

GOOD CORPORATE GOVERNANCE , KINERJA LINGKUNGAN DAN CARBON EMISSION DISCLOSURE

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ABSTRACT

The study aims to prove and empirically test the effect of good corporate governance (GCG) and environmental performance on carbon emission disclosure. Good corporate governance variables include independent board of commissioners, board of directors, audit committee, institutional ownership, and managerial ownership. The object of this research is mining companies and property companies listed on the Indonesia Stock Exchange (IDX) for the 2021 period. The sample of this research was obtained using purposive sampling method which was taken from 100 companies that met the criteria from a total of 146 mining companies and property companies in the 2021 period. The analysis model used in this research is a multiple linear regression model. The result showed that the board of directors, audit committee, and environmental performance have a positive and significant effect on carbon emission disclosure. While the independent board of commissioners, institutional ownership, and managerial ownership have no influence on carbon emission disclosure.

Keyword: Good Corporate Governance, Environmental Performance, and Carbon Emission Disclosure.

INTRODUCTION

In the current industrial era, increasing world carbon emissions resulting in global pemanasan. Various parts of the country have felt the effects of global warming, including Indonesia. Based on News reported by cnbnindonesia, Indonesia has been named the 8th largest or highest contributor to World gas emissions in 2022. This of course will be a challenge as well as a homework for Indonesia to overcome it in cleaning up the world through the transition of fossil energy to green energy or commonly known as renewable energy (EBT). The problem of global warming or commonly known as global warming has been recognized internationally as a problem for companies with a changing climate. The existence of internal and external influences is certainly a driver of environmental change so quickly. This, of course, will force business leaders to be able to consider social and environmental issues in addition to being concerned with economic benefits and performance (CAH 2017).

With the problem of carbon emissions, Indonesia enacted Law No. 6 of 1994 on the United Nations Framework Convention on Climate Change and ratified the Kyoto Protocol through Law No. 17 of 2004 in order to implement sustainable development and participate in efforts to reduce global greenhouse gas (GHG) emissions. In addition, Indonesia also set Presidential Regulation No. 61 of 2011 with the aim to implement the planning, implementation, monitoring and evaluation of action plans to reduce greenhouse gas emissions for ministries or institutions.

The Indonesian Institute of accountants (IAI) regulates the practice of openness of social responsibility in Indonesia which is regulated in PSAK No. 1 Clause 9 indirectly encourages companies to disclose their environmental responsibilities. Therefore, user reports are not only for shareholders, but also used for stakeholders. From this, it is expected that the company is not only concerned with profits for shareholders who have believed in investing their capital, but also concerned with responsibility for the environment (Budiharta and Kacaribu 2020).

The implication of the Kyoto Protocol is a carbon calculation that becomes an obligation for every company to recognize, measure, record, present, and disclose its carbon emissions. The reason for Indonesia to implement the Kyoto Protocol is due to the occurrence of water and food disturbances caused by climate

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change, while Indonesia is an agrarian country that ranks 9 of the 10 most vulnerable countries from threats to food security due to the impact of climate change on the agricultural and fisheries sectors (Huelsenbeck 2012).

Companies that conduct carbon emission disclosure will make it easier for stakeholders to make decisions about the state of the company's carbon emission performance, pressure companies to reduce carbon emissions, participate in public debates on climate change regulations and policies (Ennis, Kottwitz et al. 2012).

Andrew and Cortese (2011) state that carbon emission disclosure is presented as a form of voluntary disclosure. However, due to the voluntary character of the industry, not all companies in Indonesia declare social responsibility related to the environment in producing carbon emissions as a result of company activities in company reports. There are several reasons why there are still many companies that continue to hold back carbon emission disclosure is because the cost is sacrificed very much and can even harm the company. Cases like this according to Cahya (2017) create a disconnect between what is predicted by existing theories and what actually happens in the field. In this study, this disparity is referred to as the gap phenomenon.

Amaliyah and Solikhah (2019) examined non-financial companies during 2013-2017 as many as 127 observations. The analysis Model used in this study is descriptive statistical analysis and inferential statistical analysis with panel data regression model on Eviews9. The results of this study is that the variables of institutional ownership, audit Committee have a positive effect while environmental performance and managerial ownership, independent commissioners, and the board of directors have no effect on carbon emission disclosure.

Saptiwi (2019) examined companies listed on the Indonesia Stock Exchange during 2012-2016 as many as observasian. The analysis Model used is regression analysis. The results of the study is that environmental performance variables have a positive effect on carbon emission disclosure.

Budiharta and Kacaribu (2020) examined non-financial companies during 2016-2018. The analysis Model used is descriptive statistical analysis and multiple regression analysis. The results stated that the managerial ownership variables have a positive effect, while the variables of the audit Committee and board of directors have no effect on carbon emission disclosure.

Maulidiavitasari and Yanthi (2021) examined financial companies during 2016-2018 as many as 28 observations. The analysis Model used is multiple regression analysis. The result of this study is that environmental performance variables have a positive effect on carbon emission disclosure.

This study is different from previous research, the companies studied are companies that have conducted PROPER Public Disclosure Program for Environmental Compliance (PROPER) is a program of assessment of the company's performance rating in Environmental Management developed by the Ministry of Environment and Forestry. In the PROPER assessment, the company will obtain a reputation / image in accordance with the environmental management that has been done by the company the image is assessed with 5 colors, namely gold, green, blue, red and black. The best PROPER is marked with a gold color which means that the company has implemented environmental management thoroughly and continuously. In this study to measure carbon emission disclosure using disclosure quality assessment. In addition, the difference of this study with the previous study is located in the object of research used. In this study using mining and property companies listed on the Indonesia Stock Exchange (IDX) as the object of research. This is because property companies are responsible for 39% of global carbon emissions, making it the largest contributor to climate change in 2019, according to the World Green Building Council it is clear that a transition in the property sector is needed while mining companies contribute carbon emissions of 58 million tons of CO₂e per year (databoks.katadata, 2022).

METHODS

This study is an associative research by taking the objects of mining companies and property companies listed on the Indonesia Stock Exchange (IDX) for the 2021 period. Technique in sampling this study is by purposive sampling technique. The type of data used is secondary data in the form of annual report and sustainability report obtained from the official website of each company and website: (www.idx.co.id) by using documentation techniques.

Measurement variables used in this study are as follows.

Carbon Emission Disclosure

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In this study carbon emission disclosure is calculated by the carbon emission disclosure formula consisting of 5 categories divided into 18 indicator units which are then assessed based on the quality of disclosure using the CSR disclosure Quality Assessment adopted from Anggraeni and Djakman (2018), which uses a rating scale between 0-3 for each indicator. Disclosure of Carbon Emission Disclosure information is weighted according to its projection using the following numerical code.

0 = item not disclosed

1 = the item is disclosed without any explanation or only with a brief statement

2 = the item is expressed with a qualitative explanation

3 = items expressed with qualitative and quantitative explanation

Independent Board Of Commissioners

This variable is assessed using the number of independent board of Commissioners of a company divided by the number of Board of Commissioners of the company concerned.

Board Of Directors

The board of Directors is judged by the number of members of the board of directors that the company in question has.

Audit Committee

The audit committee is assessed by the number of audit committee members owned by the company concerned.

Institutional Ownership

This variable is valued by the number of shares owned by the institution divided by the number of shares outstanding which are then multiplied by 100%

Managerial Ownership

Managerial ownership is assessed by the percentage of the number of shares held by the board of Commissioners and board of directors which is then divided by the number of outstanding shares.

Data analysis is done with the following stages:

1. Tabulating research data.
2. Perform calculations to each variable to be tested.
3. Perform descriptive statistical test analysis.
4. The classical assumption test
5. Multiple linear regression Model
6. Hypothesis Testing

RESULTS AND DISCUSSION

In this study, all mining and property companies listed on the Indonesia Stock Exchange for the 2021 period with a total of 146 companies. This study uses purposive sampling method to identify research samples. Of the 146 population companies there are 100 total samples that have met the criteria set.

Carbon emission disclosure is judged on the quality of disclosure. This approach has been used by Anggraeni and Djakman (2018) to assess the quality of CSR disclosures. The carbon emission disclosure consists of 18 indicators, namely 2 climate change indicators, 7 greenhouse gas (GHG) emissions indicators, 3 energy consumption indicators, 4 greenhouse gas and cost reduction indicators, and 2 carbon emission accountability indicators. Assessment of these indicators using a scale of 0-3 for each indicator of carbon emissions accountability.

The basis used by giving a value of" 0 "if the company does not disclose, the value of" 1 "if the company discloses but without explanation or the company only gives a brief statement, the value of" 2 "if the company discloses and explains qualitatively, and the value of" 3 " if the company discloses and explains qualitatively and provides data with nominal numbers (quantitative) for each indicator disclosed.

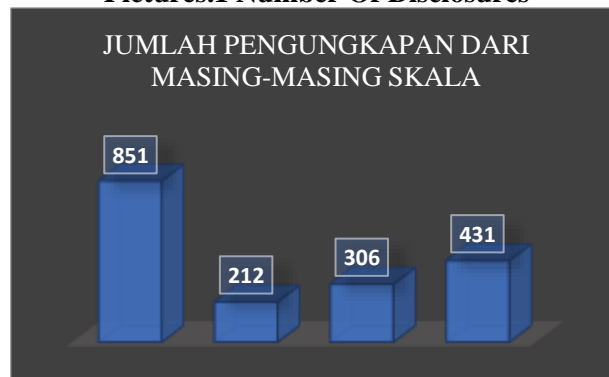
The quality of carbon emission disclosure in 2021, PT Bukit Asam, Tbk ranked first with a score of 50, while the lowest ranking was occupied by PT Fortune Mate Indonesia, Tbk with a score of 2.

Table.1. Ced disclosure quality results

Skala	Indikator																	
	CC-1	CC-2	GHG-1	GHG-2	GHG-3	GHG-4	GHG-5	GHG-6	GHG-7	EC-1	EC-2	EC-3	RC-1	RC-2	RC-3	RC-4	AEC-1	AEC-2
0	43	58	76	88	44	55	43	70	38	41	55	26	8	59	8	91	1	47
1	2	3	0	1	0	0	1	10	0	1	4	40	7	12	39	9	50	33
2	21	9	5	1	1	5	18	13	0	1	26	29	47	19	45	0	47	19
3	34	30	19	10	55	40	38	7	62	57	15	5	38	10	8	0	2	1

From Table.1 it can be seen that there are still many companies that do not disclose. We can also see that most companies do not disclose the RC-4 indicator, which is an indicator of greenhouse gas (GHG) reduction and cost, which indicator describes the cost of future emissions taken into account in capital investment planning. A total of 91 out of 100 companies have not disclosed these indicators. While the most fully disclosed indicator by companies is the GHG-7 indicator, which is an indicator of greenhouse gas (GHG) emissions that describes greenhouse gas emissions compared to previous years, this indicator is fully disclosed by 62 out of 100 companies.

Pictures.1 Number Of Disclosures



From Picture.1, it can be seen that there are still many companies that do not disclose carbon Emission Disclosure assessment indicators, namely as many as 851 who get a value of 0, 212 who get a value of 1, 206 who get a value of 2, and 431 who get a value of 3.

Results Of Descriptive Statistical Analysis

The results of descriptive statistical analysis in Table 2 shows the mean CED sebesar 39,2% of the maximum value of 92,6%. This means that the level of carbon emission disclosure of mining and property companies in Indonesia is still very low, which means that companies have not fully carried out carbon emission disclosure. This condition can be caused by making disclosures that require large costs, then 2021 will be the year Indonesia enters the “new normal” state after the covid-19 pandemic, so not all companies can do carbon emission disclosure.

Table.2. Descriptive Statistical Test Results

Variable	Obs	Mean	Std. Dev.	Min	Max
CED	100	0.392	0.228	0.037	0.926
DKI	100	0.446	0.114	0.25	0.75
DD	100	4.54	1.806	2	10
KA	100	3.07	0.7	0	6
KI	100	0.463	0.301	0	0.966
KM	100	0.069	0.183	0	0.874
KL	100	0.89	1.644673	0	5

Sources: Output STATA 15

The results of descriptive statistical tests in Table 2 describe the ratios of variables such as minimum, maximum, average (mean), and standard deviation.

Classical Assumption Test Normality Test

Normality test aims to determine and test whether in multiple regression models, residual variables or disruptive variables have a normal distribution.

Table.3 Results Of The Normality Test
Skewness/Kurtosis tests for Normality

Variable	Obs	Pr (Skewness)	Pr (Kurtosis)	Adj chi2 (2)	Prob>chi2
Error	100	0.9280	0.9577	0.01	0.9945

Sourche: Output STATA 15

The results of the normality test above show the Prob/chi2 with a value of 0.9945 which means that the value is greater than 0.05 so it can be concluded that the residual value is normally distributed.

Multicollinearity Test

Multicollinearity test aims to determine the results of the test that has been done whether the regression model will be found correlation between independent variables.

Table.4 Multicollinearity Test

Variable	VIF	1/VIF
Dewan Direksi	1.16	0.863909
Kepemilikan Institusional	1.15	0.866480
Kepemilikan Manajerial	1.13	0.887390
Komite Audit	1.08	0.922264
Kinerja Lingkungan	1.03	0.969625
Dewan Komisaris Independen	1.00	0.996575
Mean VIF	1.09	

Sourche: Output STATA 15

Based on the table above obtained the results of all variable VIF value < 10, it means that in this study did not occur multicollinearity.

Heteroscedasticity Test

Heteroscedasticity test aims to determine whether the regression model occurs variance inequality of the residual of another observation.

Table.5 Heteroscedasticity Test Results

chi2(1)	0.47
Prob > chi2	0.4947

Sourche: Output STATA 15

Based on the test results above can be seen that the value of prob. chi of 0.4947 which is greater than 0.05 which means that there is no heteroscedasticity.

Multiple Linear Regression Model

$$CED = \alpha + \beta_1DKI + \beta_2DD + \beta_3KA + \beta_4KI + \beta_5KM + \beta_6KL + e$$

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$$\text{CED} = -0.1854278 + 0.0636505 \text{DKI} + 0.0383428 \text{DD} + 0.0924076 \text{KA} + 0.0982865 \text{KI} - 0.1393433 \text{KM} + 0.0623188 \text{KL} + e$$

Table.6 Multiple Linear Regression Test Results

Number of obs	= 100
F (6,93)	= 15.74
Prob > F	= 0.0000
R-squared	= 0.5039
Adj R-squared	= 0.4719
Root MSE	= 0.16574

CED	Coef	Std Error	t	P> t	[95% Conf Interval]
DKI	0.0636505	0.1461631	0.44	0.664	-0.2266005 0.3539015
DD	0.0383428	0.0099244	3.86	0.000	0.0186349 0.0580506
KA	0.0924076	0.0247792	3.73	0.000	0.0432009 0.1416142
KI	0.0982865	0.0594733	1.65	0.102	-0.198157 0.2163887
KM	-0.1393433	0.0967453	-1.44	0.153	-0.3314602 0.0527736
KL	0.0623188	0.0102857	6.06	0.000	0.0418935 0.0827441
_cons	-0.1854278	0.1068415	-1.74	0.086	-0.3975938 0.0267382

Sourche: Output STATA 15

Hypothesis Test

Coefficient Of Determination (R^2)

Table.7 Test Results Coefficient Determinant R^2

Hipotesis	Pengaruh	Coef	t	Prob	Kesimpulan
H1	DKI → CED	0.0636505	0.44	0.664	Tidak Berpengaruh
H2	DD → CED	0.0383428	3.86	0.000	Berpengaruh
H3	KA → CED	0.0924076	3.73	0.000	Berpengaruh
H4	KI → CED	0.0982865	1.65	0.102	Tidak Berpengaruh
H5	KM → CED	(- 0.1393433)	(-1.44)	0.153	Tidak Berpengaruh
H6	KL → CED	0.0623188	6.06	0.000	Berpengaruh
Adj. R-Square				0.4719	
F-Statistic				15.74	
Prob(F-Statistic)				0.0000	

Sourche: Output STATA 15

The above Data shows that the adjusted R-square in this study is 0.4719, which means that carbon emission disclosure is influenced by the independent variables of the independent board of commissioners, board of Directors, audit Committee, institutional ownership, managerial ownership and environmental performance by 47.19%. While the rest is equal to 52.81% influenced by other variables outside the variables studied.

Statistical Test F (Simultaneous Test)

Based on the results of the F test in table 7, obtained the value of prob < 0.01, which is 0.0000, the variables independent board of Commissioners (X_1), Board of directors (X_2), audit committee (X_3), institutional ownership (X_4), managerial ownership (X_5) and environmental performance (X_6) simultaneously have an influence on carbon emission disclosure.

Statistical t-test (Partial Test)

Table.8 Hypothesis Test

No	Hipotesis	Coefficient	Prob.	Hasil
1	Dewan komisaris independen berpengaruh terhadap <i>carbon emission disclosure</i>	0.0636505	0.664	Ditolak

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2	Dewan direksi berpengaruh terhadap <i>carbon emission disclosure</i>	0.0383428	0.000	Diterima
3	Komite audit berpengaruh terhadap <i>carbon emission disclosure</i>	0.0924076	0.000	Diterima
4	Kepemilikan institusional berpengaruh terhadap <i>carbon emission disclosure</i>	0.0982865	0.102	Ditolak
5	Kepemilikan manajerial berpengaruh terhadap <i>carbon emission disclosure</i>	(– 0.1393433)	0.153	Ditolak
6	Kinerja lingkungan berpengaruh terhadap <i>carbon emission disclosure</i>	0.0623188	0.000	Diterima

DISCUSSION

Based on the hypothesis test results in table 8 shows that:

1. H1 was rejected because the board of independent commissioners had an effect on carbon emission disclosure. This is because most of the sample companies have relatively few independent commissioners. In addition, the independent board of Commissioners is an external party that serves as a supervisor, so their time is limited to create optimal supervision within the company. This is not in line with stakeholder theory, where the independent board of Commissioners is not able to encourage the company to disclose all activities to stakeholders. The results of this study are in line with the research of Akhiroh and Kiswanto (2016) and Amaliyah and Solikhah (2019). However, contrary to the research of Kılıç and Kuzey (2018) which states that the independent board of Commissioners has a positive influence on carbon emission disclosure.
2. The results of the second hypothesis test showed that the board of Directors has an effect on Carbon Emission Disclosure. This is also in line with the theory used in this study, namely legitimacy theory. Where with good performance and in the form of responsibility, the company in carrying out its activities must meet the rules and norms in force in society. The board of directors will strive to convey its performance to all stakeholders, one of which is the community, more likely to report carbon emissions. This is because the board of Directors is the highest important element of management that is responsible for obtaining legitimacy from all stakeholders. Therefore, the ability of the company to manage the company to the maximum will be helped by the size of the board that makes it possible to make voluntary disclosure of carbon emissions. The results of this study contradict research conducted by Amaliyah and Solikhah (2019) which proves that the board of directors does not have a significant effect on carbon emission disclosure. The results of this study resulted that the average value of the board of directors amounted to 4.54. While the average value of carbon emission disclosure is 1,806. This means that the larger the size of the board of directors, the better the carbon emission disclosure of a company. This is because the larger the size of the board of Directors of a company, the more leverage a company has in managing the company so that it has an impact on the possibility of making carbon emission disclosure.
3. The results of the hypothesis test showed that the Audit Committee has an effect on Carbon Emission Disclosure. This is also in line with stakeholder theory, the company with the audit committee is able to provide maximum supervision of the company's management, thus encouraging the company to implement GCG principles, namely the principle of transparency. Good corporate governance with the audit committee in the company, provides the company's ability to conduct carbon emission disclosure. The results of this study are supported by the results of research from Amaliyah and Solikhah (2019) and research from Akhiroh and Kiswanto (2016) which obtained the results that the audit committee has an effect on carbon emission disclosure.

4. The results of the hypothesis test showed that institutional ownership has no effect on carbon emission disclosure. It can be interpreted that a high percentage of institutional investors, does not mean the company will pay more attention to environmental issues. This is not in line with stakeholder theory, where institutional ownership is not able to encourage companies to disclose all activities to stakeholders. The results of this study are in line with the research of Akhiroh and Kiswanto (2016). However, it contradicts the research of Amaliyah and Solikhah (2019) and research from Budiharta and Kacaribu (2020) which states that institutional ownership has a positive influence on carbon emission disclosure.
5. The results of the hypothesis test showed that managerial ownership has no effect on carbon emission disclosure. This condition is thought to be because the existence of managerial ownership in the company makes managers tend to pay attention to financial performance to obtain a return on their investment. So that more control by managers will make the company not pay attention to carbon emission disclosure which may require considerable costs. This is not in line with stakeholder theory, where managerial ownership is not able to encourage companies to disclose all activities to stakeholders. The company's relationship with its stakeholders puts pressure on it to continuously improve its performance and become more active in social activities and environmental tasks. Managers who manage the company well will be able to benefit the company's shareholders. The results of this study are in line with the research of Amaliyah and Solikhah (2019). But contrary to the research of Akhiroh and Kiswanto (2016) which states that managerial ownership has a positive influence on carbon emission disclosure.
6. The results of the hypothesis test showed that environmental performance has an effect on Carbon Emission Disclosure. This is also in line with the theory used in this study, namely stakeholder theory. The company operates not only for its own interests, but also for the interests of stakeholders. Environmental performance is one of the criteria that can be used to evaluate the company's responsibility to the environment. If the company's environmental performance is good, then the community and the environment will benefit, and vice versa. Through the PROPER program, companies can demonstrate their commitment to the environment in improving their company's environmental management system. Therefore, the higher the PROPER rating held by the company indicates the higher the company's chances of disclosing carbon emissions. The results of this study contradict research conducted by Selviana and Ratmono (2019) and research conducted by Amaliyah and Solikhah (2019) which states that environmental performance does not have a significant effect on carbon emission disclosure. Other research that supports the results of this study is that conducted by Saptiwi (2019) which states that environmental performance has a significant effect on carbon emission disclosure.

CONCLUSION

This study examines the influence of the independent board of commissioners, board of Directors, audit Committee, institutional ownership, managerial ownership, and environmental performance on carbon emission disclosure. The results of the study concluded that the board of Directors, audit Committee, and environmental performance have a positive and significant effect on carbon emission disclosure. While the independent board of Commissioners, institutional ownership, and managerial ownership have no influence on carbon emission disclosure.

The limitation of this study is that of the total sample of 100 companies studied only 24 companies that have followed the PROPER program. This is certainly still lacking to describe the real situation. In addition, the adjusted R-square in this study was 47.19%. This means that carbon

emission disclosure is influenced by independent variables, namely corporate governance which includes the independent board of commissioners, board of Directors, audit Committee, institutional ownership, managerial ownership, and environmental performance only by 47.19% so that there are 52.81% influenced by other variables outside the variables studied.

Based on the conclusions and limitations in this study, the researchers provide suggestions for future researchers are expected to use a much wider number of samples so that the results obtained can better describe the actual situation. In addition, further researchers expected the existence of other variables that may also affect many things in this study.

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