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# THE EFFECT OF CARBON EMISSION DISCLOSURE AND GREEN INNOVATION ON FINANCIAL PERFORMANCE (ENERGY AND CONSUMER NON-CYCLICAL COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE)

**NADYA SYAFITRI, LIA UZLIAWATI & BUSTANUL ARIFIN**
Departement of Accounting, Faculty of Economics and Business
Sultan Ageng Tirtayasa University, Indonesia

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## ABSTRACT

The issues of sustainability and environmental responsibility have become increasingly relevant in evaluating corporate performance, especially in emerging markets. This study aims to examine the effect of carbon emission disclosure and green innovation on financial performance. The research uses a quantitative approach with purposive sampling of energy and consumer non-cyclicals sector companies listed on the Indonesia Stock Exchange (IDX) during 2021–2023. Multiple regression analysis was conducted using SPSS. The results show that carbon emission disclosure has a significant negative effect on financial performance, suggesting that environmental transparency without concrete actions, such as improving emission performance or enhancing process efficiency may be interpreted as an environmental risk by investors. Meanwhile, green innovation proxied by green process innovation positively and significantly affects financial performance, indicating that visible and efficiency-driven environmental actions are appreciated by the market. Conversely, green product innovation has no significant effect, likely due to low consumer and investor awareness or willingness to support green products in developing markets such as Indonesia. These findings imply that while operational environmental innovations can help improve financial performance, carbon disclosures must be accompanied by concrete performance, and product-level innovation still faces cultural and economic challenges in Indonesia's market context.

**Keywords:** Financial Performance, Carbon Emission Disclosure, Green Innovation

## 1.0 INTRODUCTION

Achieving positive financial performance is one of the key indicators in assessing a company's success in realizing its objectives. It not only represents profitability but also reflects a company's ability to create economic value that attracts investors and delivers competitive returns. Therefore, financial performance serves as a vital basis for evaluation by stakeholders in strategic decision-making processes (Dianty & Nurrahim, 2022). From an investment perspective, financial stability and growth are the main factors considered by investors, as they indicate the company's long-term profit potential.

However, the definition of business success has evolved beyond purely financial outcomes. In today's global economy, long-term financial health is viewed responsible and sustainable business practices. Stakeholders including investors, consumers, and regulators now demand

  

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greater corporate accountability for environmental and social impacts (Bedi & Singh, 2024). Environmental issues such as climate change, pollution, and the depletion of natural resources have become pressing global concerns that influence business strategies and investment decisions.

This paradigm shift has elevated sustainability and ethical practices as essential components of corporate evaluation and strategic resilience. Investors are now integrating environmental, social, and governance (ESG) criteria into their assessments, looking beyond traditional metrics to evaluate long-term sustainability. In this context, environmental issues has become a central determinant of firm financial performance, influencing both market perception and investment decisions.

Uzliawati et al. (2023) emphasize that a positive corporate reputation can be achieved through ethical conduct, environmental and social accountability, and transparent public communication. To meet these expectations, firms must align their operations with sustainable principles, demonstrating long-term commitment to stakeholders. In response, regulatory frameworks have also strengthened. In Indonesia, Government Regulation (PP) No. 47 of 2012 on Corporate Social and Environmental Responsibility mandates that companies incorporate environmental and social accountability into their strategic planning.

Failure to address environmental risks can lead to severe consequences for a company's reputation, legal standing, and financial performance. For instance, in 2023, PT Mayora Indah Tbk (MYOR) was implicated in an air pollution case due to the operation of an unlicensed incinerator, leading to public health concerns and the threat of legal sanctions. This incident coincided with a 0.4% decline in MYOR's stock price. Although stock movements are affected by multiple factors, such incidents may signal reputational and compliance risks to the market. A more pronounced example involved PT Adaro Energy Indonesia Tbk (ADRO), which reported a 7.85% increase in greenhouse gas emissions compared to the previous year announcement that occurred alongside a substantial 61.8% drop in its stock price. These cases underscore how environmental responsibility has become a key consideration for investors evaluating long-term business sustainability.

Greenhouse gas emissions, primarily from industrial operations, are at the center of global climate change concerns. The energy sector, in particular, is known for its high emission levels due to its reliance on fossil fuels such as coal. According to the Ministry of Energy and Mineral Resources (2023), emissions from Indonesia's energy sector in 2023 reached 127.67 million tons of $CO_2$ exceeding the national target of 116 million tons. The consumer non-cyclicals sector also contributes significantly to emissions, especially through production activities that generate waste and pollution. As a result, companies face increasing pressure from governments, communities, and investors to adopt environmentally accountable business practices (Choi et al., 2013; Lu et al., 2021).

In response to these pressures, companies adopt strategies such as carbon emission disclosure, which involves publicly reporting emissions and mitigation efforts. Bedi and Singh (2024) suggest that such disclosures function as a form of corporate communication signaling transparency and accountability in managing environmental risks. In line with signaling theory, carbon emission disclosure can enhance investor confidence and strengthen stakeholder trust

  

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(Emmanuel et al., 2023). When effectively communicated, these disclosures help reduce information asymmetry and demonstrate the company's proactive environmental stance, thereby influencing market perception and financial performance.

Nonetheless, disclosure alone is not sufficient. Stakeholders increasingly expect companies to implement real, measurable actions. One such action is green innovation, which refers to environmentally friendly innovations in both production processes (green process innovation) and products (green product innovation). Regulation of the Minister of Environment and Forestry (KLHK) No. P.75 of 2019 underscores the importance of reducing plastic waste at the source. In practice, however, companies such as Unilever, Indofood, and Mayora have faced scrutiny for their continued use of single-use plastic packaging. A 2022 Greenpeace Indonesia survey found that packaging from these three companies accounted for 79.7% of all plastic waste collected in field samples. This highlights the urgent need for companies to implement green innovation to meet regulatory and societal expectations. If executed effectively, such innovation can enhance corporate reputation, attract sustainability-oriented investors, and yield a competitive advantage.

Based on the above discussion, it is evident that environmental factors particularly carbon emission disclosure and green innovation are playing an increasingly significant role in influencing financial performance. However, existing research on the financial impact of these environmental practices shows mixed results. Studies by Emmanuel et al. (2023), Akhanolu et al. (2023), and Nyahuna & Doorasamy (2023) found that carbon emission disclosure positively affects financial performance. In contrast, Desai et al. (2021), Houten & Wedari (2023), and Hadiwibowo et al. (2023) reported a negative impact, while Safutri et al. (2023) found no significant effect. Similarly, research by Xie et al. (2019), Le & Govindan (2024), and Wang & Ahmad (2024) found that green innovation positively affects financial performance, but Duque-Grisales et al. (2020) concluded that the effect was not always significant.

Despite the growing body of literature, limited research has focused specifically on energy and consumer non-cyclicals companies in Indonesia. Therefore, this study aims to investigate the effect of carbon emission disclosure and green innovation on the financial performance of companies in the energy and consumer non-cyclicals sectors for the 2021–2023 period. Beyond academic contribution, the findings of this study may inform the effect of carbon emission disclosure and green innovation on financial performance to support strategic decision-making toward more environmentally responsible practices. The results are expected to provide meaningful insights for policymakers, investors, and corporate decision-makers who are navigating the transition toward sustainable business models.

## 2.0 THEORETICAL REVIEW AND HYPOTHESIS

### 2.1 Signaling theory

Signaling theory explains how companies, as insiders, can reduce information asymmetry by sending signals to external parties such as investors or the public (Spence, 1973). It explains how companies address the issue of information asymmetry between insiders (such as managers or executives) who possess complete information and outsiders (such as investors or consumers) who have limited access to such information. In this context, companies send

  

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"signals" to communicate relevant information to the market. The key elements of signaling theory include the signaler (insiders), the signal itself (the information being communicated), and the receiver (outsiders). The main goal is to build trust, establish credibility, and reduce the imbalance of information that can negatively affect the decision-making of external stakeholders. As a result, businesses must effectively signal their intentions and strengths to outsiders to guide their evaluation of the firm's worth (Dewi et al, 2024). These signals help build trust, enhance credibility, and reduce uncertainty, thereby enabling stakeholders to make better-informed decisions.

In practice, carbon emission disclosure and green innovation are important forms of signals used by companies to demonstrate their commitment to environmental sustainability. Carbon emission disclosure reflects transparency in a company's environmental impact, while green innovation shows proactive efforts to create environmentally friendly products and processes. These signals reassure stakeholders that the company values not only economic profit but also social and environmental responsibility. This aligns with the growing demands from stakeholders who now emphasize sustainability, and in turn, such positive signals can enhance a company's reputation, foster consumer loyalty, and ultimately improve long-term financial performance.

### 2.2 Financial performance

Financial performance reflects how well a company or organization achieves its financial objectives within a specific period (Ramadhana & Windijarto, 2023). It provides a snapshot of the company's financial position, encompassing its ability to generate profits, manage assets, and meet financial obligations (Nsiah et al., 2022). This performance serves as a comprehensive indicator of the company's financial health and operational effectiveness. It enables stakeholders to evaluate whether the company has met its predetermined goals and helps identify areas that may require improvement or strategic adjustments.

As a key indicator, financial performance is critical for investors and stakeholders in assessing a company's health and future prospects (Putra & Dewi, 2021). Various financial metrics are used for this purpose, including liquidity, solvency, profitability, activity, and market value (Munawir, 2010). In this study, Tobin's Q is employed as a market-based measure of financial performance, as it reflects intangible assets, future costs, and investor perceptions (Delmas et al., 2015; Trinks et al., 2020). Unlike accounting-based metrics like ROA that are susceptible to manipulation, Tobin's Q provides forward-looking insights that combine financial and market data, making it more robust against managerial bias (Wang & Ahmad, 2024). Furthermore, Tobin's Q is considered a more reliable indicator of how efficiently a firm utilizes its resources in making economically rational decisions (Uzliawati & Djati, 2015). Accordingly, evaluating financial performance through Tobin's Q provides stakeholders with meaningful information about a company's long-term economic prospects and strategic value. Financial performance measured by Tobin's Q with the following formula:

$$TQ = \frac{(Market\ value\ of\ all\ outstanding\ shares + Total\ debt)}{Total\ Asset}$$

### 2.3 Carbon emission disclosure

  

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According to Romar (2009), carbon emissions are a major contributor to global warming and have increasingly threatened global well-being in recent years. The rise in carbon emissions is largely driven by human activities such as air travel, fossil fuel consumption, deforestation, and industrial growth (Nursulistyo et al., 2023). Growing public concern over environmental issues has led to mounting pressure on companies to disclose the environmental impact of their operations (Muhammad & Aryani, 2021). As a result, transparency in environmental disclosure has become a crucial element for companies amid rising demands for accountability and social responsibility.

Carbon emission disclosure is one of the most essential forms of environmental information that companies are expected to report. This includes details such as industrial carbon calculations, carbon reduction targets, reporting systems, and mitigation programs (Tjahjadi et al., 2023). Typically disclosed in annual or sustainability reports (Maharani et al., 2023), this information offers not only the total carbon output but also the company's efforts to reduce its carbon footprint. By providing this disclosure, companies can present a clearer picture of the environmental impact of their operations, thus supporting more informed decision-making for both the firm and its stakeholders. In this study carbon emission disclosure is measured by seven item list based on GRI 305-Emissions (Brilliani et al, 2023). A score of 1 is given if disclosed, and 0 if not. Then the final score is calculated as the proportion of disclosed items.

**2.4 Green innovation**

Green innovation is the development and application of new products, processes, or technologies that reduce environmental impact compared to conventional alternatives (Do, 2024). It addresses issues such as emissions, waste, and resource conservation by adopting cleaner techniques or modifying production systems to support sustainability goals. Unlike conventional innovation, green innovation incorporates environmental responsibility into business strategy (Ramadhan & Widiastuty, 2023), providing not only economic benefits but also competitive and reputational advantages. It is generally categorized into green process innovation and green product innovation (Xie et al., 2019).

Green process innovation focuses on enhancing production efficiency through energy saving, pollution control, and waste recycling (Ramadhan & Widiastuty, 2023). This includes reducing emissions, conserving resources, and switching to renewable energy sources (Kivimaa & Kautto, 2010), thereby improving both environmental and operational performance (Nsiah et al., 2022). Meanwhile green product innovation involves using environmentally friendly materials and designing products that are recyclable, reusable, or biodegradable (Ramadhan & Widiastuty, 2023). It improves efficiency and reduces pollution across the product lifecycle (Lin et al., 2013), enhancing competitiveness and corporate image (Xie et al., 2019). In this study, green innovation is measured using the indicators from Xie et al. (2019), consisting of five items for green process innovation and three for green product innovation. Scores are in the range of 0-2 where a score of 2 is given if there is a related description accompanied by details (for example, plans, implementation processes, or quantitative terms that indicate that a company does indeed carry out related types of innovation); 1 if there is only a related description without implementation details; and 0 if there is no related description. Then the final score is calculated as the proportion of disclosed items.

  

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### 2.5 The relationship between carbon emission disclosure on financial performance

Carbon emission disclosure has become one of the most pressing issues due to the growing environmental concerns linked to climate change (Sakalsiz & Özçelik, 2024). In recent years, various stakeholders have raised concerns over the increasing threat of climate change. This has led to strong pressure on companies to disclose transparent information regarding their business activities, particularly those contributing significantly to environmental degradation. Such pressure creates an obligation for companies to manage their environmental impact effectively (Tu et al., 2022). As a result, corporate transparency concerning environmentally impactful operations is now under increasing public scrutiny.

One strategy companies can adopt to address these concerns is disclosing carbon emissions. Disclosing carbon emissions reflects accountability and can enhance a company's reputation, particularly among environmentally conscious investors and consumers. According to signaling theory, companies disclose information to communicate their achievements and differentiate themselves from competitors, thereby improving public perception and reputation. Signaling theory supports the idea that disclosing non-financial information, such as environmental data and carbon emissions, can send positive signals to investors and improve a company's market valuation. A strong reputation may attract new investors and provide competitive advantages that ultimately benefit the company financially (Suparjan & Mulya, 2012). Several studies have been conducted to examine the effect of carbon emission disclosure on financial performance such as Emmanuela et al. (2023), Nyahuna & Doorasamy (2023), and Akhanolu et al. (2023) which confirm a positive relationship between carbon emission disclosure and corporate financial performance. Therefore, the hypothesis is stated as follows:

**H1: Carbon emission disclosure has a positive effect on financial performance.**

### 2.6 The relationship between green process innovation on financial performance

Green process innovation has become one of the main strategies for companies facing increasing pressure to operate more sustainably. Environmental pollution and the alarming scarcity of natural resources have prompted companies to urgently seek ways to protect the environment (Aftab et al., 2022). As corporate activities are considered major contributors to environmental issues, stakeholders who are increasingly concerned about sustainability are demanding stronger environmental commitments from firms (Le et al., 2022). Green process innovation represents the company's concern and commitment to reducing environmental harm and preserving the ecosystem.

Green process innovation allows companies to improves production methods to reduce environmental harm through energy efficiency, waste reduction, or cleaner technologies. It demonstrates a firm's commitment to sustainability and can enhance its image among stakeholders, attracting loyalty and long-term support. In line with signaling theory, transparent communication about environmental commitments can foster stakeholder trust and loyalty, thereby enhancing the company's reputation and stakeholder support. Consequently, this condition can contribute to business sustainability in both the short and long term by increasing investment opportunities, boosting revenues, and reducing financial risk (Tariq et al., 2019). Several studies have been conducted to examine the effect of green process innovation on

  

financial performance such as Xie et al. (2019) and Wang & Ahmad (2024) confirm a positive relationship between green process innovation and financial performance. Therefore, the hypothesis is stated as follows:

**H2: Green process innovation has a positive effect on financial performance.**

### 2.7 The relationship between green product innovation on financial performance

Green product innovation focuses on the development of environmentally friendly products by considering their impact throughout the product lifecycle from raw materials and production processes to disposal. The goal is to create products that meet consumer needs while also supporting environmental preservation. Environmentally conscious consumers tend to be more loyal to brands that demonstrate commitment to sustainability, which provides companies with a competitive advantage and access to a broader market. This, in turn, can positively affect a company's financial performance.

In line with signaling theory, green product innovation serves as a positive signal to investors and the market. It reflects a long-term sustainability-oriented strategy, reduces environmental risks, and enhances brand attractiveness. When investors view the company as forward-thinking and environmentally responsible, it can boost investor confidence, potentially leading to higher stock prices and improved financial outcomes. Previous studies, such as Wang & Ahmad (2024), Le & Govindan (2024), and Xie et al. (2019), have consistently found a positive relationship between green product innovation and financial performance. Therefore, the hypothesis is stated as follows:

**H3: Green product innovation has a positive effect on financial performance.**

## 3.0 METHODS

This research is quantitative in nature where the population in this study are all energy and consumer non-cyclical sector companies listed on the Indonesian stock exchange in 2021-2023. In this study, the sample was selected using purposive sampling method with predetermined criteria.

**Table 1. Research Sample Criteria**

| No. | Criteria | Total |
|---|---|---|
| 1. | Energy and Consumer Non-Cyclicals sector companies listed on the Indonesia Stock Exchange for the period 2021-2023 | 208 |
| 2. | Energy and Consumer Non-Cyclicals sector companies that are not listed consecutively on the Indonesia Stock Exchange for the period 2021-2023 | 167 |
| 3. | Energy and Consumer Non-Cyclicals sector companies that publish annual reports and sustainability reports consecutively in accordance with GRI Standards for the period 2021-2023 | 66 |
| | **Total Sample (66 x 3 Years)** | **198** |

  

**Source:** Data processed by the author, 2025

In this study, the data collected through the data collection process will be processed using statistical analysis techniques. The analysis method that will be used is descriptive statistical analysis, classical assumption test and multiple regression hypothesis testing using Statistical Package for the Social Sciences (SPSS) Version 25.

The regression model in this study is as follows:

Tobin's Q = α + β1 CED + β2 Gproc + β3 Gprod + e

Where Tobin'Q is financial performance, α is a constant model, while β1, β2, and β3 are regression coefficients or indicate the contribution of each measurement indicator adopted from the carbon emission disclosure (CED), green process innovation (GPROC), and green product innovation (GPROD) variables, and e is the error term.

## 4.0 RESULTS AND ANALYSIS

### 4.1 Results

**Table 2. Descriptive Statistic Results**

| Variable | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| CED | 198 | 0,000 | 1,000 | 0,55341 | 0,296944 |
| GPROC | 198 | 0,100 | 1,000 | 0,62273 | 0,210965 |
| GPROD | 198 | 0,000 | 1,000 | 0,27687 | 0,222260 |
| TOBINSQ | 198 | 0,513 | 10,570 | 1,67849 | 1,404851 |

**Source:** Data processed by the author, 2025

Table 2. shows that the carbon emission disclosure (CED) ranges from 0.000 to 1.000, with an average of 0.55341 and a standard deviation of 0.296944. The green process innovation (GPROC) has a minimum value of 0.100, a maximum of 1.000, an average of 0.62273, and a standard deviation of 0.210965. The green product innovation (GPROD) ranges from 0.000 to 1.000, with a mean of 0.27687 and a standard deviation of 0.222260. Meanwhile, the financial performance variable measured by Tobin's Q has a minimum value of 0.513, a maximum of 10.570, an average of 1.67849, and a standard deviation of 1.404851.

Classical assumption tests were conducted to ensure the validity of the regression model. The Kolmogorov-Smirnov test for normality yielded a significance value of 0.072 ($p > 0.05$), indicating that the residuals are normally distributed. Multicollinearity was tested using tolerance and VIF values, with results showing that CED had a tolerance of 0.892 and VIF of 1.122, GPROC had a tolerance of 0.768 and VIF of 1.302, and GPROD had a tolerance of 0.837 and VIF of 1.195. These values indicate no multicollinearity, as all tolerance values were above 0.10 and VIF values below 10. The Durbin-Watson statistic value of 2.161 falls within the acceptable range ($du < d < 4 - du$), suggesting that the model is free from autocorrelation. Furthermore, the Glejser test for heteroscedasticity revealed significance values of 0.791 for

  

CED, 0.167 for GPROC, and 0.706 for GPROD, all above 0.05, indicating the absence of heteroscedasticity in the model.

The F-test results show that the regression model is significant, with an F-count value of 10.939, which is greater than the F-table value of 2.65, and a significance level of 0.000 ($p < 0.05$). This indicates that Carbon Emission Disclosure, Green Process Innovation, and Green Product Innovation simultaneously have a significant effect on Financial Performance. Additionally, the model produces an Adjusted R-Square value of 0.131, meaning that these three independent variables explain 13.1% of the variation in Financial Performance, while the remaining 86.9% is influenced by other factors not included in this study.

**Table 3. Test of Hypothesis**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -0,003 | 0,125 | | -0,022 | 0,982 |
| | CED | -0,536 | 0,136 | -0,276 | -3,926 | 0,000 |
| | GPROC | 1,034 | 0,207 | 0,379 | 4,999 | 0,000 |
| | GPROD | -0,096 | 0,188 | -0,037 | -0,510 | 0,611 |

a. Dependent Variable: TOBINSQ

**Source:** Data processed by the author, 2025

Based on table 3. the carbon emission disclosure has a t-value of -3.926, which is less than the critical t-value of 1.97227, with a significance level below 0.05 (0.000). This indicates that carbon emission disclosure has a significant negative effect on financial performance. Meanwhile, the green process innovation variable has a t-value of 4.999, which is greater than the critical t-value of 1.97227, with a significance level of 0.000, indicating a significant positive effect on financial performance. In contrast, the green product innovation variable has a t-value of -0.510, which is less than the critical t-value of 1.97227, and a significance level of 0.611, indicating no significant effect on financial performance.

### 4.2 Analysis

Based on the hypothesis testing yielded the following results:

1. The hypothesis test results indicate that carbon emission disclosure has a significant negative effect on financial performance, with a regression coefficient of -0.536 and a significance level of 0.000, which is less than the 0.05 threshold. This outcome rejects the initial hypothesis that predicted a positive and significant influence based on signaling theory, which suggests that carbon emission disclosures serve as positive signals to investors regarding a company's sustainability commitment and governance quality. However, the negative coefficient implies

  

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that investors may perceive carbon emission disclosure as signaling environmental risks when the disclosed emissions are high or poorly managed, leading to adverse financial impacts.

This finding is consistent with Matsumura et al. (2014), who note that investors may respond negatively to disclosures indicating poor environmental performance. When a company discloses its emission data, investors do not merely view the transparency as a positive aspect, but also evaluate the content of the disclosure namely, the amount of emissions produced and how effectively the company is performing in reducing them. Furthermore, Houten & Wedari (2023) emphasize that in developing countries such as Indonesia, investor focus tends to be on tangible environmental outcomes rather than voluntary disclosures, which are still evolving. Therefore, without corresponding improvements in emission reduction or operational efficiency, carbon emission disclosure can act as a negative signal in the markets. Consequently, the negative market reaction can adversely affect the company's financial performance supporting studies by Desai et al (2021), Houten & Wedari (2023), dan Hadiwibowo et al (2023).

2. The analysis reveals that green process innovation exerts a positive and significant effect on financial performance, as indicated by a regression coefficient of 1.034 and a significance level of 0.000, which is below 0.05. This result supports the hypothesis and aligns with signaling theory, where in companies send credible signals to external stakeholders through concrete actions such as adopting environmentally friendly processes. These innovations demonstrate commitment to operational efficiency and environmental sustainability, which are valued by investors.

Supporting studies by Xie et al. (2019) confirm that green process innovation can enhance operational efficiency, reduce production costs, and provide a competitive advantage. This strategic orientation toward sustainable innovation sends a strong positive signal to the market about the company's long-term sustainability and value creation which leads strong financial performance. These findings are consistent with Putri & Agustin (2023) and Wang & Ahmad (2024), who report similar outcomes regarding green process innovation on financial performance.

3. Contrary to expectations, green product innovation does not show a significant impact on financial performance, with a regression coefficient of -0.096 and a significance value of 0.611, exceeding the 0.05 threshold. This result leads to the rejection of the hypothesis predicting a positive and significant relationship. The lack of impact may stem from low consumer awareness, limited market demand for environmentally friendly products, and a general reluctance to pay premium prices associated with such products.

As discussed by Dangelico & Pujari (2010) and Putri & Agustin (2023), consumers tend to avoid green products due to higher costs, which can reduce market acceptance and investor confidence. This limited market response negatively affects the company's financial performance, reflecting the challenges of green product innovation in emerging markets like Indonesia. These findings are consistent with Husnaini & Tjahjadi (2020) and Putri & Agustin (2023), who report similar outcomes regarding green product initiatives on financial performance.

  

## 5.0 CONCLUSION AND RECOMMENDATIONS

Overall, the results revealed that environmental sustainability practices significantly influenced the financial performance of companies in Indonesia's Energy and Consumer Non-Cyclicals sectors. Specifically, carbon emission disclosure was found to have a significant negative impact, indicating that investors may react unfavorably to disclosure if it highlights poor emission performance or lacks real environmental improvement. In contrast, green process innovation showed a significant positive effect, emphasizing the market's appreciation for operational efficiency and environmental responsibility. However, green product innovation had no significant effect on financial performance, suggesting that the market or consumers may not yet place strong value on environmentally friendly products. Thus, this study recommends that companies focus not only on transparency but also on delivering measurable outcomes in emission management. Efforts toward process-level innovation should be prioritized as they contribute directly to performance. Additionally, future research should consider expanding the sample across sectors and exploring other factors that may influence how environmental actions translate into financial gains.

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