The Role of Environmental Performances in Determining Financial Performances through Corporate Social Responsibility

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ABSTRACT

This study was conducted to analyze the effect of environmental performance on financial performance with CSR disclosure as an intervening variable. The environmental performance was measured by using PROPER score, CSR disclosure was measured by the Global Reporting Initiative index, and financial performance was measured by using earning per share. Using purposive sampling method, this research took 89 samples from manufacturing companies listed in the Indonesia Stock Exchange that were granted PROPER by the Ministry of Environment and Forestry within the years of 2017-2019. The secondary data documented from companies' annual reports were used to test four hypotheses. The tests were conducted by using linear regression and path analysis. The results of the analysis showed that environmental performance positively effecting CSR disclosure and CSR disclosure financial performance. However, this study did not find any significant effect of environmental performance on financial performance. It did not find CSR reporting's role as an intervening variable is unable to affect the environmental performance's impact towards financial performance.

KEYWORDS

Environmental Performance  
CSR Reporting  
Financial Performance

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Introduction

It is essential for companies operating within society to pay attention to the impact of their business operations on both the people and the environment. In recent years, stakeholders have also begun to consider the non-financial aspects of a company. Investors tend to endue in companies with good environmental and social responsibility (Iryanie, 2009).

The PROPER (Public Disclosure Program for Environmental Compliance) policy issued by the Ministry of Environment and Forestry (KLHK) assesses waste management, pollution control, and environmental destruction for companies in Indonesia. Implementing this policy and stakeholder consideration is expected to entice companies to improve the quality of their environmental management, its accountability to stakeholders, and better compliance with environmental regulations. The forms of responsibility for environmental management can be disclosed through annual reports, sustainability reports, or other forms of disclosure.

This disclosure of achievements and successful company performances to stakeholders can add value and enhance the company's reputation. Corporate Social Responsibility (CSR) can build a reputation and shine a positive image for the company in the eyes of the public. With this, CSR becomes a means of communication for the company towards its stakeholders to show that the company operates for profit-oriented purposes and cares about environmental sustainability and social welfare.

The relationship between environmental performance, CSR reports, and financial performance has long been researched and reviewed. Even so, there has yet to have been a consensus that agrees on the relationship between the three variables. Rakhiemah and Agustia (2012), in their research, revealed that CSR could interfere in environmental and financial performance relationships. In contrast, Setyaningsih and Asyik (2016) found that CSR was deemed unable to be a moderator between environmental
performance and ROE. It was found that the discrepancy between the year, sample, and variables measurement in each research has resulted in differences among the results found. This research utilized a proxy for measuring variables that differ from previous studies in testing samples. Earnings per share (EPS hereafter) was used in measuring financial performance due to its connections with earnings and the number of shares outstanding within a company. It is hoped that the relationship between financial performance, environmental performance and CSR reports could be uncovered. CSR reports as an intervening variable was expected to bridge environmental performance in influencing financial performance. This research reviewed the relationship between environmental performance, CSR reports, and financial performance with consideration to the research suggestion proposed by Rakhiemah and Agustia (2012) to apply CSR reports as an intervening variable.

Literature Review

Stakeholder theory claims that other than engaging in businesses to improve the value of the companies themself, companies also aim to provide value to stakeholders (Chariri & Ghozali, 2007). They will try to fulfill expectations, avoid conflict and maintain good dealings with stakeholders. Their performance disclosure through reports creates avenues for companies to communicate and build a relationship with stakeholders (Gray et al., 1995).

Legitimation theory states that companies will try to uphold good relations with stakeholders to be accepted and continue to operate within society as justification for their existence. If the company disappoints the community's expectations, it will trigger a conflict that can push the community to 'retract' their legitimacy towards the company (Deegan & Rankin, 1996). Companies will pursue good relations with stakeholders through disclosures, including CSR reporting covering environmental, economic, social, and political aspects (Deegan & Rankin, 1996).

Improving environmental performance helps companies track and allocate environmental costs, assess product life cycles, develop products, analyze product inventories, and optimally track carbon footprints (Ferreira et al., 2010). Improved environmental performance that aims toward cost efficiency is expected to improve a company's financial performance. By carrying out optimal environmental performances, they can disclose even further success and achievements in environmental management within their CSR reports. Based on figure 1, companies with a high-quality CSR report will attract investors' trust, thus impacting on EPS (Samy et al., 2010).

The Effect of Environmental Performance on CSR Reporting

The disclosure of environmental performance was carried out by an entity to gain image as a company that is environmentally friendly (Al-Tuwaijri et al., 2004). Processing management revealed in the CSR report is one of the company's environmental performance disclosures. The better the company's management ability and concern for the environment, the more they are able to bring out environmental performance in the CSR report. This will indicate that the company's CSR reporting quality is improving. This disclosure of information through the company's report can prove to stakeholders that the company is trying to meet expectations and demonstrate that the company's business activities do not harm the environment, representing stakeholder theory and Legitimacy Theory. Environmental performance was empirically stated to affect CSR disclosure (Rahmadhani & Meylani, 2012).

H1: Environmental performance has a positive impact on CSR reporting.
The Effect of Environmental Performance on Financial Performance

Companies and firms assume that optimizing environmental performance can lead to increased market prices and financial performance (Wagner et al., 2001). That increase arrives from stakeholders that choose to purchase products or invest in companies that maintain their environmental performance. It is also in accordance with stakeholder theory. Optimal environmental performance can improve cost efficiency after identifying and allocating environmental costs. Other benefits that can be obtained include better waste and emission management and reducing the use of energy and raw materials, which can cut back costs. In addition, if the environmental performance is carried out optimally, the company can avoid conflicts with stakeholders and lawsuits for violations of environmental compliance laws. In line with this hypothesis, the research of Widarto and Mudijanti (2015) revealed that environmental performance affects financial performance.

H3: Environmental performance has a positive impact on financial performance.

The Effect of CSR Reporting towards Financial Performance

The implementation and reporting of CSR are important so that companies are able to compete in a competitive business environment. The link between EPS and CSR policies is believed to increase the company's income (Samy et al., 2010). CSR also pays attention to aspects of employee job satisfaction and safety that helps improve efficiency, financial benefits, competitive advantage, and the company's strategic position (Waworuntu et al., 2014). In addition, Samy et al. (2010) have proven that responding to stakeholders through CSR disclosure impacts financial performance. In conjunction with this hypothesis is the research of Supadi and Sudana (2018), which has succeeded in proving the effect of CSR reporting on financial performance.

H4: CSR reporting positively affects financial performance

The Effect of Environmental Performance on Financial Performance with CSR as an Intervening Variable

Lately, a company's financial performance is not the only consideration for investors. Investors also now consider non-financial performance alongside the contributions and positive impacts that the issuer gave. Companies can disclose achievements, successes in environmental management, and social and community activities in CSR reports to be shown to stakeholders. Therefore, good CSR reporting will allow stakeholders to recognize the company's capabilities and know its environmental performance records. It is expected that by increasing stakeholder trust in the company, the company's profitability can also increase. Adequate environmental management can also improve cost efficiency and profitability. CSR reporting is proven to be an intervening variable between the environmental performance and financial performance relationship (Rakhiemah & Agustia, 2012).

H5: Environmental performance positively affects financial performance with CSR reporting as an intervening variable.

Research Method

This research examines the relationship between three variables: environmental performance as the independent variable, financial performance as the dependent variable, and CSR reporting as the independent, dependent, and intervening variable. Environmental performance was derived from the quality of the company's environmental performance assessed by PROPER ratings. Five PROPER assessment criteria were represented by points in Table 1 below.

| Rating | Point |
|--------|-------|
| Gold   | 5     |
| Green  | 4     |
| Blue   | 3     |
| Red    | 2     |
| Black  | 1     |

Source: Processed secondary data, 2021
CSR reporting is rated based on 91 CSR disclosure items from GRI which include materiality, stakeholder inclusiveness, sustainability concept, and completeness (Samy et al., 2010). CSR reporting is measured using a dichotomous approach by appointing 1 point for each item that is reported and 0 points for items that are not reported. The points earned by a company are then accumulated and divided by 91 total disclosure items (Rakhiemah & Agustia, 2012).

\[ \text{CSRД} = \frac{\sum X}{n} \]

CSRД means CSR Reporting. X is Total CSR items reported and n means total item disclosures (91 items). Financial performance is calculated based on EPS. EPS reflects the financial condition of a company by calculating profits, dividends, and shares which relates it to investors. Samy et al. (2010) stated that EPS is an indicator that can show the relationship between net income and outstanding which is important for investors and companies.

\[ \text{EPS} = \frac{\text{net profit after tax} - \text{dividen}}{\text{number of shares outstanding}} \]

The research was carried out on manufacturing companies listed on the Indonesia Stock Exchange (IDX) that received PROPER ratings in 2017-2019. Samples were taken from companies with different PROPER ratings to compare the performance of companies with different ratings. The purposive sampling method was applied to select samples that met the following criteria:

1. Manufacturing companies listed on the IDX and has published an annual report for 2017-2019,
2. Manufacturing companies that received PROPER assessment in 2017-2019.

Table 2. Research Sample

| Criteria | Total |
|----------|-------|
| BEI registered manufacturing companies in 2017-2019 | 161 |
| Manufacturing companies that didn't acquire PROPER evaluation during 2017-2019 | (57) |
| Companies that meet the criteria | 33 |
| Total samples | 99 |
| Outlier | (10) |
| Total samples after subtracted by outlier | 89 |

Source: Processed secondary data, 2021

Table 2 represent of the 161 companies, 57 of them have not received a PROPER assessment. Since the 57 companies did not meet the criteria, they were removed from the sample list. The total sample outliers is 10, so the total sample tested are the remaining 89 companies.

Data analysis was carried out using path analysis and Sobel test to examine the relationship and influence of independent variables and intervening variables on the dependent variable. The linear relationship between variables was analyzed by regression analysis. Data analysis was carried out using the SPSS application.

Results and Discussion

Table 3 shows environmental performance, which PROPER symbolizes, has an average value of 2.9326, which means that the average sample received a Blue rating. The minimum sample score of 2 indicates that the lowest PROPER rating achieved is Red. The maximum PROPER score of 4 indicates that the highest-ranking achieved by the samples is Green.

Table 3. Descriptive statistic

|       | Total | Minimum | Maximum | Mean     | Std. Deviation |
|-------|-------|---------|---------|----------|---------------|
| PROPER | 89    | 2       | 4       | 2.9326   | 0.42098       |
| CSRД  | 89    | 0.04    | 0.38    | 0.1676   | 0.07913       |
| EPS   | 89    | -109.47 | 627     | 93.8737  | 154.21675     |

Source: Processed secondary data, 2021
CSR reporting, which CSRD symbolizes, shows an average of 0.1676. It indicates that the average sample reports as much as 16% of the total 91 GRI disclosure items. The samples with the most disclosure is 38% and the samples with the lowest disclosure is 4%.

Financial performance is measured using EPS. The average EPS of all samples is 93.8737. The lowest EPS value achieved by the sample was -109.47, while the highest score was 627.

To identify the normality of the distribution of residual values in the research model, a normality test was performed. The normality test was carried out by the Kolmogorof-Smirnov test. Table 4 yielded a significance number of 0.222, it is concluded that the residual values distribution was normal.

The test was carried out through a run test. Normal data do not have autocorrelation symptoms. From the run test in table 5, a significance value of 0.188 was produced, which proves that the research model does not have autocorrelation.

The heteroscedasticity test can detect the variance inequality of the residuals of one observation with another observation. The method used in this test was the glejser method. Data that do not have symptoms of heteroscedasticity are assumed to be normal. The heteroscedasticity test resulted in a PROPER significance value of 0.775 and a CSRD of 0.261. Table 6 shows that the research model does not have heteroscedasticity symptoms.

Hypothesis Testing I (Environmental Performance towards CSR Reporting)

Table 8. Hypothesis Testing I (Environmental Performance towards CSR Reporting)

| Unstandardized Coefficients | Std. Coefficients | t | Sig. |
|-----------------------------|-------------------|---|------|
| B  | Std. Error | Beta | |
| SQRT_PROPER | 0.198 | 0.079 | 0.260 | 2.510 | 0.014 |

Source: Processed secondary data, 2021
The first hypothesis testing resulted significance value lower than 0.05, specifically 0.014. The result indicated that environmental performance affects CSR reporting, thus the hypothesis can be accepted. There will be more CSR activity to be reported granted that companies undertake environmental performance optimally. Companies are able to report on waste treatment, water use, and emission production if they are managed properly. Environmental performance disclosure through CSR reporting can also be a way of companies to show responsibility over their business activities to stakeholders, thus so environmental performance reports listed through CSR reporting is expected to secure legitimisation and relation between company and stakeholders.

**Hypothesis testing II (Environmental Performance towards Financial Performance)**

| Unstandardized Coefficients | Std. Coefficients | t | Sig. |
|-----------------------------|-------------------|---|------|
| SQRT_PROPER                 | 6.580             | 6.023 | 0.130 | 1.092 | 0.278 |

The significance number of 0.278 that was acquired from the second hypothesis testing proved that environmental performance is not yet able to give affect to financial performance. This indicates that optimal environmental performance is not necessarily able to increase financial performance and vice versa. As an example, the PROPER rating for PT UIC is rated RED, but contrarily its EPS value is higher than other companies with higher PROPER ratings. The hypothesis is rejected because in this research, other factors that are considered by investors and considerations of consumers in buying products was not involved and analysed. Sarumpaet (2005) also stated that buyers often choose other products with cheaper prices, disregarding whether they are eco-friendly or not. This result supports research by Rakhiemah and Agustia (2012) along with Sarumpaet (2005), however in contradiction to research by Al-Tuwaijri, et al. (2004).

**Hypothesis Testing III (CSR Reporting towards Financial Performance)**

| Unstandardized Coefficients | Std. Coefficients | t | Sig. |
|-----------------------------|-------------------|---|------|
| SQRT_CSRD                   | 20.608            | 8.196 | 0.290 | 2.515 | 0.014 |

The third hypothesis testing resulted a significancy value of 0.014 which indicates the presence of an affect by CSR reporting towards financial performance. Not only is CSR a means of connecting companies to stakeholders, but it also assists in increasing profitability (Gray et al., 1995). To be able to hold grounds in a competitive business environment, companies need to gain reputation and a positive image in the eyes of stakeholders. Companies have to show that they are capable of providing value to stakeholders and show that they give attention to environment and society. This conclusion is in line with research by Mohammed, et al. (2016) and Samy, et al. (2010) that stated that CSR disclosure can affect EPS, but is contrary to the research of Rutledge et al. (2014) and Rakhiemah and Agustia (2012).

**Hypothesis Testing IV (Environmental Performance towards Financial Performance with CSR Reporting as Intervening Variable)**

The fourth hypothesis analysis is carried out by path analysis. The regression function used was:

\[ CSRD = a + a \text{ PROPER} + e_1 \]

\[ EPS = a + b \text{ PROPER} + c \text{ CSRD} + e_2 \]
Table 11. F Test

| Model   | F     | Sig. |
|---------|-------|------|
| Regression | 3.204 | 0.047|

Source: Processed secondary data, 2021

Table 11 shows the stimulant affect that is caused by the independent variables (environmental performance and CSR reporting) towards the dependent variable (financial performance). The result show the counted F value of 3.204 with significance level of 0.047. The above figures indicate that the independent variable affects the dependent variable simultaneously.

Table 12. Coefficient of Determination Test ($R^2$)

| Function | R  | R Square | Adjusted R Square | Std. Error of the Estimate |
|----------|----|----------|-------------------|---------------------------|
| 1        | 0.260 | 0.068   | 0.057             | 0.09397                   |
| 2        | 0.293 | 0.086   | 0.059             | 0.06465                   |

Source: Processed secondary data, 2021

Table 12 shows the value of adjusted $R^2$ square from regression function 1 and 2 which in path analysis is used to test CSR reporting as an intervening variable on the relationship between environmental performance and financial performance. Table 12 presents that the first adjusted $R^2$ square value is 0.057. This figure indicates that the PROPER variable is able to explain the effect it has on the EPS variable of 5.7%. As for the remainder value of 94.3% is explained by other variables outside the research model. The second function of the adjusted $R^2$ square value is 0.059. This figure indicates that the PROPER variable and CSRD is able to explain the affect that is has on EPS variable of 5.9%. The remaining value of 94.1% is explained by other variables outside of the research model.

First Function

Table 13. Hypothesis Testing (Environmental Performance towards CSR Reporting)

| Unstandardized Coefficients | Std. Coefficients | t     | Sig.  |
|-----------------------------|-------------------|-------|-------|
| SQRT_PROPER                 | 0.198             | 0.079 | 0.260 | 2.510 | 0.014 |

Source: Processed secondary data, 2021

The coefficient determination test for the first function produced an $R^2$ value of 0.068 (Table 12). The $e_1$ value derived from the root value of $R^2$ is 0.965. This figure is a variation of CSRD that is not explained through PROPER. The hypothesis testing results show a significance of 0.14. From this it can be concluded that PROPER has an affect towards CSRD. The value of $p_2$ is obtained from the standard beta coefficient of 0.260.

Second Function

Table 14. Hypothesis Testing IV (Environmental Performance towards Financial Performance with CSR Reporting as an Intervening Variable)

| Unstandardized Coefficients | Std. Coefficients | t     | Sig.  |
|-----------------------------|-------------------|-------|-------|
| SQRT_PROPER                 | 2.465             | 6.125 | 0.049 | 0.402 | 0.689 |
| SQRT_CSRD                   | 19.579            | 8.634 | 0.275 | 2.268 | 0.027 |

Source: Processed secondary data, 2021

The coefficient of determination test for the second function shows the result of $R^2$ is 0.086 (Table 12) and value $e_2$ is 0.956. This value explains that the EPS variance is not able to be defined through PROPER and CSRD. The significance value that is obtained from the second hypothesis testing for PROPER is 0.689 and CSRD significance is 0.027. This means that the CSRD variable has an affect towards the EPS variable, whereas the PROPER variable does not. The $p_1$ value is 0.049 and the $p_3$ value is 0.275. The following is the calculation for the overall affect.
The figures resulted from the tests is then inserted into the regression function:

$$\text{CSRD} = 0.060 + 0.198 \text{PROPER} + 0.965$$
$$\text{EPS} = -3.312 + 2.465 \text{PROPER} + 19.579 \text{CSRD} + 0.956$$

The significance of the indirect affect of PROPER towards EPS through CSRD is able to be tested through the Sobel test as follows:

$$\Sigma \alpha \beta = \sqrt{p^{2}S^{2}p^{2} + p^{2}S^{2}p^{3} + S^{2}p^{2}S^{3}}$$

$$= \sqrt{(19.479)^{2}(0.079)^{2} + (0.198)^{2}(8.634)^{2} + (0.079)^{2}(8.634)^{2}}$$
$$= 2.392407721 + 2.2922499659 + 0.465241311$$
$$= 2.40419398$$

The Sobel figure is then used to calculate the t value as follows.

$$t \text{ count} = \frac{p^{2}p^{3}}{\text{Sob}}$$
$$= \frac{0.198 \times 19.579}{2.40419398}$$
$$= 3.876642$$
$$= 2.40419398$$
$$= 1.612449$$

The calculated t value is 1.612449, which is lower than the t table with the value of 1.664. This means, CSR reporting is not yet able to be an intermediary with significant affects towards the affect of environmental performance towards financial performance. Reported CSR activities apparently have not been able to demonstrate the success of environmental management which is assumed to be able to attract stakeholders to invest. This is because most of the CSR activities carried out by companies are in the form of charitable and philanthropic activities for the community and society, which are not in line with the PROPER assessment aspects that are oriented towards waste management and environmental preservation. Although there are items related to the environment in CSR reporting, these items still do not include PROPER assessment criteria such as pollution control, waste management, and land destruction. For example, PT KLBF received high PROPER and EPS ratings, but its CSR disclosure score experienced a decrease. This discrepancy between CSR disclosure score and PROPER and EPS ratings shows that CSR reporting have not been able to mediate the relationship between environmental performance and financial performance.

This research result is in contradiction towards legitimation theory that assumes stakeholders often choose companies with good environmental performance in CSR reports. But companies with products or services which are eco-friendly often put higher prices than those of similar but non eco-friendly products, thus many people end up choosing the cheaper option (Sarumpaet, 2005). However, his research is in line with the research of Putra (2018) and research of Setyaningsih and Asyik (2016) which states that CSR disclosure is not yet able to be a moderator between the relationship of environmental performance and financial performance.

Conclusion

This research concludes that environmental performance affects CSR reporting positively. Environmental performance that is executed optimally can increase the amount of items and environmental management success that can be reported in CSR. This research also shows that
environmental performance does not affect financial performance. Environmental performance is not one of the key considerations for stakeholders, therefore it is still not able to help improve financial performance.

CSR reporting is proven to have an effect on financial performance positively. With the multitude of information that is reported through CSR, investors will recognize and entrust investment to the company. Nonetheless, CSR reporting is still not yet able to give a significant intervening effect towards environmental performance and financial performance. CSR activity reporting is still not able to show the success of environmental management which is assumed to be able to foster investor interest in investing.

This research experienced a number of limitations. Among them is that this research only examines a sample of companies from the manufacturing sector. Another limitation is that the proxy used to measure financial performance is only based on EPS. Based on these limitations, this study suggests that further studies may consider expanding the company sector that is set as the sample selection criteria, not only from the industrial sector, but also from the mining, construction, infrastructure, and so on. Besides that, further research is suggested to consider other proxies for variable measurement, such as referring to GRI G4 as a proxy for CSR reporting and using financial performance measurements other than EPS to measure financial performance.

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