

THE EFFECT OF CORPORATE GOVERNANCE STRUCTURES, ENVIRONMENTAL PERFORMANCE, AND MEDIA COVERAGES TO CARBON EMISSIONS DISCLOSURE

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Abstract — Companies are currently required to be more transparent and accountable in disclosing environmental information. One of them is the disclosure of carbon emissions which are part of the form of environmental disclosure carried out voluntarily by the company. The purpose of this research is to prove the positive effect of institutional ownership, independent commissioners, environmental performance, and media coverage to carbon emissions disclosure. The extent of carbon emission disclosure was measured by carbon disclosure information index that provided by the Carbon Disclosure Project. The author used mining companies listed on the Indonesia Stock Exchange for 2015 – 2019 as research sample that was selected by using purposive sampling method. The analytical method used in this research was multiple regression analysis. This research showed that independent board of commissioners, environmental performance, and media coverage had positive effect on carbon emissions disclosure. On the other hand, the institutional ownership had negative effect to carbon emissions disclosure. From this result of research, the companies can increase sensitivity or attention to emission carbon disclosure, especially for corporations that have direct contact and impact on society and the environment in surroundings.

Keywords: Institutional Ownership; Independent Commissioners; Environmental Performance; Media Coverage; Carbon Emissions Disclosure

1. INTRODUCTION

1.1 Research Background

Environmental change is, as of now, getting critical outcomes as a worldwide ecological issue. One of the reasons for environmental change on the planet is the ozone-depleting substances delivered by human exercises (IPCC, 2021). Fifty of the world's 500 most prominent listed organizations are liable for almost 3/4 of the 3.6 billion metric huge loads of ozone-depleting substances. The carbon delivered comes from organizations working in the energy, crude materials, and utility areas. Earth-wide temperature boost and the dangers of environmental change are perceived universally as huge issues for organizations. Issues that have grown as of late regarding an unnatural weather change are likewise firmly identified with organization exercises (CDP, 2013). The top three of the three hundred causes

of carbon emissions are companies from the industrial, power generation, and transportation sectors (Ministry of Energy and Resources, 2017).

The impact of climate change is the increase in temperature on earth globally or often called global warming. Climate change occurs because greenhouse gases resulting from human activities and industrial increasing activities in the earth's atmosphere (Aini, et al., 2022). The new effects of the environmental change include an increment in surface temperature, stormy climate changes, an increment in the environment, and outrageous climate (Bappenas, 2013). Indonesia has confirmed the Kyoto Protocol through Law no. 17 of 2004 to execute a maintainable turn of events and partake in endeavors to lessen worldwide ozone harming substance outflows.

Indonesia expected to bridge the role of developed countries in developing various sectors of emission reduction and increasing carbon emission absorption through investment. Indonesia ratified the Kyoto Protocol for the first period on June 28, 2004, through Law no. 17 of 2004 (Abdullah, et al., 2020). The ramifications of the Kyoto Protocol lead to carbon accounting and the initiative called the National Action Plan on Greenhouse Gases Emission targeted a reduction of the Greenhouse Gases (GHG) emission as much as 26% with national effort or 41% with international support by 2020 (Saraswati, et al., 2021).

The United Nations Framework Convention on Climate Change (UNFCCC) made an agreement inviting many countries to reduce greenhouse gases under the Paris Agreement. The Paris Agreement has a target to strengthen the influence of global countries in climate change by considering the climate temperature that was rising of 2 degrees Celsius. There is a connection between carbon accounting and carbon emissions produced in the utilization of crude materials, worker costs, plant overhead expenses, environmental cost, and expenses regarding standard carbon disclosure (Irwhantoko, 2016). In Indonesia, carbon emissions disclosure is still voluntary. Some companies will consider whether the benefits derived from social information disclosure will be worth as their competitive advantage with the costs incurred (Amar et al., 2019). If the benefits obtained from disclosing the information are considered comparable or more than the costs incurred, the company will disclose it (Nainggolan, 2015).

In 2019, P.T. Aneka Tambang Tbk had engaged in gold production and was the largest company in Indonesia. P.T. Aneka Tambang Tbk has implemented social responsibility to protect the surrounding environment due to the company's activities. This company's social responsibility is to control emissions by reducing the effects of greenhouse gases. Carbon emission disclosure can help companies that produce greenhouse gases to avoid various threats such as risk reputation and legal proceedings (Andrian & Kevin, 2021). Companies that make and disclose sustainability reports regarding carbon emission disclosures will have several considerations to gain legitimacy from stakeholders. This disclosure can already be considered a form of responsibility from the company to protect the environment and avoid the most critical threat from companies that produce greenhouse gases (Berthelot & Robert, 2011). Disclosure of carbon emissions gives stakeholders high self-esteem to the companies' commitment to maintaining the sustainability of the company and the responsibilities for the environmental impact to fulfill its responsibilities to stakeholders (Suryani & Wijayati, 2019).

Companies that carry out corporate governance will pay attention to many sectors to increase the value of a company, one of which is by making an accountability report on the environment (Nainggolan, 2015). The author use corporate governance structures such as institutional ownership and independent board of commissioners. Institutional ownership can adjust the amount of investors to the executives, so the more the percentage of institutional

ownership owned in a company, the more companies' disclosure of social and environmental accountability reports will get bigger (Chang & Zhang (2015). When the number of shares owned by institutional parties is higher, the awareness of the importance of companies to disclose carbon emissions in the company's annual report can be higher (Akhiroh, 2016). The independent board of commissioners as an independently organ of the company for supervising and providing advice to the board of directors (Ardillah & Vanesa, 2022). This monitoring and providing advice that was done by board of independent commissioners aims to increase the firm value by disclosing carbon emissions to protect the environment (Nainggolan, 2015).

In 1995, the Ministry of Environment developed the PROPER as assessment program to improve the company's environmental management performance. PROPER is expected to be active information for stakeholders to respond to the level of arrangement and encourage companies to improve their environmental management performance. Carbon emissions disclosure is one of the environmental management performances to show stakeholders that the company has carried out high environmental performance (Jannah & Muid, 2014). Media coverage can affect public attitudes towards companies, affecting stakeholders in terms of environmental disclosure because stakeholders and media coverage have an essential impact (Dawkins & Fraas, 2011). Therefore, the role of the media has meaning and can be used as a way to provide information to stakeholders by voluntarily disclosing carbon emissions.

Firm size shows the size of a company as seen from the total assets owned by the company (Hermawan et al., 2018). Large companies are under more pressure to disclose carbon emissions than small companies (Yusuf, 2020). The more prominent company will have higher pressure and demand from various parties to do carbon emission disclosure than a small company because its operation activities are equal to its contribution to the surrounding environment (Pratiwi et al., 2021).

Several research results on the carbon emissions disclosure have inconsistent results. Nainggolan's research (2015), Trufvisa & Ardiyanto (2019), Nasih, et al. (2019), Zanra, et al. (2020), and Saraswati, et al. (2021) suggests that independent board of commissioners significantly affect the carbon-emissions disclosure, while Akhiroh's (2016), Suryani & Wijayati's (2019), and Ulupui, et al. (2020)'s research states that independent board of commissioners doesn't affect carbon-emissions disclosure. Nainggolan (2015), Akhiroh's (2016), Akbas & Canikli (2019), and Solikhah, et al. (2021) states that institutional ownership affect carbon emissions disclosure, while Hermawan et al. (2018) and Aini, et al. (2022) research states that institutional ownership doesn't affect carbon-emissions disclosure. The research results by Janah & Muid (2014) prove that environmental performance, media coverage, and firm size have a positive effect on carbon emissions disclosure. Cahya (2016), Ulfa & Ermaya (2019), Ulupui et al. (2020), and Pratiwi et al. (2021) prove that environmental performance does not affect the carbon-emissions disclosure. Cahya (2016), in his research, states that media coverage does not have a significant effect on carbon emissions disclosure.

This research references resulted from Nainggolan's research (2015) by using two other independent variables from Jannah & Muid's (2014) research, such as environmental performance and media coverage, and made the addition of two independent variables due to the suggestion from Hallmah & Yanto (2018), such as institutional ownership and board of independent commissioners. The researcher also adds firm size as a control variable from Hermawan et al. (2018). The motivation for doing this research is because of the inconsistent results of previous studies. This inconsistent results has made the author to verify the positive effect of institutional ownership, independent board of commissioners, environmental

performance, and media coverage to carbon-emissions disclosure with firm size as the control variable.

1.2 Problem Identification

Based on the research background, the formulation of the research problem is as follows:

1. Does institutional ownership has a positive effect on carbon-emissions disclosure with firm size as the control variable?
2. Do the independent board of commissioners have a positive effect on carbon-emissions disclosure with firm size as the control variable?
3. Does environmental performance have a positive effect on carbon-emissions disclosure with firm size as the control variable?
4. Does the media coverage has a positive effect on carbon-emissions disclosure with firm size as the control variable?

1.3 Literature Review and Hypothesis

1.3.1 Stakeholder Theory

The stakeholder theory expresses that the organization isn't a substance that works for individual interests and should give partners the advantages of. Organizations that reveal carbon disclosure will make it simpler for stakeholders to settle on choices about the condition of organizations that unveil their carbon emission performance, pressure organizations to diminish carbon emissions, and prepare public discussions on environmental change approaches and guidelines (Jannah & Muid, 2014). Stakeholders extraordinarily influence the presence of an organization since stakeholders assume a vital part in the improvement of the organization (Stanny, 2013). The actual stakeholders incorporate investors, the government, the community, workers, and different parties. For organizations that deliberately give information identified with the social, ecological, and intellectual aspects, the stakeholder assessment of the company will be better (Sirojudin & Nazarudin, 2014).

1.3.2 Legitimacy Theory

Legitimacy theory are theories speculations that have likenesses however are unique (Gray et al., 1995). Legitimacy theory is needed to explain expected to clarify the voluntary environmental disclosure by associations. Legitimacy theory is not the same as stakeholder theory which expresses that organizations and their management activities make reports following the desires and qualities of various stakeholder groups. In legitimacy theory, the company do social responsibility reports as a structure to get lawfulness from the local area where the company is located and can amplify its economic strength in the long haul (O'Donovan, 2002). In contrast, legitimacy theory focuses more on collaborations among organizations and society. This legitimacy theory can cooperate from the companies to the community by decreasing carbon emissions to demonstrate to the public that the organization additionally takes part in securing the climate around which the organization is established (Nainggolan, 2015).

1.3.3 Carbon Emissions Disclosure

Carbon emissions result from gases released from the combustion of compounds containing carbon, especially carbon dioxide (CO₂) (Nainggolan, 2015). Carbon emissions themselves are better known as greenhouse gases. The greenhouse gas effect was first

proposed by Sulistyono (2012) and often presented to internal and external decision-making by utilizing voluntary disclosure. Therefore companies are required to be more open with information related to carbon emissions disclosure (Andrew & Cortese, 2011). Carbon emissions disclosure is an environmental disclosure that is a form of company concern in preserving the environment and becomes part of an additional report in the company's sustainability report (Arifah & Haryono, 2021). Carbon emissions disclosure in Indonesia until 2019 is still voluntary because information related to environmental disclosure is still additional information. Carbon emissions disclosure explains whether the organization is subject to emission regulations and policies at the state, regional, or industry level (Cotter et al., 2011).

1.3.4 Institutional Ownership

Institutional ownership is share proprietorship claimed by organizations by non-bank monetary institutions that manage other people's assets. Institutional proprietorship is the responsibility of an organization by specific institutions, for example, insurance agencies, benefits reserves, or different organizations (Ardiansyah, 2014). Institutional ownership plays a vital part in limiting agency conflicts that happen among organizations and stakeholders. Institutional ownership is considered capable of being a successful monitoring mechanism in each choice taken by managers because institutional investors are engaged with making strategic decisions avoid favourable circumstances for self-centred conduct (Jensen & Meckling, 1976; Ardillah & Halim, 2022). The higher the degree of institutional ownership, the more grounded the degree of control completed by external parties to urge organizations to unveil data identified with carbon emissions (Widyaningsih, 2018).

1.3.5 Independent Board of Commissioners

The independent board of commissioners is essential for the organization that plays a significant part in carrying out good corporate governance adequately and giving dependable financial reports. This development can be trusted to diminish the effect brought about by the interests of public investors and different stakeholders, particularly in Indonesia that utilization public assets in financing their business (National Committee on Governance Policy, 2006). The independence of the board of commissioners can increase the board's effectiveness and the overall performance of the company (Nainggolan, 2015). Public companies are needed to have independent commissioners provide at least 30% of the total number of commissioners to increase the effectiveness of supervision and improve the quality of reports of a company.

1.3.6 Environmental Performance

ISO 14001 defines environmental performance as how well the company can manage the surrounding environment. Company activities negatively impact climate change because these activities can damage the environment (Jannah & Muid, 2014). The Ministry of Environment developed Company Performance Rating Program in Environmental Management (PROPER) as a form of government policy to improve company management performance. The companies will be carried out to improve their environmental management by increasing voluntary information disclosure. The information related to environmental performance made by companies regarding the carbon emissions disclosure aims to provide information to stakeholders to make decisions (Dawkins & Fraas, 2011). The companies that disclosed emissions have PROPER levels made for gold and green ranks (score 4 and 5) (Ministry of Energy and Mineral Resources, 2017).

1.3.7 Media Coverage

Media coverage is a tool to communicate information to many parties reported by the media. The emergence of media in a company makes stakeholders understand more about the surrounding environment and take a stand on the news. Good news related to the environment of a company will provide information to stakeholders to make investment decisions. Otherwise, if news related to the environment of a company is not good, then investment decision-making from stakeholders will not be good either (Jannah & Muid, 2014). Media coverage can influence public attitudes towards companies and stakeholders. The media is an essential and effective tool for disseminating information (Mary et al., 2019). According to media coverage plays an essential role in influencing stakeholder decision-making in investment (Wang et al., 2013). The media coverage simultaneously can determine the company's disclosure strategy. Regarding the issue of climate change and reducing carbon emissions, the media also plays a role in monitoring company activities that can affect climate change. The existence of the media in a country also controls the activities of a company, so companies also need to take into account the emergence of media in that country (Dawnkins & Fraas, 2011).

1.3.8 Institutional Ownership and Carbon Emissions Disclosure

Institutional ownership is a crucial component of the company's ownership because institutions are expected to increase supervision over management (Akhiroh, 2016). Companies with a high level of institutional ownership will have pressure from stakeholders and will be under the willingness of stakeholders to disclose more information. It will lead to more outstanding supervisory efforts by the institution to monitor the company. It can prevent opportunistic behavior on the part of managers considering that external parties have more significant resources and impact the company (Nainggolan, 2015). It is in line with a signal theory where good companies will signal stakeholders to differentiate between good and bad companies. Institutional ownership plays an essential role in building a company's reputation.

Ha1: Institutional ownership affects positively to carbon emissions disclosure.

1.3.9 Independent Board of Commissioners and Carbon Emissions Disclosure

The board of commissioners is the party that can contribute to the management and turn into a scaffold to the shareholders. It is also significant for the management to complete its corporate governance structure appropriately through independent board of commissioners. It can expand the board's adequacy to overview the company's overall performance (Trufvisa & Ardiyanto, 2019). Independent commissioners will have the option to urge organizations to uncover data to offer information to give signals to stakeholders in decision-making (Nainggolan, 2015). The expanding number of independent commissioners will stimulate uncovering carbon emissions (Akhiroh, 2016). It follows the stakeholder theory where an independent party from the commissioners can supervise the management and support carbon emissions disclosure from the company's activities (Liao et al., 2015).

Ha2: Independent board of commissioners affects positively to carbon-emissions disclosure.

1.3.10 Environmental Performance and Carbon Emissions Disclosure

Company Performance Rating Program in Environmental Management (PROPER) is a form of assessment from the government regarding environmental performance that has been carried out by companies to protect the environment and can be seen in the form of voluntary disclosure reports regarding the environment (Jannah & Muid, 2014). PROPER will

be one of the pieces of information that stakeholders will see because PROPER is proof that the company has carried out environmental performance. If a company has PROPER, it is expected that stakeholders can make decisions to invest in the company (Dawnkins & Fraas, 2011). It is in line with the legitimacy theory where the company, when carrying out company activities, must also protect the environment around the company to gain legitimacy and improve its image from the community (Pratiwi et al., 2021).

Ha3: Environmental performance affects positively to carbon emissions disclosure.

1.3.11 Media Coverage and Carbon Emissions Disclosure

The relationship between stakeholders and media coverage is essential to carbon emission disclosure. The media is a place for companies to make reports and do news through the media (Dawkins & Fraas, 2011). Media can provide significant parts to communicate the information relating to company activities to the public, so the companies must be aware of the media to maintain the company's reputation and value (Ulfa & Ermaya, 2019). Media coverage is the primary source of information on carbon-emissions disclosure. It is in line with the signal theory because if the information issued by the company is good, it is used as a signal. Signals containing good information will positively impact stakeholder investment decision-making (Wang et al., 2013).

Ha4: Media coverage affects positively to carbon emissions disclosure.

1.3.12 Research Model

The research model is presented in Figure 1.

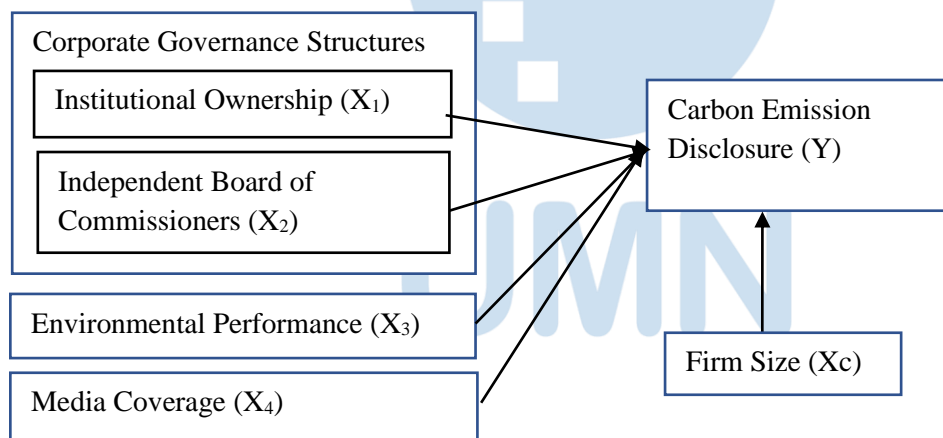


Figure 1. Research Model

2. METHODOLOGY AND DATA ANALYSIS

2.1 Research Design

The population in this research is a mining company listed on the Indonesia Stock Exchange. The sample selection method used in this research is purposive sampling. Purposive sampling is a sample based on criteria adjusted to the research objectives (Sugiyono, 2015). The sample of this research is mining companies listed on the Indonesia Stock Exchange from 2015-2019 companies and adjusted to predetermined criteria. The 140 observation data have been selected with the criteria that have been set in table 1.

Table 1. Result of Selection of Samples

No	Criteria	Accumulation Amount
1	Mining companies listed on the Indonesia Stock Exchange for the period 2015 – 2019	43
2	Mining companies that have delisted in research period	(2)
3	Mining companies that have not published audited financial statements and annual report for the period ending December 31 in research period	(7)
4	Companies that disclose carbon emission information that are sourced from annual reports, websites, and other media.	(6)
Number of company samples per year		28
Total observation data during the 2015 – 2019 period		140

2.2 Variable Operational Definition

Carbon emissions disclosure is the extent of disclosing the carbon emissions of an organization or company and setting targets for reducing these emissions (Choi et al., 2013). Carbon emissions result from gases released from company activities that burn compounds containing carbon, especially carbon dioxide (CO₂) (Sulistiyono, 2012). Carbon emission disclosure is measured using the Carbon Emission Disclosure adopted from Choi et al. (2013) with a checklist for data development provided by the Carbon Disclosure Project. The Carbon Disclosure Project provided five broad categories of carbon emissions disclosure such as risks and opportunities of climate change, emissions of greenhouse gases, energy consumption, reduction of greenhouse gases and costs, and accountability of emission carbon (Choi et al., 2013). The measurement of the carbon emission disclosure is carried out using a ratio scale and can be obtained through the following steps (Nainggolan, 2015).

1. Give a score on each disclosure item with a dichotomous scale. After assigning a score of 1 to each company, the minimum total score is 0, and the maximum total score is 18 if the company discloses all items in the information in the company's annual report.
2. The score for each company is then added to the total maximum score of 18.
3. Calculate the index by calculating the total carbon emissions disclosure divided by the maximum score multiplied by 100%.

$$\text{Carbon Emission Disclosure Index} = \frac{\sum d_i}{M} \times 100 \%$$

$\sum d_i$ = Items revealed

M = The total items disclosed with a maximum overall score is 18

Institutional ownership is the responsibility to divide the proprietorship of company shares (Ardiansyah, 2014). The measurement of institutional ownership is replicated from Nainggolan (2015) by dividing the number of shares that become proprietorship by the institution with the number of outstanding shares at the end of the year. The measurement scale used to measure institutional ownership is the ratio scale.

Institutional ownership = (Amount of shares owned by institutions/number of outstanding shares at the end of the year) x 100 %

The independent board of commissioners becomes a significant part of managing a company's performance (Nainggolan, 2015). Independent commissioners are measured by dividing the number of an independent board of commissioners by the total number of the board of commissioners (Liao et al., 2015). The measurement scale used in measuring the board of commissioners is the ratio scale.

Independent board of commissioners = (Number of members of an independent board of commissioners/ total members of the board of commissioners in a company) x 100 %

Environmental performance is the company's performance to protect the environment. Environmental performance is measured using PROPER (Cahya, 2016). PROPER is one of

the efforts of the State Ministry of the Environment to encourage companies to carry out environmental management through information instruments (Ardillah & Chandra, 2021)). PROPER becomes information for stakeholders in decision-making. PROPER includes ranking companies in five colors such as black (terrible with score 1), red (poor with score 2), blue (Good with score 3), green (very good with score 4), and gold (very, very good with score 5) (Jannah & Muid, 2014). The measurement scale used to measure environmental performance is the interval scale.

Media coverage is information delivered in the media to give this information to stakeholders (Dawkins & Fraas, 2011). The measurement scale used to measure media coverage is nominal scale. A nominal scale for measuring media coverage by the score of 0 and 1. A condition value of 1 for organizations that unveil data identified with carbon emissions through the organization's site, while value of 0 for organizations that don't uncover information identified with carbon emissions just as different media revelations like yearly reports, supportability reports, and other media (Abdullah, et al., 2020).

Firm size shows that the size of a company is measured by using total assets, the number of workers, the level of sales or income, and market capitalization. Companies that have a larger size will earn greater attention from the public and have significant resources (Hermawan et al., 2018). The researcher used firm size as the control variable. Firm size is measured by using the natural logarithm of total assets. The measurement scale used to measure firm size is the ratio scale.

2.3 Data Analysis Method

The data analysis used in this research was descriptive statistics, classic assumption test, and multiple linear regression to test the hypothesis partially. Multiple linear regression analysis is a regression that has one dependent variable and two or more independent variables (Sugiyono, 2015). After data collection, the data were analyzed with the following equation model.

$$CED = \alpha + \beta_1 IO + \beta_2 IBC + \beta_3 PROPER + \beta_4 MC + \beta_5 SIZE + e$$

Where:

CED	= Carbon emissions disclosure
a	= Constant
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$	= Regression coefficient
IO	= Institutional ownership
BIC	= Independent board of commissioners
PROPER	= Environmental Performance
MC	= Media Coverage
e	= Error

3. RESULT AND DISCUSSION

3.1 Result

This research describes the results of the average (mean), minimum value, maximum, and standard deviation value in table 2.

Table 2. Descriptive Statistics Test Results

Variables	Min	Max	Mean	Std. Dev.
Carbon Emissions Disclosure	0,111	0,722	0,307	0,1839
Institutional ownership	0,227	0,973	0,7253	0,1869
Independent board of commissioners	0,2	0,667	0,3753	0,0847
Environmental performance	3	5	3,72	0,6661
Media coverage	0	1	0,4000	0,49403
Firm size	14,003	30,6647	20,4526	3,5933

Carbon emissions disclosure with a minimum value of 0,111 is found at P.T. Resources Alam Indonesia Tbk (KKGI), and the maximum value of 0,722 is found at P.T. Aneka Tambang (Persero) Tbk (ANTM). The average value (mean) is 0,30747 with a standard deviation of 0,1839. The average value (mean) and standard deviation indicate that the distribution of data on carbon emissions disclosure is expected because the average value (mean) is greater than the standard deviation value ($0,30747 > 0,1839$). The average value (mean) is 30,74%, which means that in this research, not all mining companies have disclosed carbon emissions, especially in points RC-3 and RC-4 regarding greenhouse gas reductions and AEC-2 related to carbon emission accountability.

The results of institutional ownership show a minimum value of 0,227 from P.T. Bumi Resources Tbk (BUMI), and the maximum value is 0,973 from P.T. Golden Energy Mines Tbk (GEMS). The average value (mean) is 0,7253 with a standard deviation of 0,1869. The average value (mean) and standard deviation show that the distribution of data on institutional ownership is expected because the standard deviation value is smaller than the average value (mean) ($0,7253 > 0,1869$). The average value (Mean) is 66,7%. In this research, the average institutional ownership in mining companies is 66,7%, which means that mining companies already have more institutional ownership than managerial ownership. It can provide tighter oversight to the management.

The results of the independent commissioners show a minimum value of 0,200 from P.T. Timah (Persero) Tbk (TINS) and a maximum value of 0,667 from P.T. Toba Bara Sejahtera Tbk (TOBA). The average value (mean) is 0,3753, with a standard deviation of 0,0847. The average value (mean) and standard deviation show that the distribution of data on the independent variable proportion of independent commissioners is expected because the average value (mean) is greater than the standard deviation value ($0,3753 > 0,0847$). The average value (mean) is 37,53%. In this research, the average of company samples has an independent board of commissioners that has met the provisions of good governance guidelines with a minimum of 30%.

The results of descriptive statistics on the environmental performance show a minimum value of 3 using a blue (good) rating from P.T. Timah (Persero) Tbk (TINS), P.T. Vale Indonesia Tbk (INCO), P.T. Golden Energy Mines Tbk (GEMS), P.T. Indo Tambangraya Megah Tbk (ITMG), PT. Resources Alam Indonesia Tbk (KKGI) and the maximum value is from P.T. Medco Energi Internasional Tbk (MEDC) while the average value (mean) is 4 with a standard deviation of 0,666. The average value (mean) and standard deviation show that the distribution of data on the independent variable environmental performance is expected because the average value (mean) is greater than the standard deviation value ($4 > 0,666$). The average value (mean) is 4. In this research, mining companies have followed PROPER with an average rating of 4 or blue, meaning that not all companies have disclosed carbon emissions because the PROPER standard for disclosing carbon emissions is green and gold.

Table 3. Media Coverage Frequency Distribution

	Amount	Percentage
Not disclosing carbon emissions in the media	84	60.0
Disclosing carbon emissions in the media	56	40.0
Total	140	100.0

Based on the results of table 3 regarding media coverage, the amount of data used in the research is 140. 84 out of 140 data with a proportion of 60% that resulted from companies that do not disclose carbon emissions in annual reports, sustainability reports, and various other media will be given a value of 0. 56 out of 140 data with a proportion of 40 % that resulted from companies that disclose carbon emissions in reporting in annual reports, sustainability reports and various other media will be given a value of 1. These results prove that not all companies have disclosed carbon emissions and are reported by the internal and external media because carbon emission reductions are still voluntary.

The Kolmogorov – Smirnov test results show that the data is usually distributed. It can be seen from the significance level of $0,225 > 0,1$, which means that the residual data is usually distributed. This research model has met the classical assumption of the normality test. The results of the multicollinearity test show the VIF (Variance Inflation Factor) value is not more than 10. The institutional ownership has amounted for VIF to 1,235, independent commissioners have amounted to for VIF to 1,663, the environmental performance has amounted for VIF to 1,080, media coverage has amounted for VIF to 1,305, and firm size has amounted for VIF to 1,388. So, it can be concluded there is no multicollinearity between the independent variables in the regression model. The results of the autocorrelation test show the Durbin - Watson value of 0,561. The value between the -2 and +2 means that there is no autocorrelation in the regression model of this research.

The coefficient of determination test results shows that the value of Adjusted R2 is 0,778. The value of the coefficient of determination is close to 1, which means that variations in institutional ownership, the proportion of independent commissioners, environmental performance, and media coverage with firm size as a control variable can explain variations in carbon emission disclosure by 77.8%, the remaining 22,2% is explained by other factors contained in the regression model.

This research uses one dependent variable, namely the carbon emissions disclosure, and four independent variables, namely institutional ownership, the proportion of independent commissioners, environmental performance, and media coverage. The hypothesis test results in this research are as follows.

Table 4. Hypothesis Test Results

Variables	Coefficient	Sig. Value
(Constant)	-0,179	0,195
Institutional ownership	-0,224	0,002
Independent board of commissioners	0,388	0,035
Environmental performance	0,031	0,094
Media coverage	0,334	0,000
Firm size	0,012	0,002

The results are shown in table 4 by taking into account the regression model and the results of multiple linear regression, it can be seen that the equations of factors that affect the carbon emissions disclosure are as follows:

$$\text{CED} = -0,179 - 0,224 \text{ IO} + 0,388 \text{ BIC} + 0,031 \text{ PROPER} + 0,334 \text{ MC} + 0,012 \text{ SIZE} + e$$

The results from table 4 show that institutional ownership has a significance value of 0,002, which shows a significance value lower than 0,1. A comparison can be made ($0,002 < 0,1$) with a beta value of -0,224. It can be concluded that then H_{a1} is rejected, which means that institutional ownership has a negative effect on the carbon-emissions disclosure. The proportion of the board of independent commissioners has a significance value of 0,035. This result shows a significance value greater than 0,1 so that a comparison can be made ($0,035 < 0,1$) with beta value of 0,388. It can be concluded that H_{a2} is accepted, which means that the board of independent commissioners has a positive effect on the carbon-emissions disclosure.

Environmental performance has a significance value of 0,094. The results of this significance indicate that significance value $0,094 < 0,1$ with beta value of 0,031. It can be concluded that H_{a3} is accepted, which means that environmental performance positively affects the carbon-emissions disclosure. Media coverage has a significance value of 0,000. These results indicate that the significance value is below 0,05 ($0,000 < 0,1$) with a beta value of 0,334. It can be concluded that H_{a4} is accepted, which means that media coverage positively affects carbon emissions disclosure. Firm size as a control variable has a significance value of 0,002 with a beta value of 0,012. The results of this significance indicate that significance value $0,002 > 0,1$, and it can be concluded that firm size has a positive effect on the carbon-emissions disclosure.

3.2 Discussion

Institutional ownership has a negative effect on carbon emissions disclosure. These outcomes support the result of research by Nainggolan (2015), Akhiroh (2016), Akbas & Canikli (2019), and Solikhah, et al. (2021). The results of this research don't support the research of Hermawan et al. (2018) and Aini, et al. (2022), which states that the institutional ownership do not affect the carbon-emissions disclosure. It demonstrates that the more institutional ownership that the organization had can diminish the carbon emission disclosure because there is no management to urge organizations to reveal carbon emissions. This information will be utilized as a sign to stakeholders in making decisions. This result of research inconsistent with stakeholder theory where institutional is one who is a stakeholder companies that can influence and also influenced by the company owned institutional, so that good and bad institutionally owned companies will affect institutional companies to disclose carbon emission disclosure.

The independent board of commissioners has a positive effect on carbon-emissions disclosure. This result has the same result as Nainggolan's (2015), Trufvisa & Ardiyanto (2019), Nasih, et al. (2019), Zanra, et al. (2020), and Saraswati, et al. (2021). The results of this research don't support the research of Akhiroh (2016), Suryani & Wijayati's (2019), and Ulupui, et al. (2020). The board of commissioners with their independence are considered capable of reducing information asymmetry by maintaining transparency and disclosure of information for stakeholders. The independent board of commissioners cannot encourage companies to make policies but can only provide policies to encourage them to disclose carbon emissions. It is in line with the stakeholder theory where non-affiliated parties from the board of commissioners should monitor and encourage companies to disclose carbon emissions for stakeholder decision-making.

Environmental performance has a positive effect on carbon emission disclosure. These results support the result of research by Dawnkin & Fraas (2011), Jannah & Muid (2014), and Prafitri & Zulaika (2016), which states that environmental performance has a positive effect on carbon emissions disclosure. These results contradict with the result of research by Ulfa &

Ermaya's (2019), Ulupui et al. (2020), and Pratiwi et al. (2021) that environmental performance doesn't affect carbon-emissions disclosure. Increasing the PROPER rating can motivate companies to disclose carbon emissions in their companies. The PROPER rating indirectly represents the company's commitment to anticipating reducing climate change problems. PROPER is one of the measurements for companies that have carried out environmental performance through the color rating used in PROPER. Environmental performance is proof that the company has taken care of the environment around the company. It is in line with the legitimacy theory where the company when carrying out company activities, must also maintain the environment around the company so that the surrounding community also does not feel disturbed from the company's activities.

Media coverage has a positive effect on carbon emissions disclosure. These results support the research of Dawnkin & Fraas (2011), Jannah & Muid (2014), Ulfa & Ermaya (2019), Abdullah, et al. (2020), and Ulupui, et al. (2020) which state that the role of the media can encourage companies to publish activities in the environmental field to get a positive response from the community and stakeholders. This result contradicts the research results by Pratiwi & Sari (2016), which state that media coverage does not affect the carbon-emissions disclosure. Companies that have implemented policies related to the carbon emissions disclosure will make disclosures through the media. Knowledge of the environment causes stakeholders to start paying attention to information about the company's environment. A good company will have policies related to protecting the environment for the company's sustainability. The media will be the bridge between the company and the stakeholders. It is in line with the legitimacy theory because stakeholders will see information related to the environment in the media coverage, so if the company's media coverage is good, then stakeholder can think rational to make decision-making for the investment in the company's share.

4. CONCLUSION AND SUGGESTION

4.1 Conclusion

This research aims to prove the positive effect of institutional ownership empirically, the proportion of independent commissioners, environmental performance, and media coverage to the carbon-emissions disclosure. Institutional ownership affects negatively to the carbon emissions disclosure and in aligns with stakeholder theory where good and bad institutionally owned companies will affect institutional companies to disclose carbon emission disclosure. The proportion of the board of independent commissioners affects the carbon-emissions disclosure. It is in line with stakeholder theory where an independent party from the board of commissioners should encourage companies to disclose carbon emissions for stakeholder decision-making. Environmental performance has a positive effect on carbon emissions disclosure. It is in line with the legitimacy theory where companies that carry out environmental performance will get legitimacy from around the company so that the surrounding community does not feel disturbed by the companies for supporting activities related to carbon emission. Media coverage has a positive effect on carbon emissions disclosure. It is in line with the signal theory because the information held by the company will be like a signal for stakeholders to do decision-making in the company, especially to disclose carbon emissions.

4.2 Limitation and Suggestion

The research period used in this study is only four years, starting from 2016-to 2019. For further research, future researchers are expected to do at least five years to provide

research results that better describe the actual situation. The research population used is limited to mining companies listed on the Indonesia Stock Exchange. As a result, this research does not represent the entire sector of public companies in Indonesia. For further study, the author suggests using other sector companies such as manufacturing companies so that the results of the study can be more generalized. The future researchers can add another independent variables related to the carbon emissions disclosure such as carbon risk management and board diversity and use additional control variables such as leverage and company age to get the significant effect of independent to dependent variable according to the relevant theory. The author also made suggestions in the following study to use moderation equation model to cover the inconsistency of this research findings.

4.3 Implication

This study is expected to have the following implications. First, investors can pay attention to sustainability reports related to the carbon emissions disclosure as a basis for making good decisions to invest in company's share. Secondly, for companies, it is expected that companies can increase sensitivity or attention to emission carbon disclosure, especially for corporations that have direct contact and impact on society and the environment in surroundings. Thirdly, the government can reform laws related to carbon emissions for companies in Indonesia to encourage companies to comply with existing regulations and reduce carbon emissions so that the surrounding environment is maintained for the company's sustainability.

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