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## Environmental disclosure and public ownership: Further evidence

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### ABSTRACT

Due to the considerable influence that company operations have on the environment, there is a growing demand for firms to provide transparent information about their environmental impact. The purpose of this study is to determine the effect of profitability, company size, leverage and public ownership on environmental disclosure in basic industrial and chemical sector manufacturing companies listed on the IDX for the 2018-2021 period. The study had a population of 69 companies. The sampling technique used is purposive sampling so that 20 companies are obtained to be studied. The type of data used is secondary data and the data analysis techniques used are multiple linear regression test. The results indicate that public ownership has a positive influence on environmental disclosure. Meanwhile, profitability, size, and leverage do not exhibit any significant impact on environmental disclosure. This research contributes to the environmental disclosure literature by emphasizing the necessity of considering public ownership as a crucial factor.

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## INTRODUCTION

The primary objective of corporate establishment is profit generation to satisfy stakeholders' interests, particularly shareholders. While pursuing their operations, companies must conscientiously address environmental considerations. In the contemporary global economy, environmental issues have garnered significant attention, propelled by instances of environmental pollution adversely affecting societal well-being (Adnin & Triyonowati, 2021). Environmental pollution, denoting undesirable alterations in the environment, poses threats to the activities, health, and safety of living organisms (Wijayana & Kurniawati, 2018). A noteworthy challenge arises from companies,

particularly those engaged in natural resource management, displaying inadequate regard for their environmental and social surroundings during their operations.

Evident in the escalating number of reported cases, complaints related to environmental degradation received by the Ministry of Environment and Forestry have increased annually, constituting 50% of all cases in Indonesia. Industrial waste factories predominantly contribute to environmental damage. The surge in such instances necessitates an evaluation by companies to assume greater responsibility for environmental sustainability. Corporate responsibility is often manifested through disclosures in sustainability reports, elucidating the environmental impacts of operational activities. However, instances of successful Corporate Social Responsibility (CSR) implementation exist within Indonesia. Noteworthy examples include PT Djarum's scholarship program for outstanding scholars and PT Indocement Tungal Prakasa, Tbk's commitment to environmental sustainability through the Clean Development Mechanism (CDM) Program.

An exemplary initiative is the Mitra Produksi Sampoerna (MPS) Program, fostering partnerships with small and medium enterprises, cooperatives, and boarding schools as production collaborators for the company. Such initiatives underscore a positive trend towards corporate responsibility, addressing environmental concerns and contributing to sustainability within the Indonesian corporate landscape. Data from the Ministry of Environment and Forestry (KLHK) shows that 2,897 industries in the manufacturing sector produced B3 waste last year. Then, the infrastructure sector produced B3 waste from 2,406 industries. Then, as many as 2,103 industries in the agricultural sector (agro-industry) produced hazardous waste, and the energy and oil and gas mining sector produced hazardous waste from 947 industries. This is what makes researchers interested in taking research objects in manufacturing companies. Government Regulation Number 47 of 2012 article 2 paragraph 1 concerning Social and Environmental Responsibility of Limited Liability Companies. Stating "that planning must pay attention to compliance and fairness". In Indonesia, industrial activities still need to be considered by the government because there are still many companies that have not given their concern to the environment. For this reason, through these regulations, companies must consider the suitability of procedures and ensure that procedures are in accordance with provisions relating to environmental sustainability (Suhardjanto & Choiriyah, 2010).

In the study conducted by Maulia et al. (2020), it is asserted that industrial companies have been a source of public discontent, necessitating a call for transparency in disclosing activities that impact the environment as part of corporate responsibility. Corporate responsibility, in this context, is assessed through the lens of corporate governance mechanisms. A well-organized corporate governance mechanism is posited to provide comprehensive information regarding a company's activities that influence environmental sustainability and society, reflecting the effective implementation of corporate responsibility. The disclosure of environmental responsibility is often achieved through the inclusion of Corporate Social Responsibility (CSR) reports in annual reports. Within the realm of CSR disclosure, Maulia et al. (2020) highlight the three components economic, environmental, and social disclosures. In the regulatory landscape, the Indonesian government has enacted legislation to address environmental protection and management, notably the Law of the Republic of Indonesia Number 32 of 2009 (Aulya, 2019).

The Ministry of Environment (KLNH) administers a program known as the Company Performance Rating Assessment (PROPER), aiming to evaluate companies and encourage compliance with environmental management practices. Successful compliance is indicated by the inclusion of environmental disclosures. As defined by Riyadhoh et al. (2018), environmental disclosure pertains to the provision of information related to a company's environmental initiatives in its annual report, constituting a manifestation of corporate social responsibility. The disclosure of environmental information in annual reports serves as a means for the public to scrutinize a company's activities, emphasizing transparency in corporate information. Environmental disclosure, considered a facet of

corporate social responsibility, assumes significance in facilitating public monitoring of a company's operations. [Ningsih \(2017\)](#) underscores the correlation between environmental disclosure and the transparency of company information. Investors, in particular, rely on comprehensive information to make informed decisions regarding investment. The withholding of information on environmental risks by companies may lead to erroneous decision-making by investors, underscoring the critical role of transparency in corporate reporting. Disclosure of information about environmental responsibility can attract investors to invest in companies that can provide responsibility for the environment ([Hidayat et al., 2022](#)) suggests that "Investors will be interested in social information reported by the company's annual report in the form of investment security, the quality of the company's products and the company's responsibility to the environment".

Various factors cause companies to disclose environmental information in annual reports such as corporate governance and company characteristics. The independent variables used in this study consist of profitability, company size, leverage and public ownership ([Yahya & Wahyuningsih, 2020](#)). The first independent variable in this study is profitability. Profitability can be used as a consideration in making environmental disclosures seen through the company's financial performance. According to ([Fathurohman et al., 2022](#)) "The higher the profitability of the company, the greater the resources owned so that the company will be easier to make environmental disclosures and gain legitimacy from the community". The second independent variable used in this study is company size. This variable explains that larger companies will have higher information than smaller companies. The third independent variable is leverage. This variable is a measure of financial performance that can be taken into consideration in making environmental disclosures ([Wardhani et al., 2019](#)). The higher the leverage of the company, the greater the responsibility to stakeholders, namely creditors. Companies with high leverage prefer to pay off obligations to creditors rather than making disclosures because making voluntary disclosures will only increase the burden on the company. The fourth independent variable is public ownership. The percentage of shares offered to the public indicates the amount of private information that managers must share with the public. With the existence of public shareholders, the company's internal parties, especially management, will be more perspective in reporting matters directly related to the company. Public ownership has an important role in creating a well-functioning governance system because they have a financial interest and act independently in assessing management ([Terry & Asrori, 2021](#)). The greater the percentage of shares offered to the public, the greater the internal information that must be disclosed to the public so that companies with higher levels of public ownership will tend to be on time in their annual reporting, including environmental disclosure.

Research on environmental disclosure has also been conducted previously to examine several variables with diverse results that show inconsistent results. Factors that influence environmental disclosure that have been researched include by ([Aulia & Agustina, 2015](#)) with the result that profitability affects environmental disclosure. However, research conducted by ([Maulana et al., 2021](#)) shows that profitability has no effect on environmental disclosure. Research on the effect of company size on environmental disclosure was conducted by ([Rizka, 2020](#)) He found that company size has a positive effect on environmental disclosure. However, research conducted by ([Maulana et al., 2021](#)) found that company size has no effect on environmental disclosure. The effect of leverage on environmental disclosure was studied by ([Fathurohman et al., 2022](#)). The results showed that leverage has a negative effect on environmental disclosure. The results of this study are different from research conducted by ([Oktariyani & Rachmawati, 2021](#)). He stated that leverage has no effect on environmental disclosure. The effect of public ownership on environmental disclosure was studied by ([Adnin & Triyonowati, 2021](#)). The results showed that public ownership affects environmental disclosure. The results of this study are different from research conducted by ([Saragih & Sembiring,](#)

2019) which states that public ownership has no effect on environmental disclosure. Based on previous research, there are differences in research results that are still inconsistent, indicating a research gap. The research gap can be caused by differences in samples and variables used, the difference in the results of previous research on environmental disclosure is interesting to do research again (Purwanti & Nurjanah, 2020).

## Literature Review

### Signalling Theory

As per Brigham & Houston, as cited in Ardi (2020), signal theory is elucidated as "an action undertaken by a company's management to evaluate the company's outlook." The theory posits that company management functions as a signaler, disseminating and releasing corporate financial reports, social responsibility reports, and environmental disclosures for companies listed on the Indonesia Stock Exchange. This practice is directly linked to the growing interest of investors in making investments in the company. Investors, upon receiving this information, engage in an analysis to ascertain whether the signal is perceived as positive (indicative of favorable news) or negative (indicative of unfavorable news).

### Legitimization Theory

According to Grey in (Mutmainah & Indrasari, 2017) argues that "legitimacy is a company management system that is oriented towards alignments with society, government, individuals and community groups". This indicates that there is social and environmental disclosure and a social contract between the company and the community. Companies carrying out social contracts must adjust to the prevailing values and norms in order to run in harmony. The company will also increasingly realize that the company's relationship with the social environment in which the company operates will greatly affect the company's survival.

### Environmental Accounting

According to (Fathurahman et al., 2022), Green Accounting is a type of environmental accounting that describes efforts to incorporate environmental benefits and costs into economic decision making or a business financial result, Green Accounting describes efforts to incorporate environmental benefits and costs into economic decision making. Environmental accounting as a measuring tool and description of the company's responsibility resulting from activities that affect the environment around the company. It can include labor information, recycled waste information and product information used to reduce the negative impact of environmental pollution. This theory is in line with legitimacy theory which shows the existence of a social contract between the company and society where the company is required to meet the expectations of society and the demands of society.

### Environmental disclosure

According to (Hermawan, 2023) Environmental disclosure is "the disclosure of information related to the environment in the company's annual report contained in the company's CSR report, the report includes reports on the social, environmental and profit impacts of the organization's economic activities on special interest groups and on society as a whole". To assess environmental disclosure, an index based on the GRI Standard can be used by giving a score of 1 on each item of environmental disclosure made by the company. Measurement is only focused on specifics about the environment, which refers to GRI No. 300 with a total of 31 indicators based on GRI standards.

### Public Ownership

Public ownership in question is the proportion of shares owned by the wider community with management. This variable is indicated by the percentage of shares owned by the public, calculated by comparing the number of shares owned by the public with the total shares of the company in circulation, one of the factors that can reduce the credibility of financial statements, and add bias to financial reports and can interfere with users of financial statements who believe in these engineered

numbers as real numbers or without engineering ([Apip et al., 2020](#)). Investors from outside management or public investors need protection of their investment, this protection can be in the form of non-financial and financial information submitted by the company through annual reports that are useful for decision making. Therefore, the higher the proportion of shares owned by the public, the higher the level of completeness of annual report disclosure.

### **Research Hypothesis and Conceptual Framework**

High profitability shows good prospects in the future. According to ([Ningsih, 2017](#)) that "return on assets can show the company's overall ability to generate net profit from the company's normal activities and the results of selling the company's products. High profits for the company will make managerial motivated to disclose environmental, social and economic information better and more completely so that it can be a positive signal for investors and creditors to invest in the company. Therefore, there is a positive relationship between Return On Asset and environmental disclosure.

H1: Profitability affects environmental disclosure

Determination of company size is based on the company's total assets. Furthermore, company size is closely related to assets, assets are one of the most important indicators in determining the scale of the company. Large companies, usually have a large asset value as well. The higher the value of company size and the larger a company, obviously its operations are also on a large scale, so the impact caused by its activities is also very large, especially for the environment around the company.

H2: Company size has a positive effect on environmental disclosure

Debt to equity ratio is a ratio used to assess debt with equity. The higher the leverage value, the less capital the company has compared to debt. Companies that have a low leverage value will have a complete disclosure report both environmentally, socially, and economically so that it is a positive signal for stakeholders. Therefore, there is a negative relationship between leverage and environmental disclosure.

H3: Leverage has a negative effect on environmental disclosure.

Public ownership of a company's shares indicates that the company has a high level of credibility in the community in providing dividend rewards. Public ownership is also an indication that the company can operate continuously (going concern), so that disclosure will be made widely ([Hidayat et al., 2022](#)). When the public ownership of a company is higher, the company has a big responsibility to make wider disclosures or publications regarding the operational activities carried out by the Company.

H4: Public ownership has a positive effect on environmental disclosure

### **METHOD**

This research employs a quantitative research design with an associative approach, focusing on establishing causal relationships ([Agatha & Imelda, 2020](#)). The investigation involved the collection of information and data pertaining to manufacturing companies in the basic and chemical industry sectors listed on the Indonesia Stock Exchange. The data was sourced from various platforms, including the official websites of the Indonesia Stock Exchange ([www.idx.co.id](http://www.idx.co.id)), the Financial Services Authority ([www.ojk.go.id](http://www.ojk.go.id)), and the respective official websites of the companies under study, including their Annual Reports and Sustainability Reports. The study spans the period from 2018 to 2021 ([Ahmadi & Bouri, 2017](#)). The research population comprises manufacturing companies in the basic and chemical industry sectors listed on the Indonesia Stock Exchange during the years 2018 to 2021. The sampling approach employed is purposive or judgmental sampling, with specific criteria dictating the inclusion of companies presenting financial data in Rupiah and publishing an annual H5 report containing Corporate Social Responsibility (CSR) disclosures for the years 2018-2021. Data for



this study is exclusively secondary, sourced from documented records and reports. The data collection method utilized in this research is the documentation method, relying on a systematic review of the relevant reports and records available from the aforementioned sources.

## RESULTS AND DISCUSSION

### Result

Descriptive analysis is the process of transforming research data in tabulated form so that it is easy to understand and interpret (Gabriella & Siagian, 2021). Tabulation presents a summary, organization or arrangement of data in the form of numerical tables and graphs. Descriptive statistics in this study are presented to provide an overview of the characteristics of the research variables, including the minimum, maximum, mean, and standard deviation values.

Table 1. Statistics Descriptive

	N	Minimum	Maximum	Mean	Std. Deviation
Profitabilitas	80	-,12	,21	,0534	,04822
Ukuran Perusahaan	80	14,90	29,16	23,4055	5,33887
Leverage	80	,07	3,61	,7003	,63247
Kepemilikan Publik	80	,08	,51	,3118	,14493
Pengungkapan Lingkungan	80	,00	,42	,0722	,10332
Valid N (listwise)	80				

Source: Results of data processing with SPSS, 2023

Based on the table 1, it can be seen that the amount of profitability ranges between -0.12 and 0.21, with a mean value of 0.0534 and a standard deviation of 0.04822. The company that has the lowest profitability is PT Lionmesh Prima Tbk in 2019, which amounted to -0.12. Meanwhile, the company with the highest profitability value is PT Arwana Citramulia Tbk in 2021, which is 0.21. The company size variable has a value ranging between 14.90 and 29.16, with a mean value of 23.4055 and a standard deviation of 5.33887. The company that has the lowest company size is PT Tjiwi Kimia Paper Mill Tbk in 2018, which is 14.90. Meanwhile, the company with the highest company size value is PT Trias Sentosa Tbk in 2021, which is 29.16.

The leverage variable has a value ranging between 0.07 and 3.61, with a mean value of 0.7003 and a standard deviation of 0.63247. The company that has the lowest leverage is PT Ekaadharma International Tbk in 2019, which is 0.07. While the company with the highest leverage value was PT Indal Aluminum Industry Tbk in 2018, which was 3.61. The public ownership variable has a value ranging between 0.08 and 0.51, with a mean value of 0.3118 and a standard deviation of 0.14493. The company that has the lowest public ownership is PT Chandra Asri Petrochemical Tbk in 2020, which is 0.08. While the company with the highest public ownership value is PT Intanwijaya International Tbk in 2018, which amounted to 0.51.

The environmental disclosure variable has a value ranging between 0.00 and 0.42, with a mean value of 0.0722 and a standard deviation of 0.10332. Companies that have the lowest environmental disclosure are PT Surya Toto Indonesia Tbk in 2018, 2019, 2020, PT Steel Pine Industry of Indonesia in 2021, PT Lion Metal Works Tbk in 2018, 2019, 2020, 2021, PT Ekaadharma International Tbk in 2018, 2019, 2020, PT. Indo Acidatama Tbk in 2018, 2019, 2020, PT Champion Pacific Indonesia Tbk in 2018, 2019, 2020, PT Trias Sentosa Tbk in 2018, 2019, PT Charoen Pokphand Indonesia Tbk in 2018, 2019, 2020, 2021, PT Alkindo Naratama Tbk in 2018, 2019, 2020, namely 0.00. While the company with the highest environmental disclosure value is PT. Indal Aluminum Industry Tbk in 2021 amounting to 0.42.

### Test Coefficient of Determination (R2)

The coefficient of determination (R2) essentially measures how far the model's ability to explain the variation in the dependent variable. The range of values is 0 to 1, if the value of R2 is small, it means that the ability of the independent variables to explain the variation in the dependent variable is very limited, and vice versa if R2 is large (close to the value of 1), it means that the ability of the independent variables to explain the variation in the dependent variable is large. Based on the table above, the Adjusted R Square (Adjusted R2) value is 0.491, which means that 0.491 or (49.1%) independent variables are able to explain environmental disclosure. While the rest is influenced or explained by other variables that are not included in the research model.

Table 2. Multiple Linear Regression Analysis Test

Code	Hypothesis	Original Sampel	T Statistics	P Value	Note
H1	Profitability has a positive influence on environmental disclosure	-,130	,041	-3,219	,002
H2	Company size has a positive influence on environmental disclosure	-,001	,000	-3,657	,001
H3	Leverage has a positive influence on environmental disclosure	,017	,004	3,991	,000
H4	Public ownership has a positive influence on environmental disclosure	,029	,014	2,022	,048*

Note: \* = significant at the 5% level

### Discussion

#### The effect of profitability on environmental disclosure

The first hypothesis in this study is that profitability has a positive effect on environmental disclosure. Table 2 show that the profitability coefficient is negative and has a sig value of 0.002 < 0.05 so that profitability has a negative and significant effect on environmental disclosure. With these results, H1 cannot be accepted. Based on these results which show that the coefficient has a negative value, it can be explained that when profitability has increased, environmental disclosure will decrease. Vice versa, when profitability decreases, environmental disclosure will increase, this assumes that with the high level of profitability of a particular company, the company no longer needs to disclose information because shareholders will certainly legitimize the company and assume the company is good for investment ([Mubarak, 2022](#)). The link with signal theory is that the management of a company that acts as a signaler provides information related to the increase in the company's profitability in the current year so that this is also the assumption of the high level of profitability of a particular company, then the company no longer needs to disclose information because shareholders assume the company is good for investment. This is contrary to the concept of legitimacy theory where company management is oriented towards alignment with society, government, individuals and community groups because company management is only oriented only to shareholders in its reporting. In line with the results of research conducted by ([Maulana et al., 2021](#)) that profitability has a negative influence on environmental disclosure.

### **The effect of company size on environmental disclosure**

The second hypothesis posited in this study posits a positive relationship between company size and environmental disclosure. However, the empirical results reveal a negative coefficient for company size, with a significance value of 0.001, falling below the conventional threshold of 0.05. Consequently, Hypothesis 2 cannot be accepted. The findings suggest that as the size of the company increases, the extent of environmental disclosure diminishes, and conversely, a reduction in company size corresponds to an increase in environmental disclosure. This negative relationship indicates that the realization of environmental disclosure within companies is relatively low, possibly attributed to the non-universal adoption of environmental disclosure guidelines, such as the General Disclosure of Environmental Specifications (GRI 300). Notably, these guidelines encompass a broader set of indicators for environmental disclosure. The size of the company emerges as a determining factor influencing the magnitude of environmental disclosure, as larger companies may not consistently adhere to environmental disclosure practices. Conversely, smaller companies may engage in environmental disclosure to enhance their company's value and overall performance. The negative effect of company size can be rationalized by the tendency of larger companies to allocate their assets towards business development, often resulting in lower prioritization of environmental initiatives (Saragih & Sembiring, 2019). Consequently, the environmental implementation efforts by these companies are perceived to be relatively low, leading to a corresponding decrease in environmental disclosures within annual reports. From the perspective of signal theory, the management of larger companies, serving as signalers, may not consistently furnish information about environmental disclosure due to the lower emphasis on environmental initiatives. This aligns with the study conducted by Assiva & Kaharti (2021) where the results similarly indicate a negative influence of company size on environmental disclosure.

### **The effect of leverage on environmental disclosure**

The third hypothesis in this study is that leverage has a negative effect on environmental disclosure. The test results in this study indicate that the leverage coefficient is positive and has a sig value of  $0.000 < 0.05$  so that leverage has a positive and significant effect on environmental disclosure. With these results, H3 cannot be accepted. This means that the higher the leverage, the wider the environmental disclosure and the lower the leverage, the narrower the environmental disclosure. Companies that have a high level of leverage tend to choose to disclose information about environmental disclosure, because companies that have a high level of leverage tend to choose to disclose more information about the environment in order to better convince creditors and other stakeholders. Leverage is a measure of the amount of assets financed with debt. (Meutia & Kristanti, 2019). The use of very large debt by the company will make the company provide more information to meet the demands of investors and creditors, because creditors will always keep an eye on the funds they lend to the company. This result shows that it is in line with signal theory where management as a signaler provides environmental disclosure information if leverage increases. In line with the results of research conducted by (Dewi & Sedana, 2019) show that leverage has a positive influence on environmental disclosure.

### **The effect of public ownership on environmental disclosure**

The fourth hypothesis posited in this study asserts that public ownership exerts a positive and statistically significant impact on environmental disclosure. The empirical results of the analysis reveal a positive coefficient for public ownership, with a significance value of 0.048, which is below the conventional significance threshold of 0.05. Consequently, the findings substantiate that public ownership indeed has a positive and significant influence on environmental disclosure, leading to the acceptance of Hypothesis 4. The outcome suggests that an increased percentage of shares owned by



the public or the community corresponds to a heightened demand for information about the company, encompassing environmental disclosure (Jati, 2023). The percentage of shares offered to the public serves as an indicator of the extent to which managers are obligated to share private information with the public. In the presence of public shareholders, internal stakeholders, particularly the management, are inclined to be more diligent in reporting matters directly relevant to the company. Furthermore, the study posits that a greater percentage of shares offered to the public correlates with an augmented necessity to disclose internal information to the public. Consequently, companies with higher levels of public ownership tend to exhibit timeliness in their annual reporting, including environmental disclosure. These findings align with both legitimacy theory and signal theory. According to these theoretical frameworks, as public ownership increases, company management, functioning as a signaler, is inclined to furnish more extensive environmental disclosure information. This inclination is attributed to the understanding that environmental disclosure serves as crucial information for aligning with societal expectations, governmental regulations, and the interests of various stakeholders. The study's results are consistent with prior research conducted by Purnama et al. (2021), which similarly concludes that public ownership positively influences environmental disclosure.

## CONCLUSION

The findings derived from the conducted research lead to the conclusion that profitability exerts a negative and statistically significant impact on environmental disclosure among manufacturing companies within the basic and chemical industry sectors listed on the IDX. Likewise, company size exhibits a negative and statistically significant influence on environmental disclosure within these sectors. Conversely, leverage demonstrates a positive and statistically significant effect on environmental disclosure for manufacturing companies in the basic and chemical industry sectors listed on the IDX. Furthermore, public ownership is found to have a positive and statistically significant impact on environmental disclosure within the same context. Collectively, profitability, company size, leverage, and public ownership collectively exhibit a positive and statistically significant influence on environmental disclosure in manufacturing companies within the basic and chemical industry sectors listed on the IDX.

However, it is imperative to acknowledge certain limitations in this research. Notably, the sample exclusively encompasses manufacturing companies, with some not fully disclosing the complete allocation of funds towards Corporate Social Responsibility (CSR) activities. Consequently, future research is encouraged to adopt a more diverse sample that represents the entire spectrum of companies. Additionally, the relatively brief observation period of three periods in this study prompts the suggestion for future research to employ a larger sample and extend the research duration. A more comprehensive exploration of variable indicators closely associated with CSR disclosure is recommended, as the current study primarily examines profitability, company size, leverage, and public ownership. This could involve a more thorough examination of indicators available in annual reports issued by each company.

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