

## **THE INFLUENCE OF ENVIRONMENTAL PERFORMANCE AND ENVIRONMENTAL COSTS ON FINANCIAL PERFORMANCE**

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**Abstract:** The development of industrial revolution 4.0 has encouraged many companies to continue to grow and maintain their existence, resulting in intense competition between companies. The competition requires the company to be able to maintain or gain a competitive advantage by giving full attention to the company's operational and financial activities, but the company's concern for the environmental impact of its operational activities and industrial activities can be said to be low so that environmental problems are an important factor to think about given the impact of poor environmental management that is increasingly evident. The purpose of this study was to examine the influence of environmental performance and environmental costs on financial performance. The population in this study are manufacturing companies listed on the Indonesia Stock Exchange (IDX), which publish financial reports and are listed in the Company Performance Rating Program in Environmental Management (PROPER) in 2015-2019. To take data samples in this study researchers used the purposive sampling method and obtained 140 data samples. The research method used is the verification method with a quantitative approach. Hypothesis testing is done using multiple linear regression analyses. The results showed that environmental performance has a positive influence on financial performance and environmental costs has a negative influence on financial performance.

**Keywords:** Environmental Performance, Environmental Cost, Financial Performance

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### **INTRODUCTION**

The development of industrial revolution 4.0 has encouraged many companies to continue to grow and maintain their existence, resulting in intense competition between companies. The competition requires the company to be able to maintain or gain a competitive advantage by giving full attention to the company's operational and financial activities, but the company's concern for the environmental impact of its operational activities and industrial activities can be said to be low so that environmental problems are an important factor to think about given the impact of poor environmental management that is increasingly evident. This can be seen from various recent disasters, such as floods in South Kalimantan, one of the causes of which is the reduction of primary and secondary forests due to deforestation, landslides that occur in almost all regions of Indonesia, and forest fires that occur in Sumatra and Kalimantan. Many factors cause such disasters, but poor human behavior towards natural sustainability is the biggest factor that causes environmental damage.

The company's performance can be reflected through the financial condition of a company and the main concern in the assessment of financial performance is by looking at the company's performance to generate profit. As stated by (Pujiasih, 2013) that the main thing in financial performance assessment is the ability of a company in generating profit. Each company is expected to be able to improve its performance, not only the current performance but the company's performance on an ongoing basis that guarantees prospects, also the company has an obligation to stakeholders to maintain trust in funds managed by the company. If the company's financial performance is good, it will attract investors to invest, improve the company's performance. Thus financial performance is also the determinant of the continuity of a company. This is because the financial support obtained by the company becomes the basis for the running of business processes in the future.

Nowadays, the company is starting to realize that the purpose of the business activities carried out is not only to generate the most profit but also how the profit generated can provide benefits for the community (Setyaningsih & Asyik, 2016). The Company is expected to pay attention to the environmental impact of its operational activities and industrial activities but in reality, there are still companies that attach more importance to maximize profit without regard to the environmental impact arising from its operational activities.

Environmental management, especially companies engaged in manufacturing is now an important discussion because in the production process manufacturing companies will undoubtedly cause waste, and if the waste is not reprocessed it will pollute the environment. This is supported by the emergence of the case of a manufacturing company with the status as a go public company that occurred in 2017, where PT Indah Kiat Pulp and Paper engaged in the paper industry in carrying out its activities caused environmental damage with polluted air, water and soil felt by the community in Siak area, Riau Province (Sandra, 2017). The case is very concerning because, in the era of industrialization that utilizes advanced technology for its operational activities, it causes an impact on the environment because the company ignores some aspects of the environment. Awareness of this is expected as a surveillance system for companies so that the side effects of industrial activities can be minimized. The actualization of this awareness began to appear with public attitudes towards the changes that occur from a system (Putra & Utami, 2018).

Environmental Performance is the company's performance by paying attention to the company's activities to maintain environmental sustainability and minimize the impact that occurs due to the company's production activities (Setyono, 2015). Information on environmental performance will reveal the company's efforts in carrying out its responsibility to address the environmental impacts resulting from its industrial activities. To encourage corporate arrangements in environmental management, the government through the Ministry of Environment since 2002 established the Company's Performance Rating Assessment Program in Environmental Management (PROPER). The ranking is divided into 5 color ratings ranging from the best gold, green, blue, red, and the worst which is black. This is done in the hope that the company can be encouraged to improve environmental performance to create a good image of the company in the eyes of the

public, where the public can assess which companies have a good reputation and are not good in environmental management.

According to (Yanti, 2015), explained that the PROPER program aims to encourage companies to comply with environmental regulations to achieve excellence in environmental aspects through the principles of sustainable development in the company's industrial activities, implementation of environmentally-based systems, and business implementation that applies ethical values and is responsible to the community through community development programs. Environmental performance variables in (Purnama, 2018), (Supadi & Sudana, 2018), showed that environmental performance affects the company's performance. Meanwhile, (Meiyana & Aisyah, 2019) research showed different results, namely that environmental performance does not affect the company's performance.

In addition to environmental performance, other factors that affect financial performance are environmental costs. According to (Susenohaji, 2003), environmental costs are costs incurred by the company due to a poor environmental management system due to the company's production process. Environmental costs include costs associated with reducing production processes that impact the environment and the cost of repairing waste-induced damage. The Company will allocate environmental costs at the time of environmental control to deal with the impacts that arise. However, the company argues that the environmental costs are one of the funds spent and a profit reduction for the company. It can build public trust about the company's responsibility regarding the surrounding social life and can increase the consistency of the company's attention to the surrounding environment (Tunggal & Fachrurrozie, 2014).

Environmental costs are considered a long-term investment and can provide a good name for the company and can increase the trust of stakeholders in the company. According to (Dewi, 2014), the allocation of environmental costs of the company can be a burden and reduce the company's profit in the short term, but if seen in the long term the environmental costs will have an impact on energy savings, increased productivity of the company, sustainable environmental improvement, minimizing environmental damage, obtaining an environmentally friendly positive image, and ultimately can help increase the company's profit per share. As a form of responsibility in addressing the impacts arising from the company's operational activities, the company needs to conduct environmental management by budgeting environmental costs.

Environmental performance translates as environmentally related performance, primarily concerning environmental impact. Environmental performance relates to three aspects, namely strategic corporate environmental performance, operational corporate environmental performance, and corporate environmental reporting (Sulistiawati & Dirgantari, 2017)). The definition is in line with (Suratno, Darsono, 2007) which defines environmental performance as the company's performance in creating a good environment and preserving the environment. So it can be interpreted that environmental performance is the performance of the company concerning the environment.

The company's environmental performance is measured by the company's achievement in participating in the Company's Performance Rating Assessment Program in Environmental Management (PROPER) which is one of the efforts made by

the Ministry of Environment to encourage corporate arrangements in environmental management through information instruments. Information about the company's environmental performance is communicated using color symbols to make it easy to understand from gold as the best rank, followed by green, blue, red, and for the worst ratings indicated in black. The color rating is categorized by a number that serves as a proxy for environmental performance measurement. The gold color is calculated with the highest rank of 5, green color 4, blue color 3, red color 2, and the lowest black color with the number 1 (Tiarasandy et al., 2018).

Based on the opinion of experts (Susenohaji; Babalola and Hadi (Fitriani, 2013)) can be interpreted that environmental costs are costs incurred by companies that aim for environmental activities as a result of environmental damage caused. Environmental costs generally include the overall internal and external costs of the steps taken or to be taken by the company to manage the environmental impacts caused by the company's operating activities, to be environmentally responsible as well as efforts to comply with applicable environmental rules and regulations as well as optimize the use of resources oriented with efforts to prevent or reduce waste and pollution. These environmental costs can be seen in the allocation of funds for the Community Development Program listed in the company's financial statements or annual reports. In this study, environmental costs were calculated by comparing the funding of environmental development programs with the net profit generated by the company (Susenohaji (Camilia, 2016)).

$$\text{Environmental Cost} = \frac{\text{CSR Cost}}{\text{Net Profit}}$$

Financial performance according to (Sucipto, 2003) is the determination of certain measures that can measure the success of a company in generating a profit. One of the ways that can be done by the management in providing an overview of the financial position of a company, can be seen from the financial performance measured from the financial statements issued periodically. Assessment of a company's performance is measured because it can be used as the basis for decision-making both internally and externally Pujasih, 2013 in (Setyaningsih & Asyik, 2016).

Financial performance is a financial condition that is influenced by the management's decision-making process. Financial performance is complex because it concerns the effectiveness of capital utilization and the efficiency of the company's activities. On the other hand, shareholders make business investments with the main goal of achieving improved well-being. Analysis of financial statements is the beginning of the future when viewed from the investor's point of view, while for management is useful to help anticipate future conditions and become the starting point of action planning that will affect the course of future events. Thus, the measurement of the company's financial performance should be able to provide indicators of changes in the level of welfare of shareholders as a result of investments in a certain period (Kristianti, 2018).

Financial performance assessment can be measured using a profitability ratio. Profitability is one of the ratios that have an important role and is often used as a criterion

in assessing the results of the company's operations and can be used as an analysis of the company's ability to generate profit aimed at detecting the cause of profit and loss generated by a corporate entity so that by looking at profitability can be reflected how the financial performance condition whether increased or decreased. The company's high profitability indicates a growing profit.

Management utilizes profitability as a controlling tool by internal parties in drawing up targets to be achieved, budget, coordination, and evaluating the results of the company's operations as the basis for determining a decision. Return On Assets (ROA) is one of the financial ratios in analyzing the profitability of the company. This ratio shows the level of efficiency of the company in managing all its assets to earn revenue. ROA in companies is usually used as a measurement of financial performance because to see how the asset management of each rupiah is issued to generate accounting returns, which can indicate the good or bad performance of the manager. Because, the greater the percentage of ROA generated by the company indicates that the company's financial performance will be better (Kristianti, 2018). In measuring Return On Asset in the company using the following formula:

$$ROA = \frac{\text{Earning After Taxes}}{\text{Total Assets}}$$

## **Research Hypothesis**

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

The Company can maximize the role of its environmental performance to shape its image and maintain its existence in the wider community. This is in line with the research of (Djuitaningsih & Ristiawati, 2015), which stated that environmental performance has a positive and significant impact on financial performance because companies with good environmental performance will also get a good response from stakeholders and have an impact on increasing the company's revenue in the long term. By doing an environmental performance, the company can improve the company's image and attract investors to invest and can strengthen the ability to sell its products and services and can arouse the desire of managers to innovate and look for new opportunities (Hansen, 2007). Research conducted by (Fitriani, 2013) proves that PROPER as a measure of the company's environmental performance affects the company's financial performance, which shows that the better the environmental performance, the more positively responded by investors through fluctuations in stock prices. This will affect the company's revenue and profit which is an indicator of financial performance. This is by research conducted by (Yanti, 2015) and (Setyono, 2015) that environmental performance positively affects financial performance. However, research by (Rafianto, 2015) states that environmental performance does not affect financial performance. Based on the explanation above, can be drawn a hypothesis as follows:

## **H1: Environmental Performance affects Financial Performance The Influence of Environmental Costs on Financial Performance**

Environmental costs are costs incurred by the company related to environmental improvement programs resulting from environmental pollution committed by the company intentionally or unintentionally (Camilia, 2016). The company in every production activity will produce products but also produce waste. The waste will be processed by the company to prevent environmental damage. The treatment of such waste will incur environmental costs.

The implementation of environmental cost budgets will have an impact on the products being produced and marketed. One of them is a positive image to consumers who want to buy the best products that are quality, environmentally friendly, and affordable. This will have an impact on improving profitability in an industry (Rohelmy, 2015). However, some argue that environmental costs will only reduce profits because the benefits of environmental costs are not necessarily felt at the time of spending on the environment. In line with (Barnett & Salomon, 2006) research, which stated that social responsibility investment funds in the environment negatively impact the company's financial performance because the company has not been able to make social activities conducted as a competitive strategy against other competitors so that environmental costs incurred will reduce the company's profit that negatively impacts financial performance.

## **H2: Environmental Costs affect Financial Performance**

### **METHODS**

The object of this research is environmental performance, environmental costs, and financial performance. The population in the study is manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2015-2019. Research data in the form of annual reports of companies listed on the Indonesia Stock Exchange and listed on PROPER from 2015-2019. The data source comes from the official website of the Indonesia Stock Exchange, [www.idx.co.id](http://www.idx.co.id) and the proper website of the Ministry of Environment, <http://proper.menlhk.go.id>. To conduct data sampling in this study researchers used the purposive sampling method and obtained 140 data samples. The research method used is a verificative method with a quantitative approach. Hypothesis testing is performed using multiple linear regression analyses. At the time of data collection, there is data that is ordinal scale while in analyzing data required data that scaled intervals, therefore, the data that has been collected must be processed using a Method of Successive Interval (MSI). Here's the sample selection process:

**Tabel 1. Research Sample Criteria**

No	Criteria	Total Companies
1	Manufacturing Companies listed on the Indonesia Stock Exchange year 2015-2019 and publish annual financial statements on the company's website or the website of the Indonesia Stock Exchange (IDX).	141
2	Manufacturing Companies that do not participate regularly in the Company's Performance Rating Assessment Program in Environmental Management (PROPER) during the research period.	(48)
3	Companies that do not have complete data.	(40)
4	Companies that present financial statements in currencies other than Rupiah (US Dollar).	(27)
5	Delisting companies.	-
	Number of companies that meet the criteria	28
	Observation Period	5
	Number of Observations	140

Source: Data that has been processed by the author (2021)

The independent variables used in this study were environmental performance and environmental costs. While the dependent variables used in this study are financial performance. Definition of operational and variable measurement. Described as follows:

## RESULTS AND DISCUSSION

**Tabel 2. Descriptive Statistics of Research Variables**

	Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
PROPER	140	1.000	4.813	2.27116	.918323
BL	140	.0001	.0846	.022171	.0224493
ROA	140	.0002	.2229	.079521	.0529292
Valid N (listwise)	140				

Source: Data that has been processed by SPSS 26

Based on the table above, it can be known for environmental performance variables that are projected with PROPER, obtaining a minimum value of 1,000 and a maximum value of 4,813 with an average value (mean) of 2.27116 and a standard deviation value of 0.918323. Environmental cost variables obtain a minimum value of 0.001 and a maximum value of 0.0846 with an average value (mean) of 0.022171 and a standard deviation value of 0.0224493. Financial performance variables projected with ROA

obtain a minimum value of 0.0002 and a maximum value of 0.2229 with an average value (mean) of 0.079521 and a standard deviation of 0.0529292.

### F Test

**Tabel 3. F Test Results**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.021	2	.010	8.075	.000 <sup>b</sup>
	Residual	.175	136	.001		
	Total	.196	138			

a. Dependent Variable: ROA  
b. Predictors: (Constant), BL, PROPER

Source: Data that has been processed by SPSS 26

Based on the table above test F can be seen that the value of F is 8,075 with a Sig of 0.000. Because of Sig. < 0.05 it can be concluded that all free variables consisting of Environmental Performance and Environmental Costs jointly affect financial performance at a significant level of 5%.

### T Test

**Tabel 4. T Test Result**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	.020	.004		4.736	.000
	PROPER	.012	.004	.235	2.863	.005
	BL	-.553	.170	-.266	-3.242	.001

a. Dependent Variable: ROA

Source: Data that has been processed by SPSS 26

Based on the partial test results in the table above shows that environmental performance variables have a positive influence on financial performance. While environmental costs have a negative influence on financial performance. The value of environmental performance variable significance of 0.005 < 0.05 and the value of environmental cost significance of 0.001 < 0.05 can thus be concluded if environmental performance and environmental cost have a significant influence on financial performance.



## Determination Coefficient Testing (R<sup>2</sup>)

**Tabel 5. Determination Coefficient Results**

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.326 <sup>a</sup>	.106	.093	.03592

a. Predictors: (Constant), BL, PROPER  
b. Dependent Variable: ROA

Source: Data that has been processed by SPSS 26

Based on the results of the analysis in the table above obtained the result of coefficient of determination (R Square) of 0.93 = 9.3%. The coefficient of determination is close to zero (0), meaning that environmental performance variables and environmental costs can explain financial performance variables of 9.3%. Meanwhile, the remaining value of 100% - 9.3% = 91.7% were influenced by other factors not observed in this study.

## Discussion

### The Influence of Environmental Performance on Financial Performance

Based on the results of H1 testing, it is known that environmental performance positively affects the company's financial performance in manufacturing companies listed on the Indonesia Stock Exchange in 2015 - 2019, hence hypothesis 1 (H1) is accepted. The results of this test show that the better the environmental performance, the more positive the investor will respond through fluctuations in the company's share price that can improve the company's financial performance. Besides, consumers or the public will be more interested in buying goods or services offered as a form of appreciation to companies that have conducted CSR. This will affect the company's revenue and profit which is an indicator of the company's financial performance. This is in line with the research of (Djuitaningsih & Ristiawati, 2015), which stated that environmental performance has a positive and significant impact on financial performance because companies with good environmental performance will also get a good response from stakeholders and have an impact on increasing the company's revenue in the long term.

The results of this study are consistent with research conducted by (Jiménez et al., 2013); (Küçükbay & Fazlılar, 2016) stated that environmental performance has a significant positive influence on financial performance. Similarly, the results of (Gatimbu & Wabwire, 2016), (Haninun et al., 2018) stated that environmental performance affects financial performance. However, this study is inconsistent with the research of (Sarumpaet, 2006) and (Li et al., 2017). So that it can state that the Company's Performance Rating in Environmental Management (PROPER) conducted by the

government in this case the Ministry of Environment (KLH) can influence the interests of stakeholders, especially investors and the public. So based on the explanation above environmental performance can be a consideration to see the company's financial performance because the positive image of the company can increase public interest to make purchases of company products that will make financial performance improve (the company's profit increases), increased financial performance will also increase the share price and stock value of the company to attract investors to invest in the company.

### **The Influence of Environmental Costs on Financial Performance**

Based on the results of H2 testing, it is known that environmental costs negatively affect the financial performance of manufacturing companies listed on the Indonesia Stock Exchange in 2015 - 2019, then hypothesis 2 (H2) is accepted. Environmental costs have a negative influence on financial performance because sometimes environmental costs incurred in a prior period are not yet felt immediately for the following primary years. On the other hand, if the environment that is needed for the activity of the environment can be detected as quickly as possible, it will give a positive impact on sustaining business.

Besides, environmental costs that are expected to be long-term investments have not been proven in this study. This can happen because the environmental costs incurred by the company are indicated to be additional expenses by the company. (Fitriani, 2013) stated that sometimes companies ignore the environmental costs they incur, resulting in these costs are not visible in the company's financial statements and adversely affect financial statements due to the swell of environmental costs incurred. Environmental costs incurred by companies are usually also charged on the price of the product. This means that if the environmental costs incurred by the company are large enough then it is likely that the price of the company's products will increase. Of course, the price of increasingly expensive products will not be accepted and burdensome to the community, until finally there is a decrease in income.

This research is in line with (Barnett & Salomon, 2006) research, which stated that social responsibility investment funds in the environment negatively impact the company's financial performance because the company has not been able to make social activities conducted as a competitive strategy against other competitors so that environmental costs incurred will reduce the company's profit that negatively impacts financial performance. The results of this study also support (Yamaguchi, 2009) and (Buana, 2017) that environmental costs are a negative factor for management in a short time.

This research is contrary to several previous studies such as (Al Sharairi & Al Awawdeh, 2005), (Sundari, 2020), (Chiang et al., 2015) which shows environmental costs have a positive effect on financial performance. The results of research (Hadi, 2009), (Fitriani, 2013), and (Tunggal & Fachrurrozie, 2014) stated otherwise that

environmental costs do not significantly affect the financial performance of the company because corporate social responsibility through various dimensions of social costs has fewer economic consequences. This finding implies that there are consequences that must be borne by companies related to the moral burden of incurring environmental costs to prevent damage or damage to the environment caused by the business activities that were damaged. Of course, most of the environment that is distrustful of spending, will reduce the profit of the company and will reduce the company's financial performance. The maintenance has now begun to formulate environmental policies that are in line with the following concerns, but do not violate environmental regulations and pay attention to the impact on the social environment. The government must have a strategy related to the continuity of business and the role of the responsibility to the environment by blocking the environment so that it does not damage or reduce profits.

### CONCLUSION

This research was conducted to determine the influence of environmental performance and environmental costs on financial performance. The research was conducted on manufacturing companies listed on the Indonesia Stock Exchange in 2015 – 2019. Based on the results of hypothesis testing and discussion, it was concluded that environmental performance positively affects financial performance and environmental costs negatively affect financial performance. Researchers hope that the company can improve its environmental management because the proper rank of the company as a large earns a blue rating even there are still companies that get a red rating.

Besides, for the government in this case the Ministry of Environment should set stricter regulations on the implementation of corporate activities related to environmental management and the government is more vigorous to socialize about environmental management regulations in companies, so that information can be distributed to the maximum and improve the understanding of the company. Furthermore, further research is expected to increase the scope of researched companies such as mining companies and agricultural companies listed on the Indonesia Stock Exchange (IDX).

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