META-ANALYSIS OF ENVIRONMENT REPORTING AND CORPORATE FINANCIAL PERFORMANCE

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ABSTRACT

The relationship between environmental reporting and corporate financial performance has become an interesting research topic for academics and business practitioners alike. This study aims to conduct a meta-analysis of studies that examine these relationships. This meta-analysis used 12 studies published between 2022-2024. The results of the analysis showed that there was a significant positive relationship between environmental reporting and the company's financial performance with an effect size value of 0.880 in the large effect size category. These findings show that companies that actively report their environmental performance tend to have better financial performance than companies that don’t.

Keywords: Environmental Reporting, Corporate Financial Performance, Meta-analysis

INTRODUCTION

In today's business context, sustainability and environmental responsibility have become very important (Alfi et al., 2024). Companies that focus on sustainability and the environment can improve people's reputation and trust, as well as increase business value (Jamil & Khan, 2024). Thus, companies that focus on sustainability and the environment can improve the quality of life of people and ensure the sustainability of environmental functions for the benefit of their lives in the future. In addition, sustainability and the environment can also help companies reduce operational costs and improve business efficiency, thereby increasing profits and competitiveness in the market (Rahi et al., 2024).

Environmental responsibility is also very important in today's business. Companies must ensure that their operational activities do not damage the environment and do not cause negative impacts on society (Zubeltzu & Jaka et al., 2024). Therefore, companies must increase awareness and seriousness in managing the environment, such as by reducing greenhouse gas emissions, reducing the use of harmful chemicals, and increasing the sustainable use of natural resources (Shatnawi et al., 2024). Thus, the company can improve the reputation and trust of the public, as well as increase business value and profits. In addition, environmental responsibility can also assist companies in reducing business risks and improving environmental safety, so that it can improve business sustainability in the future (Rahmaniati & Ekawati, 2024).
Furthermore, Environmental reporting has become an important tool for companies to demonstrate their commitment to sustainable practices (Safi et al., 2023; Bendig et al., 2023). In recent years, companies have been required to report on their environmental performance, such as greenhouse gas emissions, the use of hazardous chemicals, and waste management. By doing so, companies can demonstrate their commitment to sustainable practices and increase transparency in their operations. Environmental reporting also helps companies measure environmental performance and increase public awareness of the environmental impact of a business (El Manzani et al., 2024; Safi et al., 2023).

Environmental reporting also helps companies in improving public reputation and trust. By reporting on environmental performance, companies can demonstrate their commitment to the environment and increase public awareness of the importance of sustainability (Shatnawi et al., 2024; Ouyang et al., 2024). In addition, environmental reporting also helps companies improve operational efficiency and reduce operational costs. Thus, the company can increase its profitability and competitiveness in the market. Therefore, environmental reporting has become an important tool for companies to demonstrate their commitment to sustainable practices and improve public reputation and trust.

Environmental reporting has become an important tool for companies to demonstrate their commitment to sustainable practices and improve stakeholder perception. By reporting on environmental performance, companies can demonstrate their awareness and commitment to the environment, as well as increase transparency in their operations (Bauckloh et al., 2023; Cuomo et al., 2024). This can increase the trust of investors and other stakeholders in the company, so that it can increase the potential of investors to invest their capital. Companies that care about their surroundings and report their environmental performance transparently can improve the company's image in the eyes of the public and increase investor satisfaction, which can ultimately increase the company's value (Gerged et al., 2023). Therefore, there is a need for meta-analysis research to find out the in-depth and accurate relationship between environmental reports and company performance.

Meta-analysis has become an important tool in understanding the relationship between environmental reports and a company's financial performance. By combining the results of several studies, meta-analysis can be helpful in identifying patterns and variations that affect the relationship between environmental reporting and financial performance (El Manzani et al., 2024). This can help companies increase transparency and public awareness of the impact of the business environment, as well as increase investor and other stakeholders' trust in the company (Ahmed & Yahaya, 2024). Meta-analysis also helps in identifying moderators who influence the relationship between environmental reports and financial performance. For example, some studies show that better financial performance can be obtained by increasing the transparency of environmental reports and increasing public awareness of the environmental impact of businesses (Adamkaite et al., 2022). In addition, meta-analysis also helps in identifying factors that affect financial performance, such as the size of the company, the industry, and the quality of environmental reports. Thus, meta-analysis can help companies improve financial performance and increase investor and other stakeholders' confidence in the company. Based on this, this study aims to relate environmental reporting and company performance.

**METHODOLOGY**

This study uses meta-analysis methods to systematically collect and evaluate previous studies that have analyzed the influence of environmental reporting on corporate financial performance. As a first step, an extensive literature search was carried out through databases such as Scopus, Web of Science, and Google Scholar using keywords such as "environmental reporting", "corporate financial performance", and "sustainability". Selected studies must meet strict inclusion criteria, such as focusing on a quantitative analysis of the relationship between environmental reporting and financial performance, be published in peer-reviewed journals from 2022 to 2024, and provide sufficient data to calculate the size of the effect. The selected articles were then further examined to ensure the quality and relevance of the data to this research question.

Data analysis was carried out by combining the effect measures of each study that met the selection criteria. The meta-analysis analysis technique used is a random effect model, which allows for variation between studies and assumes that different studies may have different effect sizes. Heterogeneity between studies will be tested using $Q$ and $I^2$ statistics to assess the degree of variation attributable to differences between studies rather than sampling errors. Furthermore, sensitivity analyses were conducted to explore the potential influence of each study on overall outcomes. The use of statistical software used is OpenMEE. Furthermore, the effect size criteria in the study can be seen in Table 1.
### RESULTS AND DISCUSSIONS

**Result**

Based on the results of the data search, 12 relevant studies were obtained. Furthermore, the research data is calculated the value of effect size and standard error which can be seen in Table 2.

<table>
<thead>
<tr>
<th>Kode Study</th>
<th>Tahun</th>
<th>Effect Size</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studi 1</td>
<td>2022</td>
<td>1.07</td>
<td>0.32</td>
</tr>
<tr>
<td>Studi 2</td>
<td>2022</td>
<td>0.61</td>
<td>0.12</td>
</tr>
<tr>
<td>Studi 3</td>
<td>2024</td>
<td>2.32</td>
<td>0.42</td>
</tr>
<tr>
<td>Studi 4</td>
<td>2023</td>
<td>0.67</td>
<td>0.21</td>
</tr>
<tr>
<td>Studi 5</td>
<td>2023</td>
<td>1.17</td>
<td>0.33</td>
</tr>
<tr>
<td>Studi 6</td>
<td>2024</td>
<td>0.44</td>
<td>0.18</td>
</tr>
<tr>
<td>Studi 7</td>
<td>2023</td>
<td>0.92</td>
<td>0.24</td>
</tr>
<tr>
<td>Studi 8</td>
<td>2022</td>
<td>0.85</td>
<td>0.22</td>
</tr>
<tr>
<td>Studi 9</td>
<td>2022</td>
<td>1.02</td>
<td>0.33</td>
</tr>
<tr>
<td>Studi 10</td>
<td>2023</td>
<td>0.92</td>
<td>0.35</td>
</tr>
<tr>
<td>Studi 11</td>
<td>2024</td>
<td>1.23</td>
<td>0.47</td>
</tr>
<tr>
<td>Studi 12</td>
<td>2024</td>
<td>0.77</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Tabel 2, hasil analisis nilai effect size dari 12 penelitian berkisar antara 0.44 hingga 2.32 dan standard error antara 0.18 hingga 0.47. Selanjutnya, melakukan uji heterogenitas terhadap 12 effect size dengan menggunakan fixed dan random effect model yang dapat dilihat pada Tabel 2.

<table>
<thead>
<tr>
<th>Omnibus test of Coefficients Model</th>
<th>Q</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70.367</td>
<td>1</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

| Test of Residual Heterogeneity    | 112.178 | 11 | < 0.001  |

Table 3, the analysis of the Q value of 112.178 is greater than 70.367 with a 95% confidence interval and a p value < 0.001. These findings conclude that the 12 effect sizes analyzed are heterogeneously distributed. The effective model used is the random effect model. Next, calculate the p-value to determine the relationship between environmental reporting and company performance. The results of the p-value test with the random effect model can be seen in Table 4.

<table>
<thead>
<tr>
<th>Coefficient Estimate</th>
<th>Standard Error</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.880</td>
<td>0.124</td>
<td>8,389</td>
</tr>
</tbody>
</table>

Table 4. The results of the analysis of the mean effect size value of 0.880 with a standard error of 0.124 include a large effect size. These findings conclude that there is a significant relationship between environmental reporting and company performance and non-existent companies. The importance of environmental reporting in corporations. Explain how global trends towards sustainability and corporate social responsibility have affected environmental reporting practices. (Rahi et al., 2024)

Environmental reporting has become an integral part of modern business practices as attention is paid to sustainability issues and corporate social responsibility (Coelho et al., 2023; Wang et al., 2023). More and more companies are realizing the importance of transparency in their environmental operations, both to comply with regulations and to improve public image and trust. This study focuses on the relationship between environmental reporting and a company's financial performance, with the aim of understanding whether a commitment to environmental reporting can provide financial benefits for a company (Gerged et al., 2023). Previous research has provided various findings regarding the relationship between environmental reporting and corporate financial performance. Some studies show that good environmental reporting can improve financial performance through improved reputation and investor trust, while other studies find weak or insignificant relationships (Bauckloh et al., 2023).

Furthermore, companies that are more transparent and comprehensive in environmental reporting tend to have better financial performance. These findings support the argument that investment in environmental reporting is not only a regulatory or ethical obligation, but can also be a profitable business strategy (Alfi et al., 2024). However, this relationship is influenced by various moderation factors such as industry sectors, company size, and geographical context.

### CONCLUSION

From the results of this study, it can be concluded that companies that actively report on their environmental performance tend to have better...
financial performance than companies that do not. In addition, there was a significant positive relationship between environmental reporting and corporate financial performance with an effect size value of 0.880 in the moderate effect size category. Companies that actively report their environmental practices not only meet their social responsibility, but also reap substantial financial benefits. In addition, the study identifies moderation factors such as industry sectors and company size that affect the strength of these relationships, providing important insights for company managers, investors, and policymakers regarding the strategic value of environmental reporting.

REFERENCES


