The Effect of Environmental Performance on Firm Value with Mediating Role of Financial Performance in Manufacturing Companies in Indonesia

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Abstract

The purpose of this study is to investigate the determinants of firm value by formulating the relationship between environmental performance and the intervening variable of financial performance. This study analyzes how public companies in Indonesia comply with environmental responsibility and use it as a basis for increasing corporate value. Using the sampling of purposive sampling method, the research was conducted by examining 64 basic industries and mining companies listed on the Indonesia Stock Exchange during 2016-2018. Empirical testing is done by path analysis. The results of the study suggest that firms are more likely to be able to increase the utility of environmental performance by mediating effects of financial performance. This means that the environmental performance effect is more likely in firms that have superior financial performance. Practically speaking, the results have implications that the implementation of environmental responsibility supported by adequate financial resources can significantly affect the perception of sustainability by company stakeholders and ultimately increase firm value.

Keywords: environmental performance, financial performance, firm value

1. Introduction

Each entity has the objective of maintaining the continuity of its business so that its existence is maintained. In maintaining the continuity of its business, an entity must have clear and directed goals. According to Anjasari & Andriati (2016), there are several things that are the goals of business entity that plays an important role in achieving maximum profit for the welfare of stakeholders. In addition, business entities are also internally obliged to maximize the value of the company by increasing share prices. Companies in achieving these goals will face many challenges. Companies will not only face challenges in maximizing their financial performance and generating economic benefits.

Another problem that companies must face is environmental problems because the company will involve the environment so that the environment contributes to the company in achieving its goals. Commitment to the environment and social environment is the main and inseparable part of the company’s operational activities (Ningsih & Rachmawati, 2017). Companies are not only required to pursue economic benefits, but also should pay attention to the environment and social
environment. In other words, companies must be oriented to the triple bottom line concept, which includes finance (profit), social (people), and environment (planet). The company’s responsibility for the environment and social environment is regulated in Law No. 40 of 2007 concerning Limited Liability Companies (Andriansyah et al., 2021). The Law obliged the implementation of social and environmental responsibility, especially for companies engaged in natural resources (Azhari et al., 2021). Environmental performance management is a management effort in preventing environmental damage with the aim of preserving the environment. A good company’s environmental performance can be used as a factor in increasing company value, the better the company’s responsibility for environmental sustainability, the better the company’s image (Hariati & Rihatiningtyas, 2015). Companies that have good environmental performance will receive a positive response from investors, so that the company’s value can be increased through an increase in share prices. In addition, the company must also have good financial performance in its business activities or processes to have high corporate value (Ologbenla, 2021). Financial performance is one of the factors seen by an investor to determine stock investment. For a company, maintaining and improving financial performance is important so that investors remain interested in and interested in company shares. Good performance will be able to give a positive signal to investors to invest (Handayani, 2019).

Previous research conducted by Widhiastuti et al. (2017) and Tjahjono & Eko (2013) stated that environmental performance has no effect on firm value. Meanwhile, Hariati & Rihatiningtyas (2015) and Mardiana & Wuryani (2019) stated that environmental performance has a positive effect on firm value. Research conducted by Tadros & Magnan (2019) states that environmental performance has no effect on financial performance. Meanwhile, research conducted by Fauziyyah (2019) and Lu & Taylor (2018) states that environmental performance has a positive effect on financial performance. Research conducted by Ghaesani (2016) and Bukit et al., (2018) states that financial performance has no effect on firm value. Meanwhile, research conducted by Puspitasari (2019) and Septiadi (2016) states that financial performance has a positive effect on firm value.

2. Literature Review

2.1 Environmental Performance

Environmental performance refers to a measure to identify the control system run by the company related to environmental management (Astuti et al., 2017). Environmental performance is the company’s performance in creating a good environment (Burhany & Nurniah, 2018). Environmental performance is a company effort in creating a good environment and preserving the environment (Sadma, 2021). Good performance is reflected by the low level of environmental damage, and preferably, high environmental damage indicates the failure of the company’s environmental control and management system (Sulistiawati & Dirgantari, 2017; Indriastuti & Chariri, 2021).

Indonesian Ministry of the Environment implemented the Company Performance Rating Program in Environmental Management (PROPER) in assessing firm compliance with environmental performance. PROPER was held to increase the company’s role in environmental conservation programs. The PROPER rating is reliable and trustworthy enough to measure the company’s environmental performance, because of its compatibility with ISO 14001 (Saputra & Mahyuni, 2018). Therefore, the indicator for measuring the environmental performance of companies in Indonesia uses PROPER.

2.2 Firm Value

Firm value is defined as market value (Martins & Lopes, 2016). Firm value is the market value or price applicable to the company’s general shares. An increase in share prices can provide maximum benefits to shareholders as well as encourage high company value (Aulia & Noorlaily, 2018). A high company
value will result in a high share price, and increase market confidence in the company’s current and future performance. Firm value describes how well or poorly management manages its resources. This can be seen from the measurement of financial performance. The performance of the company can be in the form of economic, social, and environmental performance in repairing damage (Hirdinis, 2019).

Various studies suggest the widespread use of Tobin’s Q ratio to estimate firm value. This ratio is obtained by calculating the ratio between the stock market value and the book value of equity (Diana, 2020). A high Tobin’s Q value of more than 1 indicates that the company’s market value is greater than the listed company’s asset value. This indicates that the market gives more value to the company, the higher the value of Tobin’s Q ratio, indicating that the company has the prospect of a high growth rate as well.

2.3 Financial Performance

The company’s financial performance is a certain measure used by entities to measure success in generating profits. The company’s financial performance can be measured from the financial statements issued by the company periodically which provide an overview of the company’s financial position (Lako, 2011). The information contained in the financial statements is used by investors to obtain estimates about future profits and dividends and the risks associated with that valuation. Financial information is needed by investors in the form of quantitative and qualitative information, both from internal company / management and external parties. External financial information in the form of published reviews of financial analysts and consultants. Apart from financial information, non-financial information can also be used as a basis for measuring company performance, such as customer satisfaction with company services (Ong et al., 2016).

The financial performance of a company can be measured using financial ratios. Financial ratios are the most frequently used financial analysis tools. Financial ratios can be used to determine whether a company has deviated or not, by comparing it with previous years. There are many types of financial ratios that are usually used to analyze financial performance. According to Hazudin et al. (2015) there are several financial ratios that are commonly used, namely: Liquidity Ratio, Activity Ratio, Solvency Ratio (Leverage Financial), Profitability Ratio, Growth Ratio, Growth Ratio valuation and the Market Value Ratio.

The financial performance in this study uses a profitability ratio. Profitability is a measure commonly used to assess the extent to which a company is able to generate finance or profits at the maximum level. Profitability can be used as an evaluation or effectiveness of the management of the business entity. In addition, it can also be used to measure how efficient the company is in using its assets and how efficient the company is in running its operations. In this study, financial performance is measured by the ratio of Return on Equity (ROE). ROE is an analysis commonly used by investors to measure how much profit the owner of the capital is entitled to (Ross et al., 2013). For investors, return on equity analysis is important because the analysis can determine the benefits of the investment made. For companies, this analysis is important because it is an attractive factor for investors to invest. In general, the higher the return or profit earned, the better the position of the company owner. Return on Equity shows the profitability of your own capital or is often referred to as business profitability. Companies with high return on equity mean that they have high financial performance (Khaddafi & Heikal, 2014). This ratio is also influenced by the debt of large and small companies, the greater the debt, the greater the return on equity. ROE shows the company’s ability to get net income for shareholders, a greater ROE indicates the greater the company’s performance.

3. Hypothesis Framework

3.1 Effect of environmental performance on financial performance

In legitimacy theory, both the private sector and the public sector require good justification from the community as the basis for their business operations, which is also used as the basis for allocating
economic resources. This theory is also closely related to companies operating in the extractive sector and is also a guide for companies to carry out social and environmental responsibilities to gain legitimacy from the public. Companies use their annual reports to illustrate the impression of environmental and financial responsibility, so that they are accepted by society. According to Widhiastuti et al. (2017), when a company incurs costs related to environmental aspects, it will automatically build a good image in the eyes of stakeholders or investors. Supadi & Sudana (2018) suggest that there is a positive influence between environmental performance and financial performance. This finding is able to prove the legitimacy theory as the basis for explaining the effect of environmental performance on financial performance. Therefore, the first hypothesis in this study is:

\[ H_1: \text{Environmental performance has a positive effect on financial performance} \]

3.2 Effect of environmental performance on firm value

Companies are required to carry out business activities not only to focus on looking for big profits but also to pay attention to the surrounding environment. Environmental conditions can provide an image and impact on society and the progress of a company. If a company pays attention to good environmental concerns, the community and investors will have a positive impact. According to research Saputra & Mahyuni (2018) environmental performance has a significant positive effect on firm value. This means that companies that are able to pay attention to environmental and social concerns in society will give a positive impression so that the company will be seen as a large company. Therefore, the second hypothesis in this study is:

\[ H_2: \text{Environmental performance has a positive effect on firm value} \]

3.3 Effect of Financial Performance on Firm Value

Financial performance is the achievement that has been achieved by the company in a certain period and is stated in the financial statements. Financial performance can be assessed from several aspects, namely the higher the value of the company, the better the financial performance of a company. According to Mudjijah et al. (2019) financial performance has a significant effect on firm value. This means that company value can help improve financial performance. With a good operational level, it is expected that the company will be able to obtain high profits. Therefore, the third hypothesis in this study is:

\[ H_3: \text{Financial performance has a positive effect on firm value} \]

3.4 Environmental Performance, Firm Value and Financial Performance

Various environmental problems that occur in Indonesia can cause claims from the community because the company’s production activities disturb and even damage the environment and have an impact on the community (Lingga & Suaryana, 2017). The company’s concern for the environment will provide added value because several aspects will affect the company’s goals, namely financial performance and company value (Tantra, 2018). This phenomenon supports the legitimacy theory which is a form of recognition of the existence of companies from the community. According to Fauziyyah (2019) environmental performance directly affects firm value through financial performance. Therefore, the fourth hypothesis in this study is:

\[ H_4: \text{Financial performance mediates the relationship between environmental performance and firm value} \]

4. Research Methods

In this study, the population used is the mining sector companies and basic industrial and chemical manufacturing companies listed on the Indonesia Stock Exchange. The data used in this study are
secondary data obtained from the Indonesia Stock Exchange in the form of annual financial reports of each company for the 2016-2018 periods. The sample selection was done by using purposive sampling method with sample criteria. With the above criteria, the sample size is 64 companies. The data analysis method used in this research is the R² model test and hypothesis testing. This study uses the path analysis method to examine the effect of the intervening variables. Path analysis is used to determine the causality relationship between variables.

Environmental performance is operationally defined as the company's performance to create a good environmental condition or when the company incurs costs related to environmental aspects. This indirectly provides a good image for stakeholders and potential investors. The proxies used in this study use Proper issued by the Ministry of Environment and Forestry, which includes the company’s ranking in five colors.

<table>
<thead>
<tr>
<th>COLOR</th>
<th>INFORMATION</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOLD</td>
<td>Having carried out more environmental management than required and has made 3Rs (Reuse, Recycle, and Recovery), implemented a sustainable environmental management system and made efforts that are useful for the benefit of the community in the long term.</td>
<td>1</td>
</tr>
<tr>
<td>GREEN</td>
<td>Having carried out more environmental management than required, has an environmental management system, has a good relationship with the community, including making 3Rs (Reuse, Recycle, and Recovery).</td>
<td>2</td>
</tr>
<tr>
<td>BLUE</td>
<td>Having made the required environmental management efforts in accordance with the applicable provisions or regulations.</td>
<td>3</td>
</tr>
<tr>
<td>RED</td>
<td>Undertaking environmental management efforts, however, only some have achieved results in accordance with the requirements as stipulated in statutory regulations.</td>
<td>4</td>
</tr>
<tr>
<td>BLACK</td>
<td>Not making significant environmental efforts, deliberately not making environmental management efforts as required, and potentially polluting the environment.</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: KLH Proper Concept

Financial performance is a form of company achievement that is seen and measured from the financial statements that reflect the state of the company during a certain period. In this study, the indicator used to measure the level of financial performance measures is Return on Equity (ROE).

\[
\text{ROE} = \frac{\text{Net Income}}{\text{Equity}}
\]

Firm value shows the view of investors or stakeholders on the condition of the company. If the company can provide welfare to shareholders, the public will judge that the company has a high value. In this study, company value is measured using the Tobins' Q formula including common shares and shareholder equity, but all assets owned by the company.

\[
\text{Tobin's Q} = \frac{\text{Share Market Price} + \text{Liabilities}}{\text{Total Asset}}
\]

5. Results

Based on Table 2, the N value is obtained which describes the number of data analyzes totaling 129 data, showing information about the minimum value, maximum value, average and standard deviation of each variable.

<table>
<thead>
<tr>
<th>Information</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Performance</td>
<td>129</td>
<td>2</td>
<td>5</td>
<td>3.280</td>
<td>0.739</td>
</tr>
<tr>
<td>Firm Value</td>
<td>129</td>
<td>0.0007</td>
<td>2.31</td>
<td>0.690</td>
<td>0.642</td>
</tr>
</tbody>
</table>
Based on the results of model 1 test in Table 3, the regression equation that reflects the variables in this study are as follows:

\[ Z = 1.512 + 0.027 X_1 + e_1 \]

Based on the results of partial parameter testing, it is found that environmental performance shows a Beta Coefficient value of 0.027 with a significance of 0.021 < 0.05 (Alpha 5%), so Hypothesis 1 is accepted, thus it can be concluded that environmental performance has a significant effect on financial performance.

Table 3: Significance Test Results (t test)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.51</td>
<td>1.24</td>
<td>1.31</td>
</tr>
<tr>
<td></td>
<td>Environmental Performance</td>
<td>-0.65</td>
<td>0.36</td>
<td>-181</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>3.20</td>
<td>0.76</td>
<td>4.40</td>
</tr>
<tr>
<td></td>
<td>Environmental Performance</td>
<td>-0.53</td>
<td>0.32</td>
<td>-2.23</td>
</tr>
</tbody>
</table>

Based on the results of the SPSS model 2 tests in Table 4, the regression equation that reflects the variables in this study are as follows:

\[ Y = 3.198 + 0.298 X_1 + 0.449 Z + e_2 \]

Based on the results of partial parameter testing, the results show that the Environmental Performance shows the Beta Coefficient value of 0.298 with a significance of 0.041 < 0.05 (Alpha 5%), so Hypothesis 2 is accepted. Thus, it can be concluded that environmental performance has a significant effect on firm value. The result of partial parameter testing shows that the financial performance shows the Beta Coefficient value of 0.449 with a significance of 0.003 < 0.05 (Alpha 5%), so Hypothesis 3 is accepted. Thus, it can be concluded that financial performance has a significant effect on firm value.

Table 4: Determination Coefficient Test Results (R²)

<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.031 *</td>
<td>0.552 *</td>
</tr>
<tr>
<td>R Square</td>
<td>0.84</td>
<td>0.29</td>
</tr>
<tr>
<td>Adjusted R-Square</td>
<td>0.85</td>
<td>0.25</td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>1.69</td>
<td>1.13</td>
</tr>
</tbody>
</table>

Analysis on R-square value showed its coefficient of determination of 0.849 (Table 4). This means that the variable firm value can be explained by environmental performance variables of 84.9 percent. The results also showed the error value in regression model 1 as follows:

\[ e_1 = \sqrt{1 - (0.849)} = 0.389 \]

The results of testing found the coefficient of determination of 0.298 (Table 5). This means that the variable firm value can be explained by environmental performance and financial performance variables by 29.8 percent. The error value in regression model 2 is thus presented as follows:

\[ e_2 = \sqrt{1 - (0.298)} = 0.838 \]
Based on Figure 1, it can be concluded that environmental performance has no indirect effect on firm value. This is because the value of the direct effect is greater than the indirect effect $0.298 > 0.012 (0.027 \times 0.449)$. Thus, it can be concluded that there is no effect of environmental performance on firm value through financial performance, so Hypothesis 4 is rejected.

6. Discussion

The results of hypothesis testing indicate that hypothesis 1 stating that environmental performance affects financial performance is accepted. So, it can be concluded that environmental performance variables have an effect on financial performance. The results of this study are also in line with Fauziyyah (2019) and Lu & Taylor (2018) which states that if a company has good environmental performance it will have an impact or effect on financial performance, namely when the company incurs costs related to environmental aspects, it will automatically build a good image both for stakeholders and potential investors.

Environmental performance, which is measured using the PROPER rating, is quite reliable as a measure of a company's environmental performance. Companies that participate in PROPER activities will gain trust not only from stakeholders but from the community, so that it will have an impact on the financial performance of a company. The results of this study are also in line with the theory of legitimacy, namely when the company has explained that the company by participating in PROPER activities directly provides information about how the company should pay attention to environmental performance. Because community legitimacy is the company's strategy to develop the company going forward. Clarissa & Rasmini (2018) state that when the public realizes that a company operates in accordance with a value system that is sustainable with community values, it is highly likely that the company will be sustainable.

The results of hypothesis testing indicate that hypothesis 2 in this study stating that environmental performance affects company value is accepted, so it can be concluded that environmental performance variables have an effect on firm value. The results of this study are also in line with Hariati & Rihatiningtyas (2015), Ullah (2018) and Mardiana & Wuryani (2019), namely that there is a significant positive effect on company value, namely that companies that are able to pay attention to environmental and social concerns in society will give a positive impression so that the company will be seen as a company the big one.

The results of this study support the theory used in this variable, namely the theory of legitimacy. If the company is able to pay attention to its environmental management, the community
will respond well to its existence, so that the company gets a good image. Investors are more interested in companies that have a good image in the eyes of the public, because this will have an impact on consumer loyalty to the company’s processed products. This means that by paying attention to environmental performance, it will have a positive impact on company value. With so many environmental issues that are happening, it will make the community demand that companies pay attention to social and environmental impacts. With the program created by the Ministry of Environment, namely PROPER, the company directly made an acknowledgment of its good image for the community. With this, of course, it will attract investors to the company.

The results of hypothesis testing indicate that hypothesis 3 in this study stating that financial performance has an effect on firm value is accepted, so it can be concluded that financial performance variables have an effect on firm value. The results of this study are in line with Puspitasari (2019) and Septiadi (2016) which state that financial performance has a significant effect on firm value. The results of this study explain that the higher the financial performance proxied by ROE, the higher the firm value. ROE is a profitability ratio. The higher the return or profit obtained, the better the position of the company owner. With this, it will increase the company’s attractiveness to investors to make the company a place to invest. The results of this study are also in line with signal theory which states that the information in the financial statements that reflects the company's value is a positive signal that can influence investors and other interested parties to invest (Susilo, 2018). The positive information will have a positive signal to stock trading.

The results of testing the hypothesis stating that financial performance mediates the relationship between environmental performance and firm value are in line with Sri Handayani (2019) which shows that hypothesis 4 in this study is rejected, so it can be concluded that financial performance variables cannot mediate the relationship between environmental performance and firm value because firm value is influenced by other factors. This indicates that if the environmental performance is good without financial performance, the company value will remain good. However, it is different from Fauziyyah (2019) which states that financial performance is able to mediate the relationship between environmental performance and firm value. According to the conclusion of his research, paying attention to environmental aspects will improve financial aspects because of public trust in the company.

7. Conclusion

Based on the results and analysis of this study, it can be concluded that environmental performance has a significant effect on financial performance, this indicates that good environmental performance by the company will affect financial performance with the Return on Equity ratio. So that investors are interested in investing in the company. Environmental performance also affects company value. Where in this study shows that a good environmental performance will provide a good image in the eyes of the community or stakeholders. So that the company's legitimacy in the eyes of investors gets a positive signal. Other conclusions in this study also indicate that financial performance has an effect on firm value. High financial performance reflects the value of the company can provide positive signals that can influence investors and other parties to invest. This research also shows that financial performance mediates the relationship between environmental performance and firm value. The indirect effect of environmental performance on firm value through financial performance shows insignificant results. This indicates that if the environmental performance is good without financial performance, the company value will remain good. This research is expected to be able to provide benefits to academics in developing research on environmental performance and provide an overview for companies of the importance of environmental performance and financial performance on company value. Suggestions for further research are to be able to use a longer time span, expand the variables and expand the sample so as to get a better examination using different analyzes.
References


