Finance Sustainability to the Environmental Investment

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Abstract. *The aim of this research is to find the correlation between financial performance, firm size, foreign ownership as independent variables and environmental investment as dependent variable. The measurement of environmental investment is environmental investment total per assets total. This research is using quantitative approach that examined the correlation between variables through hypothesis testing. The sample of this research is 46 public listed mining companies in the period of 2014-2018 by purposive sampling method. The data and hypothesis analysis used correlation analysis.*

The results indicated that financial performance have positive correlation on environmental investment whereas firm size and foreign ownership do not have any correlation on environmental investment. Great environmental investment can lead to higher profit, reputation and legitimacy of the company.

Keywords. *environmental investment; financial performance; firm size; foreign ownership; mining companies.*

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INTRODUCTION

The mushrooming of businesses makes people accustomed to investing in companies that go public with the aim of getting a greater return than investing in the banking sector. With so many people investing their money into the company, the company's responsibility to satisfy its investors is also getting bigger. Not only the stakeholders, but also the community and the environment around the company. This is because before establishing a company, the company made an agreement to the people in the environment, including an agreement to keep the environment from being contaminated with waste, because it would interfere with their survival. The company management is expected to make efforts to prevent environmental damage such as environmental investment. As in the study of Shortt (2012) which states that environmental investment can enhance the company's reputation in the eyes of customers which can also improve company performance.

On April 13, 2019, Sexy Killers video circulated on Youtube. This video contains about environmental pollution carried out by companies that are not responsible. PT. Adimitra Baratama Nusantara, a subsidiary of PT. Toba Bara Sejahtera makes excavations that are about 100 meters away from residential areas. Traces of excavation were not reclaimed and left open, causing many casualties and polluting water and air. In addition, there is environmental pollution carried out by PT. Indominco Mandiri in Kutai, East Kalimantan. PT. Indominco Mandiri which is a subsidiary of PT. Indo Tambangraya Megah, conducts air pollution in the form of fly ash and bottom ash which are the remnants of coal combustion in power plants.

These things occur because of the company's desire to optimize profits, but in a way that is not in line with the concept of Triple Bottom Line sustainability introduced by John Elkington because it does not pay attention to the environment and surrounding communities. Elkington introduced the term 3P (People, Planet, Profit) which can be used as a reference by companies who want to achieve success and build a sustainable business (Ikawidjaja, 2010). Environmental investment is a protection effort

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made by the company in managing the environment and reducing the company's environmental impact. To reduce the negative impact of the company, it is necessary to improve environmental performance, investments with environmentally friendly technology, and encouragement to conduct a clean production process in order to carry out green management (Paramita, 2013).

Financial performance is one of the factors related to environmental investment. There is a positive relationship between companies that have a higher profit on environmental investment (Ullman, 1985). With high profits, the company will consider investing in the environment. However there are studies of environmental performance and unrelated company performance (Sánchez and Sotorrío, 2007).

In addition, company size can also be one of the factors associated with environmental investment (Hart and Ahuja, 1996). Different company sizes, will produce different profits. According to Nakamura (2011), large companies have more resources to invest, so the larger the size of the company the greater the investment, including investment in the environment. In contrast to other studies, Nawaiseh et al. (2015) found that there was a negative relationship between company size and social responsibility to the environment.

Environmental investment can be influenced by several factors, one of which is ownership structure. The capital market is one that pays more attention to social and environmental responsibility. The company has responsibilities towards its stakeholders, so that both institutional investors and foreign investors can increase company awareness of the importance of protecting the environment. As in the case above, foreign investors will be more responsive to environmental issues. Chariri et al. (2011) found the influence of foreign ownership on environmental investment.

LITERATURE REVIEW

Paramita (2013) found that company size, foreign ownership, and company profile are determinants and consequences of environmental investment. The results of this study mean that foreign investors in Indonesia have not considered social and environmental criteria, so the need for social responsibility information has not been taken into consideration in investment decision making (Machmud and Djakman, 2008).

Nakamura (2011) found that environmental investment had a significant positive effect on company performance in the long run. However, CSR and ESD have no significant effect on heavy industrial companies such as textiles and chemicals (Y. Agan et al., 2014).

Hypothesis Development

Financial Performance of Environmental Investment

Companies that invest in the environment can respond to stakeholder concerns about social responsibility and can build a good reputation (Husted and Salazar, 2006). Restuningdiah (2010) also found a significant positive relationship between environmental performance and corporate financial performance. By making good environmental investments, companies can improve the performance of their companies, therefore companies need to increase their investment in the environmental field (Paramita, 2013). In line with research Nakamura (2011) found that environmental investment has a significant positive effect on company performance in the long run.

Companies with higher returns are expected to invest in the environmental sector. This needs to be done to build and maintain their image of the company's financial performance by building and maintaining stakeholder recognition and loyalty. This is indirectly related to the company's activities in its business activities. In line with the theory of legitimacy which is the basis for companies to meet agreements and social norms that apply in the environment of the company's business activities.

Ha1: Financial performance has a positive relationship with environmental investment.

Company Size on Environmental Investment

Firm size (firm size) describes the size of a company which is shown in total assets, total sales, average sales and total assets (Riyanto, 2001). Company size is one of the factors that can make a company make an environmental

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investment. Companies with large assets can make even greater investments in environmental management to increase their legitimacy in the eyes of the community (Paramita, 2013). The larger the company, the greater the tendency to report on its environmental performance to gain public support (Walls et al, 2011).

The size of the company is illustrated by the size of the company's assets. Companies that have more assets have greater ability to invest in the environment (Nakamura, 2011). The bigger the company, the more parties are watching the company. Thus, companies need to please stakeholders and the community by investing in the environment to prevent pollution and preserve the environment.

Ha2: Firm size has a positive relationship with environmental investment.

Foreign Ownership of Environmental Investment

Chariri et al. (2011) shows that the greater the foreign ownership in a company, the greater the pressure on company management to express social responsibility. This can encourage companies to make environmental investments as their responsibilities to shareholders. This is because foreign investors are considered to be very concerned about environmental issues and problems.

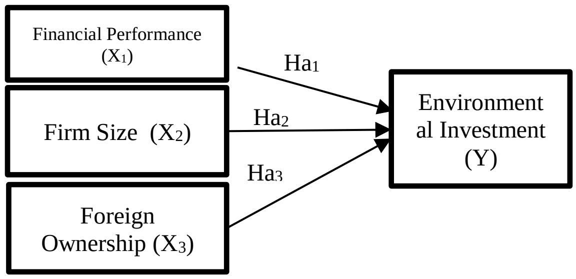
According to the Law of the Republic of Indonesia No. 25 of 2007 concerning investment, foreign investors are foreign citizens, foreign business entities, and / or foreign governments that make investments in the territory of the Republic of Indonesia. The company will further improve its performance in line with the increasing investment in foreign shares. This happens because foreign parties who invest their shares have a fairly good management, technology and innovation, expertise and marketing system that can bring positive influence to the company (Wiranata and Nugrahanti, 2013). Borregaard & Dufey (2002) found that an increase in environmental performance was influenced by investment from foreign parties.

Foreign parties will be more interested in companies with a good reputation in the social field because foreign countries for example in Europe and America are countries that are very concerned about the environment which includes social issues such as violations of human rights, education, labor, and environmental issues for example, the greenhouse effect, illegal logging, and water pollution (Simerly and Li, 2001; Fauzi, 2006 in Machmud and Djakman, 2008).

Awareness of environmental awareness by foreign parties is evidenced by the many companies that have conducted environmental campaigns as a concern for the environment.

Ha3: Foreign ownership has a positive relationship with environmental investment.

Based on the relationship between financial performance, company size and foreign ownership of environmental investment, the research model is described as follows:



RESEARCH METHODOLOGY

Research Samples

The determination of the sample in this study uses a purposive sampling method with the criteria of issuers in the mining sector whose financial reports and financial ratios are available at www.idx.co.id or www.idnfinancials.com.

Types and Sources of Research Data

The type of data used in this study is secondary data. In this study, secondary data used are the financial statements of all sample issuers obtained through the website of PT. Indonesia Stock Exchange (idx.co.id) and IDN Financials (idnfinancials.com).

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Research variable

Financial Performance (Sales Growth)

Sales growth reflects the success of past investment periods and can be used as predictions of future growth (Barton, 1989). Sales growth is also an indicator of demand and competitiveness of companies in an industry. In this study, sales growth is the dependent variable (X1). Sales growth measurement techniques can be seen in the following formula:

$$Sales\ Growth = \frac{Sales_t - Sales_{t-1}}{Sales_{t-1}}$$

Company Size

Company size is the scale of the company as seen from the total assets of the company at the end of the year. Total sales can also be used to measure the size of the company (Veronica and Siddharta, 2005).

The size of the company describes the size of the company. Determination of the size of the company can be determined based on total sales, total assets, average sales level (Seftianne, 2011). In this study, company size is an independent variable (X2). According Jogiyanto (2007), the technique to calculate company size can be done using the following formula:

$$SIZE = Ln\ (Total\ Asset)$$

Foreign Ownership

Foreign ownership is an independent variable (X3). Foreign ownership in the ownership structure is believed by some researchers to be able to influence the course of the company which ultimately affects financial performance to maximize the value of the company.

$$Foreign\ Ownership = \frac{shares\ owned\ by\ foreign\ parties}{total\ shares}$$

Environmental Investment

Environmental investment is a protection effort made by the company in managing the environment and reducing the company's environmental impact. In this study, environmental investment is an independent variable (Y). The technique of calculating environmental investment can be carried out using the following formula:

$$Environmental\ Investment = \frac{total\ environmental\ asset}{total\ asset}$$

Data analysis method

Data analysis conducted in this study included descriptive analysis and non-parametric analysis. Descriptive analysis uses descriptive statistics (minimum, maximum, average and standard deviation) while the non-parametric analysis used is Pearson and multiple correlation analysis. In Pearson correlation analysis, the data to be processed must first be free from the linearity test. Tests carried out in order to know the existence of a linear relationship or not significantly between the two variables.

RESULTS AND DISCUSSION

Description of Research Samples

The population in this study were all mining companies listed on the Indonesia Stock Exchange in 2014-2018. The company consists of coal mining sub-sectors, crude oil and natural gas production, metal and mineral mining and soil / stone excavation. Based on observations made with reference to the sample selection criteria, the following research data are obtained:

Table 1
Research Samples

Explanation	2014	2015	2016	2017	2018
Mining companies listed on the Indonesia Stock Exchange	43	43	43	43	47
Companies that do not publish annual reports	4	3	3	2	4
The company does not have complete data	3	2	2	1	
Number of samples			**195**		

Source: Secondary data processed, (2019).

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Descriptive Analysis Research Results

Table 2
Descriptive Statistics

(Size in thousands of Rupiah)

	N	Minimum	Maximum	Std. Deviation	Mean
Sales_growth	195	-.9593	63.0204	5.7757253	.918369
SIZE	195	Rp 11876309	Rp 531445849600	Rp 41574004920	Rp 15249908560
Foreign_ownership	195	.0000	.9897	.2888958	.328355
INV	195	.0000	.5231	.0567824	.023802
Valid N (listwise)	195				

Source: Data processed by SPSS 24, (2019).

Based on table 2, the total number of samples used is 195. Financial performance (sales_growth) has the lowest value of -0.99593, the highest value of 63.0204, an average value of 0.918369 and a standard deviation of 5.7757253. The size of the company (SIZE) has the lowest value of Rp.11,876,309,000, the highest value of Rp531,445,849,600,000, a standard deviation of Rp41,574,004,920,000 and an average value of Rp15,249,908,560,000. Foreign ownership (foreign_ownership) has the lowest value 0, the highest value is 0.9897, the average value is 0.328355 and the standard deviation value is 0.2888958. Environmental investment (INV) has the lowest value 0, the highest value 0.5231, the average value 0.014630, the standard deviation value 0.0567824.

Linearity Analysis

Table 3
Linearity Test for Financial Performance Variables and Environmental Investment
ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
INV * Sales_growth	Between Groups	(Combined)	.625	193	.003	8.939	.262
		Linearity	.025	1	.025	68.622	.076
		Deviation from Linearity	.600	192	.003	8.628	.266
	Within Groups		.000	1	.000		
	Total		.626	194			

Source: Data processed by SPSS 24, (2019)

From table 3, the value of sig is obtained. 0.076 means that there is no significant linear relationship between environmental investment variables and financial performance variables because the value is greater than 0.05.

Table 4
Linearity Test for Firm Size Variables and Environmental Investment

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
INV * SIZE	Between Groups	(Combined)	.626	193	.003	23075.476	.005
		Linearity	.001	1	.001	4416.748	.010

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		Sum of Squares	df	Mean Square	F	Sig.
	Deviation from Linearity	.625	192	.003	23172.657	.005
Within Groups		.000	1	.000		
Total		.626	194			

Source: Data processed by SPSS 24, (2019)

In table 4.4 the significance value is 0.01 which means it is smaller than the value of 0.05. This proves that there is a significant linear relationship between environmental investment variables and firm size variables.

Table 5
Linearity Test for Foreign Ownership and Environmental Investment Variables

			Sum of Squares	df	Mean Square	F	Sig.
INV * Foreign_ownership	Between Groups	(Combined)	.464	142	.003	1.050	.430
		Linearity	.000	1	.000	.010	.922
		Deviation from Linearity	.464	141	.003	1.058	.418
	Within Groups		.162	52	.003		
	Total		.626	194			

Source: Data processed by SPSS 24, (2019)

From the results of the linearity test, the significance value of 0.922 or more than the significance level of 0.05. This means there is no significant linear relationship between environmental investment and foreign ownership.

Correlation Analysis

Table 6
Bivariate Pearson Correlation Test Results

Variable	**α**	**Pearson Coefficient**	**Conclusion**
Sales_growth > INV	.005	.199**	Supported hypothesis
SIZE > INV	.367	.065	The hypothesis is not supported
Foreign_ownership > INV	.923	.007	The hypothesis is not supported

Seen from table 4.4 the financial performance and environmental investment variables have a significance value of 0.05, while the Pearson correlation coefficient value is 0.199 **. This means that the two variables are positively related significantly.
Variable company size and environmental investment have a significance value of 0.662 which is greater than 0.05. This indicates that the two variables are not related. The variable of foreign ownership and environmental investment has a significance value of 0.923 which is greater than 0.05. This means that the two variables are not related.

CONCLUSION

1. Financial performance is significantly positively related to environmental

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investment. This shows that the higher financial performance proxied by sales growth means the higher the company invests its assets in the following year on the environment.
2. The size of the company is not related and not significant to environmental investment. This shows that the size of assets owned by the company does not affect the level of investment of the company on the environment. This can happen because both companies that have large or small assets alike need to invest in the environment to protect their companies from pollution and damage.
3. Foreign ownership is unrelated and insignificant to environmental investment. it shows that shares owned by foreign parties do not influence the company's decision to invest in the environment because the company's decision is decided by management.

Research Limitations

This research was conducted limited to an observation period of only 5 years. Future studies should be used for longer levels of research to obtain more detailed results about the company. In addition, this study uses several independent variables that have low effect on the dependent variable. That is, many other factors outside the variables in this study.

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