

Factors Influencing Environmental Disclosure in Consumer Goods Industry and Mining Companies

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ARTICLE INFO

Article history:

Received 01 December
2019
Received in revised form
31 December 2019
Accepted 15 January 2020
Available online 26
February 2020

Keywords:

*Environmental disclosure,
environmental performance,
firm size, leverage,
profitability*

ABSTRACT

This study evaluates the influence of environmental performance, profitability, firm size, and leverage on environmental disclosure. This research is a replication of Dewi and Yasa's research in 2017, with some modifications. The population was collected from the annual report and/or sustainability report of consumer goods industry and mining companies listed in Indonesia Stock Exchange (IDX) and PROPER or Program Penilaian Peringkat Kinerja Perusahaan in 2017 until 2018. The sampling technique was purposive sampling and the total of 56 data became the samples in this study. The result of the statistical tests proved that profitability and firm size have positively associated with and influenced the environmental disclosure. Meanwhile, environmental performance and leverage insignificantly influenced the environmental disclosure. This research also found that some of the companies being examined still have less awareness in exposing their environmental disclosure.

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1. Introduction

The development of economy is needed to make this country more developing. There is many kinds of development of economy, and one of them is the development of industries. However, the development of industries makes companies compete with each other. The tight competition in the market makes companies do anything to gain more benefit and better performance in order to attract investors. According to Wintoro (2012), a company which only focuses on achieving their goal and does not concern on non-renewable resources may lead to environmental damage. Tahu (2019) has stated that there is increasing pollution, decreasing water supply and increasing global warming because of companies' activities that lead to the increasing number of death.

There are so many companies that do not pay attention to the environment, one of them is PT. Expravet Nasuba. They suspected for waste disposal at Deli River in 2018 (Mongabay, 2018). This action would impact the society who live in the vicinity and would harm the river ecosystem. Another company is PT Pertamina Hulu Energi Offshore North West Java in Karawang. They had leakage of their oil which was extended to Bekasi and Thousand Islands. This condition made eight villages in Karawang Regency affected by oil contamination (Mongabay, 2019)

Investors and societies are the main target of companies to increase their performance. Companies which have good environmental management and pay attention to the environment will attract investors (Ja'far, 2006). Investors and societies are usually not attracted to the companies which harm the environment. Therefore, a company's environmental information disclosure is needed, because it shows how the company settles and deals with the environments' issues (Dewi & Yasa, 2017). According to Burgwal & Vieira (2014), environmental disclosure is necessary to be exposed because societies can know more about company's responsibility toward the environment. Companies would be able to expose their responsibility to the environment through the annual and/or sustainability report. Ningtyas & Triyanto (2019) has stated that environmental disclosure in the annual statement will enable the users to get the necessary information and help in making decision for the future.

This study is replicated Dewi & Yasa's research in 2017 that used firm size, profitability, type of industry and environmental performance as the independent variables. Meanwhile this study will use leverage to substitute type of industry because the findings on the relationship between leverage to environmental disclosure are inconstant. Omoye & Wilson-Oshilim (2018), Nugraha & Juliarto (2015) and Embuningtyas (2018) found that leverage had no significant relationship with environmental disclosure. On the other hand, the research conducted by Paramitha & Rohman (2014) found that leverage has a significant influence on environmental disclosure.

Researches by Dewi & Yasa (2017), Choiriah, Yanto, & Ilhami's (2018), Ezhilarasi & Kabra (2017), Jannah & Muid (2014), Dibia & Onwuchekwa (2015), Burgwal & Vieira (2014), Wang, Song, & Yao (2013), Wijaya (2012) found that firm size significantly influence environmental disclosure. However, this argue against Fatayaningrum (2011) which found that there is insignificant influence on firm size to environmental disclosure, but she found that there is significant influence of profitability to environmental disclosure. Aulia & Agustina (2015) also found profitability influencing environmental disclosure. In contrast, Nugraha & Juliarto (2015) found that profitability is not influencing environmental disclosure, but they found environmental performance has significantly influence environmental disclosure. The research's result conducted by Jannah & Muid (2014) and Wijaya (2012) found that there is insignificant influence of environmental performance to environmental disclosure.

This study has purpose to evaluate the influence of environmental performance, profitability, firm size and leverage through environmental disclosure. This study is expected to be useful as a reference or guidelines for academicians in understanding environmental disclosure and also for the future research especially on factors influencing environmental disclosure. Moreover, for companies especially those in consumer goods industry, are expected to understand the importance of environmental disclosure. Besides that, it is expected that, in making decisions to invest in consumer goods industry, investor need to pay attention to environmental disclosure. This also expected for government in managing environmental disclosure.

2. Methods

This study is quantitative. The population of this study is the annual and/or sustainability reports of mining companies and manufacturing companies in consumer goods industry which are listed in Indonesia Stock Exchange (IDX) from 2017 until 2018. And for the sample is used the annual and/or sustainability reports of consumer goods industry, which are listed in IDX and also registered in PROPER from 2017 until 2018. The sampling technique is used purposive sampling, with some criteria:

Table 1. Sample Determination Procedure

Criteria	2017	2018
Consumer goods industry and mining companies listed in IDX	92	99
Consumer goods industry and mining companies are not delisted from IDX	(2)	(2)
Consumer goods industry and mining companies annually give the annual report	(0)	(1)
Companies of consumer goods industry and mining companies listed in IDX and registered in PROPER	26	30
Total Sample	56	

Source: IDX and PROPER, processed

Table 2. Operational Definitions

Variable	Type of Variable	Definition	Measurement
Environmental Disclosure	Dependent	Environmental disclosure is an information disclosure of environment for needed parties and it includes environmental risks, effects, targets, strategies, liabilities and cost (Sen, Mukherjee, & Pattanayak, 2011)	Measured by using Global Reporting Initiative G4. $ED = \frac{\text{Total items disclosed}}{34 \text{ items}} \times 100\%$ With rate (Rusdiono, 2017 in Syahputra, Helmy, & Mulyani, 2019), such as: 100% = fully applied 76% - 99% = well applied 41% - 75% = partially applied 1% - 40% = limited disclose 0% = not applied
Environmental Performance	Independent	Environmental performance is the responsibility of a company to keep the environment healthy and clean Clarkson <i>et al.</i> (2008)	Measured by using PROPER (Suratno <i>et al.</i> , 2006 in Juliarto & Sjarief, 2016): Scale 1 = Very bad = black Scale 2 = Bad = red Scale 3 = Good = blue Scale 4 = very good = green Scale 5 = Excellent = gold
Firm size	Independent	Firm size is about the organizations' total assets and total sales that can determine whether the organization is small or big (Dewi & Yasa, 2017)	Measured using logarithm of total asset (Aulia & Agustina, 2015; Embuningtyas, 2018; Nugraha & Juliarto, 2015; and Wang, Song, Yao, 2013), which is: $SIZE = \log(\text{total asset})$
Leverage	Independent	Leverage is an indicator to measure the total assets covered by the total of debts (Paramitha & Rohman, 2014)	Measured by using DAR (Aulia & Agustina, 2015; Jannah & Muid, 2014; Paramitha & Rohman, 2014) : $DAR = \frac{\text{Total Debts}}{\text{Total Assets}}$
Profitability	Independent	Profitability is the condition where a company has the ability to make some profit from sales	Measured by using ROE Aulia & Agustina (2015): $ROE = \frac{\text{Earning After Tax (EAT)}}{\text{Total Equity}}$

The data analysis method of this research uses descriptive statistics and multiple linear regression analysis. The model used is:

$$ED = \alpha + \beta_1 EP + \beta_2 PRO + \beta_3 SZ + \beta_4 LEV + \varepsilon$$

Which are:

ED = Environmental Disclosure

α = constant

EP = Environmental Performance

PRO = Profit

SZ = Firm Size

LEV = Leverage

ε = Error term

3. Result and Discussion

Descriptive Statistical Analysis

Table 3. Descriptive Statistic

Variables	N	Minimum	Maximum	Mean	Std. Deviation
ED	56	0.00	0.85	0.23	0.17
EP	56	2.00	5.00	3.09	0.70
PRO	56	-0.38	2.25	0.24	0.43
SZ	56	11.69	13.98	12.71	0.67
LEV	56	0.02	0.73	0.38	0.18

Source: Processed Data, 2019

Based on Table 3, from 56 of the consumer goods industry and mining companies had a standard deviation of 16.51% (rounded from 16.509%) on environmental disclosure from 2017 until 2018. By using GRI – G4 measurement, the average number is 23% or about 7 until 8 items that are averagely implied by the companies. This implied that companies' awareness of environmental disclosure is considered as low and about 77% of companies still have not fulfilled it yet. The minimum number of environmental disclosure is 0% which means some of the companies have not applied any kind of environmental information in their annual reports. On the other hand, some of the companies has already applied it well in their environment in annual and or sustainability reports, because the maximum number is 85% or about 29 items have been disclosed.

Environmental performance is measured by using the PROPER's ranking reports from 2017 to 2018. Table 3, shows that the average number of environmental performance (EP) is 3.09 or rounded as 3. It indicates that most of the consumer goods industry and mining companies have a blue level which indicates that most companies are good to manage environmental as the requirements and regulations. Meanwhile, the minimum value of 2 indicates that some of the companies are still low in dealing with the environment. On the other hand, from the maximum number of environmental performance which is 5, it indicates that some of the companies are also already excellent and responsible to manage their environment.

Profitability (PRO) variable shows that the average number is 0.24 or 24%. It shows that the ability of the companies to get profit is 24% by using ROE measurement. The minimum number of profitability is (-38%), with earnings before tax amounted to (-Rp.114,131,026,847) over the total equity Rp.300,499,756,873. In contrast, the maximum number of profitability in this research is 225%, with earnings before tax amounted to Rp.1,163,324,165,000 over the total equity of Rp.518,280,401,000.

The use of log on total assets as the measurement in firm size (SZ) indicates that the data collected have the average number in 12.71 or at around the amount of total asset of Rp.5,112,889,826,934. The minimum number of firm size is 11.69 or at the amount of total asset of Rp.491,382,035,136, and the maximum number is 13.98 at the amount of Rp 96,537,796,000,000

The DAR measurement in leverage (LEV) in this research shows that the data have the average number of 38%. This indicates that the data taken has an average number of total assets covered by the total of debts at the rate 38%. The minimum number of leverage in this research is 2% and the maximum is 73%.

Classic Assumption Test Normality Test

Table 4. Normality Test

N	Asymp. Sig	Description
56	0.636	Normal

Source: Processed Data, 2019

Based on Table 4, from 56 samples taken, the significance is 0.636. The data is known to be normal if the Asymp Sig is higher than 0.05. Therefore, in this research, the data taken is normal because 0.636 is higher than 0.05.

Multicollinearity Test

Table. 5 Multicollinearity Test

	EP	PRO	SZ	LEV
Tolerance	0.851	0.847	0.917	0.870
VIF	1.175	1.181	1.090	1.150

Source: Processed Data, 2019

Based on Table 5, the data does not have any multicollinearity because all of the tolerances value is higher than 0.01 and also the value of VIF (Variance Inflation Factor) is below 10.

Heteroscedasticity Test

Table.6 Heteroscedasticity Test

Variable	B	Std. Error	t	Sig.
Constant	0.080	0.169	0.476	0.636
EP	0.020	0.014	1.476	0.146
PRO	0.015	0.022	0.657	0.514
SZ	-0.003	0.014	-0.211	0.834
LEV	-0.055	0.053	-1.023	0.311

Source: Processed Data, 2019

The data is free from heteroscedasticity if the significance is not lower than 0.05. Based on Table 6, EP, PRO, SZ, and LEV have significance values which are higher than 0.05. Therefore, the data in this researches are free from heteroscedasticity.

Autocorrelation Test

Table 7. Autocorrelation Test – Durbin Watson

Model	R	R-Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.740 ^a	0.548	0.513	0.11526	1.579

Source: Processed Data, 2019

Based on Table 7, the value of DW is 1.579. From 56 samples and five variables, the value of dU is 1.7246, dL is 1.4201, and it can also be known that 4-dU is 2.120. The data taken are free from autocorrelation when $dU < dW < 4-dU$. However, dU is higher than dW ($1.7246 > 1.579$). Thus, this will use the Cochrane Orcutt Test to make the data free from autocorrelation.

Table 8. Autocorrelation Test – Cochrane Orcutt

Model	R	R-Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.740 ^a	0.547	0.511	0.11237	1.880

Source: Processed Data, 2019

After using the Cochrane Orcutt Test, the value of dW is 1.880. Therefore, the data of this research are free from autocorrelation because of $1.7246 < 1.880 < 2.120$.

F Statistic**Table 9.** F-Statistics

	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.821	4	0.205	15.457	0.000 ^b
Residual	0.678	51	0.013		
Total	1.499	55			

Source: Processed data, 2019

Based on Table 9, known that the value of F is 15.457 and the significance value is 0.000 which is lower than 0.05. Therefore, it indicates that the independent variables (EP, PRO, SZ, and LEV) can explain environmental disclosure (ED).

R – Square**Table 10.** R – Square

Model	R	R-Square	Adjusted R Square	Std. Error of the Estimate
1	0.740 ^a	0.548	0.513	0.11526

Source: Processed Data, 2019

Based on Table 10, the number of R Square is 0.548 or 54.8%. It indicates that 54.8% of environmental disclosure variance can be explained by environmental performance (EP), profitability (PRO), firm size (SZ), and leverage (LEV). Meanwhile, 45.2% is explained by other independent variables that are not included in this research.

t Statistics**Table 11.** t Statistics

Variable	B	Std. Error	t	Sig. ($\alpha=0.05$)
Constant	-1.035	0.299	-3.465	0.001
EP	0.023	0.024	0.958	0.342
PRO	0.219	0.040	5.543	0.000
SZ	0.090	0.024	3.731	0.000
LEV	0.001	0.095	0.008	0.994

Source: Processed Data, 2019

The relation between independent variables and dependent variable will be known by using t statistics (Dewi & Yasa, 2017). Based on Table 11, the equation that can be made in this research is:
 $ED = (-1.035) + 0.023 EP + 0.219 PRO + 0.090 SZ + 0.001 LEV + \epsilon$

Table 11 provides the t-Statistic Test. The significance number of environmental performance is higher than 0.05 ($0.342 > 0.05$), and the t value for environmental performance is lower than the t table ($0.958 < 2.008$). These mean that environmental performance of the consumer goods industry and mining

companies listed in the IDX and PROPER have positive relations but have no significant influence on environmental disclosure. This implies that the higher or lower rank of companies in PROPER does not affect their environmental disclosure. Moreover, the insignificant environmental performance to environmental disclosure may due to the less disclosures in the companies' annual and or sustainability report. This could be seen in Table 3, which shows that the average number of environmental disclosure is only 23% or the companies averagely disclosed only 7 until 8 items from 34 items that should be disclosed. Therefore, the first hypothesis is unsupported. This result is in line with Jannah & Muid (2014) and Wijaya (2012), but is contrasted with the research results of Nugraha & Juliarto (2015).

Profitability variable shows that it has a significance number of 0.000 which is lower than 0.05, and also has the t value of 5.542 which is higher than 2.008. It indicates that the profitability of companies that become the sample has positively associated and significantly influence environmental disclosure. The result of this research implied that higher profit of the consumer goods industry and mining companies listed in IDX and PROPER will give its responsibility to society in the form of exposing environmental disclosure. Therefore, the second hypothesis is supported and is in line with the research results of Aulia & Agustina (2015) and Fatayaningrum (2011). However, this result had contrast with Dewi & Yasa (2017) and Nugraha & Juliarto (2015).

Firm size (SZ) has significance value of 0.000 which is lower than 0.05 and has t value of 3.7311 which is higher than 2.008. It implied that environmental disclosure is influenced by firm size. Moreover, this also indicates that the consumer goods industry and mining companies listed in IDX and PROPER, which have larger number of assets, will tend to expose its environmental disclosure compared to the smaller one. The result of this research is in line with the legitimation theory in which larger companies will have more pressure to maintain their reputation within the society. Larger companies have a bigger need to expose their environmental disclosure as its responsibility to society rather than smaller ones. Therefore, the third hypothesis is supported and is in line with the research results of Ezhilarasi & Kabra (2017), Choiriah, Yanto, & Ilhami's (2018), Dewi & Yasa (2017), Jannah & Muid (2014), Nugraha & Juliarto (2015), Wang, Song, & Yao (2013), Burgwal & Vieira (2014), and Wijaya (2012). However, this contrasted with the research result of Fatayaningrum (2011)

Leverage is found as insignificantly influence and is positively associated with environmental disclosure of consumer goods industry and mining companies listed in IDX and PROPER. It can be shown by the significant value of leverage (LEV) of 0.994, which is higher than 0.05. The t value is 0.008 which is lower than 2.008. Those results imply that the company will not consider leverage in exposing environmental disclosure. The higher or lower the leverage is, it would not influence or has no effect on environmental disclosure. Moreover, if the companies face debts, it has no association with environmental disclosure. This may due to the self-interest of the companies to expose their environmental conditions (Aulia & Agustina, 2015). Therefore, the fourth hypothesis is unsupported and this result is also in line with Nugraha & Juliarto (2015), Omoye & Wilson-Oshilim (2018), Embuningtyas (2018), Aulia & Agustina (2015). However, in contrast with Jannah & Muid (2014) and Paramitha & Rohman (2014)

4. Conclusion

Based on the results, there are only profitability and firm size that have positively associated and influenced environmental disclosure in the consumer goods industry and mining industries listed in IDX and PROPER in two-year period. The higher profit companies and or larger companies will have their responsibility to societies and governments. The responsibility is environmental disclosure. Meanwhile, environmental performance and leverage have insignificant influence on environmental disclosure. Furthermore, the awareness of some companies with environmental disclosure is still low in which it can be seen by the number of disclosure by GRI – G4 Standard are still a little. Therefore, as a result, many consumer goods industry and mining industries listed in IDX and PROPER have not fulfilled the legitimation or society expectation.

The limitation of this research is the lack of samples taken, in which only 56. The years for samples taken also only for two years due to the error of PROPER's website in collecting data. It is better for future studies to add and or change the companies sector, such as research in the agriculture sector, property, real estate and building sector or infrastructure companies listed in IDX. On the other side, the disclosures might not be entirely included because of the different format of disclosures in the report, such as a chart, table, graph, or in the form of a figure. Therefore, the next study should pay attention more to the entire report especially when there is a table, chart, graph, and figure.

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