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Fidiana Fidiana*
Sekolah Tinggi Ilmu Ekonomi Indonesia Surabaya

MEDIA PRESSURE AND CARBON DISCLOSURE OF INDONESIAN GREENEST FIRMS

Keywords: carbon disclosure, voluntary, media exposure.

J E L Classification: F64, G32, M41, Q50, Q56.

Abstract: Even with the advantages, carbon taxes are still one of the least effective instruments for climate policy. The purpose of this study is to examine the connection between non-mandatory carbon disclosures specifically in developing countries. This research sample is a green ranking company, and 108 data observations were carried out on 36 selected companies in the year between the Covid-19 out-break 2019-2021. Multiple linear regression testing is carried out to test the alleged hypothesis, by first testing the assumptions. The statistical results support the hypothesis that only legitimacy pressure (media exposure) increases corporate motivation to disclose carbon emissions. This study is novel because, while earlier research has mostly focused on the external factors that drive voluntary disclosure, our findings provide new perspectives and imply that media pressures offer a supplemental explanation for the variation in corporate carbon disclosure propensity that has been largely ignored in the body of existing literature. This suggests for the need to call for holistic mandatory disclosure requirements that encourage companies to participate in climate policy.

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* Contact information: fidiana@stiesia.ac.id, Department of Accounting, Sekolah Tinggi Ilmu Ekonomi Indonesia Surabaya, Jalan Menur Pumpungan 30, Surabaya – 60118, Indonesia, phone: +62 31 594 75 05; ORCID ID: https://orcid.org/0000-0002-9895-7809.

Introduction

Global warming and climate issues are still trending international topics and the focus has been on placing greenhouse gas (GHG) emissions (Almaghrabi, 2023) on the main scale. The Paris Agreement is a form of international commitment to address this issue (Wegener, 2020).

Global warming is mainly caused by industrial emissions, where the industrial sector uses 70% of fossil energy from the total energy consumed (Wang & Zhou, 2019). These days, the two biggest developing and industrialized nations in terms of GHG emissions are the United States (16%) and China (28%) (Wu, Huang, Chen, Mao & Qi, 2022). Mining industries such as oil and gas, coal and the like are the world's largest contributors to emissions. Several popular mining industries have been associated with the highest emissions since 1988 (Weller, Hamburg & von Fischer, 2020).

Various cases in the mining industry related to the environment have been proven to have an impact on financial performance. The oil spill case, for example, resulted in huge financial losses for Beyond Petroleum (BP). This event is consistent with the argument that corporate environmental activities are related to litigation risk (Shao & He, 2022). Therefore, it is important to understand that carbon reporting has financial implications. This has prompted several companies with high emissions to take a voluntary approach to reporting carbon performance.

The impact of climate change-related regulations on corporations' climate change disclosures, particularly voluntary carbon reporting, has received little consideration up to this point. More and more companies are voluntarily disclosing carbon emissions, prompting academics to examine the impact of emissions on corporate financial performance. Several papers have found a positive and significant relationship between climate change performance and company performance (Almaghrabi, 2023). These results show that investors reward companies with low levels of carbon emissions. Highly ranked and highly polluting companies continue to increase their efforts to be sustainable (Raval, Saxena & Thanki, 2022), which increases the positive effect of carbon performance on corporate value (Weitzman, 2017).

Most studies actually document neutral or even negative results on company performance (Almaghrabi, 2023; Saka & Oshika, 2014). According to these inconclusive findings, research related to carbon emissions still needs to be

studied further. In essence, the inconsistency of research results shows that the market penalizes all companies for carbon emissions, but further penalties are imposed on companies that do not disclose emissions information (Almaghrabi, 2023). This means that emissions disclosure can also be under pressure from stakeholders. Consistent with the argument that capital markets capture carbon emissions and the act of voluntary disclosure of this information in corporate valuations. Therefore, some companies also make large RD (research and development) investments, aiming to find more efficient and innovative ways of operating while reducing their carbon footprint.

A carbon tax is a reasonably straightforward tool to impose on the individual polluters, even the numerous smaller ones that predominate the non-emission trading system sectors (Muthu, 2014). Economists support the use of carbon taxes because they are less complicated to manage, do not require government funding, and give a financial incentive to cut emissions without being technologically mandated (Weitzman, 2017). In fact, disclosing carbon emissions is part of corporate social responsibility (Shao & He, 2022). Disclosure of carbon emissions further describes the company's efforts to reduce carbon emissions, such as allocation of environmental costs, calculation of energy consumption, and regulations to control energy use. In fact, there are still few companies that make disclosures regarding carbon emissions in Indonesia. In fact, the Statement of Financial Accounting Standards requires entities to disclose their emissions. In addition, Presidential Regulation shows the government's commitment and work action plan to actively contribute to climate change mitigation.

On the other hand, disclosure of carbon emissions can increase legitimacy and reduce the risk of litigation (Shao & He, 2022). Disclosure of carbon emissions can prevent companies from detrimental threats such as unfavorable media coverage, governmental resistance, including additional regulatory duties, altered conrdsumer expectations and product substitution (Esty & Bell, 2018).

The current study aims to empirically test carbon emission disclosure (CED) in developing countries such as Indonesia. There is a dearth of conclusive research on factors motivating companies to disclose voluntary carbon emissions especially in the context of developing countries. Furthermore, there are differences in disclosure norms from developed countries and developing countries; developed economies force mandatory disclosure, and vice versa it is voluntary for developing countries which results in the absence of a disclosure framework (Desai, 2022; Desai & Raval, 2022b) or a weak framework. Con-

sidering regulatory and structural differences, a separate investigation for developing countries is essential.

In the Indonesian context, this research is based on the phenomenon of the still low CED level of issuers in Indonesia (Andrian, 2021) and the results are inclusive. Rahmanita (2020) has shown negative results of CED on company performance. Contrary to these results, Andrian (2021) shows positive support for CED with company performance. The inconsistency of results in these two sectors encourages further CED research.

Additionally, countries with tropical and subtropical climates appear to be more affected by rising temperatures (Deb, Phinn, Butt & Mcalpine, 2018) and Indonesia is no exception. The impacts of climate change in Indonesia include an increase in surface temperature, an increase in temperature and sea level, changes in rainy weather, an increase in climate events and extreme weather. Indonesia has shown commitment with sustainable development goals and the approach to climate neutrality. President Joko Widodo formally launched the Indonesian Carbon Exchange (IDX Carbon) in September 2023 (Nurahmad, 2023); in an effort to move the nation closer to its goal of reducing emissions to zero. This marks a significant turning point in Indonesia's efforts to combat climate change and uphold its commitment to environmental sustainability. In September 2023, a total of 15 businesses took part in Indonesia's first carbon trading.

Recent discussions report more diverse driving factors, operational and strategic in nature towards economic motives. Luo and Tang (2021) interviewed 38 companies in 7 countries. This research found public pressure as the main reason for CED participation and placed environmental motives as a less important reason.

Other studies prove that climate action is nothing more than a corporate strategy (Okereke, 2007). Most companies place profit goals as the main driver for taking climate action. The study reports that almost 100% of FTSE companies that disclose climate action on their websites reveal the benefits of managing carbon. Interestingly, companies do not hesitate to report the amount of revenue from managing carbon. Guo and Wang (2023) found some evidence of greenwashing efforts as well as ecological modernization in CED activities.

Furthermore, they argue that corporate climate strategies can be differentiated based on whether priority is given to the company's egoistic economic rationality (strategy) or ethical values and the common good. So, the question is whether CED is based on intrinsic drives and ethical values or an act of corporate egoistic economic rationality as strategy?

The green rating system is expected to overcome green-washing behavior (Guo & Wang, 2023). However, it is not clear whether this new system is able to mitigate carbon. This certainly raises the question of whether companies with a green rating participate in reducing their carbon emissions compared to non-rated companies. This issue is very important because the green rating system implies that companies with a green rating should have better environmental performance and participate in carbon performance. Intuitively, a positive correlation is expected between a company's green rating and carbon performance.

In Indonesia context, green rating of carbon performance is managed by The Indonesian Ministry of Environment and Forestry (KLHK). The KLHK used the PROPER instrument to assess environmental performance in various industries in Indonesia. The Proper's rating spotlights the corporation's dedication to environmental management and sustainable business practices. Its highlights firms that provide the greatest benefit to people and the planet, driving the transition to a low-carbon. Every year, KLHK giving a ranking and awarding to companies with extraordinary achievements in environmental performance. This recognizing those that surpass legal requirements with exemplary green best practices.

If this is not the case, the new system simply creates opportunities for companies to improve their image without doing anything about actual carbon performance, which is consistent with impression management theory. Lyon and Shimshack (2015) studied the impact of a leading US media sustainability ranking program in Newsweek 2009 ranking of the 500 largest US companies and found that rankings had a significant impact on shareholder value. However, there is no investigation devoted to carbon screening. To fill this gap this paper empirically explores the relationship between green ratings and carbon mitigation.

In accordance with the problem formulation above, the aim of this research is to examine reputation pressure (green rating), legitimacy pressure (media), social pressure (company size), and market pressure (profitability) on carbon emissions disclosure. This study contributes to the discussion of the minor topic of carbon emissions in the context of emerging economies, tropical countries, and non-mandatory ones. Furthermore, in the case of Indonesia, carbon disclosure shows certain characteristics worthy of analysis. There are still very few public companies in Indonesia that participate in CED (Rahmanita, 2020) considering its still voluntary nature. This means that the CED tradition of companies in Indonesia is lower compared to other countries. From a research

perspective, the lack of CED studies of Indonesian companies is noteworthy (Andrian, 2021).

The originality of this study is that although previous studies typically consider external pressures motivating voluntary disclosure, our results offer additional insights and suggest that media pressures provide a complementary explanation. The most ignored in the existing literature for variations in corporate carbon disclosure tendencies.

This paper considers the possibility of several factors on voluntary carbon disclosure according to relevant pressures: reputation, media, social and market. Competition and credibility are factors driving climate disclosure that it is better to be proactive and a pioneer in carrying out climate activities; to gain credibility and portfolio leverage. Most companies assume that reputation and ratings will be able to compensate for emissions costs through customer and public trust.

Gonzalez and Ramírez (2016) reported that Spanish companies with the Dow Jones Sustainability Index responded more quickly to projects. Companies with a certain ranking are associated with higher visibility, bringing them closer to potential investors. In line with this, several studies have concluded that ratings are a significant determinant of the level of voluntary disclosure including carbon disclosure (Okereke, 2007).

On the other hand, certain indices imply higher demands for transparency and disclosure. Shareholders of environmentally rated issuers can pressure the company to continue to exist, comply with transparency requirements including environmental and carbon disclosures and therefore the legitimacy of the organization is not compromised.

Companies with environmental programs present more credible emissions than companies without environmental programs (Yunus, Elijido-Ten & Abhayawansa, 2016). Consequently, companies with environmental programs are more likely to be in a superior position to address climate-related business risks to respond to stakeholder pressures and to gain greater legitimacy. Guo, Zha, Lee and Tang (2020) used an innovative method to detect green-washing behavior by examining carbon disclosure (green ratings) and performance. This research shows there is a significant positive relationship between green ratings and carbon performance.

Otherwise, the new system simply creates opportunities for companies to improve their image without doing anything about their actual carbon performance, which is consistent with impression management theory. However,

there is no investigation devoted to this examination. To fill this gap, this paper empirically explores the relationship between CED ratings and carbon mitigation. H1: there is a significant and positive relationship between green ratings and carbon disclosure.

Legitimacy focuses on public acceptance of company activities. Much media reporting forms a force that influences corporate practices and even influences corporate value to some extent (Shao & He, 2022). Previous study reported that corporate social disclosure has an impact on overall preferred news reporting (Nitz, 2001). Meanwhile, other studies show that media publications cause different cognitions from the government and different performance images by consumers. However, in countries with inadequate carbon laws and regulations, companies may manage carbon disclosure symbolically to respond to negative media comments and threats to legitimacy.

Media attention, especially social media, encourages monitoring and the pressures faced by companies to become more dynamic and complex. The legitimacy pressure generated by social media opinion is an important driver of corporate carbon disclosure. Especially the reporting of negative corporate information by the media brings great pressure to companies, which makes companies disclose as much positive carbon information as possible. Nitz (2001) found that the more negative the media coverage, and the more local the coverage, the greater the impact on corporations. Li (2023) stated that media coverage influences the company's information environment. Cho and Patten (2007) show that when companies are faced with negative incidents, they will utilize their social and environmental reporting as a tool to manage legitimacy. Previous study show that managers of companies responsible for violations who want to maximize the value of their companies are incentivized to reduce the level of information asymmetry by signaling good news to capital markets to avoid friction in capital markets (Turner, 2021).

Media platforms have provided space for stakeholders to voice their concerns massively and widely (Li, 2023). Other studies prove media-driven environmental legitimacy and reputation costs outweigh the investments required to increase corporate commitment to climate change action (Nitz, 2001). These findings imply that the agenda-setting and issue-framing functions of the media can be used to improve corporate responses to climate change issues, particularly the responses of companies that appear to have a lower propensity to take action to address climate change. Corporate carbon disclosure serves as an effective tool to respond to environmental demands by stakeholders and

compensate for legitimacy. Media legitimacy pressure drives companies to increase carbon disclosure, with negative media opinion being the main source of legitimacy pressure. Thus, we hypothesize (H2) that media legitimacy increases carbon disclosure.

Firm size represents social pressure, as large firms are subject to more public scrutiny and media coverage (Li, 2023). Social pressure refers to the pressure of public opinion. Large companies are the target of public expectations (Wang, 2023) to overcome the impacts of climate change. Larger companies also tend to disclose more information to achieve favorable economies of scale (Clarkson, Richardson & Vasvari, 2008). Several studies show a positive relationship between company size and carbon disclosure (Okereke, 2007). Therefore, we can consider (H3) there is a significant and positive relationship between the size of the company and carbon disclosure.

Profitability represents a proxy for market pressure (Gonzalez & Ramírez, 2016). Companies with higher levels of profitability will be in a better position to face emissions and disclosure costs. Legitimacy and stakeholder theory state that society and investors pressure higher disclosure from profitable companies. The larger the company, the more it becomes the target of policy, media, social organizations, and society, so it is under greater pressure than small companies. Companies with high profitability assume that information disclosure is a signal that they can immediately respond effectively to environmental pressures. Responding to stakeholders, profitable companies tend to respond to this pressure to gain public trust so that they legitimize the way the company makes profits (Desai, 2022). On the other hand, companies with high profitability have the financial ability to incorporate carbon performance into business strategy (Guo & Wang, 2023).

Despite the premises supporting the relationship between profitability and carbon disclosure, empirical studies have provided mixed results. Some have recorded a positive relationship (Andrikopoulos & Kriklani, 2013; Desai & Raval, 2022a) and some shown a negative relationship (Desai, 2022). The following hypothesis (H4) may be considered there is a positive relationship between profitability and carbon disclosure.

Research methods

To examine the role of reputation pressure, media pressure, social pressure, and market pressure, a quantitative research approach was adopted. Secondary data was collected from stock exchanges and green rating sites. Utilizing web crawler technology, a mature and popular technology in computer science and information of media coverage is determined (Li, 2023).

This study used 36 samples of firms traded in ISE (Indonesia Stock Exchange) and receiving Proper's rating awards in 2019-2021 from The Ministry of Environment and Forestry's (KLHK); a prestigious ranking index that certifies the performance of 100 top firms in Environmental Management in Indonesia, exceeding regulatory requirements. Purposive sampling with defined criteria was employed to obtain the sample (Table 1). There were 36 firms that met the criteria with 3 years observation. Next, the data was analyzed using multiple linear regression with 3 years of observations (36x3=108), with fulfillment of the classical assumption test as a test requirement.

Table 1. The Sample Selection Stage

Description	No	Yes
Manufacturing firms traded in ISE (Indonesia Stock Exchange) during 2019-2021		566
Non-Financial firms	(134)	432
Firms achieving Proper Rating	(355)	77
Firms which do not disclose indicator of carbon emission	(41)	36
Sample based on the criteria		36
Year of observation		3
Total unit of analysis during the period of 2019-2021		108

Source: author own calculation.

Results and discussion

Descriptive statistics describe the mean, maximum, minimum and standard deviation of data for the variables tested in this research (see Table 2). Based on the results of the variable description test, the observed data can be summarized as follows that disclosure of carbon emissions in many developing countries (Desai, 2022) including Indonesia is still voluntary and not yet established.

Table 2. Statistical Analysis Description

Variables	N	Lower limit	Upper limit	Average	Deviation
Carbon emission disclosure	108	0.051	0.415	0.21160	0.124461
Proper	108	0.000	5.000	3.19000	1.370000
Media exposure	108	0.247	0.512	0.26521	0.130012
Size	108	3.421	3.510	3.41244	0.071237
Profitability	108	-2.108	0.322	0.04137	0.259173

S o u r c e : own statistic calculation.

Many efforts to disclose carbon emissions are related to the motivation to gain reputation and meet stakeholder pressure as well as to send a signal that the entity is committed to reducing carbon emissions. Disclosure of carbon emissions can also function as a competitive advantage that differentiates an entity from competitors.

The probability value for a proper certificate is greater than 5% which means H1 is rejected. Reputational pressure reflected by the proper rating has no effect on carbon disclosure. Environmental certificates fail to motivate corporates to disclose carbon emissions. It's not in line with previous research that rating is a significant determinant of the level of voluntary disclosure including carbon disclosure (Okereke, 2007).

Table 3. Concise Tabulation of Linear Tests

Model			
$CED = a + \beta_1 TR + \beta_2 TL + \beta_3 TS + \beta_4 TP + e$			
Variable	**Sign**	**Coefficient**	**Sig.**
TR (Proper)	+	57.010	.269
TL (ME)	+	0.563	.001
TS (Size)	+	0.412	.066
TP (Profit)	+	0.031	.512
Constant		-1.265	.064
Rsquare	31.2%		
Prob. F	0.000		
N	108		

S o u r c e : own statistic calculation.

The most important thing underlying this fact is that the nature of carbon emissions disclosure is voluntary, so that only a few companies participate in disclosing carbon emissions. Therefore, the various dimensions that can motivate carbon emissions disclosure have not yet received established statistical support. More specifically, based on a selected sample of companies, the statistical data of this research shows that entities only disclose around 21% of the total carbon emission disclosure items that they should. It can be ensured that the selection of disclosure items by corporates is close to the items that are safest for corporates. So, the voluntary nature of carbon emissions disclosure is the main basis because environmental performance is unable to motivate entities to make total disclosures.

In terms of environmental management performance, the sample of companies observed in this research only achieved certificates with a blue designation on average. The blue predicate indicates that the entity's efforts in managing the new environment are limited to meet The Ministry of Environment and Forestry's (KLHK) minimum requirements or conformity to the minimum regulatory provisions. Thus, achievements and predicates related to environmental performance are still at the level of meeting regulatory demands. This is a signal that the main objective of an entity's participation in proper compe-

tition is not really at the level of wanting to contribute to environmental issues, but to avoid government pressure and even because of appointment by the government.

Legitimacy theory requires corporations to always obey norms to gain legitimacy. By participating in proper, corporates with a good environmental management performance predicate (green or gold level) assume there is no need to disclose carbon emission activities because it is already reflected in the proper predicate received (Nitz, 2001). Environmental certificates are sufficient as a means of legitimacy for environmentally certified corporations. The proper certificate contains carbon emission measurement instruments. Companies with proper programs have gained reputation and legitimacy in the community and have achieved a superior position in overcoming business risks. Carbon participation is considered as additional participation which can increase costs and risks. It would thus be a poor means of corporate legitimacy. Such entities will voluntarily disclose carbon impacts to gain public and government legitimacy.

The results of this research are in line with previous research which failed to prove the influence of environmental performance on carbon emissions disclosure (Guo & Wang, 2023). Companies are more willing to release environmental management information than to release energy (Bai & Yao, 2023). Corporations with higher special risks and sensitive carbon issues will prefer imaging on environmental aspects.

The probability value of media exposure is less than 5%, which means that H2 is accepted. Legitimacy pressure reflected by media exposure influences carbon disclosure. This means that the exposure medium motivating role corporates disclose carbon emissions. Media is a tool that pressures and monitors firm practices in a dynamic and complex manner. Media platforms have provided space for stakeholders to voice their concerns massively and widely (Li, 2023). Media legitimacy pressure is very effective in forcing companies to respond to stakeholder demands and compensate for legitimacy. Negative media opinion is the main source of legitimacy pressure that encourages corporations to disclose carbon. The more unfavorable and more local the media coverage, the more increases the impact on firms (Han & Xu, 2020).

Negative news about companies by the media is a big pressure for companies to disclose as much positive carbon information as possible. Han and Xu (2020) stated that media coverage influences the company's information environment. Tavakolifar (2021) show that when companies are faced with nega-

tive incidents, they will utilize social and environmental reporting as a tool to manage legitimacy. Shao and He (2022) show that managers of companies responsible for violations who want to maximize the value of their companies are incentivized to reduce the level of information asymmetry by signaling good news to capital markets to avoid friction.

Other studies prove media driven environmental legitimacy and reputation costs outweigh the investments required to increase corporate commitment to climate change action (Han & Xu, 2020). These findings imply that the agenda-setting and issue-framing functions of the media can be used to improve corporate responses to climate change issues, particularly the responses of companies that appear to have a lower propensity to take action to address climate change. Positive media coverage makes private companies more sensitive to and less tolerant of environmental rules (Li, 2023).

The probability size value is greater than 5% which means H3 is rejected. Company size does not support the proposed hypothesis, namely company size drives carbon disclosure. The bigger the company, the greater the pressure to disclose carbon compared to smaller companies. This research shows that the average company with a low deviation, meaning that the sample of companies in this research is homogeneous, on a medium scale. This is related to the selected sample for this research, namely properly regulated companies, generally large and medium companies. The failure to support this research hypothesis shows that company size will only be meaningful if the sample varies from small to large companies, while this research sample is classified as a medium company.

The results of this research fail to support the concept that company size represents social pressure, because large companies are subject to more public scrutiny including media coverage (Gonzalez & Ramírez, 2016). Social pressure refers to public pressure because it is the target of public expectations (Wang, 2023) in overcoming climate impacts. Legitimacy theory explains that public legitimacy pressure is higher on large companies to disclose non-financial data in order to maintain the social contract that allows companies to access community resources (Desai, 2022). In the carbon context, carbon disclosure is a way for companies to respond to public pressure (Guo & Wang, 2023) and achieve profitable economies of scale. The results of this research are in line with previous research which was also unable to support a positive relationship between company size and carbon disclosure. Medium-sized companies do not receive as much pressure as large companies and are therefore less motivated to disclose carbon.

The profit probability value is greater than 5% which means H4 is rejected. Profitability does not support the proposed hypothesis, namely profitability drives carbon disclosure. The more profitable a company is, the greater the pressure to disclose carbon compared to other companies that are losing money. This research shows that the average company profit is 4% with a standard deviation that exceeds the mean value, which means that the data variation is quite high. Average profitability data shows that this research sample is classified as a company with low profits, less than 5%, so it is unable to support the concept of profitability encouraging companies to disclose their carbon activities, while carbon disclosure is not yet mandatory.

Companies with low operational capabilities do not choose to disclose carbon activities because it increases costs and reduces profits, thereby disrupting information on the company's financial success. Companies with low profitability will focus on prioritizing operational success rather than additional activities. In line with the results of previous studies that only companies with adequate profitability are able to manage human and financial resources to expand their disclosure to the level of voluntary disclosure including carbon disclosure (Desai, 2022). Less profitable companies do not want to further pressure their financial performance by disclosing carbon.

In contrast to legitimacy theory and previous empirical studies in developed countries (Akhiroh & Kiswanto, 2016). This research concludes that company profits have no impact on carbon disclosure. Companies with low profitability will make disclosures to achieve legitimacy that is operationally attractive to their stakeholders. The opposite aspect, companies with high profits that are not motivated to disclose carbon is certainly associated with the fact that carbon disclosure is not yet mandatory in Indonesia. High firm profits choose to shift their resources to other voluntary disclosure contexts with more certain arrangements.

Conclusion

Carbon disclosure is not mandatory disclosure in Indonesia, therefore companies that disclose carbon are voluntary. The study results concluded that several proposed variables did not support the carbon disclosure hypothesis. The results of this study prove that corporations generally have only achieved a blue designation, which means their participation is limited to meeting regulato-

ry requirements. Only a few companies have carbon disclosure. This indicates a motivation for mitigation or even corporate green washing in relation to the environment and carbon. In fact, the green rating system is expected to overcome green washing behavior. Company size is not proven to support carbon emission disclosure because this sample of companies is generally not classified as large companies. Companies with low profitability are also not motivated to disclose emissions because they reduce economic capacity in the current year. This research is limited in the aspect of not involving control variables which might lead to biased conclusions.

The nature of carbon emission disclosure in Indonesia is voluntary, so only a few companies participate in disclosing carbon emissions. It is natural that this research failed to obtain adequate statistical support for the proposed variables that are expected to motivate companies to disclose carbon emissions. More specifically, the sample companies only disclosed around 21% of the total carbon emission disclosure items that they should have. Likewise, the sample in this research is a group of companies with a blue rating; indicates that the willingness to participate in green is limited to meeting the minimum regulatory requirements. Therefore, this research recommends that the Indonesian government require companies to disclose carbon emissions rather than voluntarily.

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