The Effect of Environmental Performance and Profitability on CSR Disclosure in Manufacturing Companies (2022-2024)

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Abstract. The purpose of this study is to analyze the influence of environmental performance on profits in relation to CSRD (Corporate Social Responsibility Disclosure) in a company engaged in manufacturing and listed on the Indonesian Stock Exchange (IDX) for the period 2022–2024. The research population consists of 174 manufacturing companies, with sample selection using purposive sampling, resulting in 32 companies that meet the criteria. The data source comes from annual reports and publications of the Company Performance Rating Program (PROPER). Data analysis was conducted using R Studio software through classical assumption tests, simple linear regression, and multiple linear regression. The findings This study found that environmental performance and profits, respectively, have a positive and significant influence on CSRD. However, when analyzed simultaneously, only environmental performance remains significant, while profitability does not show a meaningful effect. This finding confirms that commitment to environmental sustainability is more dominant in driving corporate involvement in CSR compared to financial factors.

Keywords: CSRD, Environmental performance, profitability, PROPER.

1 Introduction

Manufacturing companies are among the fastest growing companies in Indonesia. A company's performance or achievements can be seen from its financial condition in a certain period. Good profits will also receive a good response from investors, but investors do not only focus on financial aspects but also look at social and environmental aspects [1]

In conducting its business activities, the Company must also pay attention to its environmental impact, as it can cause environmental pollution and diseases for the community in the surrounding area. Therefore, the company has to pay more attention to its responsibility for the environment and the surrounding community. Some of these Some of these companies can be seen in Table 1.

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Table 1. Manufacturing Companies Experiencing Problems Related to Financial Performance, Environmental Performance, and Corporate Social Responsibility

No	Nama Perusahaan	Problem
1.	PT. Mukomuko Indah Lestari Tbk	Air pollution that causes hardship to communities surrounding the company.
2.	PT. Selamet Sempurna Tbk	The company does not disclose environmental performance in its annual report.
3.	PT. Kalista Alam Tbk	Received environmental compensation sanctions amounting to 300 billion rupiah for burning forests during the clearing of its concession area.
4.	PT. Eterindo Wahanatama Tbk	This company does not disclose its environmental performance in its annual report.

Source: sinarharapan 2013

Based on the data in the table, it can be seen that there is an imbalance in the company's performance, which only focuses on financial capabilities rather than environmental performance, even though both performances should go hand in hand. Therefore, to restore the trust of stakeholders and the community in the company, the company should make disclosures commonly referred to as corporate social responsibility disclosures, which are part of environmental performance.

Companies must manage the negative impacts caused by their activities. One way to determine how companies manage these impacts is through the Company Assessment Program in Environmental Performance Management (Prop-er). The Proper program implemented by the Ministry of Environment and Forestry (KLHK) as an effort to control pollution, environmental damage, and management of B3 waste (hazardous and toxic substances). This situation has prompted company management to strive to manage and attract investors by disclosing their corporate social responsibility (CSR) programs.

[2]explain that CSR involves businesses working to lessen any negative effects and enhance the positive effects of their activities on the economy, society, and the environment all play a role in achieving sustainable development. When we talk about environmental corporate social responsibility, we're referring to the social obligations that relate to the environment, such as managing waste.

Previous studies have shown varying results regarding the impact of environmental performance and income generated through the enforcement of CSRD (Corporate Social Responsibility Disclosure). [3]and [4]indicates a positive relationship between environmental performance and CSRD. However, this study contradicts the research conducted [5], who stated that environmental performance does not significantly affect CSR disclosure.

[6]states in her research that profits have a positive impact on corporate social responsibility. Research conducted [7] found that profitability has a significant negative

impact on CSR disclosure. However, this study is inconsistent with the [8], which shows that the profitability variable does not have an impact about corporate social responsibility disclosure. This indicates that high or low corporate profitability does not necessarily lead to extensive disclosure of CSR information.

Based on the gap phenomenon in previous studies, it is important to conduct this research because there are still inconsistencies in the findings related to the influence of profitability on CSR, while environmental performance tends to be consistent. This raises the question of whether in the most recent period—with stronger regulatory pressure and sustainability demands—the relationship between these two variables on CSR will remain the same. Additionally, research using the latest data (2022–2024) and a more robust analytical approach, such as the use of PCA to address multicollinearity, necessitates further research on the influence of environmental performance and corporate profits on CSRD in manufacturing companies listed on the Indonesia Stock Exchange during the 2022–2024 period.

Based on the above gap, this study contributes to filling that gap by analyzing the impact of environmental performance and earnings on CSR in registered manufacturing company the IDX for the period 2022–2024, using the latest data and a more robust statistical approach. The results are expected Aiming to offer a holistic comprehension of the determinants of CSR disclosure, as well as serve as input for company management and regulators in formulating sustainability policies.

2 Literature Review

2.1 Stakeholders

Stakeholders consist of customers, the community, suppliers, employees, and other parties who have an interest in the activities that take place within a business entity [9]. This aligns with [10], who state that stakeholder theory is a theory in which a company presents information on its environmental, social, and intellectual performance voluntarily. Therefore, companies should maintain their reputation by shifting their orientation (goals) from being solely focused on economic value to also considering social factors as a form of concern and commitment to social and environmental issues [11]. Stakeholder theory explains that stakeholders perceive the social responsibility information disclosed as an indicator of the organization's reliability and legitimacy, thereby enabling CSR disclosure to minimize pressure from stakeholders.

2.2 Legitimacy

Legitimacy is a corporate management mechanism aimed at demonstrating compliance with and concern for the interests of the government, individuals, and community groups [11]Therefore, as a system that prioritizes community interests, corporate operations must be in line with community expectations. The basis of the theory of legitimacy is the social relationship between companies and society [12]. There-fore, legitimacy serves as a key element in maintaining the sustainability of a company.

2.3 Corporate Social Responsibility (CSR)

CSR refers to a strategic practice through which companies align their operations with social and environmental responsibilities [9]. CSR not only serves as a form of moral responsibility, but also as an instrument for building and strengthening relationships with stakeholders through transparency of information covering the company's economic, social, and environmental performance. The implementation of CSR is becoming increasingly crucial, especially for manufacturing companies in Indonesia that are at high risk of environmental pollution due to their industrial processes. In this case, CSR reflects the company's commitment to sustainability, not only in terms of economic benefits but also in creating positive social and environmental impacts [4].

Social responsibility measurement is presented in the CSRI (Corporate Social Responsibility Index). CSR measurement is conducted by evaluating each item in the company's annual report and/or sustainability report in accordance with the GRI-G4 (Global Reporting Initiative) sustainability reporting standards.

2.4 Environmental Performance

Environmental performance is an indicator of a company's concern for the environment, assessed through its achievements in the PROPER program. This program is one of the programs carried out by the Ministry of Environment (KLH) to encourage companies to comply with environmental management. PROPER is announced regularly to the public. Companies with high environmental performance will receive a positive response from investors through fluctuations in stock prices [13]. If a company has poor environmental and social performance, investors will have doubts, resulting in a negative response through a decline in stock prices.

2.5 Profitability

Profitability ratios are ratios used to assess a company's ability to generate profits or earnings in a given period [14]. Profitability indicates a company's success in generating profits [15]. Profitability can be seen in the difference between profits and assets, capital, or the level of net sales used to generate those profits. This is very important because the company will be accountable to its stakeholders for its business activities. To measure the level of profitability, several ratios can be used, namely: Gross Profit Margin; b). Net Profit Margin; c). Return On Assets; d Return On Equity.

2.6 Conceptual Framework

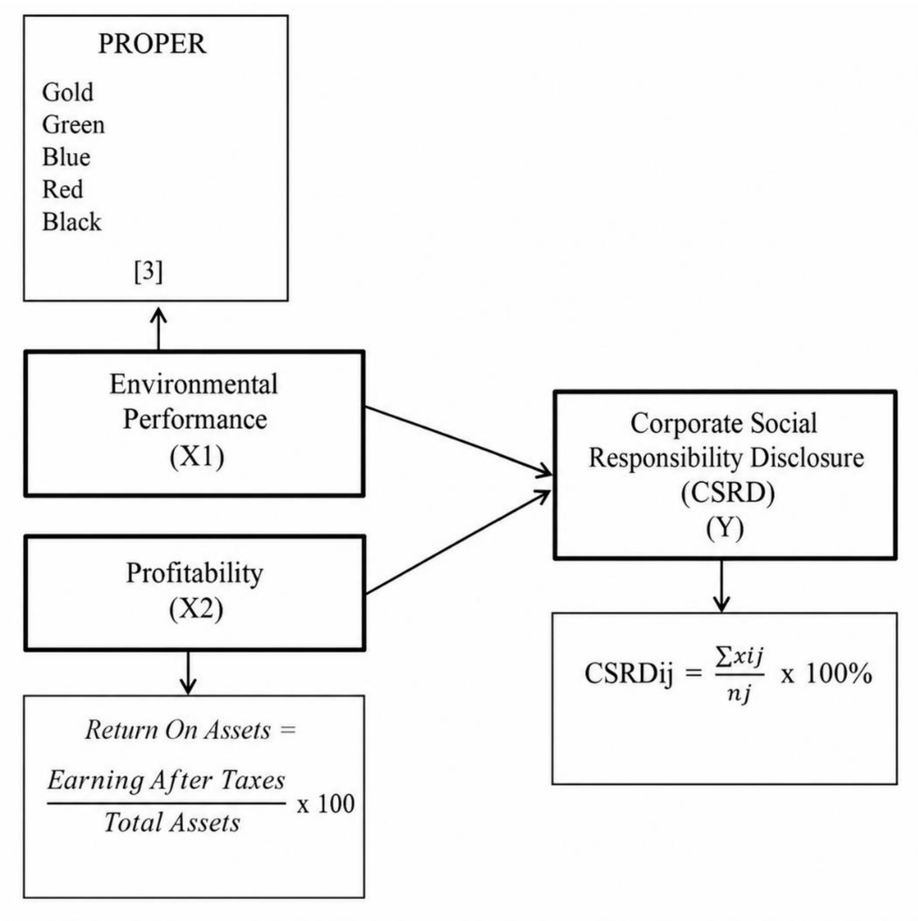

Fig. 1. Conceptual Framework

3 Research Methodology

3.1 Research Approach

This study uses a quantitative approach, considering that the data collected is in the form of numbers or numerical data. According to [16], the positivistic paradigm forms the basis for the application of quantitative research methods, which is generally applied to examine a specific population or sample. The sampling technique is random sampling, with data collection through a research instrument that has been designed. Data analysis in this approach is quantitative or statistical, with the main objective of testing the hypotheses that have been formulated previously.

3.2 Data collection and analysis

The data for this study was obtained through the collection of annual reports from manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the period 2022–2024, the data source was obtained from the official website of the Indonesia Stock Exchange (www.idx.co.id) and the Company Performance Measurement Program (PROPER) publication issued from the Department of the Environment and Forestry. The research population included all 174 manufacturing companies. Sampling was conducted using purposive sampling was applied using the criteria below:

- Manufacturing companies listed on the Indonesia Stock Exchange.
- Published annual reports consecutively during the 2022–2024 period.
- Consistently disclose CSR information during the study period.
- Participate in the PROPER program during the same period.
- Use the Indonesian rupiah in financial statements.
- Achieve positive profits for three consecutive years.

A total of 32 companies were selected as research samples according to predetermined criteria.

Data processing was conducted using R Studio software to analyze the relationship between environmental performance variables, profitability, and Corporate Social Responsibility Disclosure (CSRD). The analysis stages included:

- Classical Assumption Tests: Residual normality was tested using the Lilliefors test, autocorrelation was tested using the Durbin-Watson test, and heteroskedasticity was tested using the Breusch-Pagan test.
- Regression Analysis: This includes simple linear regression to analyze the relationship between independent variables and Corporate Social Responsibility Disclosure (CSRD), as well as multiple linear regression to test simultaneous effects.
- Multicollinearity Control: Principal Component Analysis (PCA) was performed to reduce high correlations among independent variables prior to regression modeling.

The analysis results show that all models meet the classical assumptions and have high R-squared values, indicating that CSRD variation can be significantly explained by the research variables.

4 Results

Table 2. Results of Residual Normality Test using Lilliefors Test

Model	D-Value	p-value	Conclusion Normality
Model 1	0.078304	0.8741	Normally distributed ($p > 0.05$)
Model 2	0.096193	0.6118	Normally distributed ($p > 0.05$)
Model 3	0.07627	0.896	Normally distributed ($p > 0.05$)

Source: OUTPUT R Studio processed (2025)

From the results in the table above, all regression models show p-values above 0.05, so it can be concluded that all three regression models meet the assumption of normality. Therefore, these models are suitable for further analysis, such as significance testing and regression parameter hypothesis testing.

Table 3. Durbin-Watson Test Output in the GLS Model

Test Statistics	Value	Interpretasi
Durbin-Watson (DW)	2.1274	Approaching 2, indicating no residual autocorrelation
p-value	0.6442	> 0.05, fail to reject H_0 → no evidence of positive autocorrelation
Alternative Hypothesis	True autocorrelation is greater than 0	Tested but not statistically significant
Conclusion	There is no significant residual autocorrelation.	The GLS model satisfies the assumption of residual independence.

Source: OUTPUT R Studio processed (2025)

The Durbin-Watson test results in the GLS model show a DW value of 2.1274 with a p-value of 0.6442. A DW value close to 2 and a p-value exceeding the significance threshold of 0.05 shows that there is no significant autocorrelation in the model residuals.

Table 4. Results of CSR Regression Analysis on PC1

Koefisien	Estimate	Std. Error	t-value	p-value	Description
Intercept	86.081	1.978	43.51	< 2e-16	Significant (***)
PC1	-245.740	1.421	-172.97	< 2e-16	Significant (***)

Source: OUTPUT R Studio processed (2025)

Statistic model:

- R^2 = 0,999
- Adjusted R^2 = 0,9989
- F statistic = 29.920
- p-value = < 2e-16

To address potential multicollinearity issues among independent variables, The PCA method is used to perform data transformation. The first principal component (PC1) was then used as a predictor variable in the regression model for the dependent variable Corporate Social Responsibility (CSR).

Model statistics indicate that the regression model has an R-squared value of 0.999, meaning that 99.9% of the variation in CSR can be explained by the PC1 variable. The adjusted R-squared value of 0.9989 also supports the model's strength in explaining the relationship between variables.

The result of the F-test is 29.920 with a significance p-value < 2.2e-16, indicating that the regression model as a whole is statistically significant.

Table 5. Results of Heteroscedasticity Test Using Breusch-Pagan Test

Model	Statistic BP	Degrees of Freedom (df)	p-value	Conclusion
Model 1	0,5704	1	0,4501	There is no heteroscedasticity.
Model 2	0,4143	1	0,5198	There is no heteroscedasticity.
Model 3	1,1700	2	0,5571	There is no heteroscedasticity.

Source: OUTPUT R Studio processed (2025)

The above test was conducted using the Breusch-Pagan test, which aims to detect changes in residual variance as the independent variable changes. Based on the test results, “All models produced p-values above 0.05, indicating that there was no significant evidence of heteroscedasticity. Thus, it can be concluded that the residuals in the three regression models have constant variance.

Table 6. Simple Linear Regression Analysis of the Relationship between Environmental Performance and CSR

Variabel	Koefisien	Std. Error	t-count	Sig. (p)
(Constant)	22,308	1,919	11,62	0,000***
Environmental Performance	0,989	0,005	181,35	0,000***

Source: OUTPUT R Studio processed (2025)

Statistic model:

- $R^2 = 0{,}9991$
- Adjusted $R^2 = 0{,}999$
- F count = 32.890
- Sig. F = 0,000

Simple linear regression analysis is used to determine effect of the Environmental Performance variable on the Corporate Social Responsibility (CSR) variable. The regression model constructed was:

$$Y = \beta 0 + \beta 1\ (Environmental\ Performance) + \mathcal{E} \quad (1)$$

The model estimation results show the following regression equation:

$$Y = 22.308 + 0.989 + Environmental\ Performance + \mathcal{E} \quad (2)$$

Simple linear test results regression analysis show that Environmental Performance has a significant and positive effect on CSR. Each one-unit increase in Environmental Performance is estimated to increase the value of CSR by 0.989. This finding is reinforced by a very low significance value ($p < 2e\text{-}16$), indicating a very strong relationship that does not occur by chance.

This model has a very high level of accuracy, as indicated by an R-squared value of 0.9991, meaning that 99.91% of the variation in CSR can be explained by Environmental Performance. Additionally, the F-test produced a highly significant p-value (< 2.2e-16), indicating that the model as a whole is valid for explaining the relationship between variables. Therefore, it can be concluded that the better a company's environmental performance, the higher its contribution to meaningful and strategic CSR implementation.

Table 7. Results of Simple Linear Regression Analysis of the Effect of Profitability on CSR

Variabel	Koefisien	Std. Error	t-count	Sig. (p)
(Constant)	16,7148	2,2804	7,33	0,000 ***
Profitability	0,9914	0,0065	153,10	0,000 ***

Source: OUTPUT R Studio processed (2025)

Statistic model:

- $R^2 = 0{,}9987$
- Adjusted $R^2 = 0{,}9986$
- Standard Error Residual = 12,84
- F count = 23.440
- Sig. F = 0,000

$$Y = \beta_0 + \beta_2 (Profitability) + \mathcal{E} \quad (3)$$

$$Y = 16{,}714801 + +0{,}991360\ (Profitability) + \mathcal{E} \quad (4)$$

Simple linear regression analysis shows that profitability has a positive and significant influence on corporate social responsibility (CSR). Each one-unit increase in profitability is estimated to increase the value of CSR by 0.991. The statistical significance is very strong ($p < 2e\text{-}16$), indicating that this relationship is not coincidental.

The R^2 value of the model reaches 0.9987, indicating that nearly all of the variation in CSR (99.87%) is influenced by profitability. The high F-statistic value (23.440) and very small p-value (< 2.2e-16) reinforce the overall validity of the model. Thus, it can be concluded that corporate profitability is a key indicator in increasing CSR activities, reflecting the financial capacity of companies to contribute more optimally to society and the environment.

Table 8. Multiple Linear Regression Results between Environmental Performance and Profitability on CSR

Variabel	Koefisien	Std. Error	t- count	Sig. (p)
(Constant)	22,268	2,527	8,813	0,000 ***
Environmental Performance	0,9818	0,2825	3,476	0,002 **
Profitability	0,0071	0,2832	0,025	0,981

Source: OUTPUT R Studio processed (2025)

Statistik Model:

- $R^2 = 0{,}9991$
- Adjusted $R^2 = 0{,}999$
- Standard Error Residual = 11,02
- F count = 15.910
- Sig. F = < 0,0001

Based on the results of multiple linear regression analysis, it is known that the variables of Environmental Performance and Profitability are simultaneously included to see their effect on CSR. The resulting regression model is:

$$Y = \beta_0 + \beta_1 (Environmental\ Performance\ ) + \beta_2 (Profitability) + \varepsilon \tag{5}$$

$$Y = 22{,}267906 + 0{,}981837\ (Environmental\ Performance\ ) + 0{,}007142\,(\text{Profitability}) + \varepsilon \tag{6}$$

The analysis results show that Environmental Performance has a positive effect and influence on CSR, with a coefficient value of 0.981837 and a p-value of 0.00158 ($p < 0.05$). This suggests that every one-unit increase in Environmental Performance will significantly increase the value of CSR. Conversely, Profitability variables indicate that very small coefficient of 0.007142 and is not statistically significant ($p = 0.98005 > 0.05$). thus, it can be inferred that when both variables are analyzed simultaneously, Profitability does not have a significant effect on CSR, unlike Environmental Performance, which has been proven to play a significant role.

Furthermore, the R-squared value of 0.9991 and the Adjusted R-squared value of 0.999 indicate that the regression model has a very high explanatory power, namely 99.91% differences in CSR can be explained by variation in Environmental Performance and Profitability. The overall model significance test using an F-statistic value of 1.591e+04 with a p-value < 2.2e-16 indicates The regression model is statistically significant overall. Thus, although the model as a whole is valid for use, these results confirm that Environmental Performance is the main factor that significantly influences CSR practices, while Profitability does not show a significant influence in this model.

5 Discussion

The empirical evidence indicates that environmental performance is a decisive determinant of CSR disclosure in Indonesian listed manufacturing firms, particularly once other financial factors are considered. This result is consistent with legitimacy-based reasoning, whereby firms seek to align their operations with societal expectations and maintain acceptance by signalling responsible conduct through more extensive disclosure [11, 12]. From a stakeholder perspective, CSR disclosure functions as an accountability mechanism intended to reduce pressure from salient stakeholder groups and to strengthen corporate credibility through transparent reporting of social and environmental impacts [11]. In the Indonesian context, the PROPER rating serves as a visible and institutionalised signal of environmental compliance and performance, which can heighten external scrutiny and encourage firms to formalise CSR commitments in annual reporting [13]. The finding also resonates with prior studies reporting a positive association between environmental performance and CSR disclosure [3, 4], and with the broader conceptualisation of CSR as a strategic practice that integrates environmental responsibility into corporate conduct rather than treating it as purely discretionary philanthropy [9, 17]. Moreover, stronger environmental performance may reinforce market confidence because CSR disclosure can shape perceptions of firm value and legitimacy among investors and other capital market participants [19].

Although profitability is significant when examined in isolation, its effect becomes statistically negligible when environmental performance is introduced simultaneously, implying that financial capacity is not the primary driver of disclosure once environmental accountability is accounted for. A plausible interpretation is that profitability may enable CSR activity, yet it does not uniquely explain CSR disclosure in settings where environmental performance already captures the most salient reputational and compliance incentives for manufacturing firms [13]. This outcome can also be understood through the lens of corporate reporting incentives in which disclosure is deployed to manage legitimacy risks and stakeholder demands, rather than being determined solely by the availability of internal resources [12]. In addition, evidence that CSR disclosure relates to capital market considerations suggests that firms may prioritise signals that are more directly observable and institutionally endorsed, such as environmental ratings, over purely financial indicators when shaping disclosure strategies [19]. Finally, the result underscores that CSR disclosure is shaped by firm-specific characteristics and governance contexts, so future extensions could incorporate additional company attributes, ownership structure, and reporting incentives to clarify when profitability becomes relevant and when it is dominated by sustainability performance signals [20].

6 Conclusion

Based on the results of the analysis, it can be concluded that Environmental Performance and Profitability individually have a positive and significant effect on the implementation of Corporate Social Responsibility (CSR). These results indicate that companies with good environmental performance and high profitability tend to be more active in carrying out CSR activities. However, when both variables are tested simultaneously through multiple linear regression, only Environmental Performance continues to show a significant influence. This indicates that commitment to environmental sustainability is a more dominant factor in driving corporate involvement in CSR than financial factors.

These findings reinforce the view that corporate social responsibility is not solely determined by financial capacity, but also by awareness and responsibility towards environmental aspects. Therefore, companies need to make environmental performance an integral part of their long-term CSR strategy. On the other hand, these results also provide a basis for policymakers to promote regulations and incentives that can strengthen CSR practices based on environmental sustainability.

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