



**Journal**

**THE INFLUENCE OF ENVIRONMENTAL PERFORMANCE,  
ENVIRONMENTAL COSTS, AND ENVIRONMENTAL DISCLOSURE  
ON PROFITABILITY IN THE TIME OF COVID-19**

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**ABSTRACT**

This study aims to see the effect of environmental performance, environmental costs, and environmental disclosure on profitability during the COVID-19 period. The population in this study comprises companies in the energy, basic materials, industrials, consumer non-cyclical, consumer cyclical, and healthcare sectors that are always listed on the Indonesia Stock Exchange in 2020–2022. The sample selection technique used purposive sampling and 22 companies were selected. The analytical method used is panel data regression analysis with the help of Econometric Views (Eviews) version 12. This study found that environmental performance and costs have no effect on profitability, while environmental disclosure positively affects profitability. The results of this study are expected for companies to continue to monitor the activities carried out and costs incurred related to the environment, and companies can expand environmental disclosure in accordance with predetermined rules, as a form of environmental responsibility to maintain economic sustainability which will affect increased profitability.

**Keywords:** *Enviromental Perfomance, Enviromental Costs, Enviromental Disclosure, Profitability*

**BACKGROUND**

Many businesses in Indonesia have failed to survive due to the Covid-19 pandemic, which has impacted large companies and small scale companies. Several shopping centers and retailers cannot develop and close their businesses in 2021, this was stated by Sidik (2021). Likewise with a statement from Timorria (2021), 13 PT Matahari Department Store Tbk outlets in Indonesia will be closed in 2021. Ariesta (2021) strengthens this opinion by saying that a



significant decrease in profits from location business operations led to the closure of these outlets. PT Hero Supermarket Tbk also made the decision to stop giant operations and focus more on opening retail outlets such as Guardian, IKEA and Hero (Ramli, 2021). According to Sembiring (2021) in saving business from big losses, companies need major restructuring.

PT Indofood CBP Sukses Makmur Tbk is able to quickly develop its performance and can adapt to existing conditions compared to other companies that have gone out of business due to Covid-19. The bad news phenomenon is also experienced by fellow primary product producing companies, namely PT Hanjaya Mandala Sampoerna Tbk which has the stock code HMSP and PT Unilever Indonesia Tbk with the stock code UNVR. Both companies continued to experience declining profits. At PT Unilever Indonesia, profits fell in 2020 by 3.20% from 2019 profits, and decreased again by 24.41% in 2021 from profits in 2020. Others, namely HMSP, also experienced a decline in profits from 2019 to 2021. According to the HMSP published financial report, in 2020 net income continued to decline by 59.90% and fell again in 2021 by 20.94% compared to the previous year. This condition occurred due to the pandemic that hit the whole world and resulted in a decrease in purchasing values in the consumer sector. In 2021, the use of CPO (Crude Palm Oil) will be stopped by parliament in the European Union. The implementation of this policy concerns the RED II policy and the Delegated Regulation relating to the elimination of biofuel from palm oil and limiting palm oil due to limited market access for palm oil and biofuel.

Based on the description of the problem, the researcher is interested in discussing environmental performance on profitability. In Nuryaningrum & Andhaniwati's research (2021), the results showed that there was a positive effect from environmental performance on profitability. A company with a good working environment can get more benefits for the surrounding community. By reducing waste and environmental pollution, companies can increase the efficiency of existing resources, which in turn can produce products with added value for consumers. Thus, the number of sales will increase, which will result in an increase in profitability. This description is in accordance with the opinion in research conducted by Mustika, Whetyningtyas, & Ratna Wijayani (2021) and research by Shofia & Anisah (2020), both studies suggest that there is a positive impact from the work environment on profitability. Contrary to the two studies that have been mentioned, Asjuwita & Agustin (2020) and Wijayanti (2020) stated different things, in their research there was a negative effect of environmental performance on company profitability. Similar research was also made by Hapsari, Irianto, & Rokhayati (2021) stating that the environmental fees used have a positive impact on profitability. Therefore the company should allocate and manage finances for the environment as well as possible. If the company is able to apply appropriate costs to overcome environmental problems, it is able to increase the profits generated by the company. The existence of this environmental cost allocation can show the company's concern for the environment, so this makes it possible to increase public trust. Companies will get greater profits if they are able to implement a good environmental management system rather than incurring large costs to implement environmental management. This statement is reinforced by Hadriyani & Dewi (2022) who state that environmental costs have a positive effect on profitability. Sahputra, Situmorang, & Fadillah (2020) and Widyowati & Damayanti (2022) stated a different matter, in their research it was stated that environmental costs have a negative effect on company profitability. From these explanations, the researchers saw an interesting gap for further research, the inconsistency of research results that occurred related to the influence that occurs between environmental costs, environmental performance, and environmental disclosures on the level of company profitability.



## **THEORETICAL FRAMEWORK**

### **Stakeholder Theory**

Stakeholders are internal and external parties who are related and influential and are influenced by the company (Hadi, 2011). Based on the stakeholder theory, stakeholders have the right to state the company's production activities because this influences decision making, so that companies are not just entities that operate for themselves Asjuwita & Agustin (2020). From the stakeholder theory, the relationship that exists is that if there is an increase in the profitability rate, the level of shareholder satisfaction will increase, this happens because the company is able to manage its activities properly.

### **Legitimacy Theory**

Another main theory in explaining the practice of disclosing social and environmental impacts is the legitimacy theory. Legitimacy is the assessment and involvement of actions in social values Dowling & Pfeffer (1975). According to Asjuwita & Agustin (2020) the essence of legitimacy theory is that companies pay attention not only to shareholders but also other parties and in accordance with existing norms. meaning that a company or organization can ensure that the activities carried out are in accordance with existing norms. Legitimacy theory suggests that companies have responsibility for environmental problems around them to the local community and not only focus on organizational progress (Vivianita & Nafasati, 2016).

### **Profitability**

To measure the value of success and failure experienced by a company is one of the uses of profitability (Kieso, Weaygandt, & Warfield, 2018). According to Carlon et al. (2019) the profitability ratio is a comparison that is used as a measure of profitability or the level of success of a company in carrying out production within a specified time period. Another opinion was conveyed by Brigham & Houston (2019) who said that the profitability ratio is essentially a comparison that measures the level of company efficiency, where the company is measured for its efficiency in using existing funds and the value of all operational policies implemented. This ratio is also used to measure the effectiveness of existing management policies in the company. So that investors will find it easier to access the profits they get from the shares they have purchased, therefore in this case the shareholders have a big interest in analyzing profitability. In this study will use one of the indicators of profitability, namely ROA. ROA shows the amount of profit generated by each currency value invested in an asset. The greater the profitability value depends on the high and low ROA produced (Carlon et al., 2019).

### **Environmental Performance**

Company performance and public trust have a reciprocal relationship, where when the company's position in the public eye increases, public trust also increases, and vice versa, public trust increases based on environmental performance, this is in accordance with legitimacy theory (Maya S, Mukhzardfa & Arum, 2018 ). In Indonesia, four measurement tools are used to measure a company's environmental performance, namely PROPER, ISO, AMDAL, and GRI. In this study the measuring tool used is PROPER. PROPER will choose companies that have a good level of compliance and will announce the results regularly to the public.



### **Environmental Costs**

In order to maintain and preserve the environment around the business, it is best to have a budget for activities related to environmental preservation. These funds are often called environmental fees. Environmental costs are costs used by the company as a negative impact from environmental management of the rest of the production process (Susenohaji, 2003). Another opinion about environmental costs was conveyed by Hansen & Mowen (2007) who stated that environmental costs consist of costs that arise as a result of poor environmental quality. According to Adyaksana & Pronosokodewo (2020), the way to calculate environmental costs is to divide the costs of environmental activities by the net profit.

### **Environmental Disclosure**

Disclosures are financial reports that contain information that explains the results of business operations. Compulsory disclosure means disclosure that must be made because of binding government regulations, while voluntary disclosure discloses everything that is not required by binding regulations. The information disclosed will assist investors in making decisions (Sambudi, Susbiyani, & Maharani, 2019). GRI is an international non-profit organization whose mission is to make sustainability reporting a standard practice. In the research by Shahniah & Davianti (2021) and Pratama, Purnamawati, & Sayekti (2019) environmental disclosure uses the GRI Standards (2016: GRI 300). According to Nuryaningrum & Andhaniwati (2021) to measure environmental disclosure can be calculated using the following formula:

$$ED = (\sum \text{Company disclosure items}) / (\sum \text{Disclosure items GRI})$$

### **METHOD**

This research is included in the quantitative research which utilizes secondary data in the form of panel data for statistical analysis. Panel data is data that consists of two types, namely time series data and cross data (Sugiyono, 2017). The time series data here is in the form of annual data from 2020-2022. As for the cross section data in the form of PROPER reports, financial reports, annual and sustainable from the sample companies. The data sources used are PROPER reports issued by the Ministry of Environment through the official website [proper.menlhk.go.id](http://proper.menlhk.go.id), financial reports, annual reports and/or company sustainability reports sourced from the company's official website or the Indonesia Stock Exchange website. The published report indicates that the report is free to be read by all parties. The purposive sampling method was chosen by the researcher as a method for determining the sample. Based on the criteria, 22 companies were selected from 2020 to 2022 as samples in the study.



## RESULT

### Panel Data Regression Analysis

**Table Panel Data Regression Analysis**  
**Dependent Variable: ROA**  
**Method: Panel Least Squares**  
**Date: 08/09/23 Time: 23:17**  
**Sample: 2020 2022**  
**Periods included: 3**  
**Cross-sections included: 22**  
**Total panel (unbalanced) observations: 60**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.319710	4.658054	0.283318	0.7786
EP	0.316826	1.394178	0.227249	0.8216
EC	-7.015115	9.436431	-0.743408	0.4622
ED	10.74263	2.548087	4.215958	0.0002
<b>R-squared</b>		<b>0.836408</b>		
<b>Adjusted R-squared</b>		<b>0.724231</b>		
<b>Prob(F-statistic)</b>		<b>0.000000</b>		

After testing various models, the appropriate regression model is obtained, namely the FEM model, which has the following equation:

$$[ROA]_{it} = 1.32 + 0.32 [EP]_{it} - 0.70 [EC]_{it} + 10.74 [ED]_{it} + e$$

The interpretation of the results of the panel data regression model used is as follows:

1. The value of the independent variable is constant and has a value of zero, with this the profitability obtained by the company is 1.32.
2. The coefficient value (B1) of environmental performance (EP) is 0.316826 which indicates a positive direction. A score that moves in a positive direction indicates that there is a positive influence that occurs in a one-way relationship between environmental performance variables and profitability (ROA) of 0.316826. If it is assumed that the environmental performance variable has a value of 1 and other variables are constant or have a value of zero, then profitability increases by 0.316826.
3. The coefficient value (B2) of Environmental Costs (EC) is -7.015115 which shows a negative direction. A score that moves in a negative direction indicates that there is a negative influence that occurs in the one-way relationship between the environmental cost variable and profitability of -7.015115. If environmental costs increase by 1 and other variables are constant or zero then profitability decreases by -7.015115.
4. The coefficient value (B3) of environmental disclosure (ED) is 10.74263 which shows a positive direction. A score that moves in a positive direction indicates that there is a positive influence that occurs in a one-way relationship between the environmental disclosure variable and profitability of 10.74263. If environmental disclosure increases by 1 and other variables are constant, profitability will increase by 10.74263.



### **Model Feasibility Test**

#### **Determination Coefficient Test (R<sup>2</sup>)**

From the calculation results, the adjusted R<sup>2</sup> value is 0.724231. So it can be concluded that the independent variables in the study can explain the dependent variable with a percentage of 72.42% and the rest of the percentage, which is equal to 27.58%, is influenced by other factors.

### **F test**

In accordance with the table above, it can be seen that the Prob value (F-Statistics) produces a value of 0.00000 which is less than the significance level, so it can be concluded that the FEM regression model is feasible to use in the current research.

### **Hypothesis testing**

Normally distributed 60 data were used with three independent variable items and a significance level of 0.05 was used. Then the t-table calculation can be done with:

$$\begin{aligned} t_{table} &= \{ \alpha ; df = ( n - k ) \} \\ &= 5\% ; df = ( 60 - 3 ) \\ &= 0,05 ; df = 57 \\ &= 2,00247 = 2,00 \end{aligned}$$

Based on these calculations, the t-table value obtained is 2.00, so from these results the FEM panel is concluded as follows: 1. Variable X1 (EP or Environmental Performance) obtained a t-count value of 0.227249 and a critical t-value The table that has been obtained previously is 2.00 from the two data showing the t-count value is less than the t-table. Then note that the probability value of the variable X1 is 0.82 which is greater than the significance level. From these two indicators it can be concluded that H<sub>0</sub> is accepted and H<sub>1</sub> is rejected, so environmental performance has no influence on profitability. 2. Variable X2 (EC or Environmental Costs) obtained a t-count value of -0.743408 and the critical t-table value previously obtained was 2.00. Both of these data show that the t-count value is less than the t-table. Then note that the probability value of variable X2 is 0.46 which is greater than the significance level. From these two indicators it can be concluded that H<sub>0</sub> is accepted and H<sub>2</sub> is rejected, so environmental costs have no effect on profitability. 3. Variable X3 (ED or Environmental Disclosure) obtained a t-count value of 4.215958 and the previously obtained t-table critical value was 2.00. From these two data, the t-count value is greater than the t-table. Then note that the probability value of variable X3 is 0.0002 which is smaller than the significance level. From these two indicators it can be concluded that H<sub>0</sub> is rejected and H<sub>3</sub> is accepted, so environmental disclosure has a positive effect on profitability.

## **DISCUSSION**

### **Effect of Environmental Performance on Profitability**

The initial hypothesis was designed to be rejected with the result of the t test which is smaller than t table, namely  $0.227249 < 2.00$  and the probability level is  $0.82 > 0.05$  in a positive direction, in which H<sub>0</sub> is accepted while H<sub>1</sub> is rejected. It was concluded that environmental performance has no effect on profitability. This can be interpreted that the proper rating does not affect the value of the profitability generated by the company. From the





data tested in this study, the majority of companies get a rating in blue (73%) on PROPER, meaning that most companies only carry out environmental management according to regulations. Good performance is not always a guarantee that there will be an increase in profitability. This shows that consumers or the public are not satisfied enough or do not meet their expectations. Stakeholders in developing countries such as Indonesia can also be affected, as they are less aware of the environment or unable to distinguish between good and bad corporate environmental performance. This is contrary to Stakeholder theory, whereas in fact, the information that has been submitted by companies in this case environmental performance is not seen or observed by stakeholders.

An example is taken by taking one sample company, namely PT Japfa Comfeed Indonesia Tbk (JPFA) from 2020 to 2022 consistently obtaining blue PROPER. While the ROA value in 2020 was 4.708367, in 2021 it increased to 7.453381, and in 2022 the ROA value decreased to 4.560693. During these three years, the value of ROA owned by JPFA has been inconsistent. From the previous example, it can be concluded that the PROPER color obtained by JPFA does not affect the size of the ROA. JPFA is one of the non-cyclical consumer sector companies where in this sector it sells and produces people's daily needs that are needed by the community. Even though the proper value is blue (within the threshold), people still buy the products issued so that the proper value obtained does not affect profitability. The same research by Asjuwita & Agustin (2020); Ayu Ningtyas & Nur Triyanto (2019); Olivia et al. (2022); Sahputra et al. (2020); Widyowati & Damayanti (2022) also stated the same thing. However, Hadriyani & Dewi (2022); Hapsari et al. (2021); Mustika et al. (2021); Nuryaningrum & Andhaniwati (2021); and Shofia & Anisah (2020) convey the opposite result that environmental performance has a positive effect on profitability.

### **Effect of Environmental Costs on Profitability**

The second hypothesis proposed was rejected with the results of the t test which is smaller than t table, namely  $-0.743408 < 2.00$  and the probability level is  $0.46 > 0.05$  in a negative direction, in which  $H_0$  is accepted while  $H_2$  is rejected. High increases in company profitability are not necessarily accompanied by more spending by companies on environmental costs. Companies that put environmental costs aside will be reflected in their annual reports. In this case environmental costs are not always in line with the level of profitability. This research is not in line with the legitimacy theory which states that companies pay attention not only to shareholders but also to other parties and in accordance with existing norms. An example is Astra Agro Lestari (AALI). In 2021, AALI's environmental cost ratio will slightly decrease from the previous year's 0.024042 to 0.022906. The company pays for restoration & rehabilitation activities, biodiversity, forest and land fire prevention and integrated waste management. Meanwhile, AALI's ROA in 2021 has doubled from the previous year's 3.217204 to 6.800554. Indicating that even though environmental costs in 2021 have decreased, this has not been followed by a decreased ROA either. This means that the funds used by AALI do not affect the value of ROA. AALI is a non-cyclical consumer sector company in this field. AALI sells and produces people's daily needs that are needed by the community. Even with low or high environmental costs, people still buy the products issued so that the environmental costs incurred do not affect profitability. Research with similar results was conducted by Asjuwita & Agustin (2020) explaining that environmental costs have no effect on profitability and differ in view from the research conducted by Hadriyani & Dewi (2020); and Hapsari et al. (2021) which states that environmental costs have a positive influence on profitability.



### **Effect of Environmental Disclosure on Profitability**

The third hypothesis is accepted with the results of the t test which is greater than t table, namely  $4.215958 > 2.00$  and the level t probability is  $0.0002 < 0.05$  in a positive direction, where  $H_0$  is rejected while  $H_3$  is accepted. Environmental disclosure has a positive influence by increasing the value of profitability. Companies can carry out company disclosures to increase the profits generated to improve the company's image. The higher the level of corporate disclosure, the higher the public's trust in the company. This research is in line with the theory of legitimacy which states that companies disclose environmental information to gain legitimacy from society which will protect the company from unwanted things. Companies meet social needs and higher self-recognition, avoid penalties or punishments from the government, can increase public trust, as well as improve the company's image in the eyes of the public and consumers who will buy company products or invest in company operations which will increase reflected profitability. in ROA. In addition, large companies will disclose more social-environmental information because they are aware that their actions are monitored by third parties, therefore companies need legitimacy for their behavior. The research data shows that the higher the environmental disclosure, the higher the profitability will also be obtained. For example, PT Indah Kiat Pulp & Paper Tbk (INKP), which experienced an increase in environmental disclosure from 2021 with a magnitude of 0.40625 to 0.5625 in 2022. The increase in environmental disclosures made by INKP was followed by an increase in ROA of 5.86% in 2021 to 8.89% in 2022. From this example, it can be concluded that disclosures made by INKP affect the size of ROA. Similar results were also stated in Ayu Ningtyas & Nur Triyanto's research (2019); Hadriyani & Dewi (2022); Nuryaningrum & Andhaniwati (2021) and Wijayanti (2020) which explain that environmental disclosure has a positive effect on profitability. This indicates that when environmental disclosure increases, profitability also increases. In contrast to the results of Mustika et al. (2021); Sahputra et al. (2020); and Widyowati & Damayanti (2022) which state that environmental disclosure has no effect on profitability.

### **CONCLUSION**

Based on the results of research that has been done regarding the effect of environmental performance, environmental costs, and environmental disclosures on profitability. Profitability is proxied by Return on Assets (ROA). The PROPER program accessed through the official website of the Ministry of Environment, reports from companies obtained from the company's official website or from the IDX website are secondary data for this research. Data collection was carried out using a purposive method. This method is a sampling method that takes into account certain terms and criteria that are adjusted. This method produced a sample of 22 companies from 2020 to 2022. This study used E-Views 12 and Microsoft Excel to process the data. The research method used in this study was panel data regression analysis. From the results of the hypothesis testing that has been discussed, the following conclusions can be drawn: Environmental performance has no effect on profitability. Environmental costs have no effect on profitability. Environmental disclosure has a positive effect on profitability.

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