



Does Code of Conduct Moderate Corporate Attributes and Carbon Emission Disclosure?

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Abstract

The objective of this study is to analyze the effects of corporate attributes proxied by green strategy, institutional shareholding, and board of director with the code of conduct as a moderating variable on carbon emission disclosure. Previous research has used many variables that affect carbon emission disclosures, but there are a few literatures that use a corporate code of conduct to strengthen the relationship between each variable and disclosure of carbon emissions. This study is the use of the measurement of the corporate code of conduct which is based on the highest index results for disclosing carbon emissions. This study uses quantitative approach and panel data regression using 140 Observations of 28 consumer goods companies listed in IDX for the period 2015-2019, and analyzed by using moderating regression analysis. The results of this study found that green strategy has a positive and significant influence on carbon emission disclosure, while institutional shareholding and board of director have no influence on carbon emission disclosure. Then, the code of conduct can strengthen the green strategy's relationship to carbon emission disclosure. Meanwhile, the code of conduct cannot moderate the relationship between institutional ownership and the board of directors on carbon emission disclosure. Companies must take advantage of opportunities from the impacts of climate change through a green strategy and supported by the implementation of an effective corporate code of conduct will strengthen the company's competitive advantage through disclosure of carbon emission information.

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Carbon emission disclosure
Green strategy
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Board of Director
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1. Introduction

The coronavirus disease (Covid-19) pandemic had a positive effect on reducing global carbon dioxide emissions by 17 percent compared to 2019 (www.asiatoday.id). The reduction resulting from the decline in transportation and industrial activity during the pandemic is one of the largest single emissions reductions in history. However, these reductions and write-offs are usually only temporary. The future weakening of the global economy will only lead to temporary emissions reductions. After the economy has improved, emissions will rise again (www.nationalgeographic.grid.id). However, the fall in greenhouse gas emissions increases is set to become a new pandemic that could destroy a third of the human population on earth.

Various efforts have been made to overcome the consequences of global warming and climate change, either through cooperation between countries or through international negotiations. Starting with the United Nations Framework Convention on Climate Change (UNFCCC) in 1992. Thereafter, the Paris Climate Agreement of 2015 was adopted as a new instrument under the Kyoto Protocol, which is supposed to

withstand the rise in global average temperatures well below the 2°C (Wirdyastara, 2018). From December 2015 to January 2018, 172 countries ratified the Paris Agreement, including Indonesia, which was later ratified as Law of the Republic of Indonesia No. 16 of 2016 ratifying the Paris Agreement. On this matter, top management is urged to reduce emissions and improve carbon disclosure policies to meet the data needs of various stakeholders. Despite pressure from voluntary initiatives and encouragement from regulators, non-binding regulations and voluntary carbon reporting have not been widely recognized.

In the context of legitimacy theory and stakeholder theory, researchers specifically examine research problems related to industrial companies in making claims on CO₂ emissions, one of which is based on company attributes made up of characteristics that reflect the industry (Gunawan, 2015). The designation of green in main business activities is not a new phenomenon from an early stage but has been introduced since 1980 (Makower, 2008). This activity not only protects the earth from climate change due to the rise in earth temperature caused by the effects of greenhouses, but it can also increase business efficiency. Previous research found that a green strategy consists of raids, booms, and borders (Hansen & Klewitz, 2012). Other research has adopted an environmentally friendly strategy consisting of three types, namely pollution prevention, clean products, services, and technology (Masomik, Abdul-Rahid, & Olga, 2015). Research (Duarte & Cruz-Machado, 2013) recognize Green Up Lean & Green strategies. Not many found that using Moini, Soresen, and Kristiansen (2014) measurement modifications takes into account content analysis, which uses 4 themes, starting with formulating and pursuing a green strategy, the level of management involvement in the green strategy, changes in the business model of the company and the organization and Green Strategy Management to measure the extent to which a green industrial strategy can be formulated and pursued and what impact it has on the whole of the industry to understand the impact of climate change on the industry competence for emissions management, expressed in carbon emissions data disclosure.

Second, companies with high institutional ownership (INS) will improve corporate oversight and submit to pressure from stakeholders and shareholders (Borghesi-Ghomi & Leung, 2013; Cotter & Najah, 2019; Pratiwi, 2017). According to Hermawan, Aisyah, Gunardi, and Putri (2018) and Kiswanto (2020) however, a low INS will also promote good disclosure of carbon emissions as it is part of management policy. Third, according to Kieso, Weygandt, and Warfield (2018) demographic data for accounting are also supported by educational level or educational diversity. The level of education shows the level of individual workability. The skill level also shows the individual's ability to think in various activities in life. The higher the level of training of the Board of Directors (BOD) or at least a Board of Directors with an economic and business background, the greater the awareness of the importance of disclosure of CO₂ emissions and the better the management of the company, the better the company can meet its environmental responsibility (Amaliyah & Solikhah, 2018; Krista & Sukardianta, 2016; Manurung, Kusumah, Asikin, & Suryani, 2017). According to Hossain and Farooque (2015) and Yunus, Eljido-Ten, and Alkayawansa (2016) companies with no background in business and business education are likely to disclose less information about carbon emissions.

Several previous studies have used many variables that affect carbon emissions disclosure, such as research by Borghesi-Ghomi and Leung (2013) using variables of business size and good governance. Lao and Tang (2014) used carbon performance variables, company size, leverage, and industry effects. Liao, Luo, and Tang (2015) used variables on gender diversity, independence from local councils, and committees. Ahmadi and Bourri (2017) use environmental sensitivity and asset return. Sudhyo (2018) uses variables such as company value, carbon emissions, and carbon management disclosure. Saptiwi (2019) uses variables of the industry type, environmental performance, and company characteristics. However, researchers have not found a variable that ethics uses to strengthen the relationship between each variable and carbon-emissions disclosure. Compliance with rules and guidelines, no need for reflection, and autonomous decision-making at the individual (individual or company level) seem to represent unethical behavior, as it means that no attempt is made to make decisions based on specific situations and no attempt is made to simply take responsibility, giving up regulatory responsibility or guidelines for decision making. This has been identified and needs to be reinforced by the company's previous code of conduct that should be applied to carbon emissions disclosure practices. On this basis, the researcher hopes to use a code of ethics as a moderating variable in this study.

In this study, seeks to fill this gap by examining the effect of green strategy, institutional ownership, and board of director on carbon emission disclosure and this paper wants to know that the corporate code of conduct variable can moderate green strategy, institutional ownership, and board of director and carbon emission disclosure variable. The focus of research is on the zone of the consumer goods industry in Indonesia, which belongs to one of the highly sensitive industrial zones (Gunawan, 2015) in which it continues to grow, especially with increasing population development, so that it also leads to an increase in plastic waste resulting pollution. Therefore, companies in this zone receive particular attention from observers of the area as well as stakeholders regarding the incidents of area, pollution, and destruction of the intertwined areas. Therefore, the consumer goods industries zones listed on the Indonesian Stock Exchange in this research focus primarily on carbon emissions disclosure research that companies seek to assess the efforts of that consumer goods zone to assess the quality and responsibility of the products.

2. Literature Review

2.1. Theoretical Framework

Stakeholder theory holds that a company is not an entity that acts only for itself, but rather must provide benefits to its stakeholders (shareholders, creditors, consumers, suppliers, government, society, analysts, and other parties). Hence, the company's existence is heavily influenced by stakeholder support for the company (Andrian & Salsihya, 2019). One of the strategies for maintaining relationships with the company's stakeholders is to be environmentally conscious. In this case, disclosing carbon emissions by disclosing the environment is expected to satisfy stakeholder desires and build relationships. Harmonious relationship. A harmonious relationship enables the company to achieve sustainability (Cahya, 2016). Legitimacy theory focuses on making the relationship between businesses and communities a reality through government regulations. According to studies by Gray, Owen, and Adams (1996) disclosure plays a role in connecting businesses to community groups. Companies are motivated to gain legitimacy from the community because they want to ensure that the company's business activities comply with applicable regulations and boundaries (Deegan & Shelly, 2014). When the results are similar between the company and the community, Legitimacy is acquired by the company itself, reducing the long-term risk from community requirements (Deegan, Rankin, & Tehin, 2002). To gain legitimacy, the Indonesian government approved the first phase of the "Kyoto Protocol" through Law No. 16, Presidential Decree No. 17 of 2004 and Law No. 61 of 2011 on a National Action Plan to Reduce National Greenhouse Gas Emissions in Support of the Independence to reduce emissions by 26% or cooperation with international partners to reduce emissions by 41% in 2020 without an action plan. The actions taken by the government above are various efforts by corporate actors to reduce greenhouse gas emissions as evidenced by carbon emissions disclosure (Irwanto & Rasuki, 2016).

2.2. Hypothesis Development

Businesses can incorporate risks and opportunities into business strategies that affect the environment. In particular, companies that are concerned with climate change, such as forestry, energy and transport, agriculture, industry, and waste, will disclose information on CO₂ emissions. One form of disclosure of the information is to disclose carbon emissions for businesses to manage emissions and aim to manage the risks and opportunities of climate change. Risks and opportunities that can be integrated into a company's green strategy. Paulraj (2009) emphasizes the importance of understanding various organizational motivations for pursuing responsive business practices by focusing on the motivations behind green practices across the corporate group. Bansal and Roth (2000) identify three types of motivation: competitiveness, legitimacy, and environmental responsibility.

Therefore, the greening of companies has to be conceived beyond the economic level of the company and is legal from a legal point of view and with important stakeholders (Moini et al., 2014). Also, Miles and Covin (2000) find that environmental motivation may come from the reputation associated with corporate greening, as it can ultimately improve a company's marketing and financial performance. Beside, ethical awareness and ethical awareness of owners and managers play an important role in pursuing the green strategy of Kabiraj, Topkar, and Wallis (2010). Hence, researchers believe that companies that capitalize on the effects of climate change by employing green strategies to capitalize on the effects of climate change are demonstrating their ability to manage carbon emissions by disclosing information about carbon emissions (Makower, 2008) & Afni, Gani, Dyakman, and Saiki (2018). On this basis, the following hypothesis can be formulated:

H₁: Green strategy has a positive effect on carbon emissions disclosure.

According to Amaliyah and Solikhah (2019) institutional ownership is ownership of all company shares issued by an institutional. Stakeholder theory explains the relationship between the company and the stakeholders, whereby management tries to be open to all company activities. Institutional ownership offers the best control over management, and the pressure to disclose environmental social responsibilities is high. According to Pratiwi (2017) ownership of large institutions will increase the oversight of the company so that all company activities are exposed to strengthen the positive image of the stakeholders. The transparency of the CO₂ emissions increases the company's value and contributes to the company's sustainable development. Kim and Lyon (2011) show that institutional investors' awareness of climate change can increase shareholder value and management awareness.

Also, the strength of institutional investors can put market pressure on companies to reduce their greenhouse gas emissions. Aside from these recommendations, there is also the view that institutional investors consider climate risk in their decision-making processes when disclosing greenhouse gases and shift their investments to good climate actors (Harnes, 2011) and Deegan et al. (2002). Then Borghesi-Ghomi and Leung (2013) added that higher institutional ownership suggests that institutional investors in companies have high voting rights to disclose carbon emissions. According to studies by Ben-Amar, Chang, and Mellenny (2017); Jaggi, Alini, Macchioni, and Zagaris (2017) and Bose, Khan, Rashid, and Islam (2016) institutional investors include climate risk in their decision-making processes when house gases are disclosed. On this basis, the following hypothesis can be formulated:

H₂: Institutional shareholding has a positive effect on carbon emissions disclosure.

According to [Amulyah and Solikhah \(2019\)](#) legitimacy theory explains that companies that carry out activities must comply with the rules and norms that apply in society. The board of directors is the most important part of management and is responsible for the legitimacy of all stakeholders. To achieve this legitimacy, the company always fulfills its social responsibility towards the community, namely to open up the environment, in this case CO2 emissions. Following [Hadya and Susanto \(2018\)](#), [Masurung et al. \(2017\)](#) and [Krisna and Suhardiarto \(2016\)](#) educational level shows the level of an individual's ability to do work. The skill level also shows the individual's ability to think in various activities in life. The higher the board of directors (BOD) or the board of directors with at least an economic and business background or level of education, the better the understanding of the importance of disclosure of CO2 emissions and the better the management of the company so that the company's ability to comply environmental responsibility is greater. This is an indicator that, after additional training, triggers a change in the mindset of the board of directors. If a company is run by highly skilled people, it will certainly lead to increased disclosure of CO2 emissions. On this basis, the following hypothesis can be formulated:

H2a: The board of directors has a positive influence on carbon emissions disclosure.

According to [Siltanen \(2006\)](#) the code of ethics plays an important role in building trust. Trust must be instilled in internal stakeholders before it can be passed on to external stakeholders who are indirectly linked to the company. Companies with an effective Corporate Code of Conduct (COC) will strengthen environmentally friendly strategic relationships by disclosing CO2 emissions. This is because the green strategy sees the code of ethics as a guideline to be followed when formulating guidelines for disclosing carbon emissions ([Khalid, Atkins, & Barone, 2019](#)). On this basis, the following hypothesis can be formulated:

H2b: The corporate code of conduct strengthens the relationship between green strategy and carbon emissions disclosure.

Companies with a high degree of institutional responsibility see good business ethics as a form of compliance with the law so that they are exposed to greater pressure to disclose carbon emissions ([Lawler & Ashman, 2014](#)). According to [Waweru \(2020\)](#) a code of ethics has been drawn up in every business activity to ensure a shared commitment that the company complies with the existing code of conduct, which undoubtedly further strengthens the ownership of large institutions (best supervision and administration) and openness. The relationship between carbon emissions pressures because it can provide a better network with stakeholders. On this basis, the following hypothesis can be formulated:

H2c: The corporate code of conduct strengthens the institutional relationship between shareholding and carbon emissions disclosure.

The board of directors has moral and moral obligations towards its stakeholders, such as protecting the rights and interests of minority shareholders, the rights of employees, and their safety ([Waweru, 2020](#)). According to [Abdullah and Azis \(2018\)](#) the Code of Ethics will strengthen the relationship between directors and carbon disclosure as it can be used as a means of linking and communicating environmental responsibility with stakeholders. On this basis, the following hypothesis can be formulated:

H2d: The corporate code of conduct strengthens the relationship between the board of directors and the carbon emissions disclosure.

5. Research Methodology

The subject of this study is consumer goods companies that were listed on the Indonesian Stock Exchange (IDX) from 2015 to 2019. The content analysis method is employed in collecting the CED, GRS, and COC Scores. The data used in this study is secondary data obtained from the IDX annual financial report, the company website, and the sustainability report. Multiple linear regression is used because this study has more than one independent variable. The number of samples used in this study was 140 observations from 28 companies selected using a purposive sampling method with the criteria that consumer goods companies disclose the theme of carbon emission disclosure, theme of green strategy, theme of corporate code of conduct during the research period and provide complete information on each of the variables studied. The measurement of variables in this study is shown in [Table 1](#).

Disclosure of the Corporate Code of Conduct is taken from the results of the disclosure of the highest implementation of good corporate governance conducted by research ([Andrian & Sudibyo, 2019](#)) namely from PT Unilever Indonesia Tbk which was used as a standard for disclosing code of ethics for companies in the consumer goods industry sector.

The dependent variable is CED while the independent variables are GRS, INS, and BOD. Moderating variable is COC. Research problem used in this study can be reflected in hypothesis H1a-H4a. To answer research problem are used as follows:

$$CED = \alpha + \beta_1 GRS + \beta_2 INS + \beta_3 BOD + \beta_4 GRS.COC + \beta_5 INS.COC + \beta_6 BOD.COC + \epsilon$$

Information:

CED : Carbon Emission Disclosure.

α : Constant.

GRS : Green Strategy.

INS : Institutional Shareholding.

BOD : Board of Director.
 COC : Corporate Code of Conduct.
 e : Standard Error.

Table 1. Variable Measurement

Variable	Indicator	Scale
Carbon Emission Disclosure Rusli, Yvonne, Ety, and Ririn (2019) & Choi, Lee, and Psaros (2013)	Carbon Emission Disclosure Index: $CED = V / M$ Description: CED: Carbon Emission Disclosure V: Total item disclosed M: Total Expected Item Which are: CED1: 2 item CED2: 11 item CED3: 4 item CED4: 4 item CED5: 2 item	Ratio
Green Strategy (Moimi et al., 2014)	Green Strategy Index: $GRS = V / M$ Description: GRS: Green Strategy V: Total item disclosed M: Total Expected Item Which are: GRS1: 4 item GRS2: 5 item GRS3: 4 item GRS4: 5 item	Ratio
Institutional Shareholding (Hermawan et al., 2018)	The percentage of shares owned by the institution divided by the total shares outstanding.	Ratio
Board of Director (Hadya & Susanto, 2018)	The number of directors with economics and business education or having work experience in accounting and / or finance divided by the total number of members of the board of directors.	Ratio
Corporate Code of Conduct (Andrian & Sudibyo, 2019)	Corporate Code of Conduct Index: $COC = V / M$ Description: COC: Corporate Code of Conduct V: Total item disclosed M: Total Expected Item Which are: COC1: 1 item COC8: 1 item COC2: 1 item COC9: 2 item COC3: 8 item COC10: 1 item COC4: 1 item COC11: 1 item COC5: 1 item COC12: 4 item COC6: 1 item COC13: 1 item COC7: 1 item COC14: 1 item	Ratio

It is important to note that the data source for this calculation is taken from the annual report and/ or the sustainability report released together with CED and the year-end data is available on the same date. The regression between CED as the dependent variable and GRS, INS, and BOD as the independent variable, and COC as a moderating variable in this model can provide evidence which factors tend to have a significant effect on CED and which factors can be moderated significantly by COC.

4. Result and Discussion

4.1. Descriptive Statistics

The descriptive statistical data are provided through Table 2, includes all research variables and the results of the descriptive statistics are shown as follows:

Table-2. Descriptive Statistics.

Variable	Min	Max	Mean	Std Deviation
CED	0.0434	0.5565	0.3002	0.2199
GRS	0.0555	0.4667	0.4400	0.1625
INS	0.2366	0.9896	0.7800	0.1458
BOD	0.1111	1.0000	0.5955	0.2257
COC	0.0400	0.9600	0.2445	0.1489

When monitoring consumer goods companies in the period 2015–2019, the lowest minimum value was determined by the variable Corporate Code Conduct (COC) of 0.0400. This is because the code of conduct applied by each company is different and not all focus on the main aspects, which are environmental and social. The highest maximum value is then obtained from the Board of Director (BOD) variable of 1.0000. This shows that some of the observed companies have the same total number of boards of directors with economic backgrounds as the total number of board members. Then the mean for the disclosure of CO2 emissions (CED) varies from 0.3002, the green strategy (GRS) from 0.4400, the institutional ownership (INS) from 0.7800, the board of directors (BOD) from 0.5955 and the Corporate Code of Conduct (COC) of 0.2445. For the standard deviation, which indicates the degree of deviation for each variable, the values include CED of 0.2199, GRS of 0.1625, INS of 0.1458, BOD of 0.2257, and COC of 0.1489.

4.2 Classic Assumption Test

Based on the result, which shows the results of normality tests, the Jarque Bera value is 4.731886 and the probability value is 0.083861. This shows $0.083861 > 0.05$, it can be concluded that the data used in this study are normally distributed. Based on the result of the multicollinearity test that all variables have a value < 0.80 so that it can be concluded that there is no multicollinearity in this study. Based on the result of the heteroscedasticity test for all variables used in this study with a probability value greater than 0.05, so that it can be concluded that there is no heteroscedasticity in this study. Based on the result of the autocorrelation test for all variables used in this study with a probability value of $0.8274 > 0.05$. It can be concluded that there was no autocorrelation in this study (Widarjono, 2017).

4.3 Regression Result

The following are the results of the regression in this study which are described in the Table 3:

Table-3. Regression Result.

CED = $\alpha + \beta_1$ GRS + β_2 INS + β_3 BOD + β_4 GRS COC + β_5 INS COC + β_6 BOD.COC + ϵ					
Variable	Pred Sign	Coeff	t-stat	Prob	Result
Constant		0.146	0.947	0.345	
GRS	(+)	0.450	3.208	0.001*	Accepted
INS	(+)	-0.214	-1.110	0.269	Rejected
BOD	(+)	0.079	0.790	0.430	Rejected
GRS*COC	(+)	1.602	2.558	0.012*	Accepted
INS*COC	(+)	0.740	1.021	0.308	Rejected
BOD*COC	(+)	-0.258	-0.560	0.576	Rejected
Prob (F Statistic)				0.000*	
Adj R Square				0.677	
Std. Error				0.124	
N				140	

Notes: *p < 0.05. Dependent Variable: Carbon Emission Disclosure (CED); Independent Variable: Green Strategy (GRS), Institutional Ownership (INS), and Board of Director (BOD); Moderating Variable: Corporate Code of Conduct (COC).

Then it can be seen that the probability statistic value F is 0.0000 with a significance level below 0.05. From this, it can be concluded that this research model is feasible and can be used to predict the information on carbon emissions. It can then be seen that the coefficient of determination (adjusted R-square) is 0.677. This shows that the company's variable green strategy, institutional ownership, board of directors, and code of conduct can explain the carbon emissions disclosure of 67.7% while the remaining 32.3% is explained by other variables not included in this study. The SEE value (Standard Error of Estimation) is 0.124. This means that the smaller the SEE value, the more precise the regression model in this study is to predict the disclosure of the dependent variable carbon emissions.

5. Discussion

Based on the results of the statistical t-test (t-test) it can be concluded that the variable green strategy has a positive and significant influence on the disclosure of carbon emissions. This study is in line with the study by Makower (2006); Afni et al. (2018) according to which companies can integrate risks and opportunities into

corporate strategies that affect the environment and create opportunities by harnessing competitive advantage through a green strategy, climate change will demonstrate the ability of companies to manage carbon emissions by disclosing information about carbon emissions so they can respond to competitiveness, legitimacy, and environmental responsibility to marketing and improve the company's financial performance.

Based on the results of the statistical t-test (t-test), it can be concluded that the institutional ownership variable does not influence on the disclosure of carbon emissions. This study is in line with Herawan et al. (2018) and Kiswanto (2020) who state that the small amount of institutional property is due to the transfer of institutional property to more management property as well as institutional ownership in Indonesia is still relatively small, so good carbon emissions disclosure can continue to be encouraged as it is policy management.

Based on the results of the statistical t-test (t-test), it can be concluded that the variable board of directors does not influence on the disclosure of carbon emissions. This study is in line with Setiawan, Soeprajitno, and Iswati (2018) and Yurus et al. (2016) which found boards of directors with background in business and economics education are likely to disclose less information about carbon emissions because they are still focused on the company's financial context.

Based on the results of the statistical t-test (t-test), it can be concluded that the company's variable code of conduct can strengthen the relationship of the green strategy and carbon emissions disclosure. In line with research by Silitaaja (2006) that companies with an effective corporate code of conduct (COC) will strengthen the green strategic relationship with disclosure of carbon emissions. This is because the green strategy sees the code of ethics as a guideline to be followed when developing guidelines for disclosing carbon emissions (Khalid et al., 2019).

Based on the results of the statistical t-test (t-test), it can be concluded that the company's variable code of conduct cannot moderate the relationship between institutional ownership and carbon emissions disclosure. This is in line with the study by Khan, Muttakin, and Siddiqi (2013) according to which institutional holdings with a code of ethics have a different problem where industrial managers with a concentrated ownership structure tend not to engage in voluntary disclosure when payments (competition, litigation, and regulation) are viewed as higher and for the code of ethics is a management policy that focuses on the internal company and this has been previously set up by management.

Based on the results of the statistical t-test (t-test), it can be concluded that the company's variable code of conduct cannot moderate the relationship between the board of directors and the disclosure of carbon emissions. This is in line with the research by Budiharta and Kacariba (2020) that despite public pressure to disclose CO₂ emissions, the BOD is still reluctant to do so, especially if the costs involved are too high and the existing code of conduct is too high cannot influence BOD decision as it continues to focus on economic issues and low social and environmental awareness.

6. Conclusion, Limitation, and Suggestion

6.1. Conclusion

By using a panel data model to get empirical evidence of the impact of environmental strategy, institutional ownership, and board of directors on disclosure of carbon emissions with a code of conduct as the moderating variable over the 2015-2019 period. The results of the analysis show that the environmental strategy has a positive effect on the disclosure of CO₂ emissions. In the meantime, institutional owners and directors have no significant influence on the disclosure of carbon emissions. Then the company's code of conduct can strengthen the green strategic relationship on carbon emissions disclosure, while the company's code of conduct only has interactions between institutional ownership and the board of directors concerning carbon emissions disclosure. This shows that companies seizing opportunities from the effects of climate change and using competitive advantages through green strategies demonstrate the company's ability to manage CO₂ emissions by disclosing information on CO₂ emissions and the existence of an effective corporate code of conduct (COC) strengthen the relationship with green strategies with disclosure of carbon emissions.

The implications of the results of this study can be used by companies to incorporate risks and opportunities into corporate strategies that affect the environment and to pay more attention to business processes to protect the earth from climate change caused by the increasing impact of business efficiency when you apply this green strategy and start creating a code of ethics that supports the direction of sustainable development.

6.2. Limitation & Suggestion

The limitation of this study is the subjectivity in the assessment phase of the content analysis to determine the level of carbon disclosure, green strategy, and code of conduct. For further investigation, it is expected that the observation time will be extended and use other highly sensitive industrial zones such as mining, transport, and agriculture to obtain a more representative sample for answering research questions. You can also use other variable proxies for good corporate governance, such as ASEAN corporate governance scorecard and may enlarge the research samples by adding other ASEAN countries or grouping the countries in the emerging market. It may enrich the empirical results in CED topics.

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