-0.935747
Sum squared resid	1.521518	Schwarz criterion	-0.840886
Log likelihood	36.68689	Hannan-Quinn criter.	-0.897982
F-statistic	8.286755	Durbin-Watson stat	0.410151
Prob(F-statistic)	0.000595		

Picture 2
Common Effect Regression Model Results
Source: Results of data processing with Eviews 12

2. fixed effect

Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/25/24 Time: 16:25
Sample: 2019 2022
Periods included: 4
Cross-sections included: 18
Total panel (balanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.650879	0.095136	-6.841579	0.0000
PROPER	0.166942	0.027637	6.040560	0.0000
GRI	0.403746	0.147480	2.737638	0.0085

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.815285	Mean dependent var	0.122007
Adjusted R-squared	0.747792	S.D. dependent var	0.163025
S.E. of regression	0.081872	Akaike info criterion	-1.937194
Sum squared resid	0.348554	Schwarz criterion	-1.304787
Log likelihood	89.73900	Hannan-Quinn criter.	-1.685431
F-statistic	12.07969	Durbin-Watson stat	1.905169
Prob(F-statistic)	0.000000		

Picture 3
Fixed Effect Regression Model Results
Source: Results of data processing with Eviews 12

3. random effect

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 01/25/24 Time: 16:26
Sample: 2019 2022
Periods included: 4
Cross-sections included: 18
Total panel (balanced) observations: 72
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.514652	0.086905	-5.922026	0.0000
PROPER	0.140853	0.023991	5.870965	0.0000
GRI	0.287221	0.131818	2.178911	0.0328

Effects Specification	S.D.	Rho
Cross-section random	0.113380	0.6573
Idiosyncratic random	0.081872	0.3427

Weighted Statistics

R-squared	0.462152	Mean dependent var	0.041433
Adjusted R-squared	0.446562	S.D. dependent var	0.119110
S.E. of regression	0.088610	Sum squared resid	0.541769
F-statistic	29.64450	Durbin-Watson stat	1.062093
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.010076	Mean dependent var	0.122007
Sum squared resid	1.867967	Durbin-Watson stat	0.308040

Picture 3
Random Effect Regression Model Results
Source: Results of data processing with Eviews 12

After the results of the common effect, fixed effect, and random effect models are obtained, the next step is to conduct a model selection test. Model selection tests can be carried out using the chow test, hausman test, and lagrange multiplier test.

a) Chow test

The Chow test is used to determine the best model between Fixed Effect and Common Effect in estimating panel data. The provisions used in the chow test are if the probability value> 0.05 then H0 is accepted, meaning that the selected model is common effect. However, if the probability value <0.05 then Ha is accepted, meaning that the selected model is fixed effect. The chow test results in this study are:

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

Effects Test	Statistic	d.f.	Prob.
Cross-section F	10.293628	(17,52)	0.0000
Cross-section Chi-square	106.104213	17	0.0000

Picture 4
Chow test results
Source: Results of data processing with Eviews 12

Based on the results of the chow test conducted, it can be seen that the cross section probability value F = 0.0000 <0.05. So H0 is rejected and Ha is accepted, meaning that the fixed effect model is more appropriate to use than the common effect model to estimate panel data.

b) Hausman test

After the chow test is conducted and the result is obtained that the fixed effect model is used, the panel data model must be compared again between the fixed effect and random effect. The hausman test is used to select the best model between fixed effect and random effect to estimate panel data. The provisions used in the hausman test are if the probability value> 0.05 then H0 is accepted, meaning that the selected model is random effect. However, if the probability value <0.05 then Ha is accepted, meaning that the selected model is fixed effect. The results of the hausman test in this study are:

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	13.825153	2	0.0010

Picture 5
Hausman test results
Source: Results of data processing with Eviews 12

Based on the results of the Hausman test conducted, it can be seen that the probability value of cross section random = 0.0010 <0.05. So H0 is rejected and Ha is accepted, meaning that the fixed effect model is more appropriate to use than the random effect model to estimate panel data.

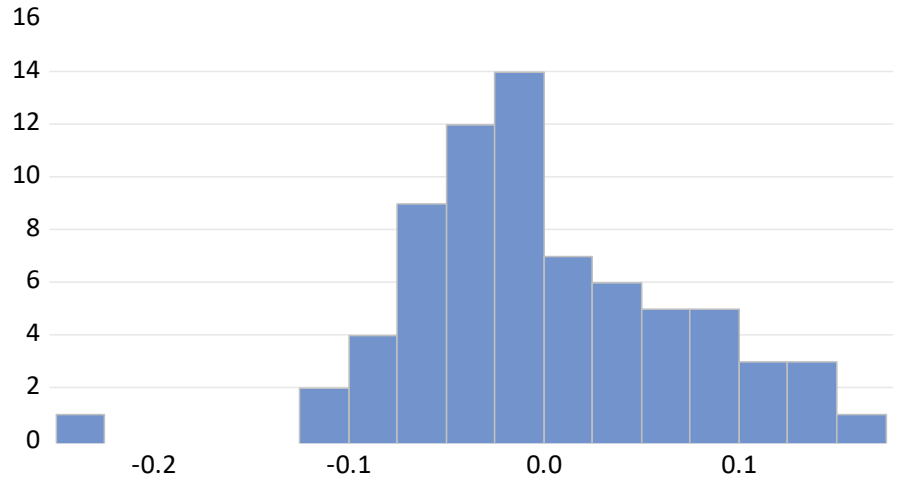
Based on the results of the three model selection tests above, the best model to estimate the panel data model is the fixed effect, because the fixed effect model was selected twice in two model selection tests. According to Diamonalisa, et al (2022) if the selected model is random effect or fixed effect, what needs to be done next is to conduct a normality test and conduct a Multicollinearity test, but there is no need to test classical assumptions.

Normality test results

According to Ghozali (2016) the normality test is a test used to determine whether the independent and dependent variables are normally distributed or not. To find out whether there are normally distributed residuals or not, it can be seen by comparing the calculated JB (Jarque-Bera) Probability value with an alpha level value of 0.05 or 5%, as follows:

1) If Prob. JB ≥ 0.05 then the residuals are normally distributed;
2) If the value of Prob. JB < 0.05 then there is not enough evidence to conclude that the residuals are normally distributed.

The following is a table of data processing results using Eviews 12 software:



Picture 6
Normality test results
Source: Results of data processing with Eviews 12

Based on the results of the normality test, it is known that the Jarque Bera (JB) probability value is 0.558708. Because the probability value ρ = 0.558708> 0.05, it can be concluded that the residual data is normally distributed and the normality assumption is met.

Classical assumption test results
Multicollinearity test results

The multicollinearity test uses VIF (Variance Inflation Factors). In detecting the presence or absence of multicollinearity, it can be seen from the Variance Inflation Factor (VIF) value and the Tolerance value with the following conditions (Ghozali, 2016):

1) If the VIF value ≤ 10, then there is no multicollinearity.
2) If the VIF value> 10, then multicollinearity occurs.

	PROPER	GRI
PROPER	1.000000	0.497318
GRI	0.497318	1.000000

Picture 7
Multicollinearity test results
Source: Results of data processing with Eviews 12

Based on the multicollinearity test, it can be seen that the Variance Inflation Factor (VIF) value of environmental performance (PROPER) (X1.1) and Environmental Disclosure (GRI) (X1.2) is the same, which is 0.497318 where this VIF value is smaller than 10. So, it can be concluded that there is no multicollinearity between the independent variables. This means that the multicollinearity test is met.

Multiple Regression Results

Multiple regression analysis is used to determine the relationship between each independent variable and the dependent variable, whether it has a positive or negative effect. The following are the processing results of multiple linear regression analysis:

Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/24/24 Time: 19:42
Sample: 2019 2022
Periods included: 4
Cross-sections included: 18
Total panel (balanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.650879	0.095136	-6.841579	0.0000
PROPER	0.166942	0.027637	6.040560	0.0000
GRI	0.403746	0.147480	2.737638	0.0085

Picture 8
Multiple Regression Results
Source: Results of data processing with Eviews 12

Based on the results of the Eviews 12 output above, the regression coefficient value is obtained in the Multiple Linear Regression Analysis Test results table, the equation for the data is as follows:

$$\mathbf{Y = -0.65 + 0.16\ X1.1 + 0.40\ X1.2}$$

Simultaneous test results (f)

A properly estimated model means that the model is suitable for explaining the effect of the independent variables on the dependent variable". The criteria used with a significant alpha level of 0.05 or 5% are:

1) If the Prob. F ≤ 0.05, then the two independent variables simultaneously have a significant effect on the dependent variable.
2) If the value of Prob. F> 0.05, then the independent variables simultaneously have no significant effect on the dependent variable

The processing results of the F test (simultaneous test) are as follows:

R-squared	0.815285	Mean dependent var	0.122007
Adjusted R-squared	0.747792	S.D. dependent var	0.163025
S.E. of regression	0.081872	Akaike info criterion	-1.937194
Sum squared resid	0.348554	Schwarz criterion	-1.304787
Log likelihood	89.73900	Hannan-Quinn criter.	-1.685431
F-statistic	12.07969	Durbin-Watson stat	1.905169
Prob(F-statistic)	0.000000		

Picture 9
Simultaneous Test Results
Source: Results of data processing with Eviews 12

Based on the test above, the F test results shown by Prob. F is 0.0000, where the value is smaller than 0.05. This means that environmental performance and environmental disclosure simultaneously have a significant effect on the level of profitability.

Partial test results (t)

Partial hypothesis testing (t test) is needed to test the significant level of the effect of the independent variable partially on the dependent variable. The basis for decision making for the t test is based on the significance value with the following criteria:

1) If the Prob. t value ≤ 0.05, then the independent variable has a significant effect on the dependent variable;
2) If the Prob. t value> 0.05, then the independent variable has no significant effect on the dependent variable.

Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/24/24 Time: 19:42
Sample: 2019 2022
Periods included: 4
Cross-sections included: 18
Total panel (balanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.650879	0.095136	-6.841579	0.0000
PROPER	0.166942	0.027637	6.040560	0.0000
GRI	0.403746	0.147480	2.737638	0.0085

Picture 10
Partial Test Results
Source: Results of data processing with Eviews 12

Based on the test results above, it is found that the significance value of each independent variable (independent variable) on the dependent variable (dependent variable) is as follows:

1) The Prob. t value of environmental performance is 0.000, where the value is <0.05. This means that partially, environmental performance has a significant effect on the level of profitability.
2) The Prob. t value of environmental disclosure is 0.0085 <0.05. This means that partially, environmental disclosure has a significant effect on the effectiveness of the level of profitability.

DISCUSSION
The effect of environmental performance on the level of profitability of energy sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2022 period.

Based on the test results above, it is found that the significance value of each independent variable (independent variable) on the dependent variable (dependent variable), namely the Prob. t value of environmental performance is 0.000, where the value is <0.05. This means that partially, environmental performance has a significant effect on the level of profitability.

Based on the results of partial testing, it shows that environmental performance affects the level of profitability of the Company, this result is obtained from partial testing (t) which shows the Prob. t value of environmental performance is 0.000, where the value is smaller than 0.05. This means that partially, environmental performance has a significant effect on the level of profitability.

This study states that with good environmental performance, it will provide a high level of company profitability. This can be seen from companies that get a high PROPER rating, indicating that the company has made efforts in environmental management properly and as required. With good environmental management, the company can avoid costs for environmental damage caused by the company's operating activities. After reducing costs, the company will get higher profits and increase the company's profitability level.

This is in line with research (Jayanti, 2022) which shows that environmental performance affects the level of company profitability. In this study, it is revealed that with good environmental performance, it can avoid costs for environmental damage caused by company activities and get more net profit so that it can increase the level of company profitability. This is reinforced by research (Lestari et al., 2023) which states that environmental performance affects economic growth. With good economic growth, it will produce high purchasing power. With high purchasing power the company can increase product prices and get higher profits and increase the level of company profitability. Other aligned research, namely that researched by (Dewi Nawangsari & Nugroho, 2019; Dwi Cahyani et al., 2023; Fitriani et al., 2013; Helmisar Saifuddin & Wiyono, 2023; Jayanti, 2022; Lestari et al., 2019;

Nuryaningrum et al., 2021; Rahmadani Hapsari et al., 2021; Sidarta et al., 2023; Susanti et al., 2023) which states that environmental performance affects the level of company profitability.

The effect of environmental disclosure on the level of profitability of energy sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2022

Based on the test results above, it is found that the significance value of each independent variable (independent variable) on the dependent variable (dependent variable), namely the Prob. t value of environmental disclosure is 0.0085 < 0.05. This means that partially, environmental disclosure has a significant effect on the effectiveness of the level of profitability.

Based on the results of partial testing, it shows that environmental disclosure affects the level of profitability of the Company, this result is obtained from partial testing (t) which shows the Prob. t value of environmental disclosure is 0.0085, where the value is smaller than 0.05. This means that partially, environmental performance has a significant effect on the level of profitability.

This study states that with good environmental disclosure, the company will get a high level of profitability. This is because the more companies disclose their environmental activities, the more they will attract the attention of investors and consumers. This will increase the company's good image to the entire community and company stakeholders. By having a good corporate image, the public or consumers will trust and will buy the products offered by the company which results in the company experiencing an increase in sales. With this, the profit will also increase and increase the level of profitability of the company.

This is in line with research (Murniati & Sovita, 2021) which shows that environmental disclosure affects the level of company profitability. This study explains that the more companies disclose their environmental activities will increase the company's positive image which has an impact on increasing the company's trust in consumers and investors. That way the public will believe in the company's products and will buy back the company's products which result in increased profits and increase the level of profitability. Other harmonized research is research researched (Luh Intan Hadriyani et al., 2022; Ningtyas & Triyanto, 2019; Rahayu & Topowijono, 2014; Setiadi & Agustina, 2019; Wijayanti, 2020) which states that environmental disclosure affects the level of company profitability.

Based on the research results, it can be stated that the application of green accounting affects the level of profitability of energy sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2022 period. However, there are still obstacles from environmental disclosures made by companies because the existence of a sustainable report will result in a high level of environmental disclosure index and only some of the companies studied make sustainable reports, because this will provide a different environmental disclosure index value between companies that make sustainable reports and companies that only make annual reports.

CONCLUSION

Based on the discussion in this study regarding the effect of environmental performance and environmental disclosure on the level of profitability of energy sector companies listed on the Indonesia Stock Exchange for the 2019-2022 period, the researchers concluded the following research results:

1. Environmental performance affects the Company's Profitability Level as measured by Return on Assets in energy sector companies on the Indonesia Stock Exchange in 2019-2022. This can be seen with good environmental management, companies can avoid costs for environmental damage caused by the company's operating activities. After reducing costs, the company will get higher profits and increase the company's profitability level.
2. Environmental disclosure affects the level of company profitability as measured by Return on Assets in energy sector companies on the Indonesia Stock Exchange in 2019-2022. This means that the more companies disclose their environmental activities, the more they will attract the attention of investors and consumers. This

will increase the company's good image to the entire community and company stakeholders. By having a good corporate image, the public or consumers will trust and will buy the products offered by the company which results in the company experiencing an increase in sales. With this, the profit will also increase and increase the level of profitability of the company.

This research has positive implications for energy companies listed on the Indonesia stock exchange. With this research, it can be used as a reference for energy sector companies in improving environmental performance in the company and implementing environmental disclosures. This aims to help companies gain trust in maintaining the company's environment and also not damaging the surrounding environment for company activities. This is also expected to increase the level of company profitability.

Based on the discussion and conclusions in this study which are concerned with matters affecting the level of profitability of the company, it is hoped that it can provide more quality research results in further research by paying attention to the following limitations:

1. It is expected that energy sector companies are advised to make sustainable reports to improve the quality of environmental reporting. Because by making a sustainability report, the value of environmental disclosure will increase and it can also make it easier for interested parties to obtain information about environmental disclosure.
2. It is hoped that the Indonesian government is advised to make strong regulations and have clear sanctions for corporate actors in Indonesia to care more about the environment and require reporting all company environmental activities in the form of sustainability reports.
3. It is expected that future researchers in conducting research add variables to environmental disclosure by also considering social disclosure and economic disclosure.

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