

## Determinants on Environmental Disclosure Moderating by Integrated Corporate Governance

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### Abstract

This will use companies from sector energy and sector goods raw as population companies. Technique taking sample used is non- probability with purposive sampling method. Study this alone using criteria sample appropriate company with specified sector, company publish report possible finances accessed on 2018-2021, required data complete and company no once experienced a delisting during year research. Results sample companies used in the study are as many as 448. Test hypothesis in study this will be tested using the Eviews program. Method research used is moderated regression analysis (MRA) using eviews software. Besides that is, research this do test assumption classic and also test model accuracy to find out which model is most appropriate. Results from study this shows the sample data used to get away in testing assumption classics namely, normality, multicollinearity, heteroscedasticity and autocorrelation. From the results testing hypothesis found that environmental costs have an effect positive against environmental disclosure, international environmental certification does not influential on environmental disclosure, industry sensitivity has an effect positive on environmental disclosure, international corporate governance is capable strengthen influence between environmental cost and environmental disclosure, international corporate governance is capable strengthen influence between international environmental certification and environmental disclosure and international corporate governance is not capable strengthen influence Among sensitivity industry against environmental disclosures.

**Keywords:** Environmental Disclosure, Environmental Costs, International Environmental Certification, Integrated Corporate Governance.

### 1. Introduction

The era of industrialization on the one hand focuses on using technology as efficiently as possible so that it sometimes ignores environmental aspects. Several environmental problems that have occurred include the PT Tirta Frensido Jaya (Mayora Group) waste case which polluted clean water sources in the Sukomoro sub-district, the plastic waste case by PT Nestle, the riverbank pollution case Surabaya river by PT Garudafood, PT Indofood Sukses Makmur and PT Wings Surya. Many cases of environmental damage and pollution occur



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because of the low level of disclosure of environmental responsibility by companies operating in Indonesia.

The low level of environmental disclosure by companies in Indonesia indicates that regulations made by the government are still not effective. Efforts from regulatory parties to preserve and develop harmonious, harmonious and balanced environmental capabilities have been carried out by stipulating the Law of the Republic of Indonesia Number 40 of 2007 concerning limited liability companies in chapter V article 74 concerning social and environmental responsibility. Furthermore, the government issued Government Regulation number 47 of 2012 specifically to regulate the disclosure of social and environmental responsibility. Article 6 of the regulation explains that the implementation of social and environmental responsibility is contained in the company's annual report and is accountable to the GMS (general meeting of shareholders). Disclosure of environmental information (environmental disclosure) is voluntary disclosure of information, both qualitatively and quantitatively, made by an organization informing its activities, where quantitative disclosures are in the form of financial and non-financial information [1].

Environmental disclosure requires real costs, for example costs for creating and developing systems, costs for measuring, identifying and reporting information, because the profitability aspect is important for bearing costs. Large environmental costs should make companies integrate them into business strategies, so that environmental and social activities require significant real costs because they involve systems for measuring, identifying and reporting information [2] [3].

However, it turns out that many companies in carrying out their business do not play an active role in environmental regulations and have never attended counseling on Environmental Impact Analysis (AMDAL) and have not implemented ISO 14001 Environmental Management System. ISO 14001 Environmental Management System (SMLISO-14001) is an environmental management tool aimed at continuously improving the management and control of environmental impacts, with work principles that prioritize pollution prevention, compliance with regulations and continuous improvement. Industry sensitivity is also one of the factors that has a positive effect on environmental disclosure [4].

Different types of ownership have an impact on company disclosure. Based on the phenomena and discussion above, this study aims to examine the effect of environmental costs, international environmental certification and industry sensitivity on environmental disclosure.

In voluntary environmental disclosure in Indonesia, there are government regulations stipulated in Government Regulation No. 22 of 2021 concerning the implementation and management of the environment. Sustainable finance is closely related to environmental issues where environmental disclosure in Indonesia is still voluntary but not mandatory. Along with these developments, the Indonesian government responded by issuing Law of the Republic of Indonesia No. 25 of 2007 concerning Investment, specifically article 15 and Law of the Republic of Indonesia No.40/2007 concerning Limited Liability Companies, which oblige companies to carry out social and environmental responsibilities. The importance of disclosing corporate social responsibility is also supported by the Indonesian Institute of Accountants through Statement of Financial Accounting Standards (PSAK) No. 1 Paragraph 9. This PSAK is the starting point for companies to disclose their social responsibility activities. It is important for companies to be involved in environmental activities including disclosing what the company has done for the environment. Therefore, this research will discuss several factors that influence environmental disclosure [5] [6].

Therefore, from the explanation of the problem above, the following problem formulation is taken:

1. Does Environmental Cost affect Environmental Disclosure ?
2. Does International Environmental Certification affect Environmental Disclosure ?
3. Does Industry Sensitivity affect Environmental Disclosure ?
4. Does corporate governance strengthen the effect of environmental costs on environmental disclosure ?

5. Does corporate governance strengthen the influence of international environmental certification on environmental disclosure ?
6. Does corporate governance strengthen the influence of industry sensitivity on environmental disclosure?

## **2. Literature Review**

Environmental disclosure shows the company's concern for the environment. Bethelot in Al Tuwajiri et al. (2013: 127) defines "environmental disclosure as a collection of information related to environmental management activities by companies in the past, present and future". Environmental disclosure is the disclosure of information relating to the environment in the company's annual report (annual report). In general, there is a separate section on the sustainability report or listed in the annual report [7] . So, the hypothesis in this study is:

### **H1 . Environmental Cost has a positive effect on Environmental Disclosure**

In research conducted by Dianawat, by awarding ISO 14001 to companies that care about environmental management, this can increase the company's self-confidence so that outsiders will believe that the company has managed all operational activities and has a commitment to comply with environmental regulations. Many investors believe that companies that pay special attention to the environment will be more sustainable than those that do not. Thus, investors will also be more likely to choose to invest in green companies , where one of the indicators is whether the company has adopted ISO 14001 or not. From the explanation above, the hypotheses raised in this study are [8]:

### **H<sub>2</sub> . International Environmental Certification has a positive effect on Environmental Disclosure**

In Industry sensitivities are described that mining sector companies and the energy sector is included into the company with a high profile category to be always noticed by Public with carefully because activity is potentially very big for damage to the environment . In addition, there are also companies with the incoming corporate sector into the low profile category or companies with level sensitivity considered low \_ impact as well as influence to damage the environment because activity and the operation do not relate to the environment . In this category, companies with the chemical sector, health, cosmetics, food and drink enter into it [9].

From exposure in line with research conducted by Julekhah & Rahmawati (2019) . So , in line with theory legitimacy , research this take hypothesis as following :

### **H<sub>3</sub> . Sensitivity Industry influential positive to Environmental Disclosure**

Environmental costs are disclosure environments to do by company from aspects incurred costs \_ for accountability to the environment . Meanwhile , Corporate governance role in supervision carried out by stakeholders . With existing corporate governance , expected happening ability for Upgrade transparency , accountability and not quite enough answer company on environment . In accordance with theory legitimacy , companies will do various disclosure including implementation governance . Research conducted shows that corporate governance influences environmental disclosure so with existing implementation corporate governance will Upgrade quality from environmental disclosure . So that hypothesis that is taken in study this are [10]:

### **H<sub>4</sub> . Integrated Corporate Governance strengthens influence Environmental Cost to Environmental Disclosure**

Environmental certification is an award that comes from external and independent parties regarding the company's operating activities related to environmental management. International Environmental Certification is where a company already implementing ISO 14001 which is something device management characteristic environment \_ volunteer will do but , with implementing a management system environment this will Upgrade image companies as green companies . Where wrong one requires green companies is already implementing ISO 14001. By because that , the hypothesis raised are :

### **H<sub>5</sub> Integrated Corporate Governance strengthens Influence International Environmental Certification to Environmental Disclosure**

The magnitude of the influence of industrial activities that are directly related to the environment is defined as industrial sensitivity [11]. In the sensitivity of the industry, there are categories that are included in companies with high profile types. Companies that fall into this category are defined as companies that get attention from the general public because they have potential company operational activities and tend to be related to the interests of the general public [12].

Sensitivity Industry is formed from impact created companies because there exists connection with field effort, risk effort and employee to environment. This causes different level sensitivity on type different industries because also the resulting impact from every company from every sector too is the same. Research conducted by [13] shows that Industry sensitivity matters positively to environmental disclosure.

#### **H<sub>6</sub>. Integrated Corporate Governance strengthens Influence Ownership Government to Environmental Disclosure**

### **3. Research Method**

The types of companies used as the research population are companies from the energy sector and the raw goods sector that have been listed on the Indonesian Stock Exchange with the period used is 2018-2021. The financial reports, annual reports (Annual Report), and sustainability reports (Sustainability Report) of companies from several of these sectors will be used to retrieve the data needed for this research. The type of data that will be used in this research is secondary data, using quantitative research. Company data is obtained from documentation and publications from companies that are available both from financial reports, sustainability reports and other data sources [14]. The data comes from the official website of the Indonesia Stock Exchange. Namely on [www.idx.co.id](http://www.idx.co.id), the PROPER website and also the company's website [15] [16].

This research uses a data analysis method in the form of a quantitative analysis method. Quantitative analysis method is an analysis that uses numbers and uses statistical calculations that are useful for analyzing research hypotheses that require various forms of analysis tools. The purpose of this research analysis was carried out to see the effect of the independent and dependent variables [17].

Processing quantitative data obtained from data collection, researchers use E-Views software to be able to analyze data with statistical calculations in parametric and non-parametric forms [18] [19]. This study used the evIEWS 11 application to process the data, and the data used were time series data and cross sections, so this study used panel data regression. Tests carried out using evIEWS are the chow test, hausman test, f test, t test and the coefficient of determination test. In addition, descriptive statistical tests and classical assumption tests were carried out. To test the hypothesis is done by testing the coefficient of determination, F test and t test.

### **4. Findings**

The data analysis tool used in this study uses evIEWS where the sample companies are companies listed on the IDX in the energy and raw goods sector. The reason for selecting this sample was because several companies were found to be polluting the environment, one of which came from the two sectors. The following table describes the company information used in this study:

Table 1 . Sample Description

Company totals in the goods sector raw	124
Companies that don't Fulfill criteria sample	(16)
Remaining total company that can processed	112
Amount year study	*4
<b>Total Companies that become sample</b>	<b>448</b>

#### 4.1 Descriptive statistics

This study uses 448 sample companies that have been explained from the previous explanation. Then, the number of samples of these companies were analyzed in this study. The next stage of this research is to analyze and calculate the data that has been collected using eviews software which is called a descriptive statistical test. The results of the descriptive statistical test are shown in the following table results:

Table 2 . Descriptive Statistical Analysis

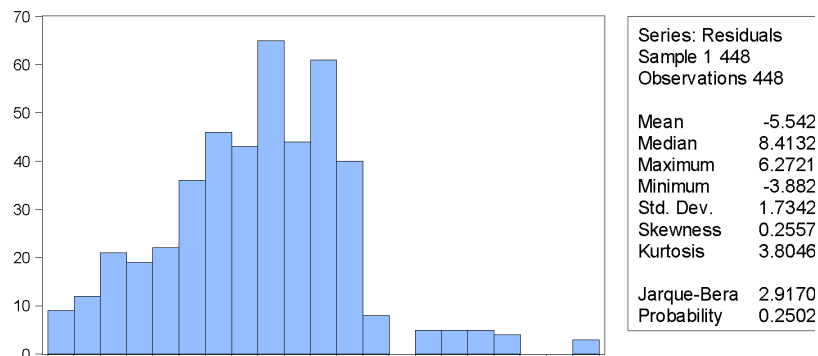
	ENVDIS	ENVCOST	IEC	SI	ICG	ROA	Lev	SIZE
Means	1.076769	1.080313	1.302339	1.440702	0.839286	4.271847	7.109100	3.529200
Median	1.033529	1.003361	1.414214	1.426019	0.920000	4.252058	7.262564	3.627641
Maximum	1.365151	8.675013	1.414214	1.537905	1.000000	9.396276	18.93647	3.987736
Minimum	1.000000	1.000000	1.000000	1.414214	0.320000	0.173205	1.024695	2.918379
std. Dev.	0.099387	0.474879	0.184119	0.033907	0.167325	0.981560	2.197431	0.271074
Skewness	1.487893	11.71741	-1.035621	1.465177	-1.361520	0.584596	0.438500	-0.132386
kurtosis	3.874682	166.1066	2.072510	3.800302	4.190045	8.254263	5.726984	1.540616
sum	482.3926	483.9804	583.4478	645.4345	376.0000	1905.244	3184,877	1581082
Sum Sq. Dev.	4.415389	100.8032	15.15318	0.513915	12.51497	428.7399	2158,431	32.84596
Observations	448	448	448	448	448	446	448	448

Results above show that the mean for environmental disclosure shows a mean of 1.076769, a maximum value of 1.3851 and a minimum value of 1.0000. For the environmental cost variable, it has a mean value of r 1.080313 , a maximum value of 8.67501, and a minimum value of 1.0000. Another independent variable, namely international environmental certification, has a mean value of 1.302339, a maximum value of 1.411421 and a minimum value of 1.0000 [20]. For the industrial sensitivity value, the mean is 1.440702, the maximum value is 1.5379 and the minimum value is 1.4141. And for the moderating variable, namely international corporate governance , it has a mean value of 0.839286, a maximum value of 1.00 and a minimum value of 0.32.

#### 4.2 Normality test

In this study using the jarque fallow test to carry out the normality test with the following results:

Table 3. Normality test



The results above show a value of 0.250207 with a value which is greater than the indicator passing the normality test. The indicator for normality testing is greater than the value of 0.05 or 5% so that it can be said that this study uses normal data and is suitable for use so that it can be processed. Therefore, testing can be continued to the next stage.

#### 4.3 Multicollinearity Test

The next stage that can be carried out in testing the classical assumptions is multicollinearity testing. In this study the multicollinearity test is said to pass multicollinearity when the variance inflation factor value in the column centered if is less than 10. The following are the results of the multicollinearity test in this study:

Table 4. Multicollinearity Test

	coefficient	Uncentered	Centered
Variables	Variances	VIF	VIF
C	3.504106	1941557	NA
ENVCOST	8.053209	6.218375	1.008201
IEC	5.401408	51.72053	1.014825
SI	1.615606	1848.267	1.023319
ICG	6.567808	26.61129	1.019295
ROA	1.971909	20.99101	1.050426
Lev	3.952510	12.06582	1.048046
SIZE	2.526708	174.9100	1.021949

Table 4 above shows that all the variables used in this study, both the dependent, control and moderation variables, have a value in the centered vif column of less than 10 where each value is for environmental cost of 1.008, international environmental certification of 1.014, for industry sensitivity of 1.023 , international corporate governance 1.019, ROA 1.050, leverage 1.04804 and size 1.021.

#### 4.4 Heteroscedasticity Test

The next test is to see whether the data used has heteroscedasticity or not by using the Breusch pagan test which is tested using eviews . This test is one of the tests that must be carried out in the classic assumption test with indicators looking at the value of the prob.chi

square, whose value must be greater than 0.05 so that there are no symptoms of heteroscedasticity. The following are the results of this test, namely as follows:

Table 5 . Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistics	2.063564	Prob. F(1,446)	0.1516
Obs*R-squared	2.063271	Prob. Chi-Square(1)	0.1509
Scaled explained SS	2.829171	Prob. Chi-Square(1)	0.0926

The prob.chi square value in the second row is 0.1509 which indicates a number greater than 0.05 or 5%. These results indicate that the data in this study did not experience symptoms of heteroscedasticity.

#### 4.5 Autocorrelation Test

The classic assumption test in this study is the autocorrelation test. Where the autocorrelation test in this study used the Breusch godfret serial correlation LM test . The autocorrelation results are shown in the following table [21]:

Table 6 . Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistics	2.112759	Prob. F(2,436)	0.1221
Obs*R-squared	4.280944	Prob. Chi-Square(2)	0.1176

Table 6 . The results show that the results of the autocorrelation test in this study are worth the prob chi square of 0.1176. Which value is greater than 0.05 or 5% so that it can be concluded that there are no autocorrelation symptoms in this study, so that from the results of the last test on the classic assumption test it states that the data in this study pass all tests and can proceed to the next stage [22] [23] .

#### 4.6 Panel Data Regression Estimation Model Selection

The next stage that must be carried out in this study to carry out data processing is the process of selecting a model. In this stage, it will be determined which model is best to use in research. Thus, it is called the process of determining CEM, REM and FEM. The following are the results of each test:

- **Chow test**

The determination of the regression model whether to choose the fixed effect or the common effect is a test called the chow test. This process will determine which model to use. The indicator used is if the probability value is less than 0.05 or 5%. If the prob cross section chi square value is more than 0.05 then CEM, if less than 0.05 then FEM.

Table 7 . Chow test

Redundant Fixed Effects Tests				
Equation: Untitled				
Test cross-section fixed effects				
Effect Test		Statistics	df	Prob.
Cross-section F		1.212240	(111,332)	0.0994
Chi-square cross-sections		152.431409	111	0.0056

0.0994 so that this value is a value greater than 0.05 or 5%. So, from these results it can be concluded that the best model is the common effect model .

- **Hausman test**

Furthermore, after carrying out the chow test, the next step is the Hausman test. This test is still being carried out in order to find which is the best regression model that can be used in this study. The Hausman test will determine and compare whether the random effect model or the fixed effect model is more appropriate . The following are the results of the Hausman test:

Table 8 . Hausman test

Correlated Random Effects - Hausman Test				
Equation: Untitled				
Test cross-section random effects				
Test Summary		Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-sections		10.164979	10	0.4261

Table 8. shows the results of the Hausman test, the test results show a number of 0.4261 where the indicator for this test is if it is smaller than 0.05 following the fixed effect and if it is greater than 0.05 then the best model is following the random effect [28] . The results show that the number 0.4261 is greater than 0.05, so the model is better to use the random effect model.

- **Lagrange Multiplier Test**

The next stage is if the Chow test gets CEM results and the Hausman test shows REM. So, it is necessary to do a Lagrange multiplier test to determine whether the best model is REM or CEM. Then the following results of the multiplier lagrange test conducted in this study:

**Table 9 . Lagrange Multiplier Test**

Lagrange Multiplier Tests for Random Effects			
Null hypotheses: No effect			
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives			
Test Hypothesis			
	Cross-section	time	Both
Breusch-Pagan	0.709428 (0.3996)	1.230719 (0.2673)	1.940147 (0.1637)
Honda	0.842276 (0.1998)	-1.109378 --	-0.188870 --
King-Wu	0.842276 (0.1998)	-1.109378 --	-0.958048 --
Standardized Honda	1.000854 (0.1584)	-0.875591 --	-7.618466 --
Standardized King-Wu	1.000854 (0.1584)	-0.875591 --	-3.906608 --
Gouririoux, et al.*	--	--	0.709428 (>= 0.10)

The indicator for this test is the P Value indicated by the lower number which is equal to 0.000 where the value is less than 0.05. So this Lagrange Multiplier Test shows that accepting H1 means that the best estimation method is Random Effect. If the p value is greater than 0.05 then accept H0 which means the best estimation method is Common Effect [24] [25]. So, from the results of the table above, it shows that the probability number for **Breusch pagan** is 0.3996, where this value is greater than 0.05, so it can be concluded that the best model in this study is the common effect model or CEM.

#### 4.7 Moderated Regression Analysis (MRA)

After testing the selection of the right model and the test results show that the most appropriate model is the common effect model . So, the next step is to look at the moderation regression analysis in this study, which is presented in the following table [26] [27]:

Table 10 . Moderated Regression Analysis

Variables	coefficient	std. Error	t-Statistics	Prob.
C	0.035489	0.074938	0.473576	0.6361
ENVCOST	0.084127	0.036949	2.276862	0.0233
IEC	-0.181264	0.096870	-1.871220	0.0620
SI	0.145006	0.119521	1.213225	0.0257
ROA	0.000121	0.000960	0.126490	0.8994
LEVERAGE	-0.000724	0.000312	-2.321960	0.0207
SIZE	0.014887	0.006418	2.319521	0.0209
EC ICG	0.104240	0.045988	2.266679	0.0239
IEC ICG	0.220448	0.109350	2.015996	0.0445
SI ICG	-0.144797	0.137983	-1.049388	0.2946

From table 10 . which explains the results of statistical calculations are as follows:

1. The environmental cost variable is 2.276862, which means that with an increase in the environmental cost value of 1 rupiah, there will be an increase in environmental disclosure of 2.27682 with the other independent variables being constant.
2. The international environmental certification variable is -1.871220, which means that with an increase in the IEC value of one unit, there will be a decrease in environmental disclosure of 1.87122 with the condition of the other independent variables remaining constant.
3. The value for industry sensitivity is 1.213225, which means that with an increase in industry sensitivity by one unit, there will be an increase in environmental disclosure of 1.213225 with the other independent variables remaining constant.
4. The EC value moderated by integrated corporate governance (ICG) is 2.266679 which indicates that with one unit of ICG moderation, there will be a strengthening of the EC relationship to environmental disclosure of 2.266679 with other variables remaining constant.
5. The value of IEC moderated by ICG is 2.015996 indicating that with one unit of ICG moderation there will be a strengthening of the IEC relationship to ED of 2.015996 with the condition of other variables remaining constant.
6. The value of SI moderated by ICG is -1.049388 which indicates that with one unit of ICG moderation there will be a weakening of the relationship between SI and ED of 1.049388 with the other variables remaining constant.

#### 4.8 Hypothesis testing

For the next stage is hypothesis testing which is carried out in three stages namely, the coefficient of determination, model feasibility test and t test. The following are the results of several hypothesis tests conducted:

- **Coefficient of Determination**

The results of the coefficient of determination show the following results:

Table 11 . Coefficient of Determination

R-squared	0.999918	Mean dependent var	1.076769
Adjusted R-squared	0.999917	SD dependent var	0.099387
SE of regression	0.000904	Akaike info criterion	-11.16759
Sum squared residual	0.000362	Schwarz criterion	-11.12177
Likelihood logs	2506540	Hannan-Quinn criter.	-11.14953
F-statistics	1349550.	Durbin-Watson stat	1.758276
Prob(F-statistic)	0.000000		

Results of 11. to find out how much the value of the coefficient of determination shows the results shown by the adjusted r-squared . The table above shows a result of 0.9917, which means that the environmental cost variable, international environmental certification, industry sensitivity and integrated corporate governance are able to explain the independent variable in this case environmental disclosure of 99.18%. Meanwhile, the remaining 0.72% is explained by other variables not included in this study [28] [29].

#### • Model Feasibility Test (F Test)

Apart from testing the coefficient of determination, the test conducted in this study is the model feasibility test or f test which will assess whether the independent variables are jointly able to influence the dependent variable used in this study. Following are the results of testing the feasibility of the model in the study with the following results:

Table 12 . F test

R-squared	0.999918	Mean dependent var	1.076769
Adjusted R-squared	0.999917	SD dependent var	0.099387
SE of regression	0.000904	Akaike info criterion	-11.16759
Sum squared residue	0.000362	Schwarz criterion	-11.12177
Likelihood logs	2506540	Hannan-Quinn criter.	-11.14953
F-statistics	1349550.	Durbin-Watson stat	1.758276
Prob(F-statistic)	0.000000		

The results above show the F test number with an indicator that is smaller than 0.05 which shows the meaning that the test passes. The table results show that the F test score is 0.0000, which means it is less than 0.05 or 5% so that the F test in this study passes. So that the proposed model is said to be feasible.

This research is to test the hypothesis and determine the effect of each independent variable on the partially dependent t test. This test was carried out with the following results:

Table 13 . t test

Variables	coefficient	std. Error	t-Statistics	Prob.
C	0.035489	0.074938	0.473576	0.6361
ENVCOST	0.084127	0.036949	2.276862	0.0233
IEC	-0.181264	0.096870	-1.871220	0.0620
SI	0.145006	0.119521	2.323225	0.0257
ROA	0.000121	0.000960	0.126490	0.8994
LEVERAGE	-0.000724	0.000312	-2.321960	0.0207
SIZE	0.014887	0.006418	2.319521	0.0209
EC ICG	0.104240	0.045988	2.266679	0.0239
IEC ICG	0.220448	0.109350	2.015996	0.0445
SI ICG	-0.144797	0.137983	-1.049388	0.2946

The t test was carried out with the results in table 13 . shows the results with the following explanation:

1. The probability value on the EC variable shows a value of 0.0233 which means that the value is less than 0.05 or 5% so it can be concluded that EC has an influence on ED so that H1 is accepted.
2. For the probability value on the IEC variable, it shows a value of 0.0620 which means that this value with a significance level of 5% is not able to have an effect on ED or has no effect so, H2 is rejected.
3. The value on the probability of the SI variable shows a value of 0.0257 which, using a significant level of 5%, can be concluded to be able to have a positive effect on ED so that H3 is accepted.
4. For the probability value of ICG moderating the relationship between EC and ED, it shows a value of 0.0239 so, with a significance level of 5%, it can be concluded that ICG is able to strengthen the relationship between EC and ED. So, H4 is accepted.
5. For the probability value of ICG moderating the relationship between IEC and ED, it shows a value of 0.0445. So, with a significance level of 5%, it can be concluded that ICG is able to strengthen the relationship between IEC and ED. So, H5 is accepted.
6. Meanwhile, the probability value of ICG moderates the relationship between SI and ED shows a value of 0.2946 with a significance level of 5%, so it can be concluded that ICG is not able to moderate the relationship between SI and ED. So H6 is rejected.

## 5. Discussion of Research Results

### 5.1 Effect of Environmental Cost on Environmental Disclosure

From the results of the t test that was carried out previously, it shows that EC has an influence on ED with a positive constant, so the relationship between the two is positive. It can be concluded that EC will improve the quality of ED contained in a company. These results are in line with research conducted by [8] which explains that environmental disclosure requires real costs, so there is a need for environmental costs in a company. In addition, [30] explained that the importance of environmental costs in the environment is needed to create and improve systems within the company, costs for making measurements, costs for identifying and reporting information and also costs for carrying out activities to protect the environment. Thus, with the existence of large environmental costs, companies should integrate them into strategies which will then drive real costs on significant environmental and social activities.

## **5.2 The Influence of International Environmental Certification on Environmental Disclosure**

For the second hypothesis, the results of tests that have been carried out previously show that IEC has no effect on ED with a negative constant, which means that IEC has a negative effect on ED. Thus, it can be concluded that companies with IEC ownership will not improve the quality of ED disclosures. One of the international certifications related to environmental management is ISO 14001, which is an environmental management standard regarding best practices in environmental management systems. In 15 countries found that among the main motivations for seeking ISO 14001 certification were 'environmental improvement' and 'corporate image'. Encouraging efforts and carrying out approaches to the management of the environment and natural resources and the quality of their management is standardized on a global scope.

## **5.3 Influence of Industry Sensitivity on Environmental Disclosures**

The results of the t test show that the third hypothesis is accepted, which means that there is an effect of industry sensitivity on ED with a positive coefficient indicating that there is a positive influence. That is, the more sensitive the company's industry, the more it will improve the quality of disclosure at the company. . Industry sensitivity is also one of the factors that has a positive effect on environmental disclosure. The magnitude of the influence of industrial activities that are directly related to the environment is defined as industrial sensitivity [9]. In the sensitivity of the industry, there are categories that are included in companies with high profile types. Companies that fall into this category are defined as companies that get attention from the general public because they have potential company operational activities and tend to be related to the interests of the general public [9].

## **5.4 Integrated Corporate Governance moderates the effect of Environmental Cost on Environmental Disclosure**

The results of the t test show that H4 is accepted so that it is known that ICG is able to strengthen the relationship between EC and ED. Environmental costs are environmental disclosures made by companies from the aspect of costs incurred for environmental responsibility. Meanwhile, corporate governance plays a role in supervising the activities carried out by stakeholders . With the existence of corporate governance , it is hoped that the company's ability to increase transparency, accountability and corporate responsibility to the environment will occur. In accordance with the legitimacy theory, the company will make various disclosures including the implementation of governance. Shows that corporate governance has a positive effect on environmental disclosure, so that the implementation of corporate governance will improve the quality of environmental disclosure.

## **5.5 Integrated Corporate Governance moderates the effect of International Environmental Certification on Environmental Disclosure**

The test results show that H5 is accepted, so it can be concluded that ICG is able to strengthen the relationship between IEC and ED. IEC is an effort made by companies to show their identity in environmental responsibility as stated by [10] which explains that companies will use IEC to improve the quality of their disclosures. ICG itself is a governance system that exists within the company, by increasing awareness of the environment in the corporate governance system, this will also encourage other accountability efforts related to the environment in the company. International Environmental Certification is where a company has implemented ISO 14001 which is a voluntary environmental management tool, however, implementing this environmental management system will enhance the company's image as a green company . Where one of the requirements for green companies is to have implemented ISO 14001.

## 5.6 Integrated Corporate Governance moderates the influence of Industry Sensitivity on Environmental Disclosures

The results of the hypothesis testing carried out showed that H6 was rejected so that this proved that ICG was not able to strengthen the relationship between SI and ED. Industrial Sensitivity is a form of impact created by the company due to a relationship with the business sector, business and employee risks to the environment. This causes differences in the level of sensitivity in different types of industries for the reason that the impact of each company from each sector is also not the same. ICG is not able to strengthen because SI is something that will not be able to change even though there is an increase in the company's ICG because SI talks about the line of business in that company. So, even though there are improvements in the company's ICG towards being more concerned about the environment, it will not strengthen the relationship between IS and the improvement of the quality of environmental disclosure in companies. This is also in line with research conducted by [8] .

## 6. Conclusion

From the results of the previous discussion, it can be concluded that the results of this study are as follows (1) Environmental costs have a significant positive effect on environmental disclosure, (2) International Environmental Certification has a significant positive effect on environmental disclosure, (3) Industrial Sensitivity has a significant positive effect on environmental, (4) Integrated Corporate governance is able to strengthen the influence between environmental costs on environmental disclosure, (5) Integrated Corporate governance is able to strengthen the influence between International Environmental Certification on environmental disclosure and (6) Integrated Corporate governance is able to strengthen the influence between Industry Sensitivity on environmental disclosure.

Environmental disclosure which is a form of corporate responsibility to the environment by the company. The implementation of this environmental disclosure has not been carried out by the company as a whole, only companies with certain sectors that focus a lot on improving the implementation of environmental disclosure and are still voluntary for several company sectors. Meanwhile, the implementation of CG in companies is only a form of company compliance with applicable rules or laws. Thus, it only complies with applicable regulations.

Future research can direct competitive advantage research that focuses on or considers environmental aspects in developing measurements on environmental disclosures which are then linked to how companies perform from environmental aspects. In addition, future research can also carry out research development by considering technological aspects that are associated with competitive advantage and performance.

## References

- [1] LM IFADA, M. INDRIASTUTI, EY IBRANI, and Y. SETIAWANTA, "Environmental Performance and Environmental Disclosure: The Role of Financial Performance," J. Asian Financ. Econ. buses. , vol. 8, no. 4, pp. 349–362, 2021, doi: 10.13106/jafeb.2021.vol8.no4.0349.
- [2] RK Rini and D. Adhariani, "Does Financial Performance Drive Environmental Disclosure and Environmental Cost? Evidence from Indonesia," J. Ilm. account. and Business , vol. 16, no. 2, p. 317, 2021, doi: 10.24843/jiab.2021.v16.i02.p09.
- [3] SW Hadiningtiyas and A. Mahmud, "Determinant of Environmental Disclosure on Companies Listed in Indonesia Stock Exchange (IDX)," Account. Anal. J. , vol. 6, no. 3, pp. 380–393, 2017, doi: 10.15294/aaj.v6i3.18898.
- [4] Y. Diantimala and TA Amril, "The Effect of Ownership Structure , Financial and Environmental Performances on Environmental Disclosure," vol. 7, no. 1, pp. 70–77, 2018, doi: 10.15294/aaj.v5i3.20019.
- [5] YR Ummah and D. Setiawan, "Do Board of Commissioners Characteristic and International Environmental Certification Affect Carbon Disclosure ? Evidence from

- Indonesia," vol. 8, no. 2, pp. 215–228, 2021.
- [6] I. Saputra and E. Murwaningsari, "Do Environmental Performance and Disclosure Contribute to the Economic Performance? The Moderating Role of Corporate Action," *J. Account. Res. Organ. Econ.*, vol. 4, no. 1, pp. 29–47, 2021, doi: 10.24815/jaroe.v4i1.18672.
- [7] FA (BM Rohelmy University, Z. (BM ZA University, and RR (BM Hidayat University, Effectiveness of Implementing Environmental Costs in an Effort to Minimize Environmental Impact) (Study at PT EMDEKI Utama) . 2018.
- [8] F. Julekhah and E. Rahmawati, "The Influence of Media Exposure, Industry Sensitivity, Foreign Ownership, Public Ownership and Profitability on Environmental Disclosure and Its Impact on Company Value," vol. 3, no. 1, pp. 50–66, 2019.
- [9] Yumina and N. Eftiana, "EFFECT OF COMPANY SIZE, BOARD OF COMMISSIONERS SIZE AND INDUSTRIAL SENSITIVITY ON CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE IN LQ-45 COMPANIES LISTED ON THE IDX IN 2014-2016," *J. Akunt. and Finance.*, vol. 5, pp. 119–136, 2017.
- [10] B. Vuran and B. Adiloglu, "Comparison of the Profitability Performance of BIST Corporate Governance Index Companies in Turkey," *Res. J. Financec. Accounts.*, vol. 8, no. 6, pp. 1–7, 2017.
- [11] CM Faller, "Does Equity Ownership Matter for Corporate Social Responsibility? A Literature Review of Theories and Recent Empirical Findings," *J. Bus. Ethics*, 2016, doi: 10.1007/s10551-016-3122-x.
- [12] A. Fitriyanto, "Effect of Leverage, Environmental Performance, and Environmental Disclosure on Economic Performance on Natural Resources Management Industry Companies," *Agreg. J. Ekon. and Business*, p-ISSN 2549-5658 e-ISSN 2549-7243, vol. 5, no. 1, pp. 13–37, 2021, doi: 10.22236/aggregate.
- [13] SRM Musallam, "Effects of board characteristics, audit committee and risk management on corporate performance: evidence from Palestinian listed companies," vol. 13, no. 4, pp. 691–706, 2020, doi: 10.1108/IMEFM-12-2017-0347.
- [14] BA Wijaya and M. Nuryatno, "The Influence of Environmental Performance and Environmental Disclosure on Economic Performance," *J. Information, Taxation, Accounting, and Finance. Public*, vol. 9, no. 2, p. 141, 2019, doi: 10.25105/jipak.v9i2.4530.
- [15] W. (Faculty E. and BUA Dianawati, "The influence of company characteristics and environmental certification on disclosure of corporate social responsibility (csr)," *EKUITAS (Journal of Economics and Finance)*, no. 80, pp. 226–241, 2012.
- [16] E. Suprpti, FA Fajari, and ASH Anwar, "The Influence of Good Corporate Governance on Environmental Disclosure," *Accountability*, vol. 12, no. 2, pp. 215–226, 2019, doi: 10.15408/akt.v12i2.13225.
- [17] AM Winarsih and B. Solikhah, "EFFECT OF MEDIA, INDUSTRIAL SENSITIVITY AND CORPORATE GOVERNANCE STRUCTURE ON ENVIRONMENTAL DISCLOSURE QUALITY (STUDY OF HIGH PROFILE COMPANIES IN INDONESIA STOCK EXCHANGE PERIOD 2011-2013)," *Account. Anal. J.*, vol. 4, no. 2, pp. 1–9, 2015.
- [18] P. Ariningtika, "The influence of good corporate governance practices on corporate environmental disclosure," 2013.
- [19] PM Clarkson, Y. Li, GD Richardson, and FP Vasvari, "Revisiting the relation between environmental performance and environmental disclosure : An empirical analysis," vol. 33, pp. 303–327, 2008, doi: 10.1016/j.aos.2007.05.003.
- [20] D. Putra, U. Veronica, S. Pebrina, and A. Irawati, "The Influence of Environmental

Performance, Company Size and Profitability on Environmental Disclosure," pp. 48–54, 2021.

- [21] I. Irfansyah, HNL Ermaya, and K. Septyan, "the Influence of Environmental Performance, Environmental Disclosure and Environmental Cost on Economic Performance," *Econ. Accounts. J.* , vol. 1, no. 2, p. 87, 2018, doi: 10.32493/eaj.v1i2.y2018.p87-94.
- [22] S. Rahmawati and C. Budiwati, "Company Characteristics, ISO 14001, and Environmental Disclosure: Comparative Studies in Indonesia and Thailand," *J. Akunt. and Business* , vol. 18, no. 1, p. 74, 2018, doi: 10.20961/jab.v18i1.268.
- [23] B. Solikhah and AM Winarsih, "EFFECT OF MEDIA COVERAGE, INDUSTRIAL SENSITIVENESS, AND THE STRUCTURE OF COMPANY'S GOVERNANCE ON THE QUALITY OF ENVIRONMENTAL DISCLOSURE," *J. Akunt. and Finance. Indonesia.* , vol. 13, no. 1, 2016.
- [24] ALC Silva and RPC Leal, "Corporate Governance Index, Firm Valuation and Performance in Brazil." pp. 1–18, 2005.
- [25] L. Salsabila and M. Syafruddin, "EFFECT OF THE AUDIT COMMITTEE'S CHARACTERISTICS ON," vol. 9, no. 2010, pp. 1–14, 2020.
- [26] S. Dewi and N. Harini, "The Effect of Environmental Financial Accounting Practices on the Cost of Capital in Public Companies Listed on the Indonesia Stock Exchange," vol. 5, no. 36, pp. 919–931, 2021.
- [27] E. Ozordi, DF Eluyela, E. Ozordi, DF Eluyela, and U. Uwuigbe, "Gender diversity and sustainability responsiveness : evidence from Nigerian fixed money deposit banks," 2020, doi: 10.21511/ppm.18(1).2020.11.
- [28] JJ Jekwam and S. Hermuningsih, "MODERATED CORPORATE SOCIAL RESPONSIBILITY AND LIQUIDITY ON FINANCIAL PERFORMANCE IN MINING COMPANIES LISTED ON THE IDX," *Upajiwa Dewantara* , vol. 2, no. 1, pp. 76–85, 2018.
- [29] NLGS Fajaryani and E. Suryani, "Capital Structure, Liquidity, and Company Size on Company Financial Performance," *J. Ris. account. Contemporary* , vol. 10, no. 2, pp. 74–79, 2018, doi: 10.23969/jrak.v10i2.1370.
- [30] Y. Qiu, A. Shaukat, and R. Tharyan, "Environmental and social disclosures: Link with corporate financial performance," *Br. Accounts. Rev.* , 2014, doi: 10.1016/j.bar.2014.10.007.
- [31] AP Monteiro, C. Pereira, and FM Barbosa, "Environmental disclosure on mandatory and voluntary reporting of Portuguese listed firms: the role of environmental certification, lucratively and corporate governance," *Meditari Account. Res.* , vol. ahead-of-p, no. ahead-of-print, Jan. 2021, doi: 10.1108/MEDAR-09-2020-1001.