The Effect of Environmental Performance, Company Characteristics and Media Exposure on Environmental Disclosures (Study of Manufacturing Companies listed on the Indonesia Stock Exchange for the Period 2010-2021)

Cornelius Tegar Prasetiyo[1], Susi Sarumpaet[2], Yenni Agustina[3]

[1]*Student, Faculty of Economics and Business, University of Lampung, Indonesia.*
[2]*Associate Professor, Faculty of Economics and Business, University of Lampung, Indonesia.*
[3]*Associate Professor, Faculty of Economics and Business, University of Lampung, Indonesia.*

A B S T R A C T

This study examines the influence of environmental performance, media exposure and company characteristics as represented by profitability, firm size and leverage on environmental disclosure. The population in this study are manufacturing companies listed on the IDX for the 2010-2021 period with the selected research years, namely 2010, 2013, 2016, 2019 and 2021. The data analysis technique used in this research is a quantitative analysis using simple regression analysis using SPSS 26. This study used a sample of 125 manufacturing companies selected using a purposive sampling method. The results of this study explain that environmental performance, firm size and media exposure have a positive and significant effect on environmental disclosure. At the same time, profitability and leverage do not affect environmental disclosure.

Keywords: Environmental Performance, Company Characteristics, Profitability, Firm Size, Leverage, Media Exposure.

1. Introduction

Environmental pollution and global warming are issues that are often discussed these days. Massive industrial practices sometimes make industry players ignore the impact they have on the environment. Air, water and soil pollution caused by industrial activities has caused environmental impacts and global warming, which can threaten the survival of living things. Environmental issues have been developing since 1972 when the International Conference on the Human Environment was held in Stockholm, Sweden, which then made the world community aware of the impact of environmental damage and global warming caused by industrial activities on the survival of living things. This makes the community urge companies to carry out their social responsibility towards the environment and their interests to obtain company profits (Rabbani, 2013).

Environmental disclosure in Indonesia is still mandatory and voluntary. The nature of mandatory (mandatory) is due to government regulations that require companies to disclose social and environmental responsibility. However, there are no official regulations regarding standard standards regarding the format, content and extent of environmental information issued by the government for business people or companies. So, environmental disclosure is also said to be voluntary (Aulia& Agustina, 2015). This certainly makes companies in Indonesia have a low level of disclosure related to the environment.

The role of industry or companies that are directly the main source of environmental damage is needed in protecting the environment and reducing the environmental impact arising from operational activities and the products they produce. Especially now that many companies have products with environmentally friendly labels, both in terms of production and the environmental impact that may arise from these products. This issue has encouraged research to examine the extent to which manufacturing companies are protecting the environment by measuring the extent of environmental recognition and disclosure (Irwhantoko& Basuki, 2016). Previous research has many differences and creates a research gap for ongoing research to provide empirical evidence and credibility in a study. So based on this, the researcher is interested in examining more deeply the influence of environmental performance, profitability, firm size, leverage and media exposure on environmental disclosure using data on the manufacturing company listed on the Indonesia Stock Exchange (IDX) for 2010-2021.

2. Theory Basis and Hypothesis Development

Legitimacy Theory

Legitimacy theory is an organizational system which, in terms of disclosure, has an important role as a liaison between corporate organizations, government and the interests of individuals or community groups (Gray et al., 1995). This theory will explain an organization's motivation for environmental disclosure, especially companies with a good environmental reputation. Environmental disclosure is a disclosure of corporate social responsibility. The company makes this disclosure to gain legitimacy from the social community groups where the company is located and seeks to maximize the company's long-term strength in the financial aspect (Irwhantoko& Basuki, 2016). The theory of legitimacy is the basis of the company in maintaining the company's values and good image from unwanted things, such as differences in value views from outsiders or legitimation gaps (Ratmono, 2019). So that one way to avoid or reduce this is to make a complete disclosure of the company's environment.

Environmental Performance

Companies with higher environmental performance disclose environmental information (Tadros&Magnan, 2019). The better a company's environmental performance, the wider the environmental disclosure of the company (Rabbani, 2013). In addition, the legitimacy theory also states that there is a tendency for companies that have a good environmental performance to make environmental disclosures in order to gain legitimacy and maintain public trust so that the company continues to receive support from the community. Legitimacy theory is important when the company has a high PROPER rating. The public will need concrete evidence of the company's state, where they hope that the company will carry out its activities according to the norms and regulations that apply in society. Based on this description, the formulation of the hypothesis in this study is as follows:

H1: Environmental performance has a positive effect on environmental disclosure

Profitability

Even though it is voluntary, companies with better performance have greater potential for environmental disclosure (Irwhantoko& Basuki, 2016). Companies with superior financial performance will take many risks to sacrifice funds for a higher and objective environmental protection and disclosure agenda (Chowdhury et al., 2020). When a company has a relatively high profit or profit, the company's responsibility, especially in social and environmental matters such as environmental disclosure, will be higher because the company is considered capable of doing so. Companies will also have pressure from outsiders, especially the community, which makes companies need to carry out environmental disclosures to gain legitimacy. From this description, the formulation of the hypothesis in this study is as follows:

H2: Profitability has a positive effect on environmental disclosure

Firm Size

Large companies are subject to more intense external monitoring than small companies due to accountability and visibility as outlined in legitimacy theory, and such companies disclose environmental information (Kılıç&Kuzey, 2019). Firm size has a significant positive effect on the quality of corporate environmental disclosures. It follows the legitimacy theory that companies will use environmental disclosures to maintain their social status and reputation (Ismail, Abdul Rahman et al., 2018). Large companies with many stakeholders will disclose more information, thus confirming the relevance of the legitimacy theory (Chandok& Singh, 2017). From the statements above, the hypothesis formulation in this study is as follows:

H3:Firm size has a positive effect on environmental disclosure.

Leverage

Higher leverage will limit the company's flexibility in funding its activities so that it will focus more on its operational activities, reduce activities such as environmental activities, and reduce related disclosures (Siregar&Deswanto, 2018). High leverage will cause a decrease in the level of environmental disclosure. The low level of disclosure caused by a high level of leverage makes companies more concerned with fulfilling debt agreements (Ardi&Yulianto, 2020). Legitimacy theory explains that companies with low leverage tend to be more able to disclose the environment because they do not focus on fulfilling their obligations so that they can carry out environmental reduction activities and disclose them. So that companies can fulfil legitimacy, recognition, and demands from society. From the description above, the formulation of the hypothesis:

H4: Leverage has a negative effect on environmental disclosure

Media Exposure

The legitimacy theory is the basis for companies to carry out social and environmental responsibility. Companies have several ways to gain legitimacy from the public, one of which is through reporting information carried out by the media (media exposure) (Junita &Yulianto, 2018). Pressure from society will be greater if the company has a big reputation and frequently appears in media reports so that it becomes the public spotlight. Companies will be more careful and increase their responsibility and the quality of their environmental disclosures for corporate sustainability (Widiastuti et al., 2018). With media exposure, companies will be more motivated to make environmental disclosures because companies will compete with other companies to gain public trust by making environmental disclosures based on media exposure (Richard & Wijaya, 2022). From the statement above, the formulation of the research hypothesis is as follows:

H5: Media exposure has a positive effect on environmental disclosure

3. Methodology

Types of Research

This type of research is quantitative research. While the data source used is a secondary data source. Secondary data is a source of indirect data and is usually obtained through the company's official or IDX website. This research, where the data obtained is secondary data obtained from sustainability reports and annual reports of manufacturing companies used as research samples.

Data Source

According to Johnston and Zhang (2021), in their research on auditor style and financial reporting similarity in companies in the United States from 2011 to 2016, it is stated that companies with the same auditor have more similarities in their financial statements. In other words, company reports will have similarities yearly if audited by the same auditor. Therefore this study retrieves data on manufacturing companies listed on the IDX every three years starting in the 2010-2021 period, so the company data used is 2010, 2013, 2016, 2019 and 2021.

Population and Sample

The population in this study were all manufacturing sector companies listed on the IDX for the 2010-2021 period, with the selected research periods being 2010, 2013, 2016, 2019 and 2021. The sample selection method in this study was carried out using a purposive sample method, namely the selection of samples with certain criteria. The criteria used are as follows:

1. Publish complete financial and annual reports up to 31 December 2021.

2. Publish annual reports or sustainability reports for 2010, 2013, 2016, 2019 and 2021.

3. The manufacturing company participated in PROPER in 2010, 2013, 2016, 2019 and 2021.

Independent Variable

1. Environmental Performance

Investors and external parties often consider environmental performance to reflect the company's responsibility in managing the environment. Environmental performance is measured using the PROPER rating. This PROPER includes a company rating in 5 colours, namely: Gold (very-very good, score 5), Green (very good, score 4), Blue (good, score 3), Red (poor, score 2), Black (very bad, score 1) (Nur Utomo et al., 2020).

2. Profitability

Profitability is the company's ability to obtain profit or profit by utilizing the resources, investment and personal capital owned by the company. They are referring to the research of Ismail et al. (2018) and Purnama (2018) in their research using profitability as measured by Return on Assets (ROA). ROA is used to measure management's ability to obtain overall profit (profit) (Purnama, 2018). ROA is measured by comparing net profit after tax and total company assets. ROA (Return On Assets) can describe a company's ability to generate profits from every rupiah of assets used by the company (Ismail, Abdul Rahman et al., 2018).

3. Firm Size

Company size is a reflection of the resources owned by the company. Company size can also describe the number of operational activities. Larger companies certainly have more activities. All company operational activities are often directly related to the environment (Irwhantoko& Basuki, 2016). referring to the research by Irwhantoko& Basuki (2016), Ismail et al. (2018) and Putra et al. (2021) that company size is proxied by using firm size, which uses total assets as a benchmark. The market does not affect measurement with total assets so that it can produce more valid data (Purwanto, 2011).

4. Leverage

Leverage, or the solvency ratio, describes the level or proportion of a company's debt and its ability to fulfil its long-term obligations or debt. Referring to the research of Chandok& Singh (2017) and Chowdhury et al (2020) leverage is measured by calculating the company's debt-to-equity ratio or Debt to Equity Ratio (DER). This ratio compares total liabilities (current liabilities and long-term liabilities) with the company's equity. If this ratio is more than one, then the composition of debt is greater than equity, and vice versa if the ratio is less than one, then the composition of equity is greater in the company's capital (Irwhantoko& Basuki, 2016).

5. Media Exposure

Media exposure, in this case, is media coverage of events or activities carried out by companies, both positive and negative, which are then published by the media to the public (Widiastuti et al., 2018). Media exposure in this study was measured by observations on the kompas.com website and looking at how many companies appeared in Kompas publications. The search was carried out for each company, and the total news appearances for each company during the study period were calculated.

Dependent Variable

The dependent variable in this study is environmental disclosure as measured by an index developed by Clarkson et al (2008) based on the GRI Index which then divides it into two main categories, namely hard environmental disclosure consisting of four categories and soft environmental disclosure consisting of three categories. This measurement is carried out using the checklist method by matching index items with items disclosed by the company. Scoring follows the model from Clarkson et al (2008). This index was developed by adopting the GRI sustainability reporting guidelines.

Data Analysis Method

This study uses multiple linear analyses to examine the effect of the independent variables on the dependent variable. The data will be processed using the SPSS application, while environmental disclosure variables will use the ATLAS.ti application. The analysis used is the classical assumption test, which consists of a normality test, multicollinearity test, heteroscedasticity test, autocorrelation test, and hypothesis testing using t-test regression analysis.

4. Results and Discussion

Research Population

Table 1. Research Object Description

No	Sample Criteria	Total
1	Manufacturing companies listed on the IDX for 2010, 2013, 2016, 2019 and 2021 periods.	114
2	Total manufacturing companies that did not issue complete financial and annual reports as of 31 December 2021.	(0)
3	Total manufacturing companies that did not participate in PROPER during 2010, 2013, 2016, 2019 and 2021 periods.	(89)
	Sample companies based on criteria	25
	The total sample was determined during the study period (×5)	**125**

Based on the determination of the sample above, the number of manufacturing companies listed on the IDX during the study period was 114 companies. Based on the purposive sampling technique, a sample of 25 companies was obtained that were worthy of being used as research objects, with a total of 125 samples during 2010, 2013, 2016, 2019 and 2021 research periods.

Results of Descriptive Statistical Analysis

Table 2. Results of Descriptive Statistical Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
X1_PROPER	125	2.00	5.00	3.1600	.60107
X2_ROA	125	-4.0509	.4010	.029718	.3803814
X3_SIZE	125	24.913	33.537	29.07375	2.124394
X4_DER	125	-30.1049	12.5571	.795765	3.8488367
X5_MEDEX	125	.00	206.00	11.0400	28.81403
Y_CED	125	.000	57.143	20.42448	12.597768
Valid N (listwise)	125				

The dependent variable or environmental disclosure (CED), as measured by the Clarkson index (2008), obtained the highest value of 57.143, namely Indocement (2021). Meanwhile, the lowest level of environmental disclosure is 0.000, namely Lotte Chemical (2010). From the data above, an average value of 20.42448% is also obtained with a standard deviation of 12.597768. The average value of 20.42% indicates that the average manufacturing company listed on the IDX has a fairly low percentage of environmental disclosures (<50%).

The test results above show that environmental performance (PROPER) has a mean value of 3.16 and a standard deviation of 0.60107. The highest environmental performance rating with a score of 5 (gold rating) belongs to Semen Indonesia (2013) and Unilever in 2013. At the same time, the lowest rating, with a score of 2 (red rating), belongs to Century Textile (2010, 2016 and 2021). In the profitability variable (ROA), an average value of 0.029718 is obtained with a standard deviation of 0.3803814. From these data, the company with the highest profitability is Unilever Indonesia (2013) at 0.401 or 40.1%. Meanwhile, the lowest profitability is Century Textile (2021), with a value of -4.0509. The highest asset value in the company size variable (SIZE) is Astra International (2021), of 33.537. At the same time, the lowest asset value is Sat Nusapersada (2016), of 24,913. From these data, an average value of 29.07375 is obtained with a standard deviation of 2.124394. The leverage variable (DER) obtained the highest value of 12.5571,

namely Century Textile (2013). Meanwhile, the lowest leverage value is -30.1049, namely Asia Pacific (2021). From the data above, an average value of 0.795765 is also obtained with a standard deviation of 3.8488367. The media exposure variable (MEDEX) obtained the highest value of 206.00, namely Kimia Farma (2021). Meanwhile, the lowest media exposure value is 0.00, namely Argo Pantes (2010-2019), Asia Pacific (2010-2021) and several other companies that are not reported on the Kompas.com website. From the data above, an average value of 11.0400 is also obtained with a standard deviation of 28.81403.

Classical Assumption Test Results

1. **Normality Test Results**

Table 3. Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		125
Normal Parameters[,b]	Mean	.0000000
	Std. Deviation	10.29885538
Most Extreme Differences	Absolute	.053
	Positive	.053
	Negative	-.035
Test Statistic		.053
Asymp. Sig. (2-tailed)		.200[c]

From the table above, it can be seen that the Kolmogorov-Smirnov test shows a significance value of Asymp. Sig. (2-tailed) of 0.200. This shows that the significance value is greater than 0.05. This means that the data in the model used are normally distributed and meet the assumptions of normality.

2. **Multicollinearity Test Results**

Table 4. Multicollinearity Test Results

Coefficients

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	X1_PROPER	.907	1.103
	X2_ROA	.931	1.075
	X3_SIZE	.836	1.196
	X4_DER	.991	1.009
	X5_MEDEX	.866	1.155

From the table above, it can be seen that there is no relationship or correlation between the independent variables in this study. This is because the tolerance value of each variable is greater than 0.1. So that with the tolerance and VIF values shown in the test results, the independent variables in this study do not experience multicollinearity problems.
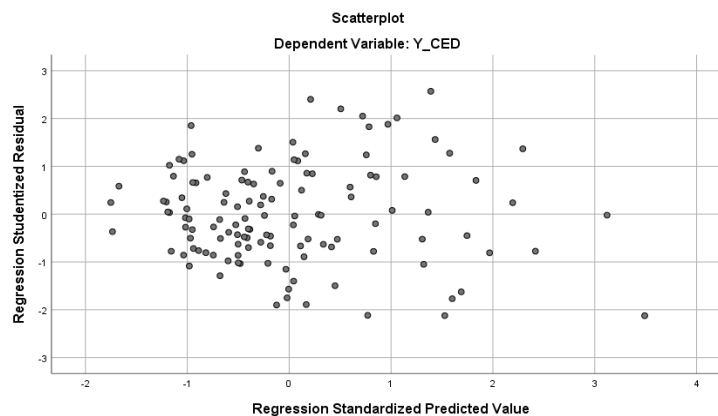
3. **Heteroscedasticity Test Result**

Figure 1. Heteroscedasticity Test Result

The scatterplot graph above shows that the dots do not form a regular pattern and spread above and below the number 0 on the Y-axis (Ghozali, 2013). This indicates that there are no symptoms of heteroscedasticity. Thus it can be stated that the regression model in this study does not experience heteroscedasticity problems.

4. **Autocorrelation Test Results**

Table 5. Autocorrelation Test Results

Runs Test

	Unstandardized Residual
Test Value	-.41032
Cases < Test Value	62
Cases >= Test Value	63
Total Cases	125
Number of Runs	60
Z	-.628
Asymp. Sig. (2-tailed)	.530

The results of the autocorrelation test using the Run Test method above show that the asymp. Sig. (2-tailed) of 0.530. This shows the significant value of asymp. Sig. (2-tailed) is greater than 0.05, which means that the data in this study were randomly distributed and did not experience symptoms of autocorrelation so that it can continue for further testing.

Hypothesis Test Results

1. Coefficient of Determination

Table 6. Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.576[a]	.332	.304	10.512992

The table shows that the coefficient results (adjusted R^2) achievement are 0.304 or 30.4%. This means that the independent variables in this study, namely environmental performance (X1), profitability (X2), firm size (X3), leverage (X4) and media exposure (X5), are only able to explain the dependent variable or environmental disclosure (Y) of 30.4%. At the same time, the remaining 69.6% is explained by variables and other factors outside the research model.

2. Simultaneous Significance Test (F Test)

Table 7. F-Test Results

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6527.031	5	1305.406	11.811	.000[b]
	Residual	13152.236	119	110.523		
	Total	19679.267	124			

The table shows that the significance value is less than 0.05, which is 0.000. So it can be said that overall all the determinants of environmental disclosure in the regression model used are environmental performance (X1), profitability (X2), firm size (X3), leverage (X4) and media exposure (X5) together or simultaneously influence environmental disclosure.

3. Partial Test (T-test)

Table 8. T-Test Results

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-46.747	14.018		-3.335	.001
	X1_PROPER	5.718	1.649	.273	3.467	.001
	X2_ROA	-.994	2.573	-.030	-.386	.700
	X3_SIZE	1.654	.486	.279	3.403	.001

X4_DER	-.399	.246	-.122	-1.618	.108
X5_MEDEX	.124	.035	.283	3.515	.001

The results of the t-test show that the environmental performance variable (PROPER) positively affects environmental disclosure (CED). The significance level of the t-test results is less than 0.05, which is 0.001. Thus, it can be stated that H1 is accepted. The profitability variable (ROA) cannot prove its effect on environmental disclosures. The significance level of the t-test results is greater than 0.05, namely 0.700. Thus, it can be stated that H2 is rejected. Company size variable (SIZE) has a positive influence on environmental disclosure. The significance level of the t-test results is less than 0.05, namely 0.001. Thus, it can be stated that H3 is accepted. The leverage variable (DER) cannot prove its effect on environmental disclosure. The significance level of the t-test results is greater than 0.05, namely 0.108. Thus, it can be stated that H4 is rejected. The test results above also show that the media exposure variable (MEDEX) positively affects environmental disclosure. The significance level of the t-test results is less than 0.05, namely 0.001. Thus, it can be stated that H5 is accepted.

Discussion

Based on the results of the linear regression test shows that there is a positive influence between environmental performance (PROPER) and environmental disclosure (CED). By the legitimacy theory applied to this research, companies with high PROPER performance or ratings tend to make broader environmental disclosures so that they gain legitimacy from the community and ensure the public trust is maintained so that the company continues to receive full support from the community. The results of this study are in line with the research of Rabbani (2013), Purnama (2018), Siregar&Deswanto (2018), Tadros and Magnan (2019), Nur Utomo et al. (2020) and contradict the research of Putra et al. (2021).

The results of the linear regression test also show that profitability (ROA) has no relationship or influence on environmental disclosure. This result does not follow the legitimacy theory used, but several underlying reasons exist. One of the reasons is that companies with high profitability are more profit-oriented, so they do not necessarily carry out more environmental activities to be presented in their annual reports (Ciriyani& Putra, 2016). This research supports the research of Akhter et al. (2022) and Junita &Yulianto (2018) but is not in line with the research of Ahmadi &Bouri (2017) and Putra et al. (2021).

This study also shows a positive influence between company size (SIZE) and environmental disclosure, following the legitimacy theory that large companies have extensive resources and carry out many activities that impact society and the environment. The result is that the pressure received by companies will be even greater because companies must make objective and quality voluntary disclosures to gain legitimacy or recognition (Ratmono, 2019). The results of this study are in line with Akhter et al. (2022) and Siregar&Deswanto (2018) but not in line with Maulana et al. (2021) and Terry &Asrori (2021).

Leverage (DER) does not affect environmental disclosure. Companies are more concerned with using their profits and wealth to fulfil obligations to debtholders rather than financing environmental policies. However, high leverage also causes companies to try to cover it up by carrying out environmental policies to gain the trust of investors and the public. This means that the level of debt or leverage in the company does not influence the high or low level of corporate environmental disclosure. The results of this study support the research of Aulia& Agustina (2015) and Purnama (2018) but do not support the research of Gerged (2020) and Akhter et al. (2022).

Media exposure has a positive effect on environmental disclosure. Pressure from society will be even greater if a company has a big reputation, frequently appears in media coverage, and is in the spotlight of the public. Causing companies to be more careful and increase their responsibility and quality of environmental disclosure for the sake of company sustainability and building public trust (Widiastuti et al., 2018). The results of this study are in line with the research of Amelia &Trisnaningsih (2021) and Richard & Wijaya (2022) but not following the research of Sarra&Alamsyah (2020) and Suryani et al. (2020)

5. Conclusion and Suggestion

Conclusion

Based on the research objectives and the results of testing the hypotheses that have been carried out and described above, the following conclusions are obtained:

1. The Environmental Performance Variable, as measured by the PROPER rating, positively influences environmental disclosures in manufacturing companies listed on the IDX. A better PROPER rating will encourage companies to be more open and disclose quality environmental information.

2. The Profitability variable proxied by Return On Assets (ROA) does not affect environmental disclosures made by manufacturing companies on the IDX. High or low levels of profitability do not guarantee that companies disclose more extensive environmental information in their annual or sustainability reports.

3. Variable Company Size (SIZE), as measured by Ln Total Assets, positively affects the environmental disclosures of manufacturing companies listed on the IDX. The value of the company's assets will affect the company's policy in managing the environment for the company's sustainability in the future.

4. The leverage variable proxied by the Debt to Equity Ratio (DER) does not affect environmental disclosures made by manufacturing companies on the IDX. The size of a company's DER or leverage ratio does not affect its environmental information disclosure policy in its annual or sustainability report.

5. The media exposure variable, measured by how many sample companies appear in the news on the kompas.com website, concludes that media exposure has a positive effect on environmental disclosure. The more often a company is exposed in the media, the more it will encourage the company to carry out social responsibility, especially environmental disclosure, to gain legitimacy and trust from the public.

Suggestion

Further research is suggested to increase the number of research samples, widen the observation period, and not only focus on one company sector but also cover the entire company sector listed on the IDX. It is recommended that further research be able to follow developments and update the indexes and items used to measure and assess environmental disclosure, using GRI (Global Reporting Initiative) guidelines or other relevant guidelines and indices to be used as proxies for environmental disclosure. Future research is expected to use new or additional research variables beyond the variables used in this study to add an element of novelty regarding what factors can influence companies disclosing environmental information.

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