

**Environmental Disclosure and Firm Value of Listed Manufacturing Companies in Nigeria****Author; Kenneth Kaunda Ozegbe¹, Okolie A. O.² & Okoro G. E.³**

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Publication Date: 2026/06/22***Abstract***

The study examined how environmental disclosure affected the firm value of Nigerian industrial companies. Expost facto research design was employed in the study with data sourced from annual report and sustainability reporting of fifty five manufacturing companies with a sample size of fourty five companies listed on the Nigeria exchange group for a period of ten years from 2015- 2025. Descriptive, correlation and two way fixed and random effect estimator by scroil kraay was used to analyzed the data and from the result, Energy Consumption (EC) produces a negative ($\beta = -0.7555$,) and statistically significant effect on firm value, $p < 0.05$). Similarly, the Random Effects (RE) model yields a negative coefficient -0.9047 for Energy Consumption EC while Environmental Compliance Cost (ECC), on the other hand, shows a positive statistically significant relationship with firm value in both models (FE: $\beta = 0.2542$; RE: $\beta = 0.1813$). The study recommends that firm managers should refocus efficiency improvements of energy consumption and energy optimization strategies.

Keywords; Energy Consumption; Environmental Cost Compliance; Firm Value.**Introduction**

Environmental problems like pollution, resource depletion, biodiversity loss, and climate change have become major concerns for governments, investors, and other stakeholders worldwide in recent decades (Omoboye & Ayiti, 2024). Due to these difficulties, firms are under pressure to operate sustainably and disclose their environmental policies openly. As a result, environmental disclosure has become an essential feature of company reporting,

especially when considering sustainability and Environmental, Social, and Governance (ESG) reporting (Wu, et., al., 2025)

The provision of both qualitative and quantitative information by companies on their environmental performance, policies, practices, and impacts is known as environmental disclosure. This covers information on energy use, waste management, carbon emissions, the cost of environmental compliance, and sustainability projects (Nnedu, Okpanachi & Achema 2025).

These disclosures function as a communication tool between businesses and their stakeholders and are usually included in annual reports, sustainability reports, or integrated reports. Environmental disclosure is frequently optional, particularly in developing nations like Nigeria where laws are still being developed (Babatunde & Aderemi 2019)

Because of problems including oil spills, gas flaring, industrial pollution, and inappropriate waste disposal, environmental concerns are especially important in Nigeria. The necessity for corporate accountability and transparency among quoted firms listed on the Nigerian Exchange Group (NGX) has increased due to these environmental challenges. Businesses in ecologically sensitive industries, like manufacturing, industrial products, and oil and gas, are under growing pressure to reveal their environmental practices in order to show accountability and adherence to national and international regulations (Samuel & Akinyosoye 2025)

The idea of company value is intimately related to the increasing focus on environmental transparency. Firm value, which is frequently calculated using metrics like Tobin's Q, market capitalization, or share price, reflects the market's assessment of a company's value (Maryam, Ghulam & Yasi 2021). To evaluate a company's risk profile, prospects for the future, and overall sustainability, investors and other stakeholders rely on public information. By lowering information asymmetry, boosting a company's reputation, drawing in socially conscious investors, and increasing stakeholder trust, environmental disclosure can have an impact on firm value (Yahaya, 2025)

Statement of the Problem

Companies are required to reveal information about their environmental policies due to the growing need for environmental

accountability, especially in areas like energy use and environmental cost compliance. Although it is anticipated that these disclosures will boost corporate valuation and increase openness, the actual data is still conflicting and unclear, particularly in the Nigerian setting. The question of whether environmental disclosure policies genuinely add to a company's value or only reflect adherence to social and legal requirements is raised by this.

Specifically, there is limited clarity on the individual effects of environmental cost compliance disclosure and energy consumption disclosure on firm value, as most prior studies have focused on aggregated measures of environmental reporting. This aggregation obscures the distinct influence of each component, thereby creating uncertainty regarding their relative importance in shaping investors' perception and market valuation of firms.

Furthermore, there is a gap of sector-specific empirical data analyzing how these disclosure components affect business value over time, despite the manufacturing sector's economic significance and environmental sensitivity in Nigeria. The voluntary nature of environmental reporting in Nigeria contributes to this disparity by leading to inconsistent disclosure practices and undermining the validity of the information that is accessible for decision-making.

Consequently, a thorough and context-specific study that fills in these gaps by applying better methodology and concentrating on a pertinent setting is required. This study aims to close this gap by offering empirical data that will improve knowledge and guide practice and policy.

Objective of the Study

The objective of the study is to investigate;

- i. the effect of Environmental cost compliance disclosure on the firm

- value of quoted companies in Nigeria; and
- ii. The effect of energy consumption disclosure on the firm value of quoted companies in Nigeria.

Research Hypotheses

HO₁: environmental cost compliance information disclosure has no significant effect on the value of listed manufacturing firm in Nigeria

HO₂: Disclosure of energy use data has no significant effect on the value of Nigerian listed manufacturing companies.

Review of Related Literature

Energy consumption

Energy use encompasses various dimensions, including energy justice, household consumption, and productive use of electricity, energy services, and analytical frameworks. Each aspect contributes to a comprehensive understanding of energy dynamics and their implications for sustainability and policy. In context of manufacturing companies or any other corporate entity, energy use refer to the type consumed to operate, facilities, machinery and processes that is involve in the production of goods and services (Sören, Wilhelm, Heinz, Armin & Armin 2020). Energy use is directly related to carbon emissions and environmental deterioration from an environmental standpoint. Fossil fuel combustion greatly increases greenhouse gas emissions, which contributes to global environmental issues like climate change. Because of this relationship, stakeholders and regulators are paying more attention, which encourages businesses to use renewable energy sources and energy-efficient technologies (Li, et., al., 2023). From a disclosure and reporting perspective, energy consumption is an important component of environmental and sustainability reporting systems, such as the Global Reporting Initiative. Information regarding energy usage,

energy intensity, and energy conservation activities must be provided by companies. These disclosures improve communication and enable stakeholders to evaluate a firm's commitment to environmental responsibility (Onyebuanyi & Ofoegbu 2022).

Energy consumption is commonly operationalized in empirical studies using indices or quantitative measurements such as total energy utilized, energy intensity (energy consumption per unit of output), or a disclosure index based on stated energy-related information in yearly reports (Tho Pesch, et., al., 2023; Janita & Anna 2025). Energy use can have a beneficial or negative impact on business value studies. Efficient energy use can lower costs and improve profitability, so boosting business value, whereas excessive or poorly managed energy consumption can increase expenses and environmental dangers, potentially diminishing firm value.

Environmental Cost Compliance

Costs associated with environmental compliance can be roughly divided into a number of components. First, there are costs associated with prevention, such as investments in pollution control machinery, greener industrial methods, and eco-friendly procedures meant to lower emissions and waste creation. Second, environmental audits, inspections, and reporting tasks necessary to guarantee compliance are included in detection and monitoring costs. Third, the costs associated with clearing up environmental harm, such as trash contamination or oil spills, are referred to as remediation costs. Lastly, when businesses violate environmental standards and face fines or legal action, they incur penalty and litigation costs (Ukpeh, 2025)

The methodical identification and reporting of costs related to environmental consequences that are normally left out of traditional financial statements is known as

environmental hidden cost disclosure. This idea is becoming more and more popular as stakeholders push higher levels of transparency about a company's sustainability performance and associated expenses. According to empirical research, financial performance may benefit from the disclosure of environmental expenses. For example, studies carried out in Iraqi industrial companies have shown that environmental disclosure serves as a mediating variable and that hidden costs and other environmental expenses have a substantial impact on financial performance (Al-Waeli et al., 2022). Proxies like total environmental spending, environmental protection costs, or a disclosure index based on reported compliance activities are frequently used in empirical research to calculate the cost of environmental compliance (Gray & Ronald 2021). The relationship between environmental compliance cost and performance is frequently inconsistent in research looking at firm value. High compliance costs can have a positive long-term impact on business value by boosting credibility, lowering regulatory risk, and increasing sustainability results, even while they may have a negative short-term financial impact.

Firm value

Firm value is a critical concept in accounting, reflecting a company's market worth as influenced by various financial reporting practices and corporate strategies. It encompasses the relationship between accounting metrics and market perceptions, highlighting how financial disclosures can impact investor decisions and overall firm valuation. Firm value, represents the overall economic worth of a company, encompassing its assets, liabilities, and potential for future earnings. It reflects the market's perception of the company's success and future prospects, often tied to its stock price and other financial

metrics. Essentially, it's a measure of how much a company is worth, both in terms of its tangible assets and its intangible value like brand reputation and future growth potential. Accurate financial reporting, including operational and investment data, is essential for determining firm value. A robust model links these reports to market perceptions, suggesting that transparency enhances firm valuation (Abreu, 2015). Firm value can be observed through stock prices, which are influenced by accounting disclosures. Higher transparency in financial reporting correlates with increased market valuation (Narayana & Wirakusuma, 2021).

According to Chinedum (2015), Value is viewed by both current and prospective investors as the primary justification for investing in certain companies.

Theory Underpinning

Legitimacy theory is developed by Dowling and Pfeffer (1975), there is a "social contract" between society and corporations, and a firm is considered legitimate when its ideals coincide with those of the larger social structure. Since firms are bound by social contracts that require the disclosure of various corporate social activities, legitimacy theory emphasizes the importance of effective communication to stakeholders in establishing and preserving legitimacy. This is pivotal in understanding corporate behavior, especially regarding corporate social responsibility (CSR) and accounting practices (Tyvonchuk 2025) This theory improves public acceptance and ensures the survival of the organization (Solikhah & Winarsih, 2016). Businesses can raise the level of disclosure in an effort to gain legitimacy by informing the public about their organizational operations and reaffirming that they adhere to social standards and boundaries. Legitimacy theory is a tool that helps organizations fulfill their social contract by implementing and creating voluntary social and environmental disclosures that allow them

to be recognized for their goals and survive in a volatile and fast-paced environment (Akhter et al., 2023). According to Chowdhury et al. (2020), legitimacy theory has become widely accepted in social accounting and disclosure-based research, which has greatly aided in identifying the objectives and motivations behind disclosing environmental information.

Empirical Review

Abbas, Zuriadah, and Azam (2020) looked into how environmental spending affected Iraqi industrial enterprises' bottom lines. A sample of twenty-five companies on the Iraqi stock exchange were used to collect data from the annual reports of published listed corporations. The data was analyzed using correlation and multiple regressions. The findings demonstrated that financial performance was positively impacted by conventional costs and social costs, negatively impacted by environmental potential hidden costs, and unrelated to contingency costs, image costs, and relationship costs.

Samuel, Aruna, and Amahalu (2020) examined the effect of environmental disclosure on the profitability of listed oil and gas companies in Nigeria using net profit margin as a proxy for profitability, the study's dependent variable, and waste management cost disclosure, employee health and safety cost disclosure, and environmental remediation cost as proxies for environmental disclosure. Eleven oil and gas businesses that were listed on the Nigeria Stock Exchange Group provided information between 2010 and 2019. Panel least square regression analysis of the data revealed that the disclosure of waste management, employee health and safety, and environmental remediation expenses had a positive and significant influence on the net profit margin of oil and gas businesses.

Nwafor et al. (2026) used data gathered from thirteen oil and gas companies "contained in the annual audited financial reports and the

Department of Petroleum Resources (DPR) from 2008 to 2019 using panel regression analysis to examine the environmental accounting disclosure and market value of listed non-financial firms in Nigeria." The findings indicate that whereas population control costs had a large and negative impact on return on asset (ROA), waste management costs had a favorable and considerable impact on the ROA of Nigerian oil and gas companies

Using information collected from eight quoted oil and gas companies between 2012 and 2021, including a sample of seven listed on the Nigeria exchange group,

Michał, Mohamad and Kwabena (2023) conducted a research on Evaluation of energy efficiency impact on corporate financial performance of companies in Western Europe with data collected during a timeframe characterized by stable energy prices (2015-2019) and a rapid escalation in those prices (2020-2022). The data was analyzed using a fixed and random effect model and from the result energy efficiency exerts a negative effect on corporate financial performance,

Using information gathered from non-financial companies listed on the NGX as of December 31, 2023, Agbo, Emmanuel, Uchenna, Uwaleke, and Achema (2024) investigated the impact of energy consumption and greenhouse gas emission disclosure on the market competitiveness of listed non-financial corporations in Nigeria. The data was evaluated using panel regression analysis and descriptive and inferential statistical techniques. The findings showed that energy consumption and green gas emissions have a favorable impact on the firm value of Nigerian non-financial listed firms.

Ubokudom, Akpan, and Akininnyi (2024) examined the financial performance and environmental remediation costs of Nigerian listed firms using data collected from ten oil and gas companies listed on the Nigerian Exchange Group as of 31st, 2022 for a ten-

year period from 2013 to 2022. The Ordinary Least Square regression technique was used to analyze the data, and the findings indicated that while environmental cleanup and environmental safety costs had a significant positive impact on oil and gas return on assets, waste management costs had a negligible negative impact.

Ahmed and Demet (2025) used data gathered between 2021 and 2023 to examine the impact of renewable energy usage on financial performance. Renewable energy consumption has a relatively small negative impact on return on assets, according to Shap, a XAI approach used to evaluate the data; yet, an increase in the total renewable energy ratio contributes to return on assets.

Using information gathered from the Nigeria Stock Exchange over a nine-year period from 2015 to 2023, Eshirambe and Adejuwon (2025) examined the energy usage and financial performance of listed cement manufacturing companies in Nigeria. The data was evaluated using descriptive statistics and correlation, which demonstrate that energy use has a major impact on financial performance.

Research Gap

The relationship between environmental disclosure and corporate value has been the subject of much empirical research, but the results are still conflicting and unclear, especially in emerging economies. The tendency to interpret environmental disclosure

as an aggregate construct, which obscures the potentially varied effects of its underlying components, is a major weakness of previous research. The Global Reporting Initiative (GRI) and the International Sustainability Standards Board (ISSB), two developing global reporting frameworks that prioritize disaggregated, decision-useful sustainability information, such as metrics on energy consumption and environmental compliance costs, make this particularly problematic. Furthermore, despite the manufacturing sector's substantial environmental impact and economic significance in Nigeria, the research is largely biased toward industries like oil and gas, with little empirical attention paid to it. Short time horizons and traditional estimate methods, which may not effectively handle panel data complications such cross-sectional dependency and heterogeneity, are methodological constraints on many investigations. As a result, there is still a lack of solid, sector-specific, and component-level research about the ways in which different environmental disclosure procedures affect business value. By analyzing the disaggregated effects of energy consumption and environmental cost compliance disclosures on firm value among listed manufacturing firms in Nigeria over a long period (2015–2025), this study fills in these gaps. while utilizing robust panel estimate methods (Driscoll–Kraay standard errors) to improve the validity and dependability of results.

Model specification

The study adopts a model modified from the study of Ukpeh, 2025. This is shown below;

Tobin's $Q = f(EC, ECC)$ -----Equation 3.1

Tobins $Q = \beta_0 + \beta_1 EC_{it} + \beta_2 ECC_{it} + \varepsilon_{it}$ ----- equation 3.2

Where Tobin's Q is used for firm value

EC is for energy consumption

ECC is for environmental cost compliance

β_0 is for intercept

β_1 - β_2 is for coefficient of the independent variable

ε_{it} is for error term

Analysis of Data

Table 4.1; descriptive statistics summary

Variables	Obs	Mean	Std. Dev.	Min	Max
TOBINSQ	450	1.631	1.593	-.31	12.69
EC	450	.061	.157	0	1
ECC	450	.036	.142	0	1

Source; Authors' Computation (2026)

Table 4.0 revealed descriptive statistics of important stylized facts concerning company value, energy consumption, and environmental cost compliance disclosure policies among manufacturing companies listed on the Nigerian Exchange Group (NGX) between 2015 and 2024. A standard deviation (1.59) is observe alongside with -0.31 to 12,9 for minimum and maximum which points a serious heterogeneity in firm value across sampled firm over time. Energy consumption and environmental cost compliance shows 0.061 0.036 respectively indicating generally weak disclosure intensity among Nigeria manufacturing companies.

Table 4.2; Normality of Data Result

Variable	Obs	W	V	Z	Prob > z
TOBINSQ	450	0.62379	114.190	11.330	0.00000
EC	450	0.88386	35.252	8.519	0.00000
ECC	450	0.86946	39.623	8.799	0.00000

Sources; Authors Computation, 2026

This result shows that the probability (prob > z) for Tobin's Q, Energy Consumption (EC) and Environmental Cost Compliance (ECC) are 0.00000 which are all less than conventional level of significance of 0.05 to the decision rule of Shapiro wilk test, when the probability value is less than 0.05, the null hypothesis of normal distribution is rejected. This indicates that data of energy consumption and environmental cost compliance are not normally distributed.

Table 4.3 Spearman's Rank Correlation Result

	TOBINSQ	EC	ECC
TOBINSQ	1.0000		
EC	-0.1843	1.0000	
ECC	-0.1159	0.5119	1.0000

Source; Authors' Computation (2026)

Table 4.3 show that there is a negative relationship of -0.1843 of energy consumption and -0.1159 of environmental cost compliance with Tobin's Q suggesting that increase

disclosure related to energy consumption and environmental cost compliance will not

enhance firm value.

Table 4.4; Two-Way Fixed Effects (Driscoll–Kraay) and Random Effects Regression Results

Variables	Fixed Effects (FE – Driscoll–Kraay)	Random Effects (RE)
EC	-0.7555 (0.2637)	-0.9047(0.5023)
ECC	0.2542 (0.2563)	0.1813 (0.4468)
Constant	12.8863 (2.6813)	5.6717 (1.2798)
R² (Within)	0.1526	0.0831
F / Wald Statistic	58872.46	14.58
Prob > F / Chi²	0.0000	0.0022

Sources; Research Computation, 2026

The Random Effect (RE) model explains 8.31% of the within-firm variation in Tobin's Q, whereas the Fixed Effect FE model explains roughly 15.26% ($R^2 = 0.1526$). The combined significance of the explanatory variables in the FE model is confirmed by the extremely high F-statistic (58872.46, $p = 0.0000$), and the overall model significance is also indicated by the Wald statistic for the RE model (14.58, $p = 0.0022$).

The findings from the two-way Fixed Effects (FE) model disclose that Energy Consumption (EC) produces a negative ($\beta = -0.7555$), and statistically significant effect on company value, ($p < 0.05$). This implies that an increase in energy consumption can lead to decline in Tobin's Q.

Similarly, the Random Effects (RE) model yields a negative coefficient for Energy Consumption EC ($\beta = -0.9047$) with a statistical significance ($p < 0.10$). The outcomes align with the hypotheses of legitimacy theory. According to the two-way Fixed Effects estimates, energy use has a statistically significant negative impact on firm value, indicating that increased energy use lowers market valuation and decreases societal approval of businesses. This suggests that companies who are thought to do poorly

in terms of the environment are being penalized by stakeholders.

Environmental Compliance Cost (ECC), on the other hand, shows a positive significant relationship with firm value in both models (FE: $\beta = 0.2542$; RE: $\beta = 0.1813$). This suggests that although higher environmental compliance spending may indicate corporate responsibility, and will have significant effect on firm valuation during the study period. Despite having a positive coefficient, Environmental Compliance Cost having statistical significance suggests that spending on environmental cost compliance will increase company firm value.

Conclusion

The study examined the environmental disclosure and firm value of quoted companies listed in the Nigeria exchange group over ten years, from 2015 to 2025. The results show the company value is negatively and statistically significantly impacted by energy consumption (EC), suggesting that increase in energy consumption does not increase the firm value of the studied companies. But there is a positive but statistically significant correlation between Environmental Compliance Cost (ECC) and business value which means that spending on

environmental cost compliance will enhance firm value.

Recommendation

The study recommends that;

- (i) Rather than manufacturing companies emphasizing volume-based energy consumption disclosures that deal with energy intensity and cost exposure, firm managers should refocus efficiency improvements of energy consumption and energy optimization strategies,
- (ii) Firms should treat same primarily as a regulatory assurance tool rather than a strategic instrument for value creation.

Contribution to knowledge

- (i) The study contributes to existing literature by deepening of theoretical understanding and showing that not all environmental disclosures are equally valued in enhancing the firm value of quoted manufacturing firm
- (ii) It provides empirical evidence on how energy consumption and environmental cost compliance affect firm value of quoted manufacturing companies in Nigeria.
- (iii) The study enables shareholders understand the environmental impact assessment of their company.

Reference

- Abbas Jumaah Al-Waeli, Zuriadah Ismail and Azam Abdelhakeem Khalid, The Impact of Environmental Costs on the Financial Performance of Industrial Companies in Iraq, *International Journal of Management*, 11 (10), 1955-1969.
doi: [10.34218/IJM.11.10.2020.184](https://doi.org/10.34218/IJM.11.10.2020.184)
- Agbo, E, Uchenna, U & Achema, F (2024) Greenhouse gas emission and energy consumption disclosure on market competitiveness of listed non-financial firms in Nigeria. *Journal of Arts and Humanities*. 10 (3) 1-20
- Babatunde, O., & Aderemi, D., A., (2019). Sustainability information disclosure and financial reporting quality of listed non-financial firms in Nigeria. *African Journal of Corporate Governance Research*. 1(2), 106-125
- Emovon and Izedonmi (2023) Sustainability Disclosure and Market Value of Quoted Oil and Gas Companies in Nigeria. *Journal of Social and Management Sciences*, (4)2 208-227
<https://doi.org/10.53982/ajsms.2023.0402.03-j>
- Eshirambe and Adejuwon (2025) Energy consumption and quoted cement manufacturing companies in Nigeria. *Journal of Economics and Management Studies*, 4(11), 77-84
- Gray, W., & Ronald S, (2021). 'Economics of environmental compliance and enforcement in Hank Shugart. *Oxford Research Encyclopedia of Environmental Science* <https://doi.org/10.1093/acrefore/9780199389414.013.444>,
- Janita, A & Anna, V. (2025). Industrial energy use, efficiency, and savings: methods for quantitative analysis. Springer nature link 18 (76) 1-18.
<https://doi.org/10.1007/s12053-025-10367-5>
- Li J, Irfan M, Samad S, Ali B, Zhang Y, Badulescu D, & Badulescu A. (2023). The relationship between energy consumption, CO₂ emissions, economic growth, and health indicators. *International Journal of Environmental Research and Public Health*. 20(3):2325.
<https://doi.org/10.3390/ijerph20032325>

- Onyebuenyi, F.E., Ofoegbu, G.N. (2022). Environmental sustainability disclosure and firm performance of quoted oil and gas companies in sub-saharan africa countries. *Academy of Accounting and Financial Studies Journal*, 26(1), 1-18.
- Yahaya, A. O. (2025). The influence of environmental disclosure on corporate information asymmetry. *Accounting Review*, 51(1) 271-239
- Nnedu, N., S. Okpanachi, J. & Achema, F., (2025). Environmental sustainability reporting and the performance of listed consumer goods firms in Nigeria. *Journal Of Research And Innovation In Social Science*, 9(4), 2849-2865
- Nwafor I., C., Isaac M., I., Ofurum C., D., Edeh L., Ogbu I., Oko J., O., & Nwankwo J.,N (2026) Impact of environmental management costdisclosureonfirm performance in Nigeria. *Journal of Behavioural Accounting*, 2 (2) 69-81
- Omoboye I., F., & Ayiti, O., M (2024) Environmental problems and sustainable development in Nigeria. *Journal of Social Sciences*, 6(2) 41-50.
- Samuel, S., O., & Akinyosoye, A., O., (2025). Environmental accounting disclosure and financial performance of listed manufacturing companies in Nigeria. *International Journal Of Research And Innovation In Social Science*, 9(6), 4995-5011
- Samuel, O., Aruna, F. E.& Amahalu, N. N.(2020). Effect of environmental costs disclosure on the profitability of listed oil and gas firms in Nigeria. *International Journal of Academic Research in Accounting, Finance, and Management Sciences*.10 (2), 157–170. <http://creativecommons.org/>
- Tho Pesch, G., Einarsdóttir, A. K., Dillman, K. J., & Heinonen, J. (2023). Energy Consumption and Human Well-Being: A Systematic Review. *Energies*, 16(18), 6494. <https://doi.org/10.3390/en16186494>
- [Ubokudom, A. I., Akpan, D. C., & Akinninyi, P. E. \(2024\). Environmental Remediation Costs and Financial Performance of Listed Oil and Gas Companies in Nigeria. *International Journal of Accounting Intelligence* 2\(1\), 41–56](#)
- Ukpeh, G., I (2025). Environmental compliance cost and financial performance of oil and gas companies in Nigeria. *Journal of Accounting and Financial Management*, 11(7), 113-125
- Wu L, Sun H, & Chen L. (2025). The Impact of ESG information disclosure on corporate environmental performance: Evidence from China's Shanghai and Shenzhen A-Share Listed Companies. *Sustainability*. 2025; 17(23):10583. <https://doi.org/10.3390/su172310583>