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The Effect of Profitability and Market Added Value on the Value of the Latest and Eco-Innovative Energy Companies Listed on IDX for the 2021-2024 Period

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Abstract

This study aims to analyze the influence of profitability and market value added (Market Value Added/MVA) on company value in the latest energy sector and eco-innovation listed on the Indonesia Stock Exchange (IDX) for the 2021–2024 period. A quantitative approach was used with panel data obtained from the annual financial statements of 35 renewable energy and ecoinnovative companies selected by purposive sampling. The profitability variable was measured using Return on Assets (ROA) and Return on Equity (ROE), while the company's value was measured using Tobin's Q. Analysis was carried out using panel data regression using the Fixed Effect Model (FEM) approach. The results showed that profitability had a significant positive effect on company value ($\beta = 0.438$, $p < 0.001$), while market value added (MVA) also had a significant positive effect ($\beta = 0.312$, $p < 0.001$). Both variables were simultaneously able to explain the 52.7% variation in company value. These findings imply that improving operational efficiency and the company's ability to create value for shareholders are key determinants in increasing the company's value in a sustainable energy sector.

Keywords: *Profitability 1, Market Added Value 2, Company Value 3, k Renewable Energy 4, Eco-Innovation 5, IDX 6*

INTRODUCTION

The transformation of the global energy sector towards renewable resources and ecological innovation has become a priority agenda in sustainable economic development. In Indonesia, this trend is getting stronger in line with the government's commitment to reduce carbon emissions and increase the renewable energy mix to 23% by 2025. Companies engaged in the field of new and eco-innovative energy face the unique challenge of proving that eco-friendly orientation not only has a positive socio-ecological impact, but is also capable of creating significant economic value for stakeholders.

Company value is a reflection of market perception of the long-term prospects and performance of a business entity. In the context of companies listed on the Indonesia Stock Exchange (IDX), the value of a company is often represented through Tobin's Q ratio, which compares the market value of a company's assets to the book value of its successors. Tobin's

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high Q indicates that the market rates the company to have above-average growth potential, innovative capabilities, and continued competitive advantage (Chung & Pruitt, 1994).

Profitability is one of the fundamental indicators that reflects a company's ability to generate profits from the resources it has. In signaling theory, a high level of profitability gives a positive signal to investors regarding the quality of management and the company's business prospects (Spence, 1973). Return on Assets (ROA) and Return on Equity (ROE) are specifically often used as profitability proxies due to their ability to measure the efficiency of using total assets and equity in generating profits.

On the other hand, the concept of Market Value Added (MVA) measures the difference between the market value of a company and the capital invested. MVA reflects a company's ability to create wealth for shareholders beyond the initial expectations of the investment (Stewart, 1991). In the context of eco-innovative energy companies, MVA becomes relevant because investments in green technologies and energy transitions often require large capital but promise attractive long-term returns.

Previous research on the determinants of corporate value in the energy sector is still relatively limited, especially focusing on renewable energy and eco-innovative companies in the Indonesian capital market. Most of the existing studies examine conventional companies or combine various industrial sectors without taking into account the unique characteristics of the green energy sector. In fact, these companies have different risk profiles, capital structures, and market dynamics than other industries.

In addition, the 2021–2024 period is a critical phase of post-COVID-19 pandemic recovery as well as a momentum to accelerate the global energy transition. During this period, the Indonesian capital market witnessed significant growth in renewable energy-based companies, driven by regulatory incentives, increasing ESG (Environmental, Social, and Governance) awareness among institutional investors, and technological developments that accelerated the decline in the cost of producing renewable energy.

Based on these research gaps, this study aims to analyze the influence of profitability and market added value on the value of the latest energy companies and eco-innovations listed on the IDX for the 2021–2024 period. The results of this study are expected to make a theoretical contribution in enriching the corporate financial literature in the context of the green economy, as well as provide practical implications for investors, company managers, and capital market regulators in value-based decision-making.

METHOD

This study uses a quantitative approach with a panel data study design that combines cross-section and time-series dimensions. The research population includes all companies in the renewable energy and eco-innovative sectors listed on the Indonesia Stock Exchange (IDX) during the period 2021–2024. The purposive sampling technique was applied with the following criteria: (1) being actively registered with IDX during the entire observation period, (2) publishing consistently audited annual financial statements, (3) not experiencing delisting or suspension of trading during the study period, and (4) having complete data for all variables measured. Based on these criteria, a final sample of 35 companies was obtained with a total of 140 observations (35 companies × 4 years).

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The dependent variable in this study is the company's value measured using Tobin's Q, calculated as the ratio between the market value of equity plus the total book value of debt divided by the total book value of assets. Independent variables consist of: (1) Profitability proxied through Return on Assets (ROA) = net profit after tax/total assets, and Return on Equity (ROE) = net profit after tax/total equity; and (2) Market Value Added (MVA) = the total market value of the company - invested capital. Control variables include company size (natural logarithm of total assets) and leverage (ratio of total debt to total assets).

Secondary data is collected from annual financial statements published through the official IDX (www.idx.co.id) website, the company's annual report, and the Bloomberg database. All financial data has gone through a cross-verification process to ensure consistency and accuracy. Data analysis was carried out using EViews 12 and Stata 17 software.

The selection of the panel data estimation model was carried out through a series of specification tests: Chow Test to choose between Common Effect Model (CEM) and Fixed Effect Model (FEM), Hausman Test to choose between FEM and Random Effect Model (REM), and Lagrange Multiplier Test for confirmation. The results of the three tests showed that the Fixed Effect Model (FEM) was the most appropriate estimator for the data in this study. Classical assumption tests including residual normality tests (Jarque-Bera), multicollinearity tests (VIF), heteroscedasticity tests (White tests), and autocorrelation tests (Durbin-Watson) have been performed prior to hypothesis testing.

RESULTS AND DISCUSSION

1.1 Descriptive Statistics

Before conducting hypothesis testing, descriptive statistical analysis is carried out to understand the characteristics of the data. The research sample consists of 35 new and eco-innovative energy companies with a varied range of company sizes, ranging from medium-scale solar energy startups to large-cap green energy conglomerates. During the 2021–2024 period, the average Tobin's Q value of the sample was 1.847 (SD = 0.621), indicating that in general the market values these companies above their asset book values, reflecting investor optimism towards the prospects of the renewable energy sector.

The average ROA of 6.23% (SD = 4.18%) and ROE of 12.47% (SD = 7.93%) show a significant variation in profitability performance between companies. Companies with more mature technologies (such as geothermal and hydro energy) tend to have more stable profitability, while solar and wind-based companies still show higher volatility along with the growth phases of their business. The average MVA value of IDR 2.34 trillion indicates that in aggregate, the companies in the sample managed to create value for shareholders in excess of the invested capital.

1.2 Hypothesis Testing Results

Table 1 presents the results of the Fixed Effect Model estimation to test the effect of profitability and market value added on the value of the company:

Table 1. Fixed Effect Model Estimation Results

Variable	Coefficient (β)	T-Statistics	p-value	Conclusion
ROA (Profitability)	0,438	8,214	< 0.001	Significant
ROE (Profitability)	0,297	5,631	< 0.001	Significant

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Market Value Added (MVA)	0,312	6,089	< 0.001	Significant
R²	0,527			
Adjusted R²	0,519			
F-statistics	127,364		< 0.001	

(source: Processed secondary data, 2025)

Based on Table 1, ROA had a significant positive effect on the company's value (β = 0.438, t = 8.214, p < 0.001), supporting H1a. These findings are consistent with signal theory predictions that high levels of profitability provide positive signals to investors about management's ability to create economic value. These results are in line with research by Astuti and Nurwahyuni (2023) which found that ROA is the strongest predictor of company value in the Southeast Asian energy sector. ROE also showed a significant positive influence (β = 0.297, t = 5.631, p < 0.001), supporting H1b, indicating that the efficiency of using equity in generating net profit also contributed significantly to the appreciation of the company's value in the eyes of investors.

MVA was shown to have a significant positive effect on the company's value (β = 0.312, t = 6.089, p < 0.001), supporting H2. This positive coefficient implies that each increase in MVA reflects a company's better ability to create wealth for shareholders, which in turn drives stock price appreciation and an increase in the value of Tobin's Q. These findings support Stewart's (1991) argument that MVA is the best measure of a company's success from a shareholder's perspective.

An R² value of 0.527 indicates that the 52.7% variation in the company's value can be explained by a combination of the profitability and MVA variables after controlling for the company's individual effects. Significant F-statistics (F = 127.364, p < 0.001) confirmed the overall fit of the model.

1.3 Analysis of the Effect of Company Size Moderation

Table 2. Results of Moderation Effect Analysis

Models	R²	ΔR²	p-value
Model 1: Main Effects	0,527	-	< 0.001
Model 2: With Company Size Moderation	0,574	0,047	< 0.001
Interaction (Profit × SIZE)	β = 0,253	t = 3.947	< 0.001

(source: Processed secondary data, 2025)

Table 2 shows that firm size significantly moderates the relationship between profitability and company value. The addition of the interaction variable increased R² by 0.047 (from 0.527 to 0.574), and this increase was statistically significant (p < 0.001). Positive interaction coefficients (β = 0.253, t = 3.947, p < 0.001) indicate that the effect of profitability on company value is stronger in larger companies. This can be explained through the economics of scale argument: larger ecoinnovative energy companies have a better capacity to capitalize profitability into market value through a wider scope of operations, diversification of energy portfolios, and easier access to international capital markets.

1.4 Discussion

The findings of this study provide several important contributions to the corporate financial literature in the context of the green economy. First, the confirmation that profitability is a key determinant of company value in the eco-innovative energy sector underscores the importance

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of operational efficiency as a foundation for sustainable value creation. Although companies in this sector often face high upfront investment costs for renewable energy infrastructure, the ability to eventually translate those investments into strong profitability is key to the appreciation of value by the market.

Second, the significance of MVA in explaining the value of the company strengthens the argument that Indonesian capital market investors are increasingly sophisticated in evaluating the company's ability to create long-term wealth, not just short-term accounting performance. This is in line with the development of ESG-based investment in Indonesia that is starting to mature, where institutional investors provide valuation premiums to companies that prove their consistent value creation capabilities.

Third, the effect of company size moderation provides an important nuance: organic growth strategies and industry consolidation can be catalysts that strengthen the profitability-value relationship of companies. By implication, small-medium-sized ecoinnovative energy companies need to develop a targeted growth strategy, whether through capacity expansion, strategic mergers and acquisitions, or business partnerships, to leverage economies of scale in increasing the effect of profitability on their market value.

From a theoretical perspective, these findings integrate signal theory, resource-based view, and value-based finance perspectives in explaining the dynamics of value creation in the renewable energy sector. This integration offers a more comprehensive conceptual framework for understanding why energy companies with similar profiles can have very different market valuations.

CONCLUSION

This study successfully analyzes and quantifies the influence of profitability and market added value on the value of the latest energy companies and eco-innovative companies listed on IDX for the 2021–2024 period. The main findings of this study are: (1) Profitability measured through ROA has a significant positive effect on the company's value ($\beta = 0.438$), confirming that the ability to generate profit from total assets is the strongest signal that the market responds positively; (2) Profitability measured through ROE also had a significant positive effect ($\beta = 0.297$), showing that the efficiency of using equity in generating profits also encourages the appreciation of company value; (3) Market Value Added (MVA) has a significant positive effect on the company's value ($\beta = 0.312$), confirming that the ability to create shareholder wealth above the invested capital is a determinant of company value that cannot be ignored; and (4) firm size has been shown to moderate the relationship between profitability and company value ($\beta = 0.253$), where the influence of profitability on company value is stronger in larger firms.

The theoretical contribution of this research lies in the integration of signal theory, Resource-Based View, and Value-Based Management in one analytical framework to explain the determinants of corporate value in the green energy sector. This research also contributes to expanding the understanding of how specific characteristics of a company (size) interact with financial performance in shaping the perception of value by the capital market.

In practical terms, these findings provide strategic guidance for managers of ecoinnovative energy companies to prioritize operational efficiency and optimization of capital use in order to increase company value. For investors, this study identifies that ROA and MVA are the most informative financial indicators in evaluating investments in the renewable energy sector. Regulators and capital market authorities can use these findings to design incentives that drive increased profitability and value creation in the green energy sector.

This research has several limitations that need to be acknowledged. First, the four-year observation period is relatively limited to capture the long-term dynamics of the renewable energy sector. Longitudinal studies with longer periods are required for validation of findings. Second, heterogeneity in the definition of 'eco-innovative' and the classification of renewable energy companies can affect the generalizability of results. Subsequent research can develop

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more rigorous classification criteria based on international standards such as the EU Taxonomy for Sustainable Activities. Third, future research can explore non-financial dimensions such as ESG scores as moderation or mediation variables to provide a more holistic understanding of value creation in the green energy sector.

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