
DISCLOSURE DETERMINANTS OF HAZARDOUS TOXIC WASTE IN INDONESIA

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ABSTRACT

This study aims to examine the effect of Suppliers, Consumers, community, Shareholders, and Employees on Hazardous Toxic Waste Disclosures in Indonesia by compiling its index. This study uses primary and secondary data. The primary data were obtained by distributing the Hazardous Toxic Waste Disclosure questionnaire to academics, environmental service officials, suppliers, consumers, local communities, shareholders, and company employees. Meanwhile, the secondary data were obtained from the annual reports of manufacturing companies, Management of Mineral, Gas, and Coal Mining, as well as hospitals listed on the Indonesia Stock Exchange (IDX) between 2012-2019. A purposive sampling technique was used, and the independent variables include Suppliers, Consumers, Community, Shareholders, and Employees controlled by Company Size, and Profitability, while the dependent variable is Hazardous Toxic Waste Disclosure. The data were processed using the descriptive test and multiple linear regression. The Stakeholder Theory was used to solve the problem of low Hazardous Toxic Waste Disclosure in Indonesia. The results showed 21 items of the Hazardous Toxic Waste Disclosure index. In a previous study, Suppliers, Consumers, Communities, and employees positively affected

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	<i>Hazardous Toxic Waste Disclosures. Meanwhile, shareholders had a negative effect on the dependent variables</i>
KEYWORDS	Toxic Hazardous Material Waste Disclosure, Toxic Hazardous Material Waste Disclosure Index, Stakeholder Theory, Voluntary Disclosure, Toxic Hazardous Material Waste, Environmental Disclosure.
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INTRODUCTION

The developing industrial activities are expected to improve the living standard of the Indonesian population. However, they have both positive and negative impacts (Euler, Krishna, Schwarze, Siregar, & Qaim, 2017). The positive impact includes producing goods and services, job creation, and improving people's living standards. Meanwhile, the negative impact consists of waste pollution, which causes damage to natural resources and decreases life quality.

The cases of environmental damage in various parts of the world are caused by companies that pay insufficient attention to the management of Hazardous Toxic Waste produced (Ferronato & Torretta, 2019). The tragedy of environmental damage occurred in parts of the world such as Japan, India, the Soviet Union, Nigeria, and Indonesia due to the company's carelessness in managing Hazardous Toxic Waste. Therefore, the living creatures become victims.

Companies are required to make improvements and maintain sustainability in the future. The Indonesian government issued Law no. 40 of 2007 concerning Limited Liability Companies (2007), regulating their obligation to perform economic, social, and environmental responsibilities, better known as Corporate Social Responsibility (CSR). CSR implementation is regulated in Government Decree no. 47 of 2012 concerning Social and Environmental Responsibility of Limited Liability Companies (2012).

A survey conducted by the Indonesian Environmental Forum (WALHI) in 2015 reported that in 2011, 2012, and from January to March 2013, there were 107, 118, and 4 cases of environmental violations, respectively, the majority of which were caused by LB3. The emergence of this conflict is caused by the low quality of the company's environmental responsibility and disclosure of annual report (WALHI, 2015). Companies are under pressure from various parties because of pollution, hence, it is essential to provide transparent information about environmental activities.

The company's annual report is mainly utilized for decision-making by investors and potential investors. Furthermore, they require as much information as possible, including financial and non-financial data. (Osadchy et al., 2018) stated that the decision-making process for investors and potential investors tends to invest in companies with a good image, and business ethics can be obtained from environmental care actions conducted by the company.

Figure 1.1 shows a graph of Hazardous Toxic Waste Disclosure in manufacturing, mineral and coal companies, as well as hospitals listed on the IDX annual report between 2012 to 2019. The graph indicates a low and fluctuating dependent variable. The average Hazardous Toxic Waste Disclosure in 2012, 2013, and 2014, was 26.98%, 19.11%, and 19.81%, respectively.

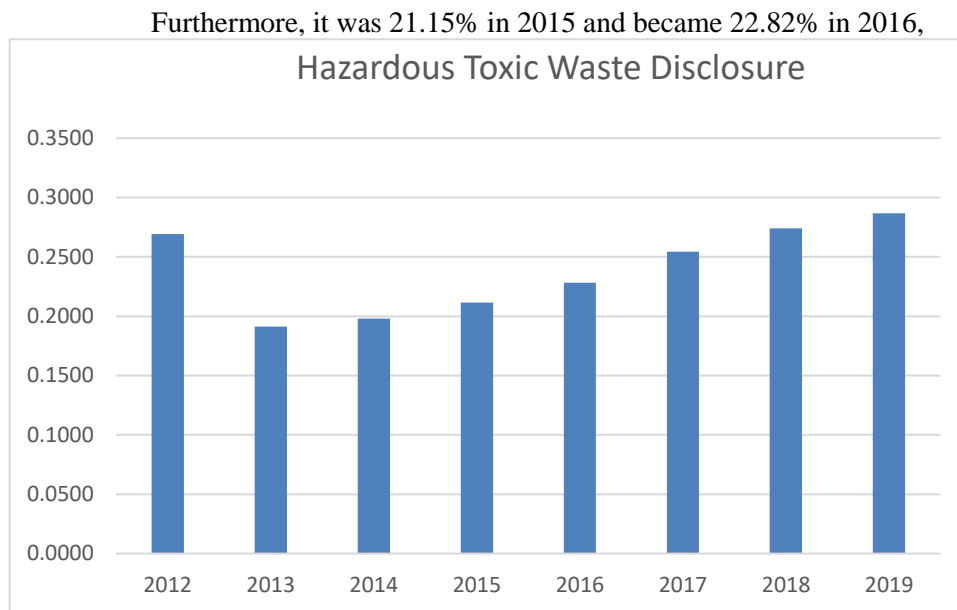


Figure 1.1: Diagram of Hazardous Toxic Waste Disclosure of Manufacturing, Mineral, Gas, and Coal Mining, and Hospital Companies on the IDX in 2012-2019
Source: Processed data (2021)

This Hazardous Toxic Waste disclosure report remains voluntary despite its numerous benefits, such as creating a good impression, supporting company continuity, increasing company legitimacy, and minimizing risk (Hahn & Lülfs, 2014).

There is a need for Hazardous Toxic Waste Disclosure research. The first reason is that incorrect management of Hazardous Toxic Waste has caused significant environmental damage. This is due to the company's low awareness of LB3 management and low dependent variable in the annual report. Second, there is a relationship between environmental Disclosure and the company's financial performance. Several studies were conducted on CSR disclosure's effect on the company's financial performance (Xixi, Tongkun, & Yecheng, 2022) showed that there is a positive effect of CSR disclosure on the company's financial performance.

According to the Stakeholder Theory, (Vasi & King, 2012) discovered that companies need to establish positive relationships with their stakeholders to build a positive reputation by supplying Hazardous Toxic Waste information. Stakeholders are divided into normative and derived. The normative type has a reciprocal relationship with the company. They consist of suppliers, consumers, local communities, shareholders, and employees.

Meanwhile, derivative stakeholders do not have a reciprocal relationship and can affect the company's reputation when ignored. Stakeholders, protests derivatives can affect the stability and reputation of the company. The company's status can be changed to normative stakeholders when managing its derivative counterpart. The derived stakeholders consist of environmental activists, the press, and radical groups.

This study identifies factors influencing Hazardous Toxic Waste Disclosure by using the basis of normative stakeholder theory. In terms of normative

stakeholders, suppliers, customers, local communities, shareholders, and employees are proxied by inventory turnover, total sales, environmental cost ratio, majority shareholders, and employee productivity. Hazardous Toxic Waste Disclosure is valued using the weighted index method, and the effect of the independent variable on the dependent is controlled by Firm Size and Profitability.

The Vos viewer was searched, which led to obtaining an article from (Tanjung, 2021) about the Disclosure of hazardous materials, published in the United States. It explained that various industries such as manufacturing, mining, coal, and petroleum in the United States are required to disclose the total weight of hazardous waste generated annually. A study on Disclosure of Waste was also conducted by (Yagi & Kokubu, 2018). The company uses three items in the Disclosure of waste, namely the presence of waste generated, time, and specificity. Meanwhile, the results of this study affect Company value. Another study was conducted by (Rodrigo, Duran, & Arenas, 2016) on Disclosure of Corporate Waste.

The measurement of total waste product divided by sales and the total waste product divided by assets was used for Waste Disclosure. The study results showed that Disclosure of Waste affects Cash Ownership. The previous study conducted by (Guesser, Hein, Pfitscher, & Lunkes, 2015) on Disclosure of Waste used measurements by counting the number of sentences and then assessing the depth level. The result of this study shows that Disclosure of Waste influences Company Size.

(Plumlee, Brown, Hayes, & Marshall, 2015) defined Disclosure of Hazardous Materials as the annual Disclosure of the weight of hazardous waste generated by the industry in the United States. Another previous study is on Disclosure of Waste, which focuses more on Hazardous Toxic Waste.

According to Government Regulation No. 22 of 2021, Hazardous Toxic Waste has become an essential matter that should be managed directly. Previous studies have established disclosure guidelines for waste in general, while others have analyzed Waste Disclosure by measuring the number of words and the level of the disclosure's content. Furthermore, there is also a Waste Disclosure measure with a quantitative value. This study measures the Hazardous Toxic Waste Disclosure in detail through the manufacturing stages of the weighted items.

The novelty of this study is compiling the Hazardous Toxic Waste Disclosure index based on guidelines, previous studies, and opinions of normative stakeholders (Suppliers, Consumers, Local Communities, Shareholders, and Employees). The Normative Stakeholder Theory was used to solve the problem of low Hazardous Toxic Waste Disclosure in Indonesia.

RESEARCH METHOD

The population in this study are manufacturing companies, mineral and coal companies, as well as hospitals listed on the Indonesia Stock Exchange (IDX) from 2012 to 2019. A purposive sampling technique was used, where the sample was selected based on predetermined criteria. The sample selection framework is based on the following company criteria:

1. Companies selected as samples are manufacturers, mineral and coal, as well as hospitals. This is based on the KLH statement that the producers of LB3 are companies (Bisnis Indonesia, 2014).
2. The company publishes a complete annual report between 2012-2019.

The operational definition of the study variables is defined based on the observed characteristics of the independent (Suppliers, Consumers, Local Communities, Shareholders, Employees), control (Company Size, Profitability), and the dependent variables (LB3 Disclosure).

To determine the independent effect on the dependent variable, a quantitative analysis method was conducted using panel data. The data were processed using multiple linear regression with the help of the Eviews program.

RESULT AND DISCUSSION

The results of the arrangement of Hazardous Toxic Waste disclosure items were obtained from GRI, following Clarkson et al. (2008); Setiadi (2016); Suhardjanto et al., (2007); Suhardjanto & Choiriyah (2010); Wiseman (1982), and government policies, namely Government Regulation no. 22 of 2021, Minister of Environment and Forestry Regulation No. 55 of 2015, Minister of Environment and Forestry Regulation No. 63. Table 1.1 presents the LB3 disclosure items.

Table 1.1 Hazardous Toxic Waste Disclosure Items

No	Hazardous Toxic Waste Disclosure items	Researcher
1	Type	Suhardjanto et al., (2007); Minister of Environment and Forestry Regulation No. 55 of 2015 LB3 Characteristic Test; PP 22 the year 2021
2	Total weight by the type	Setiabudi (2016); GRI 4
3	Reduction efforts	Crakson et al., (2008); PP 22 year 2021
4	Storage	PP 22 the year 2021
5	Collection	PP 22 the year 2021
6	Transport information	Wiseman (1982); PP 22 the year 2021
7	Utilization	PP 22 the year 2021
8	Recycling	Crakson et al., (2008); Clarkson et al., (2013)
9	Processing	Clarkson et al., (2013); PP 22 the year 2021
10	Hoarding	PP 22 of 2021; Minister of Environment and Forestry Regulation Number 63 of 2016 LB3 Hoarding Test
11	Disposal method	Wiseman (1982); Crakson et al., (2008); Clarkson et al., (2013)
12	Hazardous Toxic Waste's total weight by disposal method	GRI4
13	Financing	PP 22 the year 2021
14	Percentage of Hazardous Toxic Waste transported for international shipments	GRI4

No	Hazardous Toxic Waste Disclosure items	Researcher
15	Management of Environmental Pollution due to Hazardous Toxic Waste	PP 22 the year 2021
16	Emergency Response System in Hazardous Toxic Waste Management	PP 22 the year 2021
17	coaching	PP 22 the year 2021
18	Supervision	PP 22 the year 2021
19	Total spill volume Hazardous Toxic Waste	GRI4; Clarkson et al., (2013); Setiabudi (2016)
20	Cause of Hazardous Toxic Waste	Clarkson, et al., (2013)
21	Hazardous Toxic Waste care	Crakson, et al., (2008)

Source: Processed data (2021)

The FGD results showed 21 items of Hazardous Toxic Waste Disclosure. The participants thought these items were mandatory for Hazardous Toxic Waste producing companies, but Disclosure remained voluntary. Furthermore, Hazardous Toxic Waste Disclosures are used to provide additional information published in the company's annual report (Reza & Ullah, 2019).

The hypothesis testing is used to analyze the influence of Suppliers, Consumers, Community, Shareholders, and Employees on Hazardous Toxic Waste Disclosures. The table below presents the results of multiple linear regression with panel data.

Table 1.2 Multiple Linear Regression Test Results Hazardous Toxic Waste Weighted Disclosure Factors

Description	Coefficient	Sig
C	0.0811	0,2474
Supplier (X1)	0.0008	0,0097
Consumer (X2)	0,0176	0,0000
Local Community (X3)	0.1266	0,0039
Shareholders (X4)	-0.0009	0,0000
Employees (X5)	0,0107	0,0000
Company Size (X6)	-0,0179	0,0014
Profitability (X7)	-0,0002	0,1645
Fcount	2,4293	
Sig F	0,0000	
Adjusted R Square	0,1572	

Source: Processed data (2021)

The results of multiple linear regression calculations using panel data with the eviews 12 program produce the following equation:

$$Y=0.0811+0.0008X1+0,0176X2+0.1266X3-0.0009X4+0,0107X5-0,0179X6-0,0002X7+e$$

The equation above explained that:

- 1) H1 states that the Supplier influences the Hazardous Toxic Waste Disclosure. The

analysis shows that the value of sig tcount 0.0097 <0.05 is in an area where H0 is rejected and Ha is accepted. This value is significant, which means that Suppliers influence LB3 Disclosure in manufacturing, mineral and coal companies, as well as hospitals in IDX between 2012-2019. The effect is positive at 0.0008, and the H1 statement accepted

- 2) H2 states that consumers affect Hazardous Toxic Waste Disclosure. The analysis shows that the sig tcount value of 0.0000 <0.05 is in an area where H0 is rejected and Ha is accepted. This number shows a significant value, which means there is a consumer influence on LB3 disclosures in manufacturing, mineral and coal companies, as well as hospitals in IDX between 2012-2019. The effect is positive at 0.0176, and the H2 statement is accepted.
- 3) H3 states that Local Communities influence Hazardous Toxic Waste Disclosures. The analysis shows that the sig tcount of 0.0024 <0.05 is in an area where H0 is rejected and Ha is accepted. This number shows a significant value, meaning that local communities influence LB3 disclosures in manufacturing, mineral and coal companies, as well as hospitals on the IDX between 2012 -2019. The positive effect is 0.1266, and the H3 statement is accepted.
- 4) H4 states that Shareholders affect Hazardous Toxic Waste Disclosure. The test data analysis shows that the sig tcount of 0.0000 <0.05 is in an area where H0 is rejected and Ha is accepted. This number shows a significant value, which means that shareholders (the majority) influence LB3 disclosures in manufacturing, mineral and coal companies, and hospitals in IDX between 2012-2019. The effect is negative at 0.0009, and the H4 statement is accepted.
- 5) H5 states that employees affect Hazardous Toxic Waste Disclosure. The test data analysis shows that the sig tcount of 0.0000 <0.05 is in the area where H0 is rejected and Ha is accepted. This number shows a significant value, which means that there is an employee's influence on LB3 Disclosure in manufacturing, mineral and coal companies, as well as hospitals on the IDX between 2012-2019. The effect is positive at 0.0107, and the H5 statement is accepted.

The multiple linear regression analysis results can be observed in the Adjusted R square of 0.1573. This shows that the Disclosure of Hazardous Toxic Waste in manufacturing, mineral and coal companies, as well as hospitals listed on the IDX between 2012 to 2019, is influenced by five variables, namely Suppliers, Consumers, Community, Shareholders, and Employees, to the extent of 15.7230%. The remaining 84.2800% is influenced by other variables that have not been studied.

Environmental information is provided to suppliers, consumers, communities, shareholders, and employees to ensure that the company is responsible for Hazardous Toxic Waste management. It also shows that the company is reliable and capable of being accountable to its stakeholders, minimizing risks.

There are no hidden obligations, and the company has proven its sustainability prospects. The Hazardous Toxic Waste management is an environmental concern that companies should perform (Yong, Lim, & Ilankoon, 2019). Organizations no longer have responsibilities that rely on a single bottom line, namely the company's value (corporate value), which is reflected only in its financial condition. Therefore, stakeholders need as much information as possible for decision-making. Suppliers, consumers, communities, shareholders, and employees have the power to promote companies to make more LB3 disclosures (Jouha, 2015).

This study uses the Majority Share Ownership variable, and the results have a negative effect on Hazardous Toxic Waste Disclosure. This indicates the more majority shareholders in the company, the fewer the names or groups that own shares. They

promptly request information disclosure from management. Furthermore, the company does not consider Disclosure in the annual report necessary.

The low majority ownership indicates that it is increasingly dispersed among people or organizations (Hope, 2013). To eliminate information asymmetry, it is vital to reveal the company's management of Hazardous Toxic Waste -related operations.

CONCLUSION

This study concluded that:

1. The results obtained indicate that Suppliers, Consumers, Local Communities, and Employees positively affect Hazardous Toxic Waste Disclosure in manufacturing, mineral and coal companies, and hospitals listed on IDX between 2012-2019. Companies need to maintain good relations with Suppliers, Consumers, Local Communities, and Employees to acquire a reputation by conducting Hazardous Toxic Waste Disclosures. Furthermore, these variables can influence the Disclosure of Hazardous Toxic Waste and have the power to encourage companies to disclose more Hazardous Toxic Waste. Stakeholders with power have the potential to influence the company's behavior to achieve its goals.
2. The results also indicate that the Majority Shareholder has a negative effect on Hazardous Toxic Waste Disclosure in manufacturing, mineral and coal companies, as well as hospitals listed on the IDX between 2012 to 2019. The distribution of company ownership promotes the broader Disclosure of information. The spread of company ownership enables management to disclose more relevant information to meet the demands of various shareholders. This means the greater the percentage of Share Ownership in the company, the fewer the individuals or organizations that own the company, resulting in low demand for Hazardous Toxic Waste's information disclosure. Management believes it is unnecessary to provide Hazardous Toxic Waste information in the annual report and not have to pay for it due to the company's high level of Majority.

These results provide practical, theoretical, and methodological implications.

1. Practical Implications
 - a. These results show that the Disclosure of Hazardous Toxic Waste companies in Indonesia remains low. This is in accordance with the environmental damage caused by the company's management activities. To govern the LB3 Disclosure of corporations in Indonesia, transparent accounting rules are required. The results of creating these items can be incorporated into the development of LB3 Disclosure standards in Indonesia.
 - b. Hazardous Toxic Waste Disclosures can be influenced by a company's interactions with normative stakeholders. A company's ultimate purpose is to provide other stakeholders with the information they need for making decisions, hence, to fulfill this, companies need to establish good cooperation with normative stakeholders.
 - c. There is an information gap between expectations and realization of Hazardous Toxic Waste Disclosure, hence, companies need to disclose Hazardous Toxic Waste, and stakeholders could acquire more information in addition to financial data for making investment decisions.

REFERENCES

- Euler, Michael, Krishna, Vijesh, Schwarze, Stefan, Siregar, Hermanto, & Qaim, Matin. (2017). Oil palm adoption, household welfare, and nutrition among smallholder farmers in Indonesia. *World Development*, 93, 219–235.
- Ferronato, Navarro, & Torretta, Vincenzo. (2019). Waste mismanagement in developing countries: A review of global issues. *International Journal of Environmental Research and Public Health*, 16(6), 1060.
- Guesser, Tatiana, Hein, Nelson, Pfitscher, Elisete Dahmer, & Lunkes, Rogério João. (2015). Environmental impact management of Brazilian companies: Analyzing factors that influence disclosure of waste, emissions, effluents, and other impacts. *Journal of Cleaner Production*, 96, 148–160.
- Hahn, Rüdiger, & Lülfs, Regina. (2014). Legitimizing negative aspects in GRI-oriented sustainability reporting: A qualitative analysis of corporate disclosure strategies. *Journal of Business Ethics*, 123(3), 401–420.
- Hope, Ole Kristian. (2013). Large shareholders and accounting research. *China Journal of Accounting Research*, 6(1), 3–20.
- Jouha, Faraj. (2015). Effect of corporate governance on corporate financial and market performance with sustainability reporting as intervening variable. *Science Journal of Economics*, 2015.
- Osadchy, E. A., Akhmetshin, E. M., Amirova, E. F., Bochkareva, T. N., Gazizyanova, Yu, & Yumashev, A. V. (2018). *Financial statements of a company as an information base for decision-making in a transforming economy*.
- Plumlee, Marlene, Brown, Darrell, Hayes, Rachel M., & Marshall, R. Scott. (2015). Voluntary environmental disclosure quality and firm value: Further evidence. *Journal of Accounting and Public Policy*, 34(4), 336–361.
- Reza, Muhammad, & Ullah, Syed. (2019). Financial reporting quality of the manufacturing firms listed in Indonesian Stock Exchange. *Arthatama*, 3(1), 37–54.
- Rodrigo, Pablo, Duran, Ignacio J., & Arenas, Daniel. (2016). Does it really pay to be good, everywhere? A first step to understand the corporate social and financial performance link in Latin American controversial industries. *Business Ethics: A European Review*, 25(3), 286–309.
- Tanjung, Putri Renalita Sutra. (2021). the Effect of Good Corporate Governance, Profitability and Company Size on Sustainability Report Disclosure. *EPRA International Journal of Economics, Business and Management Studies*, June, 69–80.
- Vasi, Ion Bogdan, & King, Brayden G. (2012). Social movements, risk perceptions, and economic outcomes: The effect of primary and secondary stakeholder activism on firms' perceived environmental risk and financial performance. *American Sociological Review*, 77(4), 573–596.
- Xixi, Zhang, Tongkun, Qu, & Yecheng, Wang. (2022). Optimal strategies for stakeholders of Fukushima nuclear waste water discharge in Japan. *Marine Policy*, 135, 104881.
- Yagi, Michiyuki, & Kokubu, Katsuhiko. (2018). Corporate material flow management in Thailand: The way to material flow cost accounting. *Journal of Cleaner Production*, 198, 763–775.
- Yong, Yun Siew, Lim, Yi An, & Ilankoon, IMSK. (2019). An analysis of electronic waste management strategies and recycling operations in Malaysia: Challenges and future prospects. *Journal of Cleaner Production*, 224, 151–166.