

## **EFFECT OF LEVERAGE, ENVIRONMENTAL PERFORMANCE, AND ENVIRONMENTAL DISCLOSURE ON ECONOMIC PERFORMANCE ON NATURAL RESOURCES MANAGEMENT INDUSTRY COMPANIES**

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Article Info: Received: January 31, 2020; Revised: February 19, 2021; Accepted: February 30, 2021.

**Abstrack:** This study analyzes the influence of leverage, environmental performance, and environmental disclosure on economic performance in natural resources management industry companies registered in BEI. The period of research used is 5 years, namely 2014 - 2018. The population of this study includes all natural resources management industry companies registered in IDX for the period 2014-2018. Sampling techniques using purposive sampling techniques. Based on the criteria that have been set obtained 6 companies. The type of data used is secondary data obtained from the Indonesia Stock Exchange website. The analysis method used is data panel regression analysis. The results showed that leverage has a significant negative effect on economic performance, and environmental performance does not have a significant influence on economic performance, while environmental disclosure has a significant positive effect on economic performance.

**Keywords:** Economic Performance, Leverage, Environmental Performance, Environmental Disclosure.

**Abstrak:** Penelitian ini menganalisis tentang pengaruh *leverage*, *environmental performance*, dan *environmental disclosure* terhadap *economic performance* pada perusahaan industry pengelola sumber daya alam yang terdaftar di BEI. Periode waktu penelitian yang digunakan adalah 5 tahun yaitu 2014 – 2018. Populasi penelitian ini meliputi seluruh perusahaan industri pengelola sumber daya alam yang terdaftar di BEI periode 2014-2018. Teknik pengambilan sampel menggunakan teknik *purposive sampling*. Berdasarkan kriteria yang telah ditetapkan diperoleh 6 perusahaan. Jenis data yang digunakan adalah data sekunder yang diperoleh dari situs Bursa Efek Indonesia. Metode analisis yang digunakan adalah analisis regresi data panel. Hasil penelitian menunjukkan bahwa *leverage* berpengaruh negative signifikan terhadap *economic performance*, dan *environmental performance* tidak memiliki pengaruh signifikan terhadap *economic performance*, sedangkan *environmental disclosure* berpengaruh positif signifikan terhadap *economic performance*.

**Kata Kunci:** *Economic Performance*, *Leverage*, *Environmental Performance*, *Environmental Disclosure*.

## INTRODUCTION

Each company is basically required to make financial statements that will be used by both internal and external parties. The information contained in the annual financial statements can be used by investors to assess a company's economic performance in obtaining profit forecasts for the future. Economic performance of a company is basically needed as a tool to measure the health of a company. The better the business people, the company's goals will be achieved by itself and the business will run in the expected corridor (Haholongan, 2016). Economic performance is the relative performance of a company in a similar industry group characterized by the annual return of the company's industry (Putra and Utami, 2017). The economic performance of a company is not uncommon which annually earns an increase in profit as is the case with PT companies. United Tractors Tbk (UNTR), which managed to score profit growth, despite only rising 3.9% year-on-year (yoy). But its revenue fell 9.3% (yoy) to Rp 24.9 trillion.

There are also other companies that show a decrease in net profit, namely in PT. Bukit Asam Tbk (PTBA), recorded a 31% (yoy) decrease in net profit to Rp 795 billion. Nevertheless, PTBA improved its performance in the second quarter of 2015, this is because ptba production costs were lower in the second quarter of 2015. And PT. Indika Energy Tbk (INDY), should also be willing to lose revenue by 18.21 (yoy) to US\$ 618.32 million. INDY suffered a loss of US\$ 7.23 million from the previous profit of US\$ 8.45 million. This is because INDY prints a fairly high load. Henan Putihrai's research team in last weekend's report gave an underweight opinion on the mining sector as a whole. This is in line with weak indications of global economic recovery in China's domestic consumption and manufacturing data still signaling pressure on domestic coal exports. On the other hand, the demand for imports from India is predicted to decrease due to the growth of domestic new production. On the other hand, the demand for imports from India is predicted to decrease due to the growth of domestic coal production. The decline in the price of oil as a subsite also negatively impacts coal demand. Fortunately, there is a delay in increasing royalty rates. Previously the government aimed to lower the royalty rate this year for mines that have Mining Business License (IUP), from 5% - 7% to 10% - 13.5%. However, considering the continued weakening price of coal commodities, the government postponed the plan. However, according to Henan Putihrai, if the policy is implemented, PTBA has the potential to experience the largest decrease in revenue as a result

of all mining production due to the use of IUP permits with medium and high calorie quality (mid-low grade). The coal issuer that experienced a deep decline in profit is PT Harum Energy Tbk (HRUM). HRUM's net profit was only US\$ 2.8 million or down to 84% (yoy). HRUM has held back expansion this year until coal prices recover. If coal mining-based issuers are still sluggish, mining issuers based on mineral commodities such as PT Aneka Tambang Tbk (ANTM) can still record an increase in sales volume. This is because demand for gold and ferronickel commodities rose in Q2-2015. ANTM's net sales reached Rp 7.89 trillion in the first half of 2015, up 98% (yoy). Wiliam Surya Wijaya, analyst at Asjaya Indosurya Securities, said that the net profit margin of mining issuers that do not diversify their business is easier to decline. UNTR which has started to enter the construction business makes its net profit slightly lifted. Meanwhile, in the long term, PTBA's diversified business into electric energy business will also be more promising than other mining issuers. (Kontan.co.id, Tuesday, August 4, 2015). The factor that causes the return of its shares to experience capital loss is because the share price has decreased. Return of stocks that experience capital gains, will have an impact on investors considering that the economic performance of the company is good so as to produce profit.

The success of the leadership as the manager of the company can be seen from its financial performance or economic performance, one of which is shown by the leverage ratio. Leverage ratio is a ratio used to measure the extent to which a company's assets are financed with debt (Cashmere, 2017:151). One type of leverage ratio used to measure a company's ability to pay its obligations is the Debt to Equity Ratio (DER). Debt to Equity Ratio (DER) is a ratio that compares the amount of debt to equity. This ratio is often used by investors to see how much debt the company has. The smaller DER shows the greater trust from outside parties, it is very possible to improve the financial performance of the company, because with a large capital, the opportunity to achieve a level of profit is also large so as to show good company performance (Anggraeni, 2015). The better the company's financial performance, the better the economic performance of the company. Another factor that plays a role in showing economic performance is environmental performance. According to Suratno et al (2006), environmental performance is the company's performance in creating a good environment. Poor environmental performance tends to be bad economic performance, because a bad environment will cause bad stakeholder views towards the company, so the company will be more concerned

about the company's performance in creating a good environment. Good financial performance alone is not enough for the company to survive the competition in the business world. Environmental problems are important factors that must be considered in response to the impact of changes in environmental conditions such as the system of environmental reports consisting of control of air pollution, prevention of damage to the environment, the existence of conservation forms to nature, and other forms that have a direct relationship to nature. According to Suratno (2016), environmental disclosure is a form of disclosure of information related to the environment in the company's financial statements.

Environmental disclosure has a role for companies, low environmental disclosure tends to decrease as well, because environmental disclosure will build an image of the company and get attention to society compared to its economic performance. Some previous studies have obtained mixed results in measuring the relationship between performance and environmental disclosure of the company's economic performance such as (Sarumpaet, 2005), providing empirical evidence that there is no relationship between environmental performance and corporate economic performance, but the size of the company is significantly related to environmental performance as well as research conducted by (Anggraini, 2008), which obtained results that environmental performance does not have a significant effect on environmental disclosure, but for the variables of environmental performance and environmental disclosure positively affect the return of shares.

Researchers on the relationship between leverage, environmental performance, environmental disclosure and economic performance in general have considered the strength of the relationship between these variables. Ifada (2014), found that leverage affects economic performance. Putra and Utami (2017), found a significant positive relationship between environmental performance to environmental disclosure and economic performance. Wibisono (2011), found a negative but insignificant relationship between environmental performance to economic performance, and environmental disclosure to economic performance. These empirical studies show mixed results. It is possible that research samples and research sites are diverse. The purpose of this study is to empirically prove the effect of Leverage, Environmental Performance, and Environmental Disclosure on Economic Performance. The relationship of leverage with economic performance can be attributed to signal theory, whereby companies tend to reveal complete information will give signals about the company's performance and

social activities, so that the company can run smoothly. Previous research conducted by Ifada (2014) shows that Debt to Equity Ratio positively affects financial performance. The Debt to Equity Ratio illustrates the extent to which a company can afford to pay its debts. The higher the Debt to Equity Ratio shows the less confidence from outsiders, the more likely it is to lower the company's economic performance. This indicates that with the amount of capital the company has, the opportunity to achieve a level of profit is also large so that it can show good company performance (Anggraeni, 2015). The profit earned by the company can be used to pay debts. Based on this description, the first hypothesis in this study is as follows:

**H<sub>1</sub> : Leverage has a positive effect on Economic Performance.**

Environmental performance is projected with PROPER performance rating in five color coded ratings from the best to the company with the worst environmental performance: gold, green, blue, red, black. Environmental performance has a strong influence on economic performance, where companies that have a good environmental performance will be responded positively by investors through fluctuations in the company's share price that is increasing from period to period, and vice versa if the company with a bad rating will appear doubts from investors in the company and responded negatively to fluctuations in the company's share price in the market that is decreasing from year to year.

Previous research conducted by Al-Tuwaijri et.al ,(2004), showed that there is a significant positive relationship between environmental performance and economic performance. Based on stakeholder theory and signalling that stakeholders will give a good signal if the company provides good information or disclosed to stakeholders means that the company voluntarily provides information publicly so that stakeholders can take their decisions in investing, especially investors by looking at fluctuations in the company's share prices. Companies that have a good Environmental Performance is also good news for investors and potential investors so that it will be responded positively by investors through fluctuations in the company's share price. Based on the description, the second hypothesis in this study is as follows:

**H<sub>2</sub> : Environmental Performance has a positive effect on Economic Performance.**

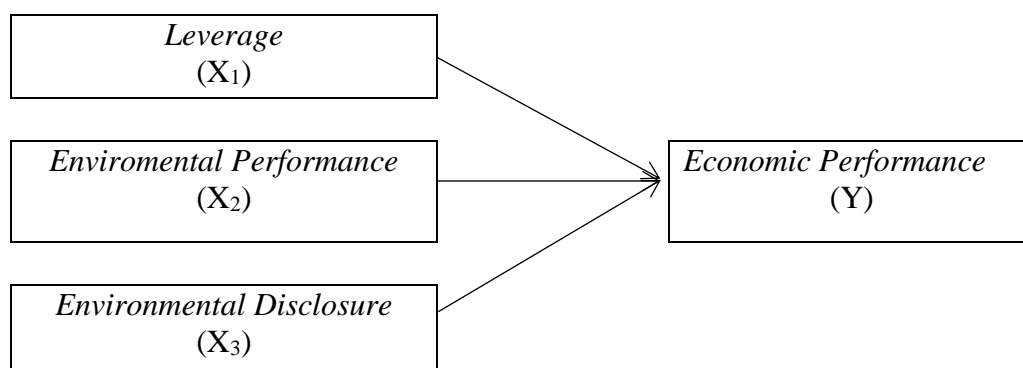
Environmental Disclosure is a form of disclosure of information related to the environment in the company's annual report, (Suratno, 2006). One of the types used to calculate the weight or index of disclosure, measured by global reporting initiative guidelines. If the company

discloses given a value of 1 but if not disclosed given a value of 0. Previous research conducted by Al-Tuwaijri et.al ,(2004), showed that there is a significant positive relationship between environmental disclosure and economic performance. The relationship between environmental disclosure and economic performance can be attributed to signal theory that companies tend to disclose complete information that will give signals about the company's performance and social activities. For investors, information to invest is very important in making decisions, while the market utilizes information to achieve a new market balance. Based on the description, the third hypothesis in this study is as follows:

**H<sub>3</sub> : Environmental Disclosure berpengaruh positif terhadap Economic Performance.**

Research Model Research model is presented as follows:

**Figure 1**  
**Research Model**



Source: Data processed, 2021.

**METHOD**

The population in this study is all major sector companies, namely the natural resources management industry consisting of two sectors, namely the agricultural sector and the mining sector listed on the Indonesia Stock Exchange (IDX) in the period 2014 - 2018. Selected by using purposive sampling with the following criteria: (a) Companies engaged in the Natural Resources Management Industry that went public and registered in IDX in 2014-2018. (b) Companies that did not rank proper in 2014-2018. (c) Companies that do not use rupiah currency. (d) Companies that do not provide complete information about the variables measured. Economic performance is defined as the company's performance relatively (changing from year to year) in a similar industry (industry engaged in the same business) which is characterized by the company's annual return. (Luciana, 2007). Calculated by formula:

$$\frac{(P_1 - P_0) + Div}{P_0} + Me_{Ri}$$

Description:

$P_1$  = Year-end share price

$P_0$  = Stock price at the beginning of the year

$D_{iv}$  = Dividend division

$Me_{Ri}$  = Median return industry

Leverage is also a measure used in analyzing financial statements to show the amount of collateral available to creditors. (Fahmi, 2012). Calculated by formula:

$$DER = \frac{\text{Debt}}{\text{Equity}}$$

Description:

DER = *Debt to Equity Ratio*

Debt = Total Debt

Equity = Total Equity

Environmental performance is the company's performance in creating a good environment (green). (Suratno et al., 2006). This variable measured by PROPER rating includes company rating in 5 (five) color ratings that will be scored consecutively with the highest value of 5 for gold, 4 for green, 3 for blue, 2 for red and 1 for black with the lowest value. Environmental disclosure is a form of disclosure of information related to the environment in the company's annual report. (Suratno, 2006). Calculated by formula:

$$ED = \frac{\text{entity environment disclosure amount}}{\text{amount of environmental disclosure according to the GRI G4}}$$

## RESULTS

The process of selecting sample data can be seen in the following table:

**Table 1 Selection Process By Criteria**

No	Description	Amount
1	Companies engaged in the Natural Resources Management Industry that went public and registered in IDX in 2014-2018	61
2	Companies that did not rank in PROPER in 2014-2018	(18)
3	Companies that do not use rupiah currency	(16)

4	Companies that do not provide complete information about the variables measured	(21)
Number of Research Samples		6
Year of Observation		5
Total Research Observation Data During 2014-2018		30

Source: Indonesia Stock Exchange and PROPER Rating

Based on the sample selection process above, the number of data contained in this study amounted to 30 data. The data observed comes from the annual report published by the company in its official website for the period 2014-2018. Companies that have met the sample criteria will then be taken the necessary data for research purposes, the list of sample companies can be seen in the table below:

**Table 2 Sample Company List**

No	Company Name	Code
1	Astra Agro Lestari Tbk.	AALI
2	Pp London Sumatra Indonesia Tbk.	LSIP
3	Sampoerna Agro Tbk.	SGRO
4	Salim Ivomas Pratama Tbk.	SIMP
5	Tunas Baru Lampung Tbk.	TBLA
6	Tambang Batubara Bukit Asam Tbk.	PTBA

Source: Indonesia Stock Exchange and PROPER Rating

### **Economic Performance**

After the calculation is done, economic performance data is obtained at the sample company presented in the following table:

**Table 3 Economic Performance**

No	Code	<i>Economic Performance</i>				
		2014	2015	2016	2017	2018
1	AALI	13,83	13,61	12,46	13,88	13,72
2	LSIP	12,66	12,80	12,44	12,38	12,63
3	SGRO	17,26	18,26	17,77	17,69	18,70
4	SIMP	12,58	12,90	12,12	12,50	12,55
5	TBLA	11,00	11,72	11,76	12,68	12,39
6	PTBA	13,82	13,46	13,33	13,32	15,04

Source: Data Processed, 2021.



Based on the table above, it can be seen that PT. Tunas Baru Lampung Tbk (TBLA) has the smallest economic performance value, which is 11.00 in 2014, while PT. Sampoerna Agro Tbk (SGRO) has the largest economic performance value of 18.70 in 2018.

### Leverage

After the calculation, leverage data is obtained at the sample company presented in the following table:

**Tabel 4 Leverage**

No	Code	<i>Leverage</i>				
		2014	2015	2016	2017	2018
1	AALI	0,57	0,84	0,38	0,35	0,38
2	LSIP	0,20	0,21	0,24	0,20	0,20
3	SGRO	0,81	1,13	1,22	1,07	1,15
4	SIMP	0,84	0,84	0,85	0,84	0,90
5	TBLA	1,97	2,23	2,68	2,51	2,42
6	PTBA	0,71	0,82	0,76	0,59	0,49

Source: Data Processed, 2021.

Based on the table above, it can be seen that PT. Pp London Sumatra Indonesia Tbk (LSIP) has the smallest leverage value, which is 0.20 in 2014, 2017 and 2018 while PT. Sampoerna Agro Tbk (SGRO) has the largest leverage value of 1.22 in 2016.

### Environmental Performance

After the calculation, environmental performance data is obtained at the sample company presented in the following table:

**Table 5 Environmental Performance**

No	Code	<i>Environmental Performance</i>				
		2014	2015	2016	2017	2018
1	AALI	3	3	4	4	4
2	LSIP	3	3	3	3	3
3	SGRO	3	3	3	3	3
4	SIMP	3	3	3	3	3
5	TBLA	3	3	3	3	3
6	PTBA	5	5	5	5	5

Source: Data Processed, 2021.

Based on the table above, it can be seen that in 2014 and 2015, there were 5 companies that obtained a blue color rating, and 1 company that obtained a gold color rating. From 2016 to

2018, there were 1 company that obtained a green color rating, 4 companies that obtained a blue color rating, and 1 company that obtained a gold color rating.

### Environmental Disclosure

After the calculation, environmental disclosure data is obtained at the sample company presented in the following table:

**Tabel 6 Environmental Disclosure**

No	Kode	<i>Environmental Disclosure</i>				
		2014	2015	2016	2017	2018
1	ALI	0,0882	0,0882	0,0882	0,0882	0,0882
2	LSIP	0,0588	0,0588	0,0882	0,0882	0,0882
3	SGRO	0,0882	0,0588	0,1176	0,1176	0,1764
4	SIMP	0,1764	0,1470	0,1470	0,1764	0,1764
5	TBLA	0,1764	0,1470	0,1470	0,1176	0,1176
6	PTBA	0,1470	0,1470	0,1470	0,1764	0,2058

Source: Data Processed, 2021.

Based on the table above, it can be seen that PT. Pp London Sumatra Indonesia Tbk (LSIP) has the smallest environmental disclosure value, which is 0.07 in 2014, 2015, 2017 and 2018 while PT. Tunas Baru Lampung Tbk (TBLA) has the largest environmental disclosure value, which is 0.89 in 2016.

### Descriptive Statistical Analysis

Before further analyzing the estimated influence of leverage, environmental performance, and environmental disclosure on economic performance. Then it is necessary to first describe the data description of each variable used in this study. Statistical data description of all variables used in this study are:

**Table 7 Descriptive Statistics**

	ECP	L	EP	ED
Mean	13.70867	0.946667	3.433333	0.297667
Median	12.85000	0.830000	3.000000	0.275000
Maximum	18.70000	2.680000	5.000000	0.890000
Minimum	11.00000	0.200000	3.000000	0.070000
Std. Dev.	2.083966	0.715620	0.773854	0.249049
Skewness	1.311540	1.210298	1.360910	1.203223
Kurtosis	3.493474	3.458141	3.104089	3.309980
Jarque-Bera	8.905075	7.586470	9.273918	7.358841
Probability	0.011649	0.022523	0.009687	0.025238

Sum	411.2600	28.40000	103.0000	8.930000
Sum Sq. Dev.	125.9445	14.85127	17.36667	1.798737
Observations	30	30	30	30

Source: Data Processed, 2021.

The table above explains that the number of observations used in this study is as much as 30 data. Mean is the average of the data, obtained by summing the entire data and dividing it by the number of data (Winarno, 2015: 3.9 in Arry Eksandy, 2018). The largest mean value experienced by economic performance (ECP) variable is 13.70867, while environmental disclosure (ED) variable has the smallest mean value of 0.297667. A median is a middle value (or an average of two middle values when the data is even) when the data is sorted from smallest to largest. The median is a middle measure that is not easily affected by the outlier, especially when compared to the mean (Winarno, 2015: 3.9 in Arry Eksandy, 2018). The largest median experienced by economic performance (ECP) variable is 12.85000, while environmental disclosure (ED) variable has the smallest median of 0.275000.

Maximum is the largest value of the data (Winarno, 2015: 3.9 in Arry Eksandy, 2018). The largest maximum experienced by economic performance (ECP) variables is 18.70000, while environmental disclosure (ED) variables have the smallest maximum of 0.275000. The minimum is the smallest value of the data (Winarno, 2015: 3.9 in Arry Eksandy, 2018). The largest minimum experienced by economic performance (ECP) variables is 11.00000, while environmental disclosure (ED) variables have the smallest maximum of 0.070000. Std. Dev (Standard Deviation) is a measure of dispersion or data dissemination (Winarno, 2015: 3.10 in Arry Eksandy, 2018). The largest standard deviation value experienced by economic performance (ECP) variables is 2.083966, which means that economic performance (ECP) variables have a higher level of risk compared to other variables. While the variable environmental disclosure (ED) has the lowest level of risk, which is 0.249049. it is that environmental disclosure (ED) variables during the research period undergo changes that are not very volatile. Skewness is a measure of the asymmetry of data distribution in the mean sekitar. The skewness of a symmetrical distribution (normal distribution) is zero. Positive skewness indicates that the data distribution has a long tail on the right side and negative skewness has a long tail on the left (Winarno, 2015: 3.10 in Arry Eksandy, 2018). All of these

variables have positive values, and no variable has a negative value and has a value above 0 (zero) which means that the asymmetry of the mean data distribution is abnormal.

Kurtosis measures the height of a distribution. Kurtosis of a normally distributed data is 3. If kurtosis exceeds 3, then the distribution of data is said to be leptocurtis to normal. Can kurtosis less than 3, the distribution of data is flat (platykurtic) compared to normal distributed data (Winarno, 2015: 3.10 in Arry Eksandy, 2018). For all variables in this study, namely economic performance (ECP), leverage (L), environmental performance (EP), and environmental disclosure (ED) has a kurtosis value of more than 3 which means that the height of data distribution is abnormal. Jarque-Bera is a statistical test to see if data is normally distributed. This test measures differences in skewness and kurtosis of data and compared to when the data is normal. With  $H_0$  in normally distributed data, the Jarque-Bera test is distributed with  $X^2$  with a degree of freedom of 2. (Arry Eksandy, 2018).

Probability indicates the probability that jarque-bera's value exceeds (in absolute value) the observed value below the zero hypothesis. The small probability value of cendrung leads to the rejection of the zero hypothesis of the normal distribution (Winarno, 2015: 3.10 – 3.11 in Arry Eksandy, 2018). The probability value of the economic performance variable (ECP) is 0.011649, the leverage variable (L) is 0.022523, the environmental performance (EP) variable is 0.009687, and the environmental disclosure (ED) variable is 0.025238 (greater than  $\alpha = 5\%$ ), we cannot deny  $H_0$  that the data is normally distributed.

### **Common Effect Model (CEM)**

The Common Effect Model (CEM) is the simplest model compared to the Fixed Effect Model (FEM) or Random Effect Model (REM) in the data panel regression. This model does not pay attention to individual dimensions or time so it is assumed that behavior between individuals is the same over various periods of time. The following will be explained about the results of the approach of the Common Effect Model as follows:

**Tabel 8 Common Effect Model**

Dependent Variable: ECP
Method: Panel Least Squares
Date: 09/05/19 Time: 15:51
Sample: 2014 2018
Periods included: 5

Cross-sections included: 6				
Total panel (balanced) observations: 30				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.81429	6.928201	1.705247	0.1001
L	-6.351744	15.68268	-0.405016	0.6888
EP	0.725457	2.205578	0.328919	0.7449
ED	18.19695	47.33398	0.384437	0.7038
R-squared	0.017245	Mean dependent var		13.70867
Adjusted R-squared	-0.096150	S.D. dependent var		2.083966
S.E. of regression	2.181854	Akaike info criterion		4.521793
Sum squared resid	123.7727	Schwarz criterion		4.708619
Log likelihood	-63.82690	Hannan-Quinn criter.		4.581560
F-statistic	0.152075	Durbin-Watson stat		0.106180
Prob(F-statistic)	0.927411			

Source: Eviews 9.0 Processed Data

In the common effect output the above model shows that the Prob (F-statistic) value is 0.927411, while the F-table with a level of  $\alpha = 5\%$ ,  $df1 = (k-1) = (4-1) = 3$  and  $df2 = (n-k) = (30-4) = 26$ . Obtained from the F-table of 2.98. Thus the Prob (F-statistic) value of  $0.927411 > 0.05$  can be deduces that  $H_a$  is accepted. Thus, it can be concluded that the independent variables in this study consisting of leverage, environmental performance and environmental disclosure together have no effect on economic performance variables. Adjusted R-squared value of (-0.096150), meaning that the action to practice economic performance can be explained by leverage, environmental performance and environmental disclosure of -9.61% explained by other variables not studied in this study. Based on the Prob value of each variable indicates that the leverage variable (L) of 0.6888, environmental performance (EP) of 0.7449, and environmental disclosure (ED) of 0.7038, have no effect on economic performance.

Fixed Effect Model (FEM) Fixed Effect Model (FEM) or also called the fixed effect model is a data panel regression model that can show the difference of constants between objects in the same regression coefficient. This model assumes that differences between individuals can be in accommodation from differences in their interception. The following will be explained about the results of the approach of the Fixed Effect Model as follows:

**Tabel 9 Fixed Effect Model**

Dependent Variable: ECP					
Method: Panel Least Squares					
Date: 09/05/19 Time: 15:53					
Sample: 2014 2018					
Periods included: 5					
Cross-sections included: 6					
Total panel (balanced) observations: 30					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	8.202308	2.611316	3.141063	0.0049	
L	-10.32792	3.678575	-2.807587	0.0105	
EP	1.353958	0.674549	2.007205	0.0578	
ED	35.72744	11.68777	3.056822	0.0060	
Effects Specification					
Cross-section fixed (dummy variables)					
R-squared	0.964682	Mean dependent var			13.70867
Adjusted R-squared	0.951228	S.D. dependent var			2.083966
S.E. of regression	0.460231	Akaike info criterion			1.529149
Sum squared resid	4.448064	Schwarz criterion			1.949508
Log likelihood	-13.93723	Hannan-Quinn criter.			1.663625
F-statistic	71.70047	Durbin-Watson stat			2.410331
Prob(F-statistic)	0.000000				

Source: Eviews 9.0 Processed Data

In the fixed effect output the above model shows that the prob (F-statistic) value is 0.000000, while F-table with a rate of  $\alpha = 5\%$ ,  $df1 = (k-1) = (4-1) = 3$  and  $df2 = (n-k) = (30-4) = 26$ . Obtained from the F-table of 2.98. Thus the Prob (F-statistic) value of  $0.000000 < 0.05$  can be deduces that  $H_a$  is accepted. Thus, it can be concluded that the independent variables in this study consisting of leverage, environmental performance and environmental disclosure together have an influence on economic performance variables. Adjusted R-squared value of 0.951228, meaning that the action to practice economic performance can be explained by leverage, environmental performance and environmental disclosure of 95.1% explained by other variables not studied in this study. Based on the Prob value of each variable shows that the leverage variable (L) of 0.0105, environmental performance (EP) of 0.0578, and environmental disclosure (ED) of 0.0060, have an influence on economic performance.

### Random Effect Model

Random effect method is used to overcome the weakness of fixed effect methods that use pseudo variables, so that the model experiences uncertainty. Without the use of pseudo variables, the random effect method uses residuals, which are thought to have a relationship between time and between objects. The following will be explained about the results of the approach of the Random Effect Model as follows:

**Tabel 10 Random Effect Model**

Dependent Variable: ECP				
Method: Panel EGLS (Cross-section random effects)				
Date: 09/05/19 Time: 15:54				
Sample: 2014 2018				
Periods included: 5				
Cross-sections included: 6				
Total panel (balanced) observations: 30				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.626358	2.890617	2.984262	0.0061
L	-10.04039	3.662719	-2.741239	0.0109
EP	1.274862	0.660524	1.930075	0.0646
ED	34.30074	11.58427	2.960975	0.0065
Effects Specification				
				S.D.
				Rho
Cross-section random				3.418000
Idiosyncratic random				0.460231
Weighted Statistics				
R-squared	0.307665	Mean dependent var	0.824002	
Adjusted R-squared	0.227780	S.D. dependent var	0.501712	
S.E. of regression	0.440885	Sum squared resid	5.053866	
F-statistic	3.851350	Durbin-Watson stat	2.106949	
Prob(F-statistic)	0.020957			
Unweighted Statistics				
R-squared	-0.330500	Mean dependent var	13.70867	
Sum squared resid	167.5692	Durbin-Watson stat	0.063545	

Source: Eviews 9.0 Processed Data

In the random effect output the model above shows that the prob (F-statistic) value is 0.020957, while the F-table with a level of  $\alpha = 5\%$ ,  $df1 = (k-1) = (4-1) = 3$  and  $df2 = (n-k) = (30-4) = 26$ . Obtained from the F-table of 2.98. Thus the Prob (F-statistic) value of  $0.020957 < 0.05$  can be deduces that  $H_a$  is accepted. Thus, it can be concluded that the independent variables in this

study consisting of leverage, environmental performance and environmental disclosure together have an influence on economic performance variables. Adjusted R-squared value of 0.227780, meaning that the action to practice economic performance can be explained by leverage, environmental performance and environmental disclosure of 22.7% explained by other variables not studied in this study. Based on the Prob value of each variable shows that the leverage variable (L) of 0.0109, environmental performance (EP) of 0.0646, and environmental disclosure (ED) of 0.0065, have an influence on economic performance.

### Chow Test

Chow test is used to choose the model used whether it is best to use Common Effect Model (CEM) or Fixed Effect Model (FEM). This test can be seen in the Probability value (Prob.) Cross-section F and Cross-section chi-square with the following hypotheses. (Arry Eksandy, 2018):

$H_0$  : The model follows the Common Effect Model (CEM) if probability

$$\text{Cross - section F and Cross-section chi-square} > \alpha (0,05).$$

$H_a$  : The model follows the Fixed Effect Model (FEM) if the Probability of Cross -section F and Cross-section chi-square  $< \alpha (0.05)$ .

**Table 11 Chow Test Results**

Redundant Fixed Effects Tests			
Equation: EQ01			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	112.670017	(5,21)	0.0000
Cross-section Chi-square	99.779335	5	0.0000

Source: Eviews 9.0 Processed Data

Based on the table above, it can be concluded that p-value cross-section F and p-value cross-section Chi-square are more  $< \alpha (0.05)$ , then it can be concluded that fixed effect model (FEM) is more feasible to use compared to Common Effect Model (CEM). Hausman Test Hausman test is used to choose the model used whether it is best to use Random Effect Model (REM) or Fixed Effect Model (FEM). This test can be seen in the Probability value (Prob.) Cross-section random with the following hypotheses. (Arry Eksandy, 2018):

$H_0$  : The model follows the Random Effect Model (REM) if the Probability value (Prob.) Cross-section random  $> \alpha (0.05)$ .



$H_a$  : The model follows the Fixed Effect Model (FEM) if the Probability value (Prob.) Cross-section random  $< \alpha$  (0.05).

**Tabel 12 Hausman Test Result**

Correlated Random Effects - Hausman Test			
Equation: EQ01			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.860085	3	0.8350

Source: Eviews 9.0 Processed Data

Based on the table above, it appears that the profitability value (prob) cross-section random  $> \alpha$  (0.05), then  $H_0$  is accepted, which means random effect model (REM) is better used in estimating the regression of panel data than Fixed Effect Model (FEM).

### Lagrange Multiplier Test

Lagrange Multiplier test is used to choose the model used whether it is best to use Random Effect Model (REM) or Common Effect Model (CEM). This test can be seen in the Breush-pagan Probability value with the following hypothesis. (Arry Eksandy, 2018):

$H_0$  : The model follows the Common Effect Model (CEM) if the Breush-pagan Cross-section Probability value  $> \alpha$  (0.05).

$H_a$  : The model follows the Random Effect Model (REM) if the Breush-pagan Cross-section Probability value  $< \alpha$  (0.05).

**Table 13 Lagrange Multiplier Test Results**

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	52.48353 (0.0000)	2.472717 (0.1158)	54.95625 (0.0000)

Source: Eviews 9.0 Processed Data

Based on the table above, it appears that the profitability value of the Breusch-Pagan cross-section  $< \alpha$  (0.05), it can be concluded that the Random Effect Model (REM) is more feasible to use than the Common Effect Model (CEM).

### F-Test

Model feasibility test or commonly known as F Test is used to explain whether all the free variables that are put into the model together have an influence on bound variables, or in other words fit models or not. If the F test has no effect then the research is not feasible to continue because the research model is not able to explain the relationship between independent and dependent variables. It can also happen because of the relationship between independent variables (Multicollinearity) that causes the research model to become unfit.

**Table 14 Model Feasibility Test Results (F Test)**

Dependent Variable: ECP			
Method: Panel EGLS (Cross-section random effects)			
Date: 09/05/19 Time: 16:03			
Sample: 2014 2018			
Periods included: 5			
Cross-sections included: 6			
Total panel (balanced) observations: 30			
Swamy and Arora estimator of component variances			
R-squared	0.307665	Mean dependent var	0.824002
Adjusted R-squared	0.227780	S.D. dependent var	0.501712
S.E. of regression	0.440885	Sum squared resid	5.053866
F-statistic	3.851350	Durbin-Watson stat	2.106949
Prob(F-statistic)	0.020957		

Source: Eviews 9.0 Processed Data

Based on the table above, it shows that F-statistic is 3.851350, while F-table with  $\alpha = 5\%$ ,  $df1 = (k-1) = (4-1) = 3$  and  $df2 = (n-k) = (30-4) = 26$ . Obtained from the F-table of 2.99 thus F-statistic (3.851350) > F-table 2.98 and prob(F-statistic) value 0.020957 < 0.05 it can be concluded that  $H_a$  is accepted, thus it can be concluded that the independent variables in this study consisting of leverage, environmental performance, and environmental disclosure together have an influence on economic performance.

### Coefficient of Determination (Adjusted R-squared)

Coefficient explains how far the regression model's ability to describe variations in free variables affects bound variables. The R-squared value will indicate how much X will affect the movement of Y. The greater the R-squared result the better as it identifies the better the independent variable in describing dependent variables. The R-squared value is between 0 and 1.

**Table 15 Adjusted R-squared Test Results**

Dependent Variable: ECP			
Method: Panel EGLS (Cross-section random effects)			
Date: 09/05/19 Time: 16:03			
Sample: 2014 2018			
Periods included: 5			
Cross-sections included: 6			
Total panel (balanced) observations: 30			
Swamy and Arora estimator of component variances			
R-squared	0.307665	Mean dependent var	0.824002
Adjusted R-squared	0.227780	S.D. dependent var	0.501712
S.E. of regression	0.440885	Sum squared resid	5.053866
F-statistic	3.851350	Durbin-Watson stat	2.106949
Prob(F-statistic)	0.020957		

Source: Eviews 9.0 Processed Data

Based on the table above, shows that the value of Adjusted R-squared is 0.227780, meaning that the variation in changes in the ups and downs of economic performance can be explained by leverage, environmental performance, and environmental disclosure of 22.7 percent, while the rest of the 77.3 percent is explained by other variables not studied in this study.

**Partial Significant Test (Test t)**

T test results explain the significance of the partial effect of free variables on bound variables. The hypotheses in the t test are as follows:

**Tabel 16 T Test Results**

Dependent Variable: ECP				
Method: Panel EGLS (Cross-section random effects)				
Date: 09/05/19 Time: 16:03				
Sample: 2014 2018				
Periods included: 5				
Cross-sections included: 6				
Total panel (balanced) observations: 30				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.626358	2.890617	2.984262	0.0061
L	-10.04039	3.662719	-2.741239	0.0109
EP	1.274862	0.660524	1.930075	0.0646
ED	34.30074	11.58427	2.960975	0.0065

Source: Eviews 9.0 Processed Data

Based on the table above, shows that:

- 1) T-statistic leverage (L) value of -2.741239, while table t with  $\alpha$  rate = 5%,  $df (30-4) = 26$  obtained table t value of 2.05553. Thus t-statistic leverage (-2.741239) > t table (2.05553) and prob value  $0.0109 < 0.05$  then it can be concluded that the leverage variable in this study has a negative influence on economic performance. **Thus, H<sub>1</sub> in this study was accepted.**
- 2) T-statistic environmental performance (EP) value of 1.930075, while table t with  $\alpha$  level = 5%,  $df (30-4) = 26$  obtained table t value of 2.05553. Thus t-statistic environmental performance (1.930075) > t table (2.05553) and prob value  $0.0646 < 0.05$ , it can be concluded that environmental performance variables in this study have a positive influence on economic performance. **Thus, H<sub>2</sub> in this study was accepted.**
- 3) T-statistic environmental disclosure (ED) value of 2.960975, while table t with  $\alpha$  level = 5%,  $df (30-4) = 26$  obtained table t value of 2.05553. Thus t-statistic environmental disclosure (2.960975) > t table (2.05553) and prob value  $0.0065 < 0.05$  then it can be concluded that environmental disclosure variables in this study have a positive influence on economic performance. **Thus, H<sub>3</sub> in this study was accepted.**

### **Leverage Influence on Economic Performance**

The first hypothesis test in this study was to test whether leverage variables affect economic performance. Based on the results of the summary of research in table 4.24 it is known that the leverage variable shows a t-statistic value of (-2.741239) smaller than the t-table value (2.05553) and the significant value of (0.0109) or smaller than the  $\alpha$  (0.5) it can be concluded that H<sub>a</sub> is accepted and H<sub>0</sub> is rejected which means, negative leverage affects economic performance. This is because the sample companies studied make leverage as a benchmark for decision making that can affect investors. One example that can influence investors in investing by looking at the company's ability to pay debts as a reference that can improve economic performance that can make investors believe they have invested in the company. The results of this study are in line with research conducted by Luluk M. Ifada (2014), who said that leverage affects economic performance.

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

The second hypothesis test in this study is to test whether environmental performance variables affect economic performance. Based on the results of the research in table 4.24 it is known that environmental performance variables show t-statistic values of (1.930075) smaller than the

value of t-table (2.05553) and significant value of (0.0646) or greater than  $\alpha$  (0.5) it can be concluded that  $H_a$  is rejected and  $H_0$  is accepted which means, environmental performance has no effect on economic performance. This condition occurs because the company's good or bad environmental performance does not have much effect on the economic performance of a company in the future. The public only looks at the performance of the company's environment in the same period and will assess again on the performance of the company's environment in the future not with the environmental performance of the current period. It is not surprising to see that in developing countries, such as Indonesia, environmental performance is not related to economic performance. Moreover, the environment of products or services that usually bring higher prices does not support large Indonesian consumers, therefore it will not affect the better economic performance. Even in developed countries, previous studies have shown mixed results on this relationship which means that in markets even in the community there are still many people predicting prices compared to the environment. The results of this study are in line with research conducted by Susi (2005), Lindrianasari (2007), Imas (2008), and Wibisono (2011), which stated that there is no significant influence between environmental performance and economic performance. However, this is in contrast to research conducted by Suratno (2006), stated that environmental performance positively affects economic performance.

### **The Effect of Environmental Disclosure on Economic Performance**

The third hypothesis test in this study is to test whether environmental disclosure variables affect economic performance. Based on the results of the summary of research in table 4.24 it is known that the environmental disclosure variable shows a t-statistic value of (2.960975) greater than the value of t-table (2.05553) and the value of significant of (0.0065) or smaller than the  $\alpha$  (0.5) it can be concluded that  $H_a$  received and  $H_0$  rejected which means, environmental disclosure positively affects economic performance.

These results show that companies with high environmental disclosure in financial statements will be more reliable, reliable financial statements will positively affect economic performance, so investors will respond positively with fluctuations in stock prices. The relationship between environmental disclosure and economic performance can be attributed to the theory of signals in which companies tend to disclose complete information and provide signals about the company's performance. For investors, information to invest is critical in decision making, while the market leverages information to achieve a new market balance.

The results of this study are in line with research conducted by (Al-Tuwaijri et.al, 2004) which states that there has been a significant positive relationship between environmental disclosure and economic performance. However, this is in contrast to research conducted by Nidia (2009), and Wibisono (2011), who stated that environmental disclosure has no significant effect on economic performance.

## CONCLUSION

This research aims to empirically prove the influence of Leverage, Environmental Performance, and Environmental Disclosure on Economic Performance. Variables in this study consist of dependent variables are economic performance and independent variables are leverage, environmental performance, and environmental disclosure. The research sample amounted to 6 major sector companies, namely the natural resources management industry consisting of two sectors, namely the agricultural sector and the mining sector listed on the Indonesia Stock Exchange (IDX) in the period 2014 – 2018. The type of data used in this study is Purposive Sampling. The results showed that leverage has a negative effect on economic performance. Environmental performance has no effect on economic performance, and environmental disclosure positively affects economic performance

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AGREGAT: Jurnal Ekonomi dan Bisnis  
Volume 5 (1), 2021  
<http://journal.uhamka.ac.id/index.php/agregat>  
p-ISSN: 2549-5658 e-ISSN: 2549-7243  
DOI: 10.22236/agregat\_vol5/is1pp13-37  
Pp 13-37

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