

THE RELATIONSHIP BETWEEN ENVIRONMENT PERFORMANCE AND PROFITABILITY: A SECTORAL COMPARISON IN INDONESIA AND MALAYSIA

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ABSTRACT

This study investigates the impact of environmental performance on financial performance in Indonesia and Malaysia, focusing on sectors with diverse environmental practices. Using secondary data from publicly available company reports, the research explores whether better environmental performance correlates with higher financial outcomes, specifically Return on Assets (ROA). The analysis employs panel data regression, which reveals that environmental performance positively influences financial performance, with a statistically significant coefficient for environmental performance. However, the model's explanatory power is modest suggesting that while environmental efforts are beneficial, they only partially explain variations in financial performance. This research offers practical implications for business practitioners, policymakers, and investors, emphasizing the importance of integrating environmental performance into broader business strategies to achieve sustainable financial success. The study also calls for further research to investigate the mediating factors and industry-specific variations that could enhance the understanding of the environmental-financial performance nexus, particularly in developing economies. The results provide a foundation for future studies exploring the intersection of environmental sustainability and financial performance in diverse global contexts.

Keywords: Environmental Performance, Financial Performance

INTRODUCTION

The relationship between environmental performance and financial performance has been a widely discussed topic in both academic research and business practices. Environmental performance, which includes measures of sustainability, environmental responsibility, and ecological footprint, is increasingly viewed as a key factor influencing a company's long-term success. Companies that effectively manage their environmental impact are expected to enhance their competitive advantage and improve financial outcomes. However, despite the increasing attention to sustainability and its potential benefits, a clear and consistent understanding of the relationship between environmental performance and financial performance remains a matter of debate.

Several studies have explored the relationship between environmental performance and financial performance, yet there is no consensus on whether improving environmental performance results in better financial performance. Prior research on this topic has often produced mixed results. Some studies suggest a positive relationship between corporate environmental performance and financial outcomes, while others argue that the costs associated with environmental initiatives may outweigh their financial benefits. For example, a study by Martínez-José et al. (2020) concluded that companies with better environmental performance have higher profitability and return on assets (ROA), while a more recent study by Li and Zhang (2021) found that the relationship is more complex, with industry-specific factors playing a crucial role in determining the impact.

Moreover, most of the existing studies have focused on specific industries, such as energy, manufacturing, and transportation, with limited research examining a broader range of sectors or a cross-country comparison. For instance, research by Zhang and Lu (2019) on Chinese firms found a positive correlation between environmental performance and firm value, while similar studies in Western markets, such as the research by Markman and Krause (2020), show divergent results. These inconsistencies suggest that the relationship between environmental and financial performance may vary across countries and industries, which represents a significant gap in the literature.

Furthermore, much of the existing research focuses on direct financial metrics like profitability, while less attention has been given to other financial indicators, such as return on assets (ROA), return on equity (ROE), and stock price performance. This lack of comprehensive measurement presents another gap in understanding the broader financial implications of environmental performance. The existing literature also fails to provide sufficient insight into the time lag between improvements in environmental performance and their measurable impact on financial outcomes, which remains an under-researched area in environmental economics.

This study aims to fill these gaps by examining the impact of environmental performance on various financial metrics, including ROA, ROE, and stock performance, across different sectors in Indonesia and Malaysia. By focusing on a comparative analysis between two countries in Southeast Asia, the study intends to offer insights into how the environmental performance of firms influences financial outcomes in emerging markets, where environmental regulations and market conditions may differ from those in developed economies.

The primary objectives of this research are threefold: first, to explore the relationship between environmental performance and financial performance across different sectors; second, to determine whether the impact of environmental performance is consistent across various industries or if certain sectors experience stronger effects; and third, to examine whether the

impact of environmental performance differs between firms in Indonesia and Malaysia, given their distinct environmental policies and economic conditions.

Understanding the relationship between environmental performance and financial performance is crucial for both business practitioners and policymakers. For businesses, particularly those in emerging markets, recognizing the long-term benefits of sustainable practices can lead to more informed decisions about resource allocation, corporate social responsibility (CSR) initiatives, and sustainability investments. Firms that integrate environmental considerations into their business models may not only comply with regulations but also enhance their reputation, reduce costs, and attract more investors.

For policymakers, the findings from this research can help shape regulations that encourage firms to adopt more sustainable practices while balancing economic and environmental goals. Given the increasing importance of environmental sustainability in global business practices, this research contributes to a growing body of literature on corporate sustainability, offering insights into how environmental performance can influence financial outcomes in emerging economies. The study also has practical implications for stakeholders, including investors, regulators, and environmental advocates. For investors, understanding the financial implications of a company's environmental performance can guide investment strategies, particularly in sectors where environmental issues are highly salient. For regulators, the findings can provide evidence for designing policies that support the adoption of environmentally friendly practices without imposing excessive financial burdens on firms.

LITERATURE REVIEW

The relationship between environmental performance and financial performance has been extensively discussed in the context of stakeholder theory, which asserts that businesses must consider the interests of all stakeholders—such as customers, employees, suppliers, investors, and the wider community—in their strategic decision-making. According to Freeman (1984), stakeholder theory suggests that firms that meet the needs and expectations of stakeholders are more likely to succeed in the long term. From this perspective, improving environmental performance is not just an ethical responsibility but a strategic decision that can enhance a company's reputation and foster positive relationships with key stakeholders, ultimately leading to better financial outcomes.

Several studies have explored the connection between environmental performance and financial performance through the lens of stakeholder theory. According to a study by Awaysheh et al. (2020), firms that invest in environmentally sustainable practices tend to strengthen their relationships with stakeholders, such as customers and investors, who increasingly prioritize corporate social responsibility (CSR). The positive perception of these stakeholders towards companies with high environmental performance can result in increased customer loyalty, improved brand value, and enhanced access to capital, which contribute to better financial performance. Thus, stakeholder theory emphasizes that environmental performance serves as a competitive advantage that can create value for firms by aligning business practices with societal and environmental expectations.

In contrast, other research suggests that there are potential costs to firms investing in environmental sustainability, which may reduce immediate financial returns. For example, Liu et al. (2019) argue that while environmental investments might enhance relationships with stakeholders, they often come with high initial costs. This can lead to short-term financial strain, especially for firms in industries where environmental regulations are less stringent or where consumers are less willing to pay a premium for sustainable products. Therefore,

stakeholder theory also provides a nuanced view, recognizing that firms must balance environmental performance with the financial expectations of shareholders and other stakeholders, especially in the short run.

Furthermore, stakeholder theory also highlights the importance of regulatory bodies and government agencies in shaping corporate environmental performance. According to the theory, companies must adhere to regulations and meet the expectations of government stakeholders, which often include strict environmental standards and laws. A study by Gallego-Álvarez et al. (2021) found that companies that proactively engage with regulators and embrace environmental sustainability not only avoid penalties but also improve their legitimacy and social license to operate. This aligns with stakeholder theory by demonstrating that regulatory stakeholders have a significant influence on how companies manage environmental performance and its subsequent impact on financial performance.

Finally, a key component of stakeholder theory is the concept of long-term value creation. A study by Orlitzky et al. (2020) suggests that firms with high environmental performance are more likely to achieve sustained long-term growth because they build trust with stakeholders and mitigate the risks associated with environmental degradation. By managing environmental risks, such firms are better positioned to take advantage of future opportunities, such as government incentives for sustainability or consumer demand for eco-friendly products. Thus, stakeholder theory connects environmental performance to long-term financial performance, asserting that businesses that prioritize sustainability are more likely to enjoy enduring success in an increasingly environmentally-conscious market.

H1: Environmental performance has a positive effect on financial performance.

METHOD

This section presents the research design, data collection methods, and analysis techniques employed to examine the relationship between environmental performance and financial performance in the context of Indonesian and Malaysian companies. The study adopts a quantitative research design, using secondary data collected from S & P database. The sample consists of publicly listed companies in Indonesia and Malaysia in 2023. The final sample includes 262 companies: 123 firms from Indonesia and 139 from Malaysia. The firms represent various sectors, including energy, manufacturing, consumer goods, and health care. The primary independent variable in this study is environmental performance which is measured by S & P index, then financial performance is measured by return on assets.

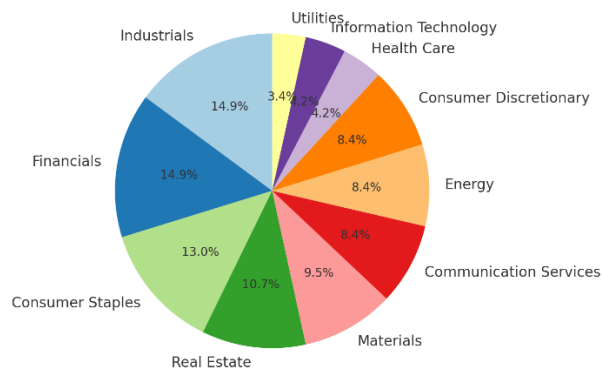
RESULT AND DISCUSSION

Descriptive Statistics

	Min	Max	Mean	Standar Deviasi
ROA	-8.671	34.01	4.3075	3.426
Environment	4.000	85.00	27.7023	27.000

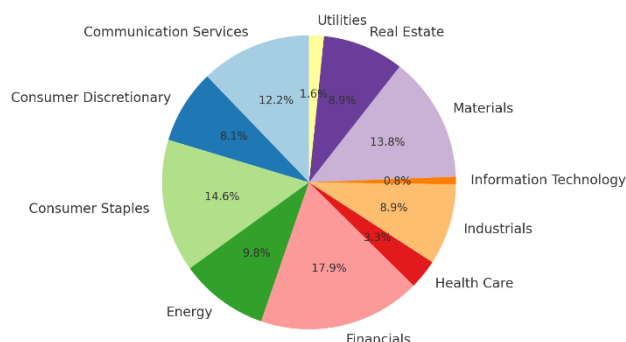
The descriptive statistics table provides a summary of the key statistical measures for two variables: ROA (Return on Assets) and Environment. For ROA, the minimum value is -8.671, indicating that some companies in the sample have experienced negative returns on their assets. The maximum value for ROA is 34.01, suggesting that other companies have achieved relatively high returns. The mean value for ROA is 4.3075, which is quite low and suggests that on average, companies have moderate returns on their assets. The standard deviation is

3.426, which indicates a moderate level of variability around the mean, meaning that ROA values vary significantly across the companies in the sample. For the Environment variable, the minimum value is 4.000, while the maximum value is 85.00, indicating a wide range of environmental performance scores among companies. The mean value of the Environment variable is 27.7023, suggesting that the average environmental performance is moderate across the sample. The standard deviation for this variable is 27.000, which is very high, indicating considerable variability in environmental performance across the companies. This suggests that some companies have significantly better or worse environmental performance compared to others in the dataset.



Picture 1. Distribution of companies by sector type

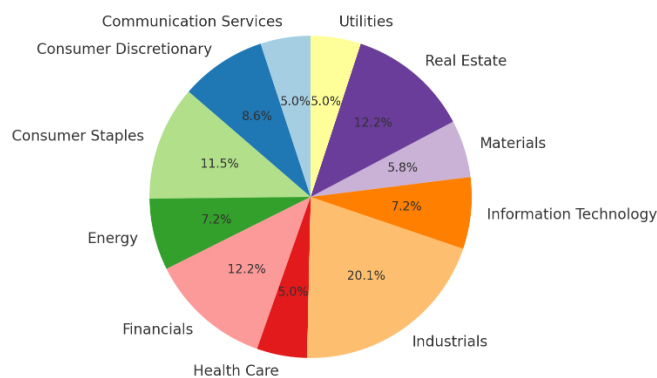
Picture 1 illustrates the distribution of companies across various sectors in the sample. The sectors are represented as slices of the pie, with each slice indicating the percentage of companies in that sector relative to the total sample. The chart shows that the largest sectors are Industrials and Financials, each comprising 14.9% of the sample. Other significant sectors include Consumer Staples (13.0%), Materials (10.7%), and Energy (8.4%). Smaller sectors include Health Care, Information Technology, and Utilities, each comprising 4.2% or less of the sample. This distribution highlights the diversity of the sample, with a balanced representation across multiple sectors, ensuring that the analysis encompasses various industries. Such a sectoral distribution is critical for understanding sector-specific patterns and assessing the generalized impact of environmental performance on financial outcomes across different business environments.



Picture 2. Distribution of companies by sector type in Indonesia

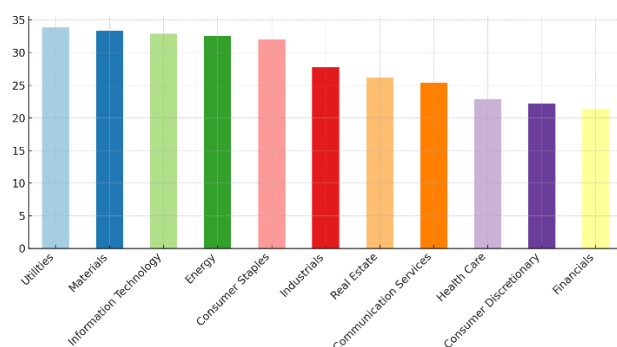
Based on picture 2 the largest sector is Financials, which comprises 17.9% of the sample, followed by Consumer Staples with 14.6%. Other prominent sectors include Energy (9.8%), Materials (13.8%), and Communication Services (12.2%). Smaller sectors include Consumer

Discretionary (8.1%), Health Care (3.3%), and Industrials (8.9%). The smallest sectors are Real Estate (1.6%) and Information Technology (0.8%). This distribution shows a relatively balanced representation across sectors, with a notable emphasis on the financial and consumer sectors, which may offer unique insights into the environmental performance and financial outcomes within the context of Indonesia's corporate landscape. This diversity in sectoral representation ensures that the analysis captures the varied dynamics of environmental practices and financial performance across different industries.



Picture 3. Distribution of companies by sector type in Malaysia

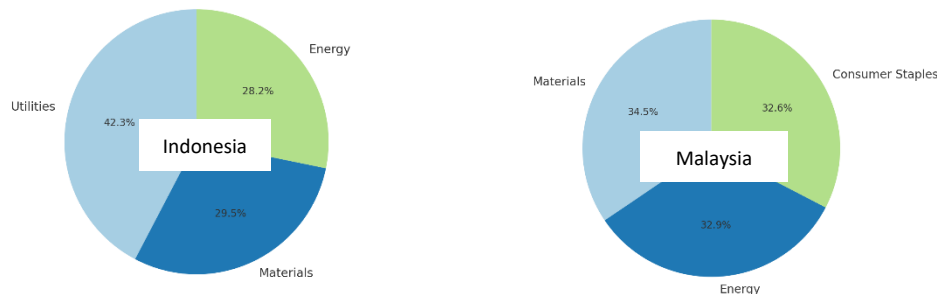
The pie chart illustrating the sector distribution of companies in Malaysia highlights (picture 3) the proportions of firms operating in various industries within the sample. The largest sector is Industrials, comprising 20.1% of the sample, followed by Financials at 12.2%. Other notable sectors include Consumer Staples (11.5%), Energy (7.2%), and Consumer Discretionary (8.6%). Smaller sectors include Information Technology (5.0%), Materials (5.8%), and Health Care (7.2%). The least represented sectors are Real Estate and Utilities, both accounting for 5.0% of the sample. This distribution reflects a varied representation of industries, with a strong presence of industrial and financial sectors, which will provide valuable insights into how environmental performance impacts financial outcomes across different sectors in Malaysia. The diversity in sector representation ensures a comprehensive analysis of the relationship between environmental sustainability and financial performance.



Picture 4. Average environmental score per sector

Picture 4 indicates the sectors Utilities and Materials exhibit the highest average environmental scores, both around 35, suggesting that companies in these sectors tend to have better environmental performance. Information Technology, Energy, and Consumer Staples also have relatively high environmental scores, ranging from 30 to 32. In contrast, Financials,

Consumer Discretionary, and Health Care sectors show lower average environmental scores, with values closer to 25. This chart illustrates significant variability in environmental performance across sectors, with some industries demonstrating stronger sustainability practices than others. This variation could provide insights into how different industries approach environmental responsibility and its potential impact on their financial performance.



Picture 5. Top 3 sectors with the highest environmental scores

In Indonesia, the Utilities sector stands out with the highest environmental score, comprising 42.3% of the top sectors, followed by Energy (28.2%) and Materials (29.5%). This suggests that companies in the Utilities sector in Indonesia have a particularly strong focus on environmental sustainability, with the Energy and Materials sectors also demonstrating considerable efforts in environmental practices.

In contrast, Malaysia has a different distribution, where the Materials sector leads with 34.5%, followed closely by Consumer Staples (32.6%) and Energy (32.9%). The Materials sector in Malaysia appears to have a higher focus on environmental performance compared to the Utilities sector in Indonesia. Furthermore, the Energy sector shows a more balanced presence in both countries, with similar environmental scores in both nations, indicating that the sector is somewhat consistent in its sustainability efforts across both markets. This comparison highlights that while Indonesia leads with the Utilities sector's strong environmental performance, Malaysia has a greater emphasis on the Materials and Consumer Staples sectors. These differences could be attributed to various factors such as regulatory environments, market demands, or industry-specific practices in each country. This research testing was carried out using non-parametric methods.

Table 1. Mann-Whitney U test

U statistics	8652
Z value	0,271039
p-value	0,78699
Asymptotic Significance	0,786992

Source: data first processed on 2025

Based on table 1 conclude that there is no significant difference between the two groups being compared. The high p-value (0.78699) suggests that any difference observed is likely due to random chance, and the null hypothesis that the two groups are identical cannot be rejected

Table 2 Regression results

	Const	Environment
B	2,064	0,0810
Std.Error	0,7769	0,0255
t	2,6566	3,1765
Sig.	0,008380	0,0016700
R-Square	0,0373	
F-Statistic		10.090
P-Value		0,00167

Source: data first processed on 2025

The table 2 presents the regression results for the relationship between environmental performance (Environment) and financial). The t-values (2.6566 for Constant and 3.1765 for Environment) are calculated by dividing the coefficients by their standard errors. Both t-values are relatively high, suggesting that the coefficients are statistically significant. The Significance (Sig.) values are 0.008380 for the constant and 0.001670 for the environment coefficient, both of which are less than the commonly used significance level of 0.05, indicating that both the constant and environmental performance have a significant impact on financial performance. The R-Square value of 0.0373 means that only about 3.7% of the variability in the dependent variable can be explained by environmental performance, which suggests a relatively weak explanatory power. Finally, the F-Statistic of 10.090 and the p-value of 0.00167 indicate that the overall regression model is statistically significant, supporting the hypothesis that environmental performance has an impact on financial performance.

This study then analyzes which sectors have a significant influence between environmental performance and financial performance. The results show that only the Industrials sector shows a positive and significant influence between Environment and ROA with a coefficient of 0.100 and a p-value of 0.0465. Furthermore, based on the results of the regression analysis, the sector that has the greatest influence of "Environment" on "ROA" in each country is health care.

CONCLUSION

This study examines the relationship between environmental performance and financial performance across different sectors in Indonesia and Malaysia. The results from the regression analysis indicate that environmental performance positively influences financial performance, as reflected by the statistically significant coefficient for environmental performance (0.0810). However, the explanatory power of the model is limited, with an R-squared value of 0.0373, suggesting that while environmental performance has a positive effect, it accounts for only a small portion of the variation in financial performance. This implies that other factors, such as industry-specific characteristics or market conditions, may also significantly influence financial outcomes, and further research should consider these variables.

The findings also highlight that environmental performance plays a critical role in enhancing a company's financial outcomes, particularly in sectors where environmental

responsibility is increasingly becoming a competitive advantage. While the coefficient for environmental performance is positive, the weak explanatory power of the model suggests that environmental efforts alone may not be sufficient to drive substantial improvements in financial performance. Companies in emerging markets like Indonesia and Malaysia might need to combine environmental sustainability practices with other strategic initiatives, such as operational efficiency and innovation, to achieve more substantial financial gains.

Lastly, the study contributes to the growing body of literature on corporate sustainability by providing insights into how environmental performance influences financial metrics in Southeast Asia. Although the results suggest that environmental performance has a positive effect on financial performance, the weak explanatory power indicates that further research is necessary to identify additional factors that may mediate or moderate this relationship. Future studies should explore industry-specific dynamics, the impact of government regulations, and the role of consumer preferences in shaping the financial benefits of environmental sustainability practices. This research provides a foundation for policymakers, business practitioners, and investors to better understand the role of environmental performance in shaping the long-term financial success of companies.

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