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Environmental Performance, Company Size, Profitability, And Carbon Emission Disclosure

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ABSTRACT

This study aims to examine the effect of environmental performance, company size, profitability on disclosure of carbon emissions in non-service companies listed on the Indonesia Stock Exchange (IDX). The population of this study used non-service companies listed on the Indonesia Stock Exchange (IDX) in 2017. The research sample was 34 companies selected through the purposive sampling method. The data collection technique using documentation method. Data analysis techniques using multiple regression analysis with statistical tools used are SPSS V.24. The results showed that the company's environmental performance did not influence the company to conduct carbon emission disclosure. by obtaining a PROPER rating, it does not guarantee the company will disclose carbon emissions properly. While company size and profitability, have no effect on carbon emission disclosure, because companies still choose to make other disclosures that can increase their legitimacy in the eyes of the public. Companies consider carbon emission disclosure as not yet able to add value to companies and the nature of emissions disclosures carbon which is still in the form of voluntary disclosure. This research contributes to disclosure of carbon emissions from company activities in the annual report and the company can prevent and reduce carbon emissionsc.

KEYWORDS: Carbon Emission Disclosure; Enviromental Performance; Firm Size; Profitability

INTRODUCTION

Success in accelerating the pace of the world economy through rapid industrial growth leads to an inevitable adverse effect, environmental degradation. This is due to carbon retention and greenhouse gases that tend to increase over time. These environmental issues are a challenge for every business entity to be able to contribute to the reduction in carbon emissions they produce (Choi, Lee, & Psaros, 2013). By reporting on the implementation of social responsibility, environment and nature conservation (carbon emission disclosure) in the company's annual report, it is expected that the company will gain legitimacy on the social role, environmental care and preserve nature that has been carried out by the company, so the company will get support from the community, and company survival can be obtained (Hanifah, 2011).

Furthermore, Irwhantoko & Basuki (2016) state that industrial activity can increase the level of the greenhouse effect which will affect economic sustainability in the long run. Pratiwi (2018) explains that accounting has a role in increasing Indonesia's participation in achieving the UNFCCC goals, namely by the disclosure of carbon emissions as an accounting treatment in presenting the use of carbon for company activities in the company's annual report. With this disclosure, companies are expected to be able to prevent and reduce carbon emissions. Through Carbon emission disclosure of stakeholders, both the government and the public can monitor and regulate carbon emission, so that it will have an impact on the company's environmental performance Peng, Sun, & Luo (2015).

The Indonesian government on June 28, 2004 ratified the Kyoto Protocol through Law No. 17 of 2004 and ratification of Law No. 32 of 2009 concerning Environmental Protection and Management in Perpres No. 61 of 2011 concerning the National Action Plan for Reducing Greenhouse Gases, and Presidential Regulation No. 71 of 2011 concerning the Implementation of the National Greenhouse Gas Inventory. Furthermore, the Ministry of Environment of Indonesia in 2013 is committed to reducing carbon emissions by 26% by 2020, which is approximately 0.67 Gt. This commitment is demonstrated by ratifying the climate change convention through Law No. 6 of 1994 concerning Ratification of the United Nations Framework Convention on Climate Change (UNFCCC) (Irwhantoko & Basuki, 2016). Considering that Indonesia is a major contributor to emissions per capita in the world after China, the United States, and the European Union (Jannah & Muid, 2014).

Wegener et.al (2013) investigated the factors that influence corporate environmental disclosure which shows the results that the company's decision to disclose is closely related to shareholder activism, litigation risk and opportunities to gain a good name at a low cost. So that it is very closely related to profitability and company size. Some research on carbon emission disclosure has been done by Choi et al. (2013) and Cahya (2016) show that company size and profitability have a positive effect on carbon emission disclosure. While the research of Irwhantoko & Basuki (2016) and Pratiwi (2018) show that company size and profitability negatively affect carbon emission disclosure. The results of the study showed that profitability had a significant effect on carbon emission disclosure, whereas industry type and leverage had no significant effect. Disclosure of carbon emissions can be influenced by various factors such as company size, company type, profitability, and leverage.

Hermawan et.al (2018) examined the carbon emission disclosure in manufacturing companies in Indonesia, the results of which showed that company size, profitability, and

regulation affected carbon emission disclosure. This research is interesting to do because the object is not only manufacturing companies but also trading companies and only conducted in 2017. The purpose of this study is to examine and analyze the effect of environmental performance, company size, and profitability on Carbon Emission Disclosure. This study uses the theory of legitimacy as a basis for disclosure of carbon emissions. Suaryana (2011) says that social contracts are the corporate basis of legitimacy theory. The contract involves the company and the community around the company.

The legitimacy theory is widely used to explain the motivation of voluntary environmental disclosure by organizations (Pratiwi, 2018). Legitimacy theory focuses on the relationship between companies and society through regulations made by the government. As emphasized by Suaryana et al. (2011), in creating profit, voluntary disclosure is one of the company's efforts to gain legitimacy from the surrounding community. Carbon emission disclosure is one way for companies to build, maintain, and legitimize the company's contribution in terms of environmental responsibility. This study contributes in providing empirical evidence where previous research has a gap in research results, and also in this study the object of research uses non-service companies so that the results of this study will enrich the influence of Environmental Performance, Company Size, Profitability, and Carbon Emission Disclosure.

Wang, Song, & Yao (2013) and Zulaikha (2016) said that large-scale companies are more open to the public so that they receive supervision from the government in making voluntary disclosures. In addition, with a large scale, companies are more likely to carry out activities that affect the environment, thereby increasing the company's demands for carbon emission disclosure.

In the theory of legitimacy, companies make environmental disclosures in order to obtain a good image from the public. Research conducted by Zulaikha (2016) found that the influence of environmental performance on carbon emission disclosure supports the theory of legitimacy, where companies that conduct environmental disclosures, specifically carbon emission disclosure, seek to maintain public trust in order to provide support to the company. Companies that have good environmental performance will tend to disclose carbon emissions more broadly than companies that have poor environmental performance.

### *H₁: Environmental Performance Affects Carbon Emission Disclosure*

The size of the company can describe the number of operational activities; larger companies certainly have more activities. The company's operational activities tend to be directly related to the environment. As stated by Choi et al. (2013), the larger the size of the company the greater the resources owned. According to Nasution (2013), company size can be based on the value of total assets, total sales, market capitalization, number of workers and so on. The greater the value of these goods, the greater the size of the company. While the findings of the study of Jannah & Muid (2014) that company size has a significant positive effect on disclosure of carbon emissions. Research Wang et al. (2013) that large companies get more social and political pressure than small companies. The effect of company size on carbon emission disclosure supports the theory of legitimacy that requires large-scale companies to increase their response to the environment, namely by providing quality voluntary disclosure. Large-scale companies have a high level of obligation in providing information to external parties. Thus, between large scale companies and small scale companies the potential to provide information on carbon emissions is more likely to be done by large scale companies.

H₂: Firm Size Affects Carbon Emission Disclosure

According to Choi et al. (2013), a good financial condition of a company is able to pay for additional human or financial resources needed for voluntary reporting and better disclosure of carbon emissions to withstand external pressures. Good financial performance has the financial ability to make decisions related to the environment and vice versa with the company's poor financial performance is more focused on achieving financial goals and improving their performance so as to limit their ability to prevent and report carbon emissions (Luo, Tang, & Lan, 2013). The results of Pradini & Kiswara (2013), shows that companies with better financial performance capabilities are more likely to try to reduce emissions from their company activities.

H₃: Firm's Profitability Level Affects Carbon Emission Disclosure

Based on the explanation above, the variables in the study are described in the conceptual framework model as follows:
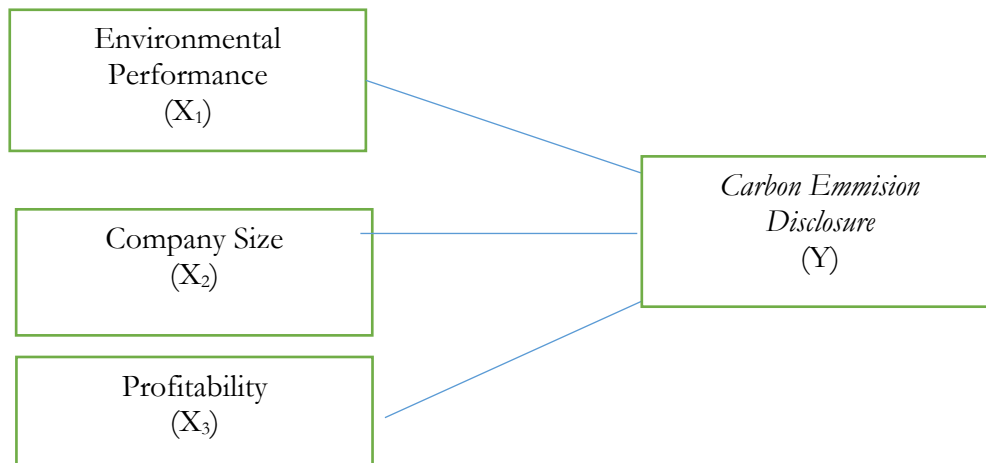
Figure 1.
Research Framework

METHOD

This research is an associative research, which is to find out the relationship between independent variables on the dependent variable. The population in this study were all non-service companies listed on the Indonesia Stock Exchange (IDX) in 2017. The sampling technique was purposive sampling. The sampling criteria are as follows: 1) Publish an annual financial report for the period to be observed, 2) Have a complete annual report used to obtain research data, 3) The company publishes sustainability reports, 4) The company presents carbon emissions disclosures in an annual report and sustainability report (at least one policy related to carbon / greenhouse gas emissions or disclosure of at least one carbon emission item). The data collection method uses the documentation method. The data is the company's Annual Report sourced from the Indonesia Stock Exchange through the IDX website, namely www.idx.co.id and company Sustainability Report sourced from each company's website.

The dependent variable in this study is Carbon emission disclosure (CED), measured using a checklist consisting of 18 indices developed by Choi et al. (2013) based on a request sheet for information on carbon emission issued by the Carbon Disclosure Project.

The independent variables in this study are:

a. Environmental performance is measured using the PROPER rating.

b. Company size (Size) is measured using natural logarithms (ln) of total company assets.

c. Profitability (Pro) is measured using return on assets (ROA). ROA is the company's profit divided by the total assets of Jannah & Muid (2014) with the following formula:

$$\frac{Profit\ at}{Total\ assets\ at}$$

The testing method used is multiple regression analysis to test the proposed hypotheses, but previously a classic assumption test was carried out as laden with the use of the regression method. The regression model uses SPSS V.24 statistical tools.

RESULTS AND DISCUSSION

Testing the normality of population data distribution using Skewness and Kurtosis statistics:

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
CED	34	-0.733	0.403	-0.515	0.788
KL	34	-0.532	0.403	-0.900	0.788
Size	34	-0.176	0.403	0.470	0.788
Pro	34	0.469	0.403	1.492	0.788
Valid N (listwise)	34				

Table 1.
Skewness and Kurtosis Test Results

Based on table 1 above, the calculation results obtained for the formula to obtain the value of Z as follows

Variabel	Z Skewness	Z Kurtosis
CED	-1.75	-0.61
KL	-1.27	-1.07
Size	-0.42	0.56
Pro	1.12	1.78

Table 2.
Z-Skewness and Kurtosis Test Results

Based on the table 2 above, all Z skewness and Z kurtosis result variables are located in the critical range, which is ± 1.96, so it can be said that the data is normally distributed.

Multicollinearity test results can be seen in the following table:

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	KL	0.847	1.181
	Size	0.848	1.179
	Pro	0.874	1.144
a. Dependent Variable: CED			

Table 3.
Multicollinearity Test Results

Based on table 3 above, it can be seen that the multicollinearity test results show there are no independent variables that have a tolerance value of less than 0.1 and a VIF value of more than 10. So it can be concluded that there is no multicollinearity among the independent variables in the regression model.

<table>
<tr><td colspan="2">Model</td><td>Sig.</td></tr>
</table>

Model		Sig.
1	(Constant)	0.596
	KL	0.184
	Size	0.921
	Pro	0.339
a. Dependent Variable: RES2		

Table 4. Heterosce-dasticity Test Results

Heteroscedasticity test using glacier test, where if the significance value obtained for each independent variable is greater than 0.05, then heteroscedasticity does not occur. Based on table 4 above, it can be seen that the results of the heteroscedasticity test show that there are no independent variables that have a significant value of less than 0.05, which means that homoscedasticity does not occur.

This test is carried out to measure how far the model's ability to explain variations in the dependent variable. A value close to one means that the independent variables provide almost all the information needed to predict the dependent variation. Based on statistical tests, the coefficient of determination test results (Adj. R2) has a value of 0.032 or 3.2%, then the company size, profitability, and environmental performance variables are only able to explain carbon emission disclosure of 3.2%, while 96.8 The remaining% is explained by other variables not explained in this study.

F test is used to determine the effect of variables X1, X2, and X3 simultaneously on Carbon Emission Disclosure. The simultaneous test results show that the significance value of 0.289 and the calculated F of 1.312 Because the significance value is greater than the specified significance value (0.289> 0.05) and the F calculated is smaller than the F table (0.652 <2.92) means that the variable environmental performance, company size, and profitability simultaneously have no significant effect on Carbon Emission Disclosure.

T test is used to determine the relationship between independent variables partially on the dependent variable (individual).

Sig value from the independent variable environmental performance of 0.080 and t arithmetic of 0.337. Because the significance value is greater than the specified significance value (0.080> 0.05) and the t value is smaller than the t table value (0.337 <2.045), the hypothesis is rejected. So it can be said that the environmental performance variable has no significant effect on carbon emission disclosure. Sig value of the independent variable company size of 0.877 and t count of 0.157.

Table 5. Results of Partial Significance Tests (T Test)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.667	16.418		0.284	0.778
	KL	0.725	0.400	0.337	1.810	0.080
	Size	0.086	0.546	0.029	0.157	0.877
	Pro	-1.786	4.299	-0.076	-0.415	0.681
a. Dependent Variable: CED						

Because the significance value is greater than the specified significance value (0.877> 0.05) and the t value is smaller than the t table value (0.157 <2.042), the hypothesis is rejected. So it can be said that the company size variable does not have a significant effect on carbon emission disclosure. Sig value profitability of 0.681 and t arithmetic of -0.415. Because the significance value is greater than the specified significance value (0.681> 0.05) and the calculated t value is smaller than the t table value (-0.415 <-2.045), the hypothesis is rejected. So it can be said that the profitability variable does not significantly influence the carbon emission disclosure.

Partial environmental performance does not affect the carbon emission disclosure is possible because companies that have a high PROPER rating do not guarantee that the company will conduct carbon emission disclosure. The company will focus on environmental disclosure that is directly related to their production activities. For companies in the mining category, companies make more environmental disclosures related to water waste, because the community around mining companies and stakeholders consider mining companies to have a significant role in producing wastewater. Manufacturing companies focus more on disclosing social responsibility directly to the community. Only companies in the plantation and cement industry sectors disclose in detail the carbon emissions they produce. This is in line with research conducted by Jannah & Muid (2014), Pradini & Kiswara (2013) and Cahya (2016).

Based on the analysis of the annual report and the sustainability report shows that there are companies that are not listed in the PROPER ranking to disclose carbon emissions well, Indo Tambangraya Megah Tbk., Lotte Chemical Titan Tbk., and Tjiwi Kimia Tbk Paper Factory. In contrast, companies with a PROPER gold rating, namely Bukit Asam Coal Mining Company, and a company with a blue PROPER rating, namely the Toba Pulp Lestari Tbk company. and Gudang Garam Tbk. minimally disclose carbon emissions.

The results of the analysis above further prove that companies with good environmental performance, as evidenced by the acquisition of PROPER ratings, do not guarantee that the company will disclose carbon emissions properly. Hence the environmental performance of carbon emission disclosure does not affect the results of research conducted by Dawkins & Fraas (2011), Clarkson, et al. (2010), and Zulaikha (2016) who found that environmental performance had a significant effect on carbon emission disclosure.

The size of the company partially does not affect the carbon emission disclosure is possible because companies in Indonesia still choose to make other disclosures that can increase their legitimacy in the eyes of the public, where the company considers carbon emission disclosure cannot provide added value to the company in the future plus with the nature of carbon emissions disclosure which is still in the form of voluntary disclosure. The results of this study are in line with research conducted by Irwhantoko & Basuki (2016) and Cahya (2016). However, it does not support the results of research conducted by Choi et al. (2013), Jannah & Muid (2014), Wang et al. (2013), and Zulaikha (2016) who found that company size had a significant effect on carbon emission disclosure. The results of the study are different from Hermawan et al. (2018) which states that company size influences carbon emission disclosure, where the sample used is only manufacturing companies and the year of observation was conducted in 2014-2016.

Based on the results of an analysis of the annual report and the sustainability report, as well as assessing the size of the company that is proxies by total assets, companies with high total assets do not necessarily do carbon emission disclosure properly. In the sample

companies, there are companies that have large total assets but do not do carbon emission disclosure properly, namely Bumi Resources Tbk. Company, Bukit Asam Coal Mine, Waskita Beton Precast Tbk., And Gudang Garam Tbk. For example, in Waskita Beton Precast Tbk., Even though companies with company characteristics in the cement industry sector were considered to have a large impact on air pollution, 43% of their total assets were trade receivables in which the large total asset proxy was not can explain carbon emission disclosure. Whereas assets that are considered to have a direct impact through the company's activities on air pollution, in the form of factories and vehicles, only amounted to 2% of total assets.

Profitability which partially does not have a significant effect on carbon emission disclosure is possible because of demands from corporate stakeholders, where stakeholders provide other demands to the company in using the profits obtained to develop the company in other aspects than doing carbon emission disclosure. In other words, the high or low profit received by a company does not guarantee the company to use the profit in making carbon emission disclosure. This is in line with research conducted by Irwhantoko & Basuki (2016), Nur & Priantinah (2012), Zulaikha (2016) and Pratiwi (2018).

Based on the analysis of the annual report and the sustainability report, one of the samples that experienced a loss in the 2017 period, namely the company Vale Indonesia Tbk. instead, the company disclosed more emissions than the company that made a profit in the 2017 period. The company that had the lowest ROA of all sample companies, namely Lotte Chemical Titan Tbk., also disclosed the emissions better than other companies that had high ROA levels. Whereas the company that has the highest ROA level among the sample companies, namely Multi Bintang Indonesia Tbk. Company, does a minimum of carbon emissions disclosure. Companies that obtain low profits are considered to disclose carbon emissions to increase the legitimacy of external parties.

From the explanation above, the profitability of carbon emission disclosure does not affect the results of research conducted by Choi et al. (2013), Jannah & Muid (2014), Luo et al. (2013), Zhang et al., (2012) and Cahya (2016) who find that profitability has a significant effect on carbon emission disclosure.

CONCLUSION

Based on the results of data analysis and previous discussions, it can be concluded that the environmental performance variables, company size, and profitability together do not have a significant effect on carbon emission disclosure in non-service companies in 2017. Companies that have a high PROPER rating do not guarantee the company will do carbon emission disclosure. Companies with high total assets may not necessarily do carbon emission disclosure properly, because the company considers carbon emission disclosure cannot provide added value for the company in the future and the nature of carbon emissions disclosure in the form of voluntary disclosure.

This study has a limited number of relatively small research samples because it only uses one year of the research period and the object of research is non-service companies. The researcher can then consider the characteristics of the objects used, namely by using corporate objects that produce large carbon emissions, such as the plantation sector, the energy sector, or the transportation sector. This research contributes to the disclosure of carbon emissions from company activities in the annual report and it is hoped that the company can prevent and reduce carbon emissions.

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