

**INVESTOR REACTIONS TO CARBON EMISSION DISCLOSURE,  
ENVIRONMENTAL PERFORMANCE, SUSTAINABLE INVESTMENT, AND  
TECHNOLOGICAL INNOVATION**

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**Abstrak**

This study evaluates the effects of carbon emission disclosure, environmental performance, sustainable investment, the moderating role of technological innovation, and emission targets on investor reactions in Indonesia's energy sector during the 2019-2023 period. The analysis was conducted on 82 companies that met sustainability criteria using panel data regression and classical assumption tests to ensure the validity of the model. The results showed that the average carbon emission disclosure (CED) was 8.25 ( $SD=4.81$ ), while environmental performance recorded an average of 1.76 ( $SD=1.97$ ). Investor reactions had an average value of 0.00962 with significant volatility. Regression analysis revealed that carbon emission disclosure, environmental performance, and sustainable investment did not have a significant effect on investor reactions ( $p > 0.05$ ). Technological innovations had a positive impact on carbon emission disclosure ( $p = 0.039$ ) but did not significantly affect the transparency of environmental performance or investor reactions. The moderation of emissions targets also failed to significantly strengthen the relationship between sustainability variables and investor reactions. With an R-squared value of 0.1349 in the direct model and increasing to 0.2452 in the moderation model, the independent variables explained only a small fraction of the variance in investor reactions. The study highlights that investors prioritize financial indicators such as profitability (average ROA = 0.00011) and *leverage* (0.53072) over sustainability factors.

These findings demonstrate the need for several key actions: increased sustainability transparency, effective technological innovation strategies, and strong regulatory support to draw investors' attention to sustainability issues in emerging markets such as Indonesia.

**Keywords:** Sustainability Transparency, Market Volatility, Financial Indicators, Energy Efficiency, Regulatory Support

# **REAKSI INVESTOR ATAS AKTIVITAS PENGUNGKAPAN EMISI KARBON, KINERJA LINGKUNGAN, INVESTASI BERKELANJUTAN DAN INOVASI TEKNOLOGI**

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## **Abstrak**

Penelitian ini mengevaluasi pengaruh pengungkapan emisi karbon, kinerja lingkungan, investasi berkelanjutan, moderasi inovasi teknologi, dan target emisi terhadap reaksi investor di sektor energi Indonesia selama periode 2019–2023. Analisis dilakukan pada 82 perusahaan yang memenuhi kriteria keberlanjutan menggunakan regresi data panel dan uji asumsi klasik untuk memastikan validitas model. Hasil menunjukkan bahwa rata-rata pengungkapan emisi karbon (CED) adalah 8,25 ( $SD = 4,81$ ), sementara kinerja lingkungan mencatat rata-rata 1,76 ( $SD = 1,97$ ), dan reaksi investor memiliki rata-rata 0,00962 dengan volatilitas yang signifikan. Regresi mengungkap bahwa pengungkapan emisi karbon, kinerja lingkungan, dan investasi berkelanjutan tidak berpengaruh signifikan terhadap reaksi investor ( $p > 0,05$ ). Inovasi teknologi berdampak positif pada pengungkapan emisi karbon ( $p = 0,039$ ) tetapi tidak memengaruhi transparansi kinerja lingkungan maupun reaksi investor. Moderasi target emisi juga gagal memperkuat hubungan antara variabel keberlanjutan dan reaksi investor. Dengan nilai R-squared sebesar 0,1349 pada model langsung dan meningkat menjadi 0,2452 pada model moderasi, variabel independen hanya menjelaskan sebagian kecil variansi reaksi investor. Penelitian ini menyoroti bahwa investor lebih mengutamakan indikator keuangan seperti profitabilitas (ROA rata-rata = 0,00011) dan *leverage* (0,53072) dibandingkan faktor keberlanjutan. Temuan ini menunjukkan perlunya peningkatan transparansi keberlanjutan, strategi inovasi teknologi, serta dukungan regulasi untuk menarik perhatian investor terhadap isu keberlanjutan di pasar yang sedang berkembang seperti Indonesia.

**Kata Kunci:** Transparansi Keberlanjutan, Volatilitas Pasar, Indikator Keuangan, Efisiensi Energi, Dukungan Regulasi.