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# WHETHER ENVIRONMENTAL PERFORMANCE CAN STRENGTHEN CORPORATE GOVERNANCE RELATIONSHIP TO CARBON EMISSION DISCLSOURE

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## ABSTRACT

This research aims to examine the impact of the correlation between corporate governance and moderated carbon emission disclosure and environmental performance. This study used secondary data using purposive sampling techniques. Twelve companies met the specified criteria and obtained 60 data during the research period from 2017 to 2021. The data analysis technique used is "Moderated Regression Analysis (MRA)." From the results of research on corporate governance, it negatively affects carbon emission disclosure, and environmental performance negatively affects carbon emission disclosure. Environmental performance deduces the correlation between corporate governance and carbon emission disclosure.

## INTRODUCTION

Currently, the issue of climate change is being discussed. This issue has received a special discussion discussed by state leaders and leaders at the "World Economic Forum (WEF)" Annual Meeting 2020 in Davos, Switzerland. The WEF was first held in 1971. One of the issues raised was the environmental issue which became a long-term global risk that must be faced by business people, investors, and policymakers.

Global heat change and climate change are among the most important issues on the global agenda today, including Indonesia. According to the Intergovernmental Panel on Climate (Pörtner et al., 2022), the impact of climate change is due to global temperature warming, which can damage the health of the planet. The activities of human and species gatherings and the survival that underpins the existence of living things on planet earth are one of the effects of climate change. According to the Climate Change Performance Index (CCPI, 2021), Indonesia is ranked 24th, and Indonesia is on the list of medium performers in CCPI 2021. This ranking is up from the previous year, which kept the rank of 39 with the existence of an increase. Companies in Indonesia can be said to be able to carry out activities that can overcome the effects of climate change. One of the activities that can be done is for companies to make

disclosures related to corporate social responsibility. These efforts can be disclosed through annual reports, Sustainability Reports, and the Company's Website.

Rising temperatures on earth cause the atmosphere to warm up, and the surface layer of the oceans will also warm up, so the volume will enlarge and raise the sea level. Warming has also led to melting polar ice caps, which has an impact on increasing the volume of seawater. In addition, warming also causes various disasters, such as droughts, floods, landslides, erratic weather changes, and other disasters (Rachmawati, 2021).

Indonesia is the country that contributes the largest per-capita emissions in the world after the European Union, the US, and China (Jaggi, Freedman, & Martin, 2011), but according to the Bank Information Center (2017), Indonesia has dropped to the sixth largest country after China, the US, Russia, Japan, and the European Union which could result in investors withdrawing their funds from companies categorized as environmental destroyers. Many emissions are produced by industries that use 70% of fossil energy from the total energy consumed (Ministry of Energy and Mineral Resources, 2013). More than 80% of Indonesia's greenhouse gas emissions come from the land use sector and from the energy sector. In order for Indonesia to meet its emission targets, it needs to strengthen the policies that have been implemented by the Government of Indonesia (EG & Murtanto, 2021).

Forests that originally functioned as the lungs of the world capable of producing oxygen and absorbing carbon dioxide exchanged functions to become producers of carbon dioxide gas. The biggest source of emissions in Indonesia is land use change and forestry, particularly logging and forest burning. As much as 62% of emissions produced by Indonesia or as much as 945 MtCo2 (million metric tons) are the impacts of forest burning. This has caused Indonesia to become the country with the highest forest loss rate in the world (Bank Information Centre, 2017). Without the calculation of emissions sourced from forests, Indonesia will be ranked in the top ten of its emissions.

Sustainable development is something that is needed in this situation. Sustainable development is the development needed to meet this generation in such a way that without borders must reduce the ability of future generations to meet their needs (Kusumaningtias, 2013). Sustainable development needs to be carried out because current global economic activities are likely to reduce the fulfillment of future needs by damaging global ecosystems. In an effort to preserve the environment to avoid damage to global ecosystems, accounting science has a role in disclosing financial reporting related to environmental costs (Kusumaningtias, 2013). Presidential Regulation Number 59 of 2017 regarding the Implementation of Achieving of the SGD is "a form of the government's political commitment to implementing the SDGs in a participatory manner that includes many parties." According to POJK No. 51/POJK.03/2017, "The Continuous Action Plan is a written document that details the business activity plan, the short-term (one year), and the long-term (five years) LJK work programs in accordance with the principles used to implement Sustainable Finance." It also includes strategies to carry out the work plan and program in accordance with the targets and timeline set while still paying attention to the fulfillment of caution and the application of risk management.

Public awareness of environmental issues began to grow, marked by the development of efforts to deal with this. Several world countries, including Indonesia, have signed the Kyoto

Protocol. The Kyoto Protocol is an amendment to the United Framework Convention on Climate Change (UNFCCC). Countries around the world that ratified the Kyoto Protocol expressed their commitment to reducing carbon emissions.

The Government of Indonesia is committed to reducing carbon emissions through Presidential Regulation No. 61 of 2011 and Presidential Regulation No. 71 of 2011. According to Presidential Regulation No. 71 of 2011, Greenhouse Gases (GHGs) are gases in the atmosphere, either natural or anthropogenic, that absorb and re-emit infrared radiation. Greenhouse gas emissions are the release of greenhouse gases into the atmosphere in a certain area within a certain period of time. In article 4 of Presidential Regulation No. 61 of 2011, business actors also take part in impacts to reduce GHG emissions. GHGs contain carbon dioxide (CO2) compounds, perfluorocarbons (PFCs), nitrous oxide (N2O), methane (CH4), hydrofluorocarbons (HFCs), sulfur hexafluorides (SF6).

Disclosure of the Company's environment is an implementation of the concept of corporate governance, whose principles include that the Company needs to pay attention to the interests of stakeholders for the long-term survival of the Company. Companies with high-quality corporate governance tend to integrate climate change as their business strategy and maintain a long-term commitment effectively to address the risks and opportunities of climate change across all operations (Milliken & Martins, 1996) : (Ibrahim & Angelidis, 1995) : (Liao, Luo, & Tang, 2015) : (Rupley, Brown, & Marshall, 2012) : (Peters & Romi, 2014) : (Paek, Pak, Kweon, & Hwang, 2013)

The success of the Company is strongly influenced by good corporate governance (GCG). With good corporate governance, it is hoped that it will be able to carry out supervision and control so as to generate added value for the Company (Ariningtika, 2013). With good corporate governance, it should be able to enhance how the environment is implemented and disclosed.

In recent years, irresponsible behavior by managers and negligence in carrying out corporate social responsibility has increased the importance of corporate governance, trust, business ethics, and accountability. This has led to widespread acceptance of the Company having formal or informal obligations not only to shareholders but to a large number of stakeholders. Disclosure of greenhouse gas emissions is part of corporate social responsibility, which is a form of implementation of the concept of GCG.

The issue of corporate governance in the last few years in Indonesia has become a special concern for stakeholders and stockholders. Companies with a good level of environmental performance sometimes have poor corporate governance. It is said that managers only focus on disclosing environmental performance to attract investors. One of the state-owned companies that received the Proper assessment award from the Ministry of Environment of the Republic of Indonesia with a vision and commitment as a 'Green Airline' actually has had very poor corporate governance in the past two years.

This research was motivated because of some of these issues and from previous research. (Choi, Lee, & Psaros, 2013) Ghomi et al. 2013; Jannah and Muid 2014; (Deantari, 2018), (Pradini, 2013) conducted research on the factors that influence the disclosure of carbon emissions. The basis for measuring the disclosure of carbon emissions is the information request sheet provided by the CDP (Carbon Disclosure Project) developed by (Choi et al.,

2013). However, the factors influencing the disclosure of carbon emissions in the study vary. (Choi et al., 2013) use Company Size, Carbon Emission Level, Profitability, Industry Type, and Quality Corporate Governance as independent variables. (Ghomi, Huot, Bau, Beaudouin-Lafon, & Mackay, 2013) Use Firm Size, Leverage, Listing Status, Industry, Corporate Governance, Age of Firm, And Ownership Concentration as independent variables. Jannah and (Muid, Karakaya, & Koc, 2014) use Industry Type, Environmental Performance, Media Exposure, Profitability, Company Size, and Leverage as independent variables. Meanwhile, (Deantari, 2018) uses Environmental Management System, Environmental Performance, Company Size, Profitability, and Leverage to determine the factors influencing GHS Emission Disclosure.

Based on some of the studies above, this research aims to analyze the correlation between good corporate governance and carbon emission disclosure with environmental management systems as moderation variables. This research is different from previous research because this study looked at whether there is an indirect relationship between environmental management systems and good corporate governance. The reference for this study is the research of (Choi et al., 2013), where dependent variables are adopted, namely the disclosure of carbon emissions. (Choi et al., 2013) examined the reporting of carbon emissions in 100 of Australia's largest companies listed on the Australian Stock Exchange in June 2009. The difference between this study and the research of (Choi et al., 2013) lies in its independent variables. The independent variables used by (Choi et al., 2013) are the size of the Company and profitability are used as control variables.

Similar research conducted by (Arisandi & Mimba, 2021) and (Akhiroh & Kiswanto, 2016) discusses the factors that impact the disclosure of carbon emissions, and good corporate governance is an independent variable adopted by this study. The results of (Arisandi & Mimba, 2021) research show that companies that respond to carbon emission disclosure tend to have an independent board on their board of commissioners. In contrast to the research (Akhiroh & Kiswanto, 2016), which stated that the proportion of independent commissioners has no impact on the disclosure of carbon emissions.

Previous research conducted by (Deantari, 2018), (Dewayani, Udin, & Djastuti, 2020), and (Maulidiavitasari & Yanthi, 2021) discussed indicators affecting the disclosure of carbon emissions. The free variable is environmental performance, which is used as a moderation variable in this study.

**A. Legitimacy Theory**

The community expects something from the Company, where the Company also has expectations for its activities that will have an impact on the community directly. This makes legitimacy a potential source for an entity to be phased in. The theory of legitimacy states that companies with good environmental records are more inclined to disclose environmental information because doing so will enhance their standing with the public and help to maintain the legitimacy of their business practices (Wahyuningsih, 2020). This theory also states that Since the public would be more aware of large corporations' actions than of small ones, societal demands and pressures will be greater, leading large companies to enhance their environmental responsibility.

The theory of legitimacy is one of the theories that underlie the intensive disclosure of social and environmental accountability reports voluntarily (Liao et al., 2015). The theory of legitimacy explains that in maximizing the financial power of the Company for the long term, social responsibility must be expressed in order to gain legitimacy from the social actors in which the Company is located. The social contract that exists between the firm and the society in which the Company operates and uses economic resources serves as the theoretical underpinning of legitimacy. (Ulum, Ghozali, & Chariri, 2007).

**B. Stakeholder Theory**

This theory says a company must help its stakeholders as well as it is own and is not merely an entity that pursues its own interests (Ulum et al., 2007). According to the concept of responsibility defined as' stakeholder theory, a company's stakeholders have an impact on its ability to sustain itself. Stakeholders have different expectations of the Company, and their stakeholders put pressure on the Company directly or indirectly to disclose the environment as a fulfillment of their expectations (Ghomi et al., 2013). Based on stakeholder theory, the interaction of large companies with the public tends to be more numerous and has a significant economic impact, and large corporate organizations are more visible to the media, policymakers, regulators, and also the public, making companies face political pressure and get strict regulations from external parties so that companies are more concerned with environmental issues, including in disclosing carbon emissions (Brammer & Pavelin, 2004), (Lorenzo-Seva & Ten Berge, 2006), (Luo et al., 2009). According to (Amdani, 2016), the idea of corporate social responsibility is relevant to stakeholder theory, according to which stakeholders have an impact on a company's ability to survive. Therefore, the Company voluntarily discloses its social and environmental responsibilities in order to get support from stakeholders (Situmorang & Yanti, 2020).

**C. *Carbon Emission Disclosure***

Greenhouse gases or known as carbon emissions are gases in the atmosphere, either natural or anthropogenic, that absorb and re-emit infrared radiation (Presidential Regulation No. 71 of 2011). One of the biggest emitters of carbon emissions is the Company's operational activities because companies still use fossil fuels as an energy source. Companies are required to be more open to information about the Company's activities. The information disclosed in the Company's report is grouped into two, namely mandatory disclosure and voluntary disclosure. In general, entities prefer to disclose the information if the information is considered to provide increased value for the Company. Companies tend to prefer to retain information if it is deemed to be detrimental to the Company's position or reputation. Carbon emission disclosure is a voluntary disclosure that is voluntary, in disclosing environmental reports as part of an additional report that has been stated in PSAK No. 1 (2015 revision) paragraph fifteen, which requires disclosing the responsibility for environmental and social problems of the Company. Climate change corporate governance plans, GHGs emission reduction targets and performance that have been achieved, risks and opportunities connected to the impacts of climate change, as well as the intensity of GHGs and energy emissions, are all included in environmental disclosures. (Ulfa & Ermaya, 2019).

Disclosure of carbon emissions in this study is measured by adopting from research Choi et al. (2013) 's research. The study by (Choi et al., 2013) divided the checklist into five

broad categories and then subdivided into 18 items to identify. There are five categories related to climate change and carbon emissions, namely:

1) Greenhouse Gas (GHG) emissions
2) Climate change risks and opportunities (CC)
3) Reduction and Cost reduction (RC)
4) Energy consumption (EC)
5) Accountability of carbon emissions (AEC)

**D. *Corporate Governance***

Corporate governance is based on a set of systems and principles by which a company is directed, managed, or controlled to the objectives for which it is directed by its rule (Vallabhaneni et al., 2016). In general, from the results of research, corporate governance is a set of correlations from company management, boards, shareholders, and other stakeholders that provide the structure through established corporate objectives and ways to achieve those goals and monitor performance determined (OECD, 2004). From the description above, it can be stated that good corporate governance includes good company performance and accountability (Wang, Song, & Yao, 2013).

Company leaders must establish the principles of GCG for the Company, which contain guidelines used and applied by employees and also company leaders so that all actions and decisions set by the Company are aimed at supporting the interests of the Company and shareholders (OECD, 2004).

**E. Environmental Performance**

According to (Bahri & Cahyani, 2016), the Company's environmental performance is the Company's performance in creating a good environment. Environmental performance is the Company's relationship with the environment regarding the environmental impact of the resources used, the environmental effects of organizational processes, the environmental implications of products and services, the restoration of product processing, and compliance with work environment regulations. If the level of environmental damage is high due to company activities, it means that the Company's environmental performance is poor, and vice versa. The greater the impact of environmental damage, the worse the Company will manage its environment. Types of environmental performance indicators, such as PROPER, ISO (ISO 14001 and ISO 17025 environmental testing certifications for independent agency environmental management systems), AMDAL (BOD and COD testing for wastewater), and GRI (Global Reporting Initiative), are pioneering development frameworks in sustainability reporting. The environmental performance of the Company in research is measured by PROPER ratings. Here is a conceptual framework that describes the relationship of dependent variables with independent\ variables and moderation variables in this study:

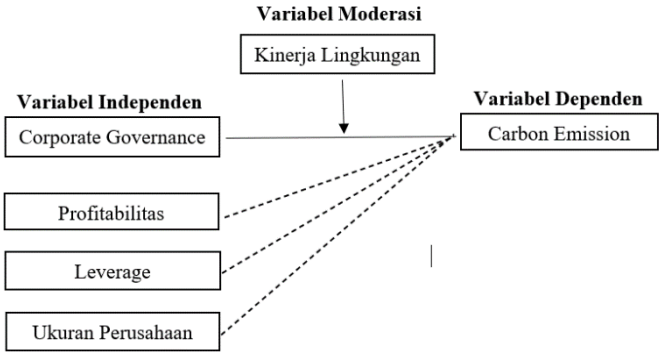


**Figure 1**
**Research Models**
Research Source: Research data processed by authors, 2022

**F. The Impact of Corporate Governance on Carbon Emission Disclosure**

The relationship between corporate governance and environmental performance to environmental disclosure can be explained in legitimacy and stakeholder theory. In the theory of legitimacy, it is explained that companies must be viewed as legitimate in order for companies to live sustainably. A legitimate company is what society expects it to be. Based on the theory, company stakeholders are under pressure from outside parties to be more active in carrying out social and environmental responsibility. (Rankin, 2011) revealed that companies with strong governance structures are more proactive in carbon disclosure strategies because they can better manage environmental issues and have a broader perspective on the long-term benefits companies will gain from transparent environmental disclosures. (Galbreath, 2010) argues the institutional environment will have an effect on the quality of climate change governance and encourages companies to be proactive in tackling climate change.

Thus, the hypothesis developed as follows:

**$H_1$: Corporate governance has a positive impact on Carbon Emission Disclosure.**

**G. Impact of Environmental Performance with Carbon Emission Disclosure**

Not all companies make a disclosure of their environmental performance, and this is due to the voluntary nature of the disclosure in Indonesia. Companies that make environmental disclosures tend to have good environmental performance because the company already has various active strategies for the environmental problems caused. According to (Calcarina, 2018),(Dewayani Et Al., 2020) which proves companies with good environmental performance will disclose environmental information and their environmental performance voluntarily, such as handling climate change from carbon emissions produced. The Company conducts voluntary disclosure of environmental information with the aim of avoiding negative media reports, improving its image, maintaining the Company's reputation, as well as to maintain the Company's legitimacy (liao et al., 2015). Thus, the hypotheses that can be developed are as follows:

**$H_2$: Environmental performance has a positive impact on Carbon Emission Disclosure**

**H. Impact of Corporate Governance on Carbon Emission Disclosure moderated Environmental Performance**

The theory of legitimacy and stakeholders describes the correlation between corporate governance and environmental performance. Not all companies report their environmental performance. This is due to the type of disclosure that is still voluntary in

Indonesia. Companies that provide environmental information tend to have better environmental performance because they already have various proactive strategies on environmental issues. This is in accordance with the findings of (Calcarina, 2018) Research. (Dawkins, 2004) show that companies with good environmental performance voluntarily disclose their environmental and environmental performance information. The Company voluntarily discloses environmental information in order to avoid negative media coverage, improve its image, protect its reputation, and maintain the legitimacy of its Company (Liao et al., 2015). From the above, we can make a hypothesis such as the following**:**

**$H_3$: Environmental Performance strengthens the positive impact of Corporate Governance on Carbon Emission Disclosure**

## METHOD RESEARCH

This type of study is a causality study that tests the correlation from variables based on previous studies. This research is intended to determine the influence of corporate governance on carbon emission disclosure moderated with environmental performance. The analysis unit used in this research is a company listed on the IDX with a period of 2017-2021. This research is quantitative, and the acquisition of secondary data obtained through financial statements and company sustainability reports are used as samples that have gone through the purposive stage. By the following criteria:

1. Non-financial companies listed on the IDX in 2017-2021.
2. The Company issued financial statements for 2017-2021 in full, with a reporting period ending on December 31.
3. The Company publishes annual reports and sustainability reports for the period 2017-2021.
4. Disclosing information about carbon emissions, including at least one policy related to GHG emissions or disclosing at least one item of expression of greenhouse gas emissions. Scale

**Table 1**
**Variables and Measurements**

| No | Variable Type | Variabel | Indicators | Scala |
|---|---|---|---|---|
| 1 | Dependent Variabels | Carbon Emission Dislcosure | Five Catagories Consisting Of 18 Items (Carbon Emission Disclosure Checklist) | Ratio |
| 2 | Independent Variables | Corporate Governance | Using The Corporate Governance Index (Sawicki,2009) | Ratio |
| 3 | Moderation Variables | Environmental Performance | Using Proper Ratings 3<br>5 = Gold<br>4 = Green<br>3 = Blue<br>2 = Red<br>1 = Black | Ordinal |

| | | | | |
|---|---|---|---|---|
| 4 | Control Variables | Leverage | LEV = $\frac{Total\ Debet}{Total\ Asset}$ | Ratio |
| | | Profitabilitas | ROA = $\frac{Laba\ Tahun\ Berjalan}{Total\ Asset}$ | Ratio |
| | | | Frim Size = LN (Total Asset) | Ratio |

## RESULT AND DISCUSSION

### A. Descriptive Statistical Analysis

**Statistics**

| | | CGI | KL | CGI.KL | ROA | LEVERAGE | FIRM SIZE | CED |
|---|---|---|---|---|---|---|---|---|
| N | Valid | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | | 5.53 | 2.28 | 10.58 | 8.1332% | .5197425 | 31.209058041333320 | 9.833 |
| Median | | 6.00 | 3.00 | 3.00 | 6.7050% | .4878050 | 30.994169890000002 | 11.000 |
| Mode | | 7 | 0 | 0 | 0.47% | .74425 | 32.002906160000000[a] | 11.0 |
| Std. Deviation | | 1.321 | 1.914 | 11.854 | 14.05340% | .24526947 | 1.184028155370080 | 3.2530 |
| Minimum | | 3 | 0 | 0 | -50.59% | .16383 | 28.634335790000000 | 4.0 |
| Maximum | | 7 | 5 | 35 | 46.66% | 1.40373 | 33.537230020000000 | 15.0 |

a. Multiple modes exist. The smallest value is shown

The table above shows the descriptive statistics of carbon emission disclosure with a min value of 4 owned by WSBP in 2017 and a maximum value of 15 owned by PTBA in 2019 to 2021, ANTM, and INTP in 2017, and with a standard deviation of 3.2530. Corporate governance has a min value of 3, owned by PTBA in 2017, JSMR in 2018, AALI, and WIKA in 2019, and a max value of 7 with a standard deviation of 1.321. The environmental performance of the min value of 0 is owned by AALI in 2017 with 2018, JSMR in 2017-2021, TOTL in 2017-2021, UNTR in 2017-2020, WSBP in 2017-2021, and a Max value of 5 owned by PTBA in 2019-2021 with a standard deviation of 1.914.

### B. Normality Test

The results of this research show that on the p-plot graph, because the data spread out around the diagonal line and moves in the same direction as the diagonal line, the data is properly distributed. It can be concluded that the variables in this study meet the assumption of normality.

**One-Sample Kolmogorov-Smirnov Test**

| | | Unstandardized Residual |
|---|---|---|
| N | | 60 |
| Normal Parameters[a,b] | Mean | .0000000 |
| | Std. Deviation | 1.71814837 |
| Most Extreme Differences | Absolute | .076 |
| | Positive | .076 |
| | Negative | -.062 |
| Test Statistic | | .076 |
| Asymp. Sig. (2-tailed) | | .200[c,d] |

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

From the table showing a total of 60 research data, having an Asymp sig two-tailed value of 0.200 > 0.05, t, then the data is normally distributed.

## C. Heteroskedasticity Test

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.336 | 3.934 | | .848 | .400 |
| | CGI | -.123 | .126 | -.154 | -.972 | .335 |
| | KL | -.036 | .116 | -.065 | -.307 | .760 |
| | CGI.KL | -.002 | .016 | -.026 | -.143 | .887 |
| | ROA | -.009 | .012 | -.125 | -.803 | .426 |
| | LEVERAGE | -.760 | .662 | -.177 | -1.148 | .256 |
| | FIRMSIZE | -.024 | .126 | -.026 | -.187 | .852 |

a. Dependent Variable: ABSRES

From the table showing the sig value of each of the variables studied has a value exceeding 0.05, then the research data did not show any heteroscedasticity in this study, so further testing could be continued.

## D. Multicollinearity Test

**Coefficients[a]**

| Model | | Collinearity Statistics | |
|---|---|---|---|
| | | Tolerance | VIF |
| 1 | CGI | .697 | 1.434 |
| | KL | .390 | 2.567 |
| | CGI.KL | .533 | 1.875 |
| | ROA | .719 | 1.390 |
| | LEVERAGE | .733 | 1.365 |
| | FIRMSIZE | .869 | 1.151 |

a. Dependent Variable: CED

The table shows a tolerance value of > 0.10 and a VIF value of < 10 so that there are no symptoms of multicollinearity in the study.

## E. Uji Autokorelasi

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .849[a] | .721 | .689 | 1.8128 | 2.158 |

a. Predictors: (Constant), FIRMSIZE, CGI.KL, LEVERAGE, ROA, CGI, KL

b. Dependent Variable: CED

The Durbin Watson test results obtained were in the autocorrelation range (du < DW < 4-du). So in conclusion there is no autocorrelation.

## F. Hypothesis

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .849[a] | .721 | .689 | 1.8128 |

a. Predictors: (Constant), FIRMSIZE, CGI.KL, LEVERAGE, ROA, CGI, KL

The table shows the Adj. R Square in this study shows the number 0.689, meaning that the variables CGI, KL, CGI*KL, ROA, LEVERAGE, and SIZE have a 68.9% effect on CED, while the remaining 31.1% is influenced by other variables not examined in this study.

**G. Hasil Uji F**

ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 450.163 | 6 | 75.027 | 22.831 | .000[b] |
| | Residual | 174.170 | 53 | 3.286 | | |
| | Total | 624.333 | 59 | | | |

a. Dependent Variable: CED

b. Predictors: (Constant), FIRMSIZE, CGI.KL, LEVERAGE, ROA, CGI, KL

From the table, showing the sig value shows the number 0.000 <0.05, which can be concluded that the CGI, KL, CGI*KL, ROA, LEVERAGE, and SIZE variables have a significant overall/simultaneous effect on CED.

**H. Uji T**

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.097 | 6.676 | | .164 | .870 |
| | CGI | .683 | .214 | .277 | 3.191 | .002 |
| | KL | 1.078 | .198 | .635 | 5.459 | .000 |
| | CGI.KL | .057 | .027 | .207 | 2.086 | .042 |
| | ROA | -.009 | .020 | -.038 | -.449 | .655 |
| | LEVERAGE | 3.333 | 1.124 | .251 | 2.965 | .005 |
| | FIRM SIZE | .008 | .214 | .003 | .035 | .972 |

a. Dependent Variable: CED

The variables CGI, KL, and CG. KL and leverage have a positive effect on CED because the sig value <0.05 and the t count > t table.

**I. Analisis Regresi Linier Berganda Moderasi**

From the results of the regression study on the t-test, the regression equation can be obtained as follows:

**$Y = \alpha + \beta 1$ CGI + $\beta 2$ KL + $\beta 3$ (CGI x KL) + $\beta 4$ ROA + $\beta 5$ *Leverage* + $\beta 6$ *Size* + e**

The partial test results are as follows:

**1. The Impact of Corporate Governance on Carbon Emission Disclosure**

The table, showing the sig value of the corporate governance variable, shows the number 0.0002 < 0.05 with the value of B 0.683 in the positive direction. Then, variable corporate governance has a positive impact on carbon emission disclosure. So $H_1$ is accepted. The results of this study support the research of Appuhami and Tashakor, (2016) which states that companies that hold meetings more frequently in a year have good corporate governance so that it makes it easier for the audit committee in the process of supervising the information to be disclosed. This study supports the agency theory, in which companies that have good governance such as holding regular meetings, having an

audit committee board, remuneration and nomination members tend to disclose information well. The company reviews the information that will be disclosed in a more detailed and thorough manner, thereby increasing the transparency of the company.

2. **The Impact of Environmental Performance on Carbon Emission Disclosure**

   The table, showing the sig value of the environmental performance variable, shows the numbers 0.000 < 0.05 with the value B 1.078 in the positive direction. So, environmental performance variables have a positive effect on carbon emission disclosure. So $H_2$ is accepted. This result is in line with previous research, (Calcarina, 2018); (Dewayani et al., 2020) which proves companies with good environmental performance will disclose environmental information and their environmental performance voluntarily, such as handling climate change from the resulting carbon emissions.

3. **Environmental performance moderates Corporate governance's relationship to Carbon Emission Disclosure**

   The table, showing the sig value of the CGI*KL variable, shows the number 0.000/2 = 0.000 < 0.05 with a value of B 0.057 in a positive direction. So, Environmental Performance is able to strengthen the positive impact of Corporate Governance on Carbon Emission Disclosure Disclosure. Based on $H_3$: Environmental Performance strengthens the positive influence of Corporate Governance on Carbon Emission Disclosure, $H_3$ is accepted. Environmental performance strengthens the positive relationship between the two variables

## CONCLUSION

From the results of the research analyzing the impact of Corporate Governance on Carbon emission disclosure moderated by Environmental Performance in Companies Listed on the IDX from 2017 to 2021, we can conclude that Corporate governance has a positive impact on carbon emission disclosure. Environmental performance positive effects carbon emission disclosure. Environmental performance strengthens the correlation between corporate governance and carbon emission disclosure. Implications Theoretical Implications This research is expected to be able to explain previous theories regarding the impact of corporate governance on carbon emission disclosure with environmental management systems as moderation variables. This research is also expected to be a reference for subsequent researchers so that it can be reviewed and further research development carried out. Practical Implications this research has implications for companies to increase disclosure of carbon emissions because it affects the Company's image by improving Corporate Governance and Media. Suggestions Further research can consider using other samples such as real estate, food, and beverage sector companies, property, and others. And subsequent research can try to add other variables to the research model, for example, the corporate social responsibility variable.

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