THE EFFECT OF ENVIRONMENTAL PERFORMANCE AND ENVIRONMENTAL COST TOWARDS FIRM VALUE WITH CLIMATE CHANGE DISCLOSURE AS MODERATING VARIABLE

Amara Wisang Aryandanu
Yogyakarta State University
amarawisang@gmaill.com

Mimin Nur Aisyah
Yogyakarta State University
mimin_nuraisyah@uny.ac.id

Abstract: The Effect Of Environmental Performance And Environmental Cost Towards Firm Value With Climate Change Disclosure As Moderating Variable. This study aims to determine (1) whether Climate Change Disclosure moderates the effect of Environmental Performance on Firm Value and (2) whether Climate Change Disclosure moderates the effect of Environmental Costs on Firm Value. This research is a causal comparative study. The research population is all manufacturing companies listed on the Indonesia Stock Exchange for the period 2015-2018. Data compiled using purposive sampling method, there are 28 companies as the research sample in total. Furthermore, data analysis was carried out using the Structural Equation Model with a Partial Least Square (SEM-PLS) measuring instrument. The results of this study indicate that (1) Climate Change Disclosure is able to strengthen the relationship between environmental performance and firm value, and (2) Climate Change Disclosure is able to weaken the relationship between environmental costs and firm value. Thus, the application of the Climate Change Disclosure is able to strengthen and weaken the signal for investors to influence company value. Climate Change Disclosure is also a means for companies to carry out their responsibilities to stakeholders.
Keywords: Firm Value, Environmental Performance, Environmental Costs, Climate Change Disclosure

Abstrak: Pengaruh Kinerja Lingkungan Dan Biaya Lingkungan Terhadap Nilai Perusahaan Dengan Climate Change Disclosure Sebagai Variabel Moderasi. *Penelitian ini bertujuan untuk mengetahui (1) apakah Climate Change Disclosure memoderasi pengaruh Kinerja Lingkungan terhadap Nilai Perusahaan dan (2) apakah Climate Change Disclosure memoderasi pengaruh Biaya Lingkungan terhadap Nilai Perusahaan. Penelitian ini merupakan penelitian kausal komparatif. Populasi penelitian adalah seluruh perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia periode 2015-2018. Data dikumpulkan dengan menggunakan metode purposive sampling dan terdapat total 28 perusahaan sebagai sampel penelitian. Selanjutnya analisis data dilakukan menggunakan Structural Equation Model dengan alat ukur Partial Least Square (SEM-PLS). Hasil penelitian ini menunjukkan bahwa (1) Climate Change Disclosure mampu memperkuat hubungan antara kinerja lingkungan dengan nilai perusahaan dan (2) Climate Change Disclosure mampu memperlemah hubungan antara biaya lingkungan dengan nilai perusahaan. Dengan demikian, penerapan Climate Change Disclosure mampu memperkuat dan memperlemah sinyal bagi para investor dalam mempengaruhi nilai perusahaan. Climate Change Disclosure juga menjadi sarana bagi perusahaan untuk melaksanakan tanggung jawab kepada stakeholder.*
Kata Kunci: *nilai perusahaan, kinerja lingkungan, biaya lingkungan, climate change disclosure*

INTRODUCTION

The beginning of globalization era is shown by the massive development of the companies, including manufacturing companies. A manufacturing company is a business entity that has business activities in the form of operating machinery, equipment and labour in the process of converting raw goods into finished goods ready for sale (Heizer, 2005). Manufacturing companies are founded with set goals, both short and long term goals. In connection with long-term goals, companies that have gone public will always try to maximize company value. The firm value itself can be a picture of the current condition of the company as well as a picture of future business prospects (Harmono, 2009). Firm value is the company's performance which is reflected in the value of shares formed based on the level of demand and supply of the capital market which shows the public's assessment of the company's performance (Harmono, 2009: 223). According to Widiastari and Yasa (2018), the role of firm value is essential for company owners because it is a form of investor perception of company performance results associated with stock prices. Stock prices have a correlation that is directly proportional to company value, so if the company has a high share price, the company value is also high.

The stock prices of manufacturing companies fluctuate every year. Stock price instability makes it very difficult for investors to invest. Investors are not arbitrary in investing their funds, they must first consider various information. The decline in company value caused by the decline in the company's share price can be seen from the cases within the company. For example, cases that caused a decline in share prices were found in five stocks that had lulled market players because their share prices rose and fell significantly in 2011-2013. The five companies, namely: PT. Garda Tujuh Buana Tbk (GTBO), PT. Bumi Resources Tbk (BUMI), PT. Krakatau Steel Tbk (KRAS), PT. Bakrieland Development Tbk (ELTY), and PT. Garuda Indonesia (GIAA). The decline in share prices was due to problems in the financial statements, especially regarding share ownership and poor corporate governance where environmental responsibility is one of the factors that indicate good or bad corporate governance (www.liputan6.com).

The growing activities of the manufacturing industry in Indonesia, besides contributing to an increase in GDP, also contribute to an increase in the risk of environmental damage due to the growing development of production activities. This evidence is supported by data compiled from the United States Agency for International Development (USAID) which shows that the emission of greenhouse gases in Indonesia increases along with the increase in Indonesia's GDP. Data from USAID states that there has been an increase in the percentage of greenhouse gas emissions in Indonesia by 62% from 1990 - 2013 or 3.9% per year which is proportional to the total increase in Indonesia's GDP of 199% or 5% per year over the same time period.

Based on issues above, in order to increasing company value and increasing profit, some companies still ignore environmental aspects that must also be considered in the company's economic activities. This is in accordance with the opinion of Hastawati & Sarsiti (2016) which states that in order to maximize profits, companies still ignore environmental aspects such as low environmental management, environmental performance, and environmental conservation.

In contrast, environmental performance is also one of the essential factors that can also increase company value (Hariati and Rihaningtyas, 2015). Research from Yadav, Hun & Rho (2014) also stated that information related to company's involvement in environmental performance assessment perceived positive signal towards stock market in US.

In assessing a company's environmental performance, the government, through the Ministry of Environment (MENLHK) in 2002, created an assessment program as an effort to control pollution and environmental damage. The program is in the form of Company Performance Ratings in Environmental Management (PROPER). The company's environmental performance rating is divided into five ranks, symbolized by colours ranging from gold, green, blue, red, to the worst, black. The use of colour in the PROPER assessment is a communicative form of delivering environmental performance results to the public so that information can be easier to convey and understood.

Even though the PROPER program has been conducted for 17 years, its implementation is still far from expectations. It is due to several companies that still ranked red and black as the assessment results. During the PROPER 2016-2017 period, a total of 130 companies received a red rating and one company with a black rating. Meanwhile, in the implementation of PROPER for the 2017-2018 period, there was a significant increase to a total of 243 companies with 241 companies receiving red ratings and two companies receiving black ratings.

Data gathered from the Ministry of Environment shows an increase in the average percentage of obedience for four years, from 2003 to 2007 of 63%, then 2009 to 2012 of 72%, and 2013 to 2016 of 73%. Even so, the number of companies that received red and black ratings also increased, from 2010, which amounted to 281 companies to 550 companies in 2015 (petrominer.com). The fact that few companies still get red and black ranks in environmental performance assessment, indicating that some companies are still ignoring environmental management under laws and contributing to environmental pollution. Companies with poor environmental performance will bring a bad image to the company. Meanwhile, companies with good environmental performance and responsibility will bring an excellent corporate image for stakeholders. As a result, people are more likely to buy products produced by companies that have environmental concerns and carry-out environmental disclosures than companies that have low environmental performance (Kusumadilaga, 2010).

The other factors affecting firm value is environmental cost. In the process of realizing optimal environmental performance, the company must, of course, incur costs related to environmental impact mitigation measures. These environmental costs are impacts that must be borne by companies both from a financial and non-financial side due to the company's economic activities which affect the environmental quality (Ikhsan, 2009). Environmental accounting has the view that environmental costs incurred by the company at this time are a form of the company's long-term investment in the future. By implementing the proper budgeting of environment and disclosure of environmental costs by the company, it can be interpreted as a positive signal to investors that the company has taken action in managing the environmental impact of the results of the company's economic activities (Hasanah & Destalia, 2017). The International Federation of Accountants (IFAC) Guidelines Document (2005) states that these environmental costs are forcing many companies to seek new and efficient ways to manage and minimize environmental impacts. As a result, some companies have not really been serious in identifying environmental costs and still think that environmental costs only add to the expense of company funds which have an impact on total profits.

Environmental accounting has the same basic functions as accounting in general related to environmental management, namely identifying, measuring, assessing, and reporting environmental costs in financial statements. In addition to the function of measuring and assessing environmental costs, companies must also report environmental performance to stakeholders. The government has also regulated in Undang-Undang no. 40 of 2007 concerning Limited Liability Companies Chapter 1V, article 66 paragraph 2b and Chapter V, Article 74, which obliges companies to present a social responsibility report in each company's annual report. Based on the Paris Agreement (Paris Agreement) which discusses the commitment to reduce global emission levels to reduce the impact of climate change, the government enacted Law Number 16 of 2016 in which Indonesia delivered a national set target to reduce carbon emissions by 29-41% by 2030 With the existence of this Law. It shows that manufacturing companies as the largest contributor to GDP for Indonesia also must report social responsibility that discloses information on company activities related to commitments to reduce the impact of climate change in this case reducing carbon emission emissions.

Climate change is one of the negative impacts arising from increasing industrial activity. Climate Change Disclosure (CCD) is one part of the environmental disclosure that was recently introduced to the public (Haque and Deegan, 2010). Climate change disclosure is an additional company report that includes information, related to the level of Green House Gas (GHG) disposal, company strategies related to climate change, measures of energy use, as well as risks and opportunities for companies related to climate change (Jannah, 2014). Broadly speaking, CCD is a non-financial reporting practice that addresses material issues related to climate change that are not contained in financial reports.

The presence of Climate Change Disclosure as a form of disclosure that focuses on mitigating the impacts of climate change is expected to contribute to increasing the value of manufacturing companies because it provides a good signal for investors. Indonesia as a country with rapid industrial development certainly needs a greater use of energy where this energy is mostly obtained from fossil fuels which harm the environment. Based on the global carbon-dioxide emission index, Indonesia ranks 12th as the largest contributor to carbon-dioxide gas in the world with a value of 1.38% in 2017 (EU Report, 2018). CCD as a part of environmental disclosure has not received considerable attention for companies in Indonesia due to the lack of awareness of companies in Indonesia regarding the threat of climate change, and CCD itself is still a new issue in the scope of company reporting.

Several studies related to the relationship between environmental performance, environmental costs, and Climate Change Disclosure on firm value has been done before but have given inconsistency to the research results. Research conducted by Suka (2016) states that environmental performance affects firm value. Meanwhile, research conducted by Tjahjono (2013) and Anjasari & Andriati (2016) shows that environmental performance does not influence firm value. Research by Cahyani (2016) shows that environmental costs have a positive influence on environmental value, while research conducted by Adyaksana (2019) gives different results that environmental costs do not show any influence on firm value. Research conducted by Zuhrufiyah & Anggraeni (2016) shows a positive correlation between disclosure of carbon emissions and firm value. Research conducted by Kelvin (2017) also shows a positive correlation between disclosure of carbon emissions to firm value mediated by operational performance and cost of equity. However, research conducted by Rizki (2019) shows no such influence.

Based on the inconsistency of research results and the increasing awareness of stakeholders regarding the importance of environmental conservation by companies, the authors are interested in conducting research with the title " The Effect Of Environmental Performance And Environmental Cost Towards Firm Value With Climate Change Disclosure As Moderating Variable (An Empirical Study On The Manufacturing Companies Listed In Indonesia Stock Exchange 2015-2018 Period)".

LITERATURE REVIEW

Signal theory suggests how a company should provide signals to users of financial statements. This signal is in the form of information about what management has done to realize the owner's wishes (Brigham & Houston, 2001). Signals can be in the form of promotions or other information stating that the company is better than other companies.

Carry out environmental disclosures will increase transparency (ease of access to environmental performance) by various interested parties. Exemplary environmental performance implementation and the company's decision to issue environmental information disclosures indicate a reduced risk of disclosure. The transparency of environmental disclosures makes the reports produced by the company more reliable so that it will generate a positive response from investors in the form of investment decisions to buy company shares. Investors will be more interested in companies that sustainably perform environmental performance and disclosure. So, if this continues to be carried out by the company, it will increase the company's value (Adyaksana, 2019).

The definition of stakeholder according to Freeman and McVea (2001) is any group or individual that can influence or be influenced by the achievement of organizational goals. Stakeholder theory is a theory that describes which parties the company is responsible for (Freeman, 1984). The company must maintain a relationship with its stakeholders by accommodating the wants and needs of its stakeholders, especially stakeholders who have power over the availability of resources used for the company's operational activities, for example, power work, the market for the company's products and others (Chariri and Ghozali, 2007).

Stakeholder theory states that companies have a responsibility to stakeholders, namely, to provide information related to corporate responsibility to the environment, both social and natural. The company is not an entity that only operates for the benefit of individuals, but must also provide benefits for stakeholders. Stakeholders can control or have the ability to influence the use of economic resources used by the company. Therefore, stakeholder power is determined by the size of the stakeholder's power (Ghozali and Chariri, 2007). This power can be in the form of the ability to limit the use of limited economic resources (capital and labour), influential media access, the ability to regulate the company, or the ability to influence consumption of goods and services produced by companies (Ghozali and Chariri, 2007).

Firm value is the performance of a business entity which is reflected in the share price which is manifested by the demand and supply of shares in the capital market which reflects the public's assessment of the company's performance (Harmono, 2009: 233). Stock prices have a linear relationship with stock prices. The higher the stock price of the company, the higher the company value. Likewise, the lower the stock price, the lower the company value (Gitman, 2006:352). Shareholders put their trust in company professionals such as managers or commissioners to manage the company in order to increase company value (Nurlela and Islahudin, 2008: 7).

Tobin's Q value is generated by adding up the market value of all outstanding stock and market value of all debt which is compared with the value of all capital placed in production assets (replacement value of all production capacity). Tobin's Q has the advantage of reflecting the company's assets as a whole and reflecting market sentiment. The increase in firm value is influenced by the size of the company's stock value obtained from the ups and downs of company profits. One of the methods to gain high profit is by taking excessive-efficiency measures on costs arising from the company's economic activities, including labour costs, overhead costs and other operational costs (Lako, 2018).

Firm value is the investor's perception of the company's success rate, which is judged by its performance which is often linked to the stock price. The company always tries to increase its corporate value. Companies can increase company value through concern for the environment. This is due to a shift in the company's goals which are not only seeking profit, but also being responsible to society (people) and the earth (planet) (Elkington, 1997).

Environmental performance is a measure that shows the company's success in preserving the environment. A good environmental performance will increase investor interest which affects the increase in the company's stock price, thus increasing the company's value.

Climate change disclosure is a non-financial disclosure practice that addresses material issues that affect company stakeholders that cannot be disclosed through traditional financial reports. Climate change disclosure has an important role in providing data related to climate change that is useful for companies and company awareness of climate change issues. Companies disclose environmental information to increase the amount of information for investors, so that it has an impact on increasing investor interest which will increase share prices and firm value (Berthelot et al., 2003). Climate change disclosure is additional information which is expected to be a positive signal for investors as a form of the company's concern in protecting the environment, so that it will increase investor interest and have an impact on increasing share prices and company value.

H1: Climate Change Disclosure able to moderate the effect of Environmental Performance towards Firm Value.

The owner founded the company with the aim of being able to carry out business activities forever. This is in accordance with the concept of corporate sustainability. One of the ways to achieve company sustainability is by disclosing environmental costs. Environmental costs incurred by a company can be interpreted as a company investment to preserve the environment. Environmental costs are proof of company compliance in complying with regulations on environmental sustainability. This will increase investor interest and will have an impact on increasing company value.

Disclosure of climate change is additional information that is expected to be a positive signal for investors as a manifestation of the company's concern in protecting the environment. Disclosure of environmental information can be used as a measure of the success of a company in allocating environmental costs as an action to mitigate the impact of climate change, thereby increasing environmental cost efficiency. Disclosure of climate change by companies will strengthen investors' perceptions regarding the company's concern in protecting the environment.

H2: Climate Change Disclosure able to moderate the effect of Environmental Cost towards Firm Value.

RESEARCH METHOD

1. Research Design

This type of research is a type of research with quantitative data. Quantitative research is research that obtains data in the form of numbers or qualitative data presented in the form of numbers (Sugiyono, 2011: 4). The data source used in this research is secondary data. Secondary data is data collected from sources published in statistical journals, and the required information is available from publications or non-publication sources both inside and outside the organization (Sekaran, 2011).

2. Place and Time of Research

This research was conducted by collecting data from the companies in the manufacturing sector from 2015-2018 which are listed in the Indonesia Stock Exchange (IDX). The sources used in this research are gatrhered from company's annual report and Corporate Social Responsibility (CSR) reports as additional data sources related to company performance in the environmental sector and climate change mitigation. The data then obtained through the several sources namely company's website, www.idx.co.id and finance.yahoo.com. This research was conducted from May to December 2020.

3. Research Subjects

The population of this study is all manufacturing companies listed on the Indonesia Stock Exchange (BEI) for the 2015-2018 period. This research use purposive sampling method. Some of the criteria used in sampling are as follows:

a. Companies participating in the PROPER program in 2015 – 2018.

b. Companies that publish financial reports consecutively in the 2015 – 2018 period.

c. Companies that record profit.

d. Companies that disclose Corporate Social Responsibility Report.

Based on the above criteria, there are 28 companies that meet the sampling criteria.

4. Variable Operational Definition

a. Firm Value

Firm value is the performance of a business entity which is reflected in the share price which is manifested by the demand and supply of shares in the capital market which reflects the public's assessment of the company's performance (Harmono, 2009: 233).

Tobin's Q has the advantage of reflecting the company's assets as a whole and reflecting market sentiment. The increase in firm value is influenced by the size of the company's stock value obtained from the ups and downs of company profits. One of the methods to gain high profit is by taking excessive-efficiency measures on costs arising from the company's economic activities, including labour costs, overhead costs and other operational costs (Lako, 2018).

b. Environmental Performance

Environmental performance is a measurable result of the environmental management system, which is related to the control of its environmental aspects. Environmental performance assessment is based on environmental policies, environmental goals and environmental targets (Ikhsan, 2009: 308).

The environmental performance measurement takes data from the PROPER report published by the MENLHK. Environmental performance assessment through the PROPER report is proxied by giving a score between 5-1 according to the perinhkat obtained by the company.

c. Environmental Cost

Hansen & Mowen (2009: 413) states that environmental costs are costs that occur because of poor environmental quality that has occurred or will occur.

Environmental costs can be measured by comparing the costs incurred for the company's Corporate Social Responsibility activities with net income. This is in accordance with the opinion of Hadi (2011) and Babalola (2012).

d. Climate Change Disclosure

Climate change disclosure has also been recognized as a management approach for disclosure and control of climate change risks (Kolk & Pinkse, 2005).

Disclosure of environmental information in this study is a moderating exogenous variable that is proxied by using the number of items disclosed by the company compared to the total items in the Climate Change Reporting Index which was adopted from Ooi & Amran's (2018) research, which totals 26 items. The number of items disclosed by the company is assessed by a score. If the company discloses the item, then it is given a value of 1 and if it does not disclose the information it is given a value of 0.

5. Data Collection Technique

The documentation method is done by collecting secondary data obtained from the website www.idx.com, finance.yahoo.com, and the websites of each company. Secondary data that will be used by researchers are in the form of financial reports and Corporate Social Responsibility reports from each company, as well as PROPER reports through the MENLHK website.

6. Data Analyze Technique

The data analysis technique in this study used descriptive statistics test, outer model test (validity & reliability) and inner model test (r-square test & hypothesis test).

RESULT AND DISCUSSION

1. Description of Research Results

This study aims to determine the effect of environmental performance and environmental costs on firm value with climate change disclosure as a moderating variable in manufacturing companies listed on the Indonesia Stock Exchange in the period 2015-2018. This study uses secondary data collected from company financial reports, Corporate Social Responsibility reports and PROPER reports published by MENLHK. The population in this study were all companies listed on the Indonesia Stock Exchange in the 2015-2018 period.

2. Descriptive Statistics Analysis

Descriptive statistics analysis is used to provide an overview of the data on the variables in the study.

Table 1. Descriptive Statistics Analysis Result

Variable	N	Min	Max	Mean	Std Dev
EP	112	1	4	3.12	0.302
EC	112	0.155^{-4}	0.102	0.015	0.000
CCD	112	0.192	0.807	0.499	0.024
FV	112	0.146	18.640	3.278	15.187

Source : Secondary Data Processed, 2020

3. Inner Model Test

The PLS analysis was carried out in two stages, namely the measurement model test and the structural model test. The structural model test is carried out by looking at the R-square value, the goodness-fit model test.

a. Goodness-fit Model

Table 2. R-Square Test Result (t-Test)

	R Square
Y	0.273

Source : Secondary Data Processed, 2020

Based on the table 2, it can be seen that the R-square value of the Firm Value variable is 0.273, or it is in the weak category. This means that the firm value construct variable's variance can only be explained by the environmental performance construct, environmental costs, and climate change disclosure of 27.3%. Meanwhile, 72.3% is explained by other variables not included in this study.

b. Hypothesis Test

Table 3. Path Coefficient Result

Source : Secondary Data Processed, 2020

The hypothesis test results show that there are two hypothesis accepted with p-

Hypothesis	Original Sample	T-Stats	P Values	Descriptiom
EP -> CCD -> FV	0.194	2.024	0.022	Accepted
EC -> CCD -> F V	-0.249	3.374	0.00	Accepted

values <0.05. The H1 P-Values scored 0.022 which is lower than 0.05 and coefficient value of 0.194. Thus, climate change disclosure is able to moderate the effect between environmental performance on firm value positively. The H2 P-Values scored 0.000 which is lower than 0.05 and coefficient value of -0.249. Thus, climate change disclosure is able to moderate the effect between environmental performance on firm value negatively.

4. Discussion

a. Hypothesis 1

The results of the hypothesis test indicate that the climate change disclosure variable is able to positively moderate the effect of environmental performance on firm value. The parameter coefficient value of 0.194 indicates a moderating effect in a positive direction and a p-value of 0.022> 0.05 indicates that the moderation effect is significant.

Companies that publish climate change disclosures show that the environmental performance of the company also discloses information related to the company's actions in dealing with the impacts of climate change. The existence of a climate change disclosure gives a positive signal to investors that the company has a good image. A company with a good image will increase investor interest in investing in a company so that the value of the company will increase along with the increasing price of a company in the capital market (Anjasari & Andriati, 2016).

This is in accordance with the stakeholder theory where an organization or company not only operates only for its own interests but also provides consideration for the interests of stakeholders including investors and non-investors such as customers, employees, suppliers, surrounding communities, and the government (Robbins and Coulter, 2007). Companies that carry out the responsibility for disclosing climate change mitigation activities in the form of climate change disclosures are able to strengthen the relationship between environmental performance and company value. Climate change disclosures by the company reinforce positive signals apart from the PROPER report to stakeholders.

b. Hypothesis 2

The results of the hypothesis test indicate that the climate change disclosure variable is able to positively moderate the effect of environmental performance on firm value. The parameter coefficient value of -0.249 indicates a moderating effect in a positive direction and a p-value of 0.000> 0.05 indicates that the moderation effect is significant.

Environmental costs are an allocation of funds issued by the company to preserve the environment. The company discloses environmental information as additional information with the aim of being a positive signal for investors as a manifestation of the company's concern for environmental preservation.

When a company wants to present environmental information related to climate change as additional company information which is a signal to attract investors as evidence that the company is responsible for tackling climate change, the company must also realize that this will require and cause high environmental costs. This can be considered by investors as a negative value because the costs incurred by companies related to climate change mitigation performance will have an impact on the company's expected earnings and market value so that it will give negative signals for investors (Buana & Nuzula, 2017).

Climate change disclosure provides space for companies to provide information related to the management of company resources related to the costs of environmental management. But based on research results, it shows that climate change disclosure weakens the relationship between environmental costs and firm value. This is in accordance with the results of research by Lasmin & Nuzula (2012) and Adyaksana (2019).

Investors, in investing their capital, rely on information related to company performance. Disclosure of information related to environmental costs through climate change disclosure shows that this information actually generates negative signals to investors because the costs incurred by companies in mitigating environmental damage affect the company's financial performance. But on the other hand, the company as a social institution has carried out its responsibilities by taking environmental conservation measures against stakeholders. The environmental conservation policy that is expressed in the climate change disclosure is a long-term investment that will have an impact on the value and performance of the company in the future.

CONCLUSION AND SUGGESTION

1. Conclusion

Based on the results of data analysis through proving the four hypotheses proposed in this study regarding the effect of environmental performance and environmental costs on company value with climate change disclosure as a moderating variable with empirical studies on manufacturing companies listed on the Indonesia Stock Exchange 2015-2018, the conclusions of this research are:

a. Climate change disclosure as a moderating variable is able to influence the relationship between environmental performance and firm value. Thus, the company's implementation of climate change disclosure will bring positive signal towards investors.
b. Climate change disclosure as a moderating variable is able moderate the relationship between environmental costs and firm value. Thus, this proves that the

environmental cost disclosed in climate change disclosure will bring negative signal towards investors. But on the contrary, company as social institustion has done its responsibility among stakeholders.

2. Suggestion

There are several suggestions that researchers can convey based on the research that has been done, namely:

a. Referring to the research results that climate change disclosure strengthening the relationship between environmental performance and environmental costs on company value, companies should further increase activities related to climate change mitigation by investing in emission management equipment and improving business opportunities by creating an environmentally friendly product.

b. The government should determine sanctions and strict law enforcement for companies that destroy and pollute the environment due to the company's industrial activities to improve company orderliness in managing environmental performance and providing a deterrent effect to prevent destructive environmental activities in the future.

c. Future research should be able to use a sample not only in Indonesia but also in ASEAN and other Asian countries to see how extensive environmental performance activities and environmental costs are to firm value.

d. Referring to the research results, which show that the climate change disclosure variable is proven to moderate the relationship between the independent and dependent variables, further research is expected to use the climate change disclosure variable to find out what variables can influence climate change disclosure so that studies related to climate change issues in the sector manufacturing is growing.

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