The effect of environmental performance and CSR on financial performance of manufacturing companies in Indonesia: A market reaction analysis

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**ABSTRACT**

This study aims to analyze the effect of environmental performance and Corporate Social Responsibility (CSR) on financial performance and its impact on market reactions in manufacturing companies listed on Proper 2014-2018. The research method uses path analysis with the SPSS 22 with 39 companies listed on the Indonesia Stock Exchange in 2014-2018 with Purposive Sampling. The results showed that environmental performance had no significant effect on financial performance. CSR has no significant effect on financial performance. Environmental performance has no significant effect on market reaction. CSR has no significant effect on market reactions. Financial performance has a significant effect on market reaction.

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Introduction

Indonesian economy’s last five years from the year 2014 to 2018 looked uncertain due to the increase in government and private debts, as well as the exchange rate remained weaker (Data Bank Indonesia, 2018). Economic growth began to improve in the beginning of 2018. Period of 2014-2018, it turned out the economy and only there was a slight growth at an average of about 5%. This reality was still far from the government's target of 7%. Meanwhile, global crisis affected also the global economy and Indonesian economy. Moreover, it had also considerable effects on the manufacturing industry, where the sector was relatively stagnant (Basri, 2019).

The economic situation in Indonesia, as described above, will require companies to strive to improve their performance to achieve the company's goals, namely to achieve the maximum profit. This is the reason for the importance of assessment of financial performance to determine how far the effectiveness of the company's operations to achieve the objectives and assess the performance of the company by using ratio analysis, including data about the changes that occur as well as the percentage and the trend (Suhendro, 2017).

The indicators to see the company's prospects in the future by analyzing financial performance. So high corporate profitability, the company will further develop (Rusandi and Rusdayanti, 2014). For instance, the ratio of profitability to measure the effectiveness of purses companies in making a profit is the Return on Assets (ROA) (Tjiptono & Fakhruddin 2012 in exposures, 2016). The information of a company will certainly cause a reaction from investors or the public. ROA can be employed to predict the company's ability in the long run by considering the profits of the previous period (Ikhwal, 2016).

Company's performance for an investor in use as guidance in determining investment to choose companies with good financial performance. expectations of investors want to get a refund / return profitable investments on its (Azizah and trustful, 2014).
Operations performance, profitability, and the company's shares are expected to affect the market reaction (Kurniawan and Emelda (2016). On the other hand, the research of the market reaction to the rights issue the company showed results be varied.

Disclosure of annual reports by companies is one of the considerations for investors and potential investors to invest in the company. These disclosures are in pour in the annual report the so-called Corporate Social Responsibility (CSR). CSR is one of the company's efforts to build, maintain, and legitimize the company's contribution from an economic and political perspective. Information from CSR, makes the public know the extent to which the company has carried out its social activities. Then the desire of people to live a prosperous and safe consumption of food can be met. Likewise, employee welfare is also fulfilled (Wijaya, 2012). Yaparto, et al (2013) proved that CSR does not have a significant effect on ROA. N Amun thus Bhernadha, et al (2017) otherwise prove CSR significant effect on ROA.

One indicator of the performance of a company is the attitude of the management of interaction with the internal environment and externally. Companies' performances are useful to make improvements in their operations so that they can compete with other companies. Companies' information on performance for investors used for consideration whether to keep investing in the company. A company in the value of managed, if have reached the standards and objectives set (Permatasari, 2017). On the other hand, the success of a company can be seen from the market reaction. Meanwhile, this market reaction can be measured using abnormal returns (Kurniawan, 2016).

In getting an abnormal return, investors can get it through anomalies. Anomalies are events that are not anticipated and offer investors an opportunity to earn abnormal returns. Anomalies arise in all forms of market efficiency, better market efficiency weak, semi-strong, or strong form (Jogiyanto, 2009). Nurdin and Cahyandito (2006) stated that the disclosure of social and environmental themes contained in company annual reports has a positive effect on investor reactions. However, research by Suranta (2010) in Adnyani and Gayatri (2018) shows that disclosure of social and environmental themes does not affect investors' reactions. In this case, it is measured using abnormal return and trading volume activity. CSR disclosure on market reactions suspected to be better, if the company also has a concern for the environment. Problems that occur in the environment, among others, are caused by the practices of industry and company chemicals (Bachri and Febby, 2016). A company should not only try to gain economic benefits, but must also be able to think about environmental quality damage, losses to consumers, employees, and investors (Ridwan, 2007).

In Indonesia, the performance rating of the company in environmental management is called PROPER or Program Performance Rating Company in the Management Life Environmental. The best performance awards are indicated by the color gold, then green, blue, red. But worst ratings were black (Fitriany, 2013). PROPER Rating positive influence on CSR, while CSR has a positive effect on ROA and stock returns Widhiastuti, et al (2017). Rafianto (2015) states that simultaneously there is an effect of environmental performance and CSR disclosure on financial performance.

Environmental pollution carried out by companies is thought to affect market reactions. This reaction relates to investors, environmental groups, community groups who are disadvantaged. If want to keep carrying out their activities, the company must look environment (Muchti and Aristianti, 2014). Based on the description above, researchers are interested in conducting this research, because previous studies have not considered financial performance and market reactions caused by environmental performance and CSR. Then a problem formula can be drawn as follows: Is there an effect of environmental performance and CSR on ROA, and how is the impact on market reactions in manufacturing companies listed in PROPER in 2014-2018?

The purpose of this study was to analyze the influence of environmental performance and CSR on ROA and its impact on the market reaction, the companies listed on the PROPER in the years 2014-2018. The research benefits provide empirical evidence of the application of environmental performance, CSR to ROA, and market reactions. For investors, the results of this study are expected to provide information on how important environmental performance and social responsibility (CSR) are to invest capital in a company. For companies, is expected to be increasingly more to raise awareness of the environment and social responsibility. Following this article discusses about literature review, research and methodology, research and discussion, and conclusion.

**Literature Review**

**Theoretical Background**

**Stakeholder Theory**

Stakeholder Theory states that a company is not the only entity that operates for the benefit of themselves alone, but must provide benefits to all stakeholders (Ghozali and Chariri 2007) It is said that the stronger the stakeholder's position, the more it will be the stronger the tendency of companies to mangadaptsi right itself in accordance with the wishes of stakeholders (Indrawati, 2011). This is useful in complex environments, as companies managing stakeholders have better information to base their decisions on because they are attractive to other market participants. M hey have a level of strategic flexibility (Harrison, Edward and Monica, 2015).

**Legitimacy Theory**

Legitimacy theory explains also that the disclosure practices of corporate responsibility should be such, so that the activities and performance of the company can be accepted by the public. Company legitimacy in the eyes of society, companies tend to use
environmental-based performance and disclosure of environmental information (Djuitaningsih and Marsyah, 2012 in Yanti, 2015). If there is an imbalance, the company will lose its legitimacy and will threaten the sustainability of the company (Djuitaningsih and Erista, 2011). Ghozali and Chariri (2007) said, the company's activities can lead to social and environmental impacts. Legitimacy theory is expected to ensure that the company's activities and performance, including financial performance, can be accepted by the community. Here the company's annual report is used as information to describe environmental responsibility. A and trust from the community, can increase the value of the company, so as to increase company profits.

**Signal Theory**

When information or shareholders invest in the company, it will increase the company value of the company in the future (Jogiyanto, 2014 in Lukiman and Yudith, 2018). The principle of Signal theory is that every action contains asymmetric information. Asymmetric information is a condition in which a party has more information than other parties (Pramastuti, 2007).

**Corporate Social Responsibility (CSR)**

The company's participation in social responsibility, such as sewage treatment, health protection and safety, strict control on products that are environmentally friendly, are considered adding to the cost, which ultimately reduces profit sharing (dividend) for investors (Yaparto, et al., 2013). CSR and environmental performance according to stakeholder theory and legitimacy, it will affect financial performance, and will also affect market reactions.

**Financial Performance**

Performance has the meaning of the achievements of the company in a certain period that reflects the level of the company's health (Sukhemi, 2007 in Ikhwal, 2016). Financial performance is usually measured by indicators of capital adequacy, liquidity, profitability (Jumingan, 2006 in Ikhwal, 2016). Fahmi (2014) in Sipahelut et al (2017) says, that financial performance is an analysis to see how far the company in using the rules of financial performance is good and right. Financial ratio analysis is an analysis used in assessing the company's financial performance. Financial ratios are done by way of comparing finance existing posts. Financial ratios consist of: liquidity ratios, solvency ratios, activity ratios, profitability ratios, growth ratios and assessment ratios. Profitability ratios are often used in a study, financial performance according to signal theory will affect market reactions.

**Market reactions**

If an announcement contains information (information content), it is expected that the market will react when the announcement is received by the market. Market reactions are indicated by changes in the price of the security in question. Market reaction can be measured using abnormal return (AR). Abnormal return (AR) is the return obtained right by the investor is not in accordance with expectations. AR is the difference between the expected returns and those obtained. Difference in return is said to be positive, if the return obtained is greater than the return expected or returns are calculated. Return negative if the return obtained is smaller than expected return or return is calculated.

**Research and Methodology**

**Types of research**

This research is an explanatory study, which aims to test a theory or hypothesis to strengthen or even reject existing theories or research hypotheses.

**Population and Sample Research**

This study uses manufacturing companies listed on PROPER 2014-2018 which are listed on the IDX. Sampling using a purposive sampling technique amounted to 39 companies. Sample criteria: manufacturing companies that publish financial reports in 2014-2018 and got the right color rank in the assessment of the Ministry of Environment PROPER year period 2014-2018.

**Research variables**

The independent variables are environmental performance (X1) and CSR (X2). The dependent variable is the financial performance with indicators of ROA (Y1), and market reaction (Y2).

**Data Analysis**

Analysis of the data in this study using the descriptive statistic which consists of minimum value, maximum value, mean, and standard deviation measurement. Classic assumption test using the test for normality, multicollinearity test, heteroscedasticity test. Verification analysis to test the truth of the hypothesis, followed by path analysis. A partial path coefficient, t-test was used. Test F (Simultaneous Testing).
Information:

Red arrow = indirect effect
X1 = Environmental performance
X2 = CSR
Y1 = ROA
Y2 = Market reaction
\( r_{x1 \times y2} \) = Correlation coefficient of environmental performance with CSR
\( \rho_{x1} \) = Path coefficient of environmental performance on ROA
\( \rho_{x2Y2} \) = CSR Path Coefficient to ROA
\( r_{x2 \times y1} \) = Correlation coefficient between CSR and ROA
\( \epsilon_1 \) = other factors that affect financial performance disclosure (ROA)
\( \epsilon_2 \) = other factors that influence the disclosure of market reactions
\( \rho_{x2 \times y2} \) = Path coefficient of environmental performance to market reactions
\( \rho_{x2} \) = CSR path coefficient to market reaction

Result and Discussion

Descriptive Analysis

Figure 2: PROPER

Figure 2, shows that the average ratio from 2014 to 2018 is the PROPER rating at rank 3 (blue category). The minimum PROPER rating in 2014-2015 is 2, which is in the red category. Then maximum rank 5, which is the gold category, meaning that the company has made environmental management more than required and have made efforts 3R (Reuse, Recycle, and Recovery). The company has been implementing sustainable environmental management systems. Besides, he has made efforts that are useful for the long-term benefit of society. The company that received the gold was Holcim Indonesia Tbk. In 2016, the minimum PROPER rating of the company was 2 (red), while the highest PROPER rating in 2016 was green.

T ear 2014-2018, category 3 (blue) 80% -83%. It is pointed out that many companies that have made the required environmental management efforts. In contrast to 2018, category 3 (blue) rating decreased to 72.4%, but the green PROPER assessment that the company got was increasing.
In 2014 and 2015 some companies received gold, the company was Holcim Indonesia Tbk. According to Rahmawati (2012), good environmental management will avoid public and government claims and can improve the quality of a company's products. So that later it will increase the company's financial benefits.

The acquisition of Red PROPERTY (2015, 2017, 2018) is quite disappointing because the company has not carried out environmental management following applicable laws. There could be the possibility that the company will deliberately not take the required environmental management efforts.

Financial performance of the year 2014-2018, as measured by ROA shows the average - an average of 5.983, meaning that average - average companies tend to have poor financial performance. Financial performance low of -22.14 in 2016. Companies that have lower financial performance, will certainly possess investment opportunities that are less well anyway. This shows, that the management company has performed less well with the assets and management. The highest financial performance reached 46.66 owned by Unilever Indonesia Tbk. This means that the company has good investment opportunities and management has a good performance in assets management.

Keika environmental management, certainly his company will allocate environmental costs. However, the company considers that environmental costs only be an additional expenditure of funds for the company. The company assumes that environmental costs will be accounted for by reducing the company's profit. Even though there is an allocation of costs for environmental management, it will show the consistency of the company in its concern for the environment, so that it will build public trust in terms of corporate social responsibility (Tunggal & Fachrurrozie, 2014). Environmental costs can be regarded as a long term investment companies such. This can be understood because the funds spent to give the company a good name and increase stakeholder confidence in the company.

On the other hand, the market reaction seen from the Abnormal Return (AR) obtained by 30 manufacturing companies in this study fluctuated from 2014 to 2018. AR value of -41425 at Gudang Garam Tbk company in 2015 and the highest at 88775 in Gudang salt company Tbk in 2017.

**Classic Assumption Testing**

**Normality Test**

The normality test of Path I and II shows that the data spread around the diagonal line and follows the direction of the diagonal line, so the Path I and II regression models fulfill the Normality assumption.

**Multicollinearity Test**

Multicollinearity measurement in this study, seen from the value, shows that the results between the independent variables do not occur multicollinearity.

**Heteroscedasticity Test**

The heteroscedasticity test for the path I and II show that the regression model used in this study does not occur heteroscedasticity.

**Multiple Regression Analysis**

**Determination Coefficient Test**

The coefficient of determination on the path I regression model shows the correlation coefficient (R) of 0.374 which indicates that the line I regression model has a weak relationship between the independent variable and the dependent variable because it has a value of R < 0.5.

As for the value of Adj. R2 is 0.073, indicating that the path I regression model is only 7.3% of the dependent variable (ROA). This can be explained by the independent variables (Environmental Performance and CSR). While the remaining 92.7% is explained by other variables not included in the study, which may affect the dependent variable (ROA).

Coefficient test of determination of the regression line 2, showed that the rate of the correlation coefficient (R) of 0.67 which indicates that the regression model line 2 the relationship between the dependent and independent variables strong because it has a value of R > 0.5.

As for the value of Adj. R2 is 0.384, indicating that in the path I regression model only 38.4% of the dependent variable ( Abnormal Return ) can be explained by the independent variable (Environmental Performance, CSR, and ROA). The remaining 61.6% is explained by other variables not included in the study which may affect the dependent variable ( Abnormal Return ). So that the total coefficient of determination can be calculated:

\[
R^2_m = 1 - ((Pe_1) (Pe_2))
= 1 - ((1 - R^2_1) (1 - R^2_2))
= 1 - ((1 - 0.140) (1 - 0.450))
\]
This means that the diversity of data that can be explained by the model is 47.3%. In other words, the information contained in the data is 47.3%. Then 52.7% explained by other variables that have not been present in the model and error.

Simultaneous Significance Test (Test F)

The F test results indicate that the path I regression model cannot be used to predict ROA because the F test significance level of 0.142 is greater than the 0.05 significance level. So it can be concluded that there is no significant influence between environmental performance and CSR simultaneously on ROA.

The path II regression model can be used to predict abnormal returns because the F test significance level of 0.002 is smaller than the 0.05 significance level. It can be concluded that there is a significant influence between environmental performance, CSR, and ROA simultaneously to AR.

Result of Parameter Significance Test (t-test)

Based on the results of the t-test on the path I regression model, it shows that the independent variables of environmental performance and CSR have no significant effect on ROA. This can be seen from the significance value of the t-test results for each independent variable. Environmental performance shows a significance value of 0.124 which is greater than the 0.05 significance level and CSR shows a significance value of 0.252 which is greater than the 0.05 significance level.

Based on the results of data analysis, the regression model equation for the path I am obtained as follows:

\[ Y_1 = 6.277 + 0.290X_1 + 0.214X_2 + 0.179 \]

Test of Significance of Parameters (t-test)

The results of the t-test on the regression model path II, that the independent variables of environmental performance and CSR have no significant effect on AR. This can be given the significant value of the t-test results of each independent variable. Environmental performance shows a significance value of 0.633 which is greater than the significance level of 0.05 and CSR shows a significance value of 0.672 which is greater than the significance level of 0.05. Meanwhile, the results of the t-test of ROA showed a significance value of 0.00 which is smaller than the 0.05 significance level. This means that ROA affects AR.

Based on the analysis results obtained by the path II regression equation as follows:

\[ Y_2 = -1.437 - 0.075X_1 + 0.671Y_1 + 0.146 \]

\[ AR = -1.437 - 0.075KL + 0.671CSR + 0.146 \]

Path Analysis

The path coefficient is calculated by constructing two structural equations, namely: Direct effect: \( Y_1 = a + \beta_1X_1 + \beta_2X_2 \), Indirect effect: \( Y_2 = a + \beta_1X_1 + \beta_2X_2 + \beta Y_1 \)

Discussion

The environmental performance of manufacturing companies in this study (2014-2018) is not in line with predictions based on theory. The environmental performance variable is not a factor that affects the company's financial performance. For example, in 2014-2015, Mayora Indah Tbk had a PROPER level of 2 (red) but it was not comparable to its high financial performance, which was 3.98 and increased by 11.02. Likewise, with HM Sampoerna Tbk from 2014-2015 to 2016-2018, environmental performance increased from 3 (blue) to 4 (green) which is not linear with financial performance, in 2014-2015 it fell from 35.9 to 27.26 so with 2016-2018 from 30.02 decreased to 29.37 in 2018 to 19.73.

The results of the research prove that CSR does not affect ROA. This shows that more and more companies are implementing CSR, but it does not necessarily affect the company's financial performance. The empirical evidence is not able to prove that a statement of corporate social responsibility in the annual report aims that the company has received positive responses from the stakeholders. The stakeholders, especially the community, should feel happy if the companies in the surrounding environment have a concern for the environment.

This result than different research by the Son (2015), which is proven their positive and significant impact on the profitability of the company's CSR as measured by ROA in the consumer goods industry companies listed on the Stock Exchange in 2010-2013.

The environmental performance also does not affect the market reaction. PROPER From 2014-2018, proved to be quite high. Most companies get PROPER ratings on k belonging to the selected 3 (blue) amounted to 79.32%, which shows that already many companies have made efforts in environmental management that are required following applicable regulations.
Research results have shown environment performance does not affect the market reaction. This may be because investors and consumers in Indonesia do not believe in the disclosures made by companies. Some investors may assume that the disclosure of environmental performance by companies tends to just look for a good name only. As a result, investors became less confident in the disclosures made by the company.

Maharani (2012) states that the difference in the time before and after the Law 40 of 2007 and Decree of Chairman of Bapepam LK No. Kep-134 / BJ / 2006 on the liability Annual Reports issued for a public company. This led to additional disclosure such as social responsibility and was previously a voluntary becomes mandatory. Investors view that disclosure is only the company's obligation and has no added value. Therefore, it does not affect the market reaction.

This research shows that investors or the public in Indonesia have not included information regarding the disclosure of environmental responsibility in their investment decision making. It is assumed that most of the investment decisions made by investors or public interest in the products produced by companies are influenced by information other than research variables, such as company profits. CSR disclosure that does not affect AR is also suspected because CSR disclosure is not captured by the market as good news. The sample manufacturing companies' CSR disclosure shows an average CSR of 84%. Even though in Indonesia CSR disclosure is still voluntary, it turns out that manufacturing companies, especially those that get proper, are already trying or have the awareness to disclose CSR. However, it seems that investors do not believe in CSR disclosures by companies, because until now there are still many cases related to environmental, social, and economic issues. As a result, investors consider that the disclosure of CSR as a formality mere.

The high costs required by companies to implement CSR programs can also cause investors to be reluctant to invest. It is suspected that there is an assumption that the cost of the CSR program is a waste that will reduce company profits. Alternatively, investors react outside of this research period. According to Jogiyanto (2009), that the signal given disclosure of CSR management is very difficult to measure signal economic value. So, the investor will require a longer time to react.

Based on the test results, it is stated that ROA affects market reactions by using the AR indicator. The bigger or smaller the ROA number will affect the company's AR. These results are consistent with research by Cahyaningrum & Tiara (2017) which shows that the variables EPS, PBV, ROA, and ROE in 2010-2014 simultaneously and partially have a positive influence on stock price variables. However, this study is not following the research conducted by Priana (2009) which states that there is no significant relationship between ROA and stock returns, meaning that the value of ROA on stock returns. It shows that investors do not pay attention to ROA in investment decisions, because ROA has a weakness, which tends to focus on the short term and not on long-term goals.

Conclusions

This research concludes the following points Environment performance does not significantly influence financial performance, CSR has no significant effect on financial performance., Environment performance does not significantly influence the market reaction, CSR does not have a significant effect on market reactions, and finance performance have significant effect on market reaction. These results indicate that environmental performance and CSR are still not the main considerations of stakeholders in Indonesia. investors are still very concerned about value in financial performance. Thus further research can seek deeper information on why in Indonesia CSR disclosure and environmental performance are not considered things.

References


