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Impact of Emissions Intensive Industries and Financial Distress on Voluntary Carbon Emission Disclosure

Sari Rahmadhani,
Accounting Study Program, STIE Totalwin Semarang
akunting.sari@gmail.com
Rahayu Indriyani
Accounting Study Program, STIE Totalwin Semarang
indri_rahayu34@yahoo.co.id

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ABSTRACT
This study aims to examine factors affecting voluntary disclosure of carbon emissions. Factors affecting the disclosure of voluntary carbon emissions consist of emissions-intensive industries and financial distress represented by leverage. The sampling method used is pruposive sampling with the following criteria, companies that have received a corporate governance rating index during the observation period and published annual reports during the observation period (2013-2016). Based on the corporate governance index determined 66 sampled research. The analysis technique used to test the hypothesis of this research is multiple linear regression analysis. The results of this study indicate that emissions-intensive industries have a significant positive impact on the disclosure of voluntary carbon emissions. Financial distress has a significant negative impact on voluntary carbon disclosure.
Keywords: Corporate Governance, Emissions-intensive industries, Financial Distress, Leverage, Voluntary Disclosure of Carbon Emission

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INTRODUCTION

Carbon emissions disclosure in recent years has become a growing problem in various countries, including Indonesia. The problem is related to the impact of climate change. Climate change threatens the continuity of the organization, because the company is one of the emitters of carbon that causes the occurrence of climate change (Jannah & Muid, 2014). Carbon emissions are considered as important to disclose because disclosure of carbon emissions is the top of all climate change strategies. In addition, disclosure of carbon emissions is also highly needed by the company for sustainability of company. Companies that have disclosed emissions of carbon produced are considered to have complied with government regulations and the community environment will accept company (Ahmad & Sulaiman, 2004).

Carbon emissions disclosure has not been fully done by the company. Disclosure of carbon emissions in companies in developing countries is still voluntary. This is because developing countries, resources are still considered very low, and activities undertaken by companies in developing countries are still relatively small (Irwhantoko & Basuki, 2016). However, Indonesia has committed to participate in carbon emissions reduction activities, as stated in Law 17 of 2004, which states that one of the ways is by voluntary carbon emissions disclosure. Carbon emissions disclosure give companies a tremendous opportunity for companies to increase public trust and shareholders and government (Dowling & Pfeffer, 1975). Carbon emissions disclosure will help companies to defend positions of trust and excellence as well as value for company.

Companies in the world are gradually beginning to consider the considerable material risks associated with climate change. Both direct risks to their business or business resulting from changes in consumer consumption patterns, as well as indirect risks (Luo, et al, 2013). In addition, what triggers disclosure of carbon emissions is demand from stakeholders regarding carbon emissions disclosure.

This disclosure will serve as a consideration in making investment decisions by stakeholders.

Some countries that have followed and committed to reducing greenhouse gas emissions including carbon emissions will issue a mandatory regulation for companies to disclose carbon emissions (Luo, et al 2013). Research Choi, et al (2013) revealed that the Australian government has the National Greenhouse and Energy Reporting Act (NGER Act) as an information reporting framework on greenhouse gas emissions. While Indonesia ratified the Kyoto Protocol through Law no. 17 of 2004 and No. Pepres. 61 of 2011 on national action plans for reductions in greenhouse gas emissions (Jannah & Muid, 2014).

The purpose of the study is to obtain evidence of the impact of emissions intensive industries on voluntary carbon emissions disclosure and the effect of financial distress on voluntary carbon emissions disclosure in companies registered in Corporate Governance Perception Index in 2013-2016. In 1998 and 2008 to support Indonesia's efforts to reform government, the idea of improving good corporate governance practices in Indonesia was raised. These include the establishment of the Indonesian Institute for Corporate Directorship (IICD), the Indonesian Institute for Corporate Governance (IICG), the Forum for Corporate Governance in Indonesia (FCGI), the Indonesian Institute of Audit Committees (IKAI) and the Board of Commissioners and the Board of Directors of Indonesia (LKDI). These organizations aim as a form of concern for corporate governance as well as corporate governance assessors and provide an index of perceptions of governance on an annual basis.

The rules governing principles of governance consist of Law no. 40 of 2007 on Limited Liability Company. The governance practices in Indonesia in the ASEAN ranking according to The OECD Principles of Corporate Governance in 2012 are in a low position. It is something that should be improved by the company and government of Indonesia. This fact shows that corporate governance practices in Indonesia are still very weak and require improvement. This illustrates that companies in Indonesia have not implemented corporate governance properly. Low corporate governance affects the low voluntary disclosure of the company's carbon emissions information and low investor interest in the company.

Financial condition in company there are two conditions namely condition of profit (profitability) and condition of financial degradation (financial distress). Research on financial distress also there is difference of research that is research conducted by Gantyowati & Nugraheni (2014) show that financial distress have a significant negative effect to the level of voluntary disclosure. Research Choi, et al, (2013) found that financial distress does not affect the voluntary carbon emissions disclosure area. This study refers to a study conducted by Choi, et al, (2013) who researched companies in Australia.

LITERATURE REVIEW

Legitimacy Theory

The theory of legitimacy focuses on the relationship between companies and society through regulations and governmental decrees of Dowling & Pfeffer (1975). This theory is a foundation and a bridge for interests of company and interests of society. This theory as a driver of a company to pay more attention to environmental problems. The existence of this theory will be able to make the company disclose its social responsibility. Legitimacy in organization can be seen from what the community gives to company and what company wants from community (Ghozali & Chariri, 2014). The foundation of theory of legitimacy is social contact between company and society around company and use of its economic resources (Ghozali & Chariri, 2014). In theory, legitimacy suggests disclosure as a means of convincing people. This is because when community is not satisfied with performance done by company then that's the position of legitimacy of the company will be threatened and affect the sustainability of company's business. This dissatisfaction resulted from the non-harmonization of values adopted by society and company this is what is called legitimacy gap (Ghozali & Chariri, 2014).

Voluntary Carbon Emissions Disclosure

Voluntary Carbon emissions disclosure is a disclosure by company to disclose or account for its activities to the environment. Carbon disclosure is one type of environmental disclosure that is part of the supplementary report stated in PSAK No. 1 (revised 2009) in the twelfth paragraph containing : entities may also present, separate from financial statements, environmental reports from value added reports (value edded statement). Especially for industries where environmental factors play an important role. The report is outside the scope of the Financial Accounting Standards. The Kyoto Protocol of greenhouse emission disclosures in developing countries is still voluntary. So in the Kyoto Protocol Indonesia itself is still a State that is not obliged to disclose about greenhouse emissions. The main purpose of the company making such disclosure is to increase value of company. Disclosure of information on carbon emissions by companies is one of company's contribution to carbon emission reduction and to climate change (Irwhantoko & Basuki, 2016).

Carbon Emission Disclosure is measured using some of items adopted from Choi, et al (2013) research. There are five major categories relevant to climate change and carbon emissions, consisting of: climate change risks and opportunities (CC / Climate Change), gas emissions greenhouse gases, energy consumption (EC/ Energy Comsumption), green-house gas reduction and cost (RC / Reduction and Cost) and carbon emissions accountability (ABC / Accountability of Emission Carbon).

Emissions Intensive Industry

Emissions Intensive industries is an industry or company engaged in a very active in producing emissions in its production and operational activities. Companies that are active in generating emissions will be more responsive to the environment (Bowen, 2000). The Company will endeavor to disclose and report the emissions generated to prevent problems with the environment. Industry according to Law no. 3 year 2014 concerning Industry is all forms of economic activities that process raw materials or utilize industrial resources to produce goods that have added value or higher benefits, including industrial services. Industry is a form of efforts to improve the welfare of the population, to improve people's lives.

Financial Distress

Financial distress is a condition where financial in company has decreased. Financial distress is usually experienced by company at time before the bankruptcy. Financial distress is stage of decline in financial conditions caused by ineffectiveness, occurrence of financial distress before occurrence of bankruptcy or liquidation (Platt & Platt, 2008). Financial distress conditions indicate that company has a poor financial performance as well. Financial distress discourages companies from disclosing their liabilities, as companies in financial distress will prefer to use their funds to meet their obligations. Company will find it difficult to gain legitimacy from the community (Jannah & Muid, 2014). Financial distress greatly influences voluntary carbon emissions disclosure, to increase the company's legitimacy towards society.

Emissions Intensive Industries and Voluntary Carbon Emissions Disclosure

Energy-intensive companies will tend to disclose carbon emissions more. The pressure faced by the carbon-intensive firm will make the company make efforts to suppress or reduce the pressure (Irwhantoko & Basuki, 2016). The theory of legitimacy governs the company's relationship with its environment. To gain legitimacy from the public the company must take responsibility for its activities and strive to be open to corporate information. One way to gain legitimacy from the public is to voluntarily disclose carbon produced by the company (Jannah & Muid, 2014). The disclosure is the responsibility of the company to the environment, so that the company will gain legitimacy from the community, and the company will be accepted by the company's public company.

Based on the above description it can be concluded that the type of industrial company will increase the disclosure of voluntary carbon emissions. This is supported by the research of Choi, et al (2013) and Jannah & Muid (2014) stating that the emissions intensive industry has a significant positive effect on voluntary carbon emissions disclosure. So the hypothesis that can be prepared is as follows:

H_1: Emissions Intensive Industries have a significant positive effect on Voluntary Carbon Emission Disclosure

Financial Distress and Voluntary Carbon Emissions Disclosure

The poor financial condition of a company greatly affects the activities of the company. Financial distress in company will inhibit social contacts to its community. Especially in social activities and environmental responsibility will be hampered. If the company is in such condition then the company will lose the legitimacy of the community (Irwhantoko & Basuki, 2016). It triggers something undesirable from the company that is protest or rejection from the public, so the company will stop operating, because of the many pressures from society that can not be fulfilled by the company.

The condition of financial distress affects the disclosure of voluntary carbon emissions. Companies that are aware of this condition or are in this condition will seek to find a way out of pressure. A way out of one of the pressures is to reduce the company's disclosure. Disclosure of carbon emissions is considered as a risk that should be reduced to companies that are in declining financial condition (Gantyowati & Nugraheni, 2014). Companies in declining financial condition will focus more on corporate debt financing or other more important financing. Therefore the company will reduce the disclosure of carbon emissions it produces. In this study the financial distress will be measured with the ratio of leverage. The high level of leverage indicates that the company has large debts, so the disclosure will be relatively smaller, the statement is in accordance with the results of research conducted by Jannah & Muid (2014) and Poluan & Nugroho (2015). So the hypothesis that can be compiled is:

H_2: Financial Distress has significant negative effect on Voluntary Carbon Emissions Disclosure

RESEARCH METHODS

This analysis is used to find out how big influence of independent variable to dependent variable by using multiple linear regression equation as follows:

$$VCED = a + b1IND - b2FD + e$$

Where:

VCED = Voluntary Carbon Emissions Disclosure
a = contanta
b1,b2 = coefisien regretiom
IND = Emissions intensive industries
FD = Financial distress
e = error

This study uses two variables consisting of dependent and independent variables. The dependent variable of this research is voluntary carbon disclosure and independent variables consist of intensive industry and financial distress emissions.

Table 1. Operational Definition

Variable	Measurement
Voluntary carbon emissions disclosure	Added a checklist of items to each company and divided by the number of disclosure items $VCED = \frac{\text{amount disclosed}}{18}$
Emissions intensive industries	Dummy variables which value 1 for firms include intensive emissions, while 0 for firms that do not include intensive emissions
Financial Distress	$Leverage = \frac{\text{Debt Total}}{\text{Asset Total}}$

Population and Sample

The population in this study are all companies registered in Corporate Governance Perception Index year 2013-2016. Companies listed in the Corporate Governance Perception Index are used as research objects because they are companies that already have good governance ratings, so companies are considered more concerned about the environment and can increase carbon emissions disclosure

ANALYSIS AND DISCUSSION

Description of Research Object

The object of this research is 38 companies that have received good corporate governance rating issued by Corporate Governance Perception Index during 2013-2016 period. Emissions Intensive Industries with sample size 66 samples. Frequency emissions Intensive Industries is an intensive industry that produces emissions is a low frequency with a sample of 34 with a percentage of 51.5% which means that the intensive company produces emissions is 34 samples. While non emissions Intensive Industries that is not intensive company produces emission is the highest frequency with the number of samples 32 percentage 48.5%, this can be seen in table 2.

Tabel 2. Descriptive Frequency Emissions Intensive Industries

	Frequency	Percent	Valid Percent	Cumulative Percent
Non Interest carbon industry	32	48,5	48,5	48,5
Intensif carbon industry	34	51,5	51,5	100,0
Total	66	100,0	100,0	

The highest frequency of the financial distress variables measured using leverage is the company or sample that does not occur financial distress for 64 samples with percentage of 97%. Meanwhile, the frequency of companies that occur financial distress a number of samples with percentage of 3%. This indicates that company sampled in this study is in good financial condition. As for showing the picture of other variables, consisting of voluntary carbon emission disclosure, presented in table 3:

Table 3. Descriptive Frequency Financial Distress

	Frequency	Percent	Valid Percent	Cumulative Percent
Non fnancial distress	64	97,0	97,0	97,0
Financial distress	2	3,0	3,0	100,0
Total	66	100,0	100,0	

Voluntary carbon emission disclosure has a minimum value of 6% Meanwhile, the maximum value is 56%. The average volume of voluntary carbon emission disclosure companies is 23.06% with a standard deviation of 17.165%, can be seen in table 4.

Table 4. Descriptive Statistics

	N	Minimun	Maximum	Mean	Std. Deviation
Voluntary carbon emissions disclosure	66	.06	.56	.2306	.17165
Valid N (listwise)	66				

The statistical test t shows how far the influence of an independent variable individually in explaining the variation of the dependent variable. Based on the calculation results obtained t test value as Table 5 follows:

Table 5. Result t Test

Variable	t	Sig.
Emissions intensive industries	16,955	,000
Financial Distress	-14,943	,000

The test results prove that industry intensive emissions have a significant positive effect on voluntary carbon emissions disclosure. This means that companies that are intensive in generating emissions will have a major impact on voluntary carbon emissions disclosure. Because companies that are intensive in generating emissions are required to be more environmentally responsible, thereby lowering the risk level of the company's legitimacy and the public will be more receptive to the existence of the company. This study is supported by the results of research conducted by Choi, et al, (2013), Jannah & Muid (2014) & Pratiwi and Sari (2016) which show that industry intensive emissions have a significant positive effect on voluntary carbon emissions disclosure, due to industrial intensive emissions will increase the demand for responsibility so as to avoid the risk of legitimacy.

Companies that produce high emissions are considered to be more responsive to environmental conditions. Because, the company's intensive emissions in its operations will adversely affect the environment around the company. This indicates that intensive companies will affect the level of voluntary corporate carbon disclosure, as a form of social and environmental responsibility as well as the fulfillment of legislative obligations.

The test results prove that financial distress significantly negatively affect voluntary carbon emissions disclosure. This proves that high financial distress disebuah companies will lower or lower voluntary carbon emissions disclosure made by the company, the company will be more considering the funds owned by the company used to disclose the environment, because the company is not in good financial condition.

Financial distress that is proxied by leverage in line with the results of research conducted by Luo, et al, (2013), Gantyowati & Nugraheni (2014) and Jannah & Muid (2014) indicates that financial distress significantly negatively affects voluntary carbon emissions disclosure due to firms with poor financial conditions will reduce the disclosure rate of carbon disclosed, so the greater the company's financial distress will be the narrower the carbon disclosure made by the company.

CONCLUSION

Based on the result of data analysis and discussion from this research, it can be concluded that industrial intensive emissions have a positive effect on voluntary carbon emission disclosure on companies that get GCG ratings from Corporate Governance Preparation Index (CGPI). This illustrates that the greater the intensive emissions of the industry, the greater impact on voluntary carbon emission disclosure. Financial distress has a significant negative effect on voluntary carbon emissions disclosure. This means that the greater financial distress generated by company will minimize the effect of voluntary carbon emissions disclosure.

The Company is expected to conduct and improve voluntary carbon emissions disclosure well to increase the level of public trust in the company, not just to comply with government regulations. Investors who invest should be able to use voluntary carbon emissions disclosure as a matter of consideration, since companies that perform voluntary carbon emissions disclosure have a lower legitimacy risk than those who do not voluntarily carbon emissions disclosure. Subsequent research may extend the object of research, not just companies that are ranked from CGPI and add corporate governance variables as control variables.

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