Jurnal Akuntansi dan Auditing Indonesia
https://journal.uii.ac.id/JAAI

The relationship between carbon emissions intensity and sustainable growth rate: The moderating role of media exposure

Muhamad Tohir Amrullah, Martdian Ratna Sari*
Sekolah Tinggi Manajemen PPM, Jakarta, Indonesia
*Corresponding Author email: martdianratnasari@gmail.com

ARTICLE INFO

Article history:
Received 2025-07-25
Accepted 2025-12-01
Published 2025-12-31

Keywords:
Carbon Emissions Intensity, *Sustainable Growth Rate*, *Media Exposure*, *Sustainability*

DOI:
https://doi.org/10.20885/jaai.vol29.iss2.art12

ABSTRACT

This study investigates the relationship between carbon emissions intensity (CEI) and sustainable growth rate (SGR), with media exposure as a moderating variable. Using data from energy sector companies listed on the Indonesia Stock Exchange (IDX) during 2022–2024, the research applies quantitative methods with moderated regression analysis (MRA). The results reveal that CEI has no significant effect on SGR, and media exposure does not significantly moderate this relationship. These findings suggest that despite maintaining of carbon emissions, public and media pressure on environmental issues in Indonesia remains weak and insufficient to influence corporate sustainable growth strategies. The study contributes to the literature by providing empirical evidence from an emerging market context and by introducing media exposure, measured through a modified Janis–Fadner coefficient, as a novel moderating variable in environmental accounting research. The results highlight the limited role of media as a social control mechanism in Indonesia and underscore the need for stronger regulatory intervention and stakeholder engagement to promote sustainability in high-emission industries.

Introduction

Climate change has become a pressing global issue, with carbon emissions recognized as one of its main drivers (Williamson et al., 2018). Indonesia, as one of the top greenhouse gas (GHG) emitters globally, faces a major challenge in balancing economic growth with environmental sustainability (Crippa et al., 2024). The energy sector is the largest contributor to Indonesia's national carbon emissions, underscoring the urgency of examining how industrial emissions impact companies' long-term performance. The high level of carbon emissions in Indonesia reflects the serious challenge of balancing national economic growth with a commitment to environmental sustainability.

In the context of sustainable development, reducing carbon emissions is a crucial aspect, given the growing pressure from the international community, global investors, and consumers who are increasingly paying attention to sustainability aspects in corporate business activities (Buertey et al., 2025; Burton & Eike, 2023). For example, Bolton et al. (2022) revealed that companies with high carbon emissions tend to face increased capital costs because investors demand higher returns as compensation for the climate risks they bear. On the other hand, companies with high emissions also tend to face pressure from various stakeholders to immediately transition and make efforts toward a more "green" business (Andrian & Kevin, 2021; Yuliana & Wedari, 2023; Yunus et al., 2020).

In this context, carbon emissions intensity (CEI), defined as the ratio of carbon emissions to company output, has emerged as a critical metric in evaluating corporate environmental efficiency. Previous studies have extensively examined the relationship between environmental performance and short-term financial indicators such as return on assets (ROA) or stock returns (Desai et al., 2022; Dewantoro, 2024; Febriani et al., 2022; Latif, 2024). However, there remains a significant gap in the literature concerning how carbon emissions affect long-term financial sustainability, particularly measured through the sustainable growth rate (SGR), a forward-looking indicator that reflects a firm's ability to grow using internal resources without relying on external financing. Furthermore, while some studies have considered media exposure as an influencing factor, few have positioned it as a moderating variable in the relationship between carbon intensity and financial sustainability, especially within the context of developing countries such as Indonesia.

This study aims to address that gap by analyzing the effect of carbon emissions intensity on sustainable growth rate and examining whether media exposure moderates this relationship. However, our empirical analysis of energy sector firms listed on the Indonesia Stock Exchange (IDX) during 2022–2024 reveals that neither carbon emissions intensity nor media exposure has a statistically significant effect on sustainable growth rate. The

P ISSN 1410-2420 | E ISSN 2528-6528

contribution of this paper is twofold. First, it provides new empirical evidence on the relationship between environmental efficiency and long-term financial growth in the context of an emerging market. Second, it introduces media exposure measured using the modification from Janis–Fadner (JF) coefficient as a novel moderating variable in environmental accounting research. The findings offer valuable insights for policymakers or regulators, public, media, and industry stakeholders seeking to promote corporate sustainability in Indonesia.

Literature Review

Legitimacy Theory

According to Max Weber, as quoted by Schlusberg (1969), legitimacy is the basis that makes power considered legitimate and worthy of obedience by society, which is classified into three forms, namely traditional legitimacy, charismatic legitimacy, and legal-rational legitimacy. Traditional legitimacy stems from belief in customs and traditions, charismatic legitimacy originates from belief in the extraordinary qualities of a leader, while legal-rational legitimacy is based on the existing legal system. This theory of legitimacy then expanded into the industrial realm, where companies need to align their social values with socially acceptable norms (Dowling & Pfeffer, 1975). Companies that are irresponsible toward the environment, such as those that produce excessive carbon emissions, may be considered to be violating social norms and threatening their legitimacy (Datt et al., 2020). The loss of legitimacy can reduce stakeholder trust and negatively impact long-term financial performance. Therefore, companies need to implement legitimacy strategies such as increasing transparency, complying with environmental regulations, and managing public image through the media (Helfaya et al., 2023).

Carbon Emission Intensity

Carbon emission intensity (CEI) is a measure of a company's environmental efficiency, calculated based on the ratio between the amount of carbon emissions generated and the company's main revenue (Chang et al., 2023; Nengzih, 2022; Zheng & Jin, 2023), and refers to the Global Reporting Initiative (GRI) 305: Emissions 2016 standard issued by the Global Sustainability Standards Board (GSSB). This carbon emissions measurement has strategic benefits, such as identifying emission sources, finding efficiency opportunities, developing data-driven decarbonization strategies, meeting tender requirements, and attracting the attention of investors and other stakeholders. In Disclosure 305-4, greenhouse gas (GHG) emissions are divided into Scope 1 (direct), Scope 2 (indirect from electricity, heating, and steam), and Scope 3 (other indirect emissions outside the organization), while the denominator in the CEI ratio can be product units, production volume, physical size, number of employees, or monetary value. A high CEI indicates that a company generates large emissions relative to its economic output, signaling low environmental efficiency and potentially leading to pressure from regulators, investors, and the public, which can negatively impact long-term financial performance. Therefore, in this study, CEI is used as an independent variable that influences a company's ability to grow sustainably.

Sustainable Growth Rate

The sustainable growth rate (SGR) measurement model commonly used in financial literature is the model developed by Higgins (HSGR) and Van Horne (VSGR) (Fonseka et al., 2012), where SGR is defined as the maximum growth rate that a company can achieve without requiring external financing, but rather by utilizing retained earnings as a source of internal financing (Higgins et al., 2022). This concept reflects a company's ability to grow organically and sustainably in line with its internal capacity to generate and manage profits, making SGR an important indicator in evaluating financial stability, operational efficiency, and the quality of managerial policies. When the actual growth rate (AGR) is lower than the SGR, this indicates the presence of excess internal capital that has not been optimally utilized, which can be directed toward strengthening the company's financial structure, such as by increasing liquid assets or reducing debt levels (Vuković et al., 2022).

Media Exposure

Media exposure refers to the level of media coverage or reporting on a company, which plays an important role in shaping public perception and creating social pressure (Su et al., 2022), which in turn can encourage companies to improve their environmental responsibility and performance (Ardillah & Rusli, 2022; Aulia & Agustina, 2015; Guo & Lu, 2020). In this study, media exposure refers to news scraped from Google News related to company activities that impact the environment, particularly carbon emissions, using the modification from Janis–Fadner (JF) coefficient as a measurement tool. This media exposure is also described in Zhang (2016) study. Companies often use the media as a means to improve their image and convince stakeholders of the decisions and actions they take, but if companies fail to manage environmental issues well, the media may respond negatively, which can result in a decline in public legitimacy (Hammami & Zadeh, 2019; Syafik et al., 2025).

Hypothesis Development

From the perspective of legitimacy theory, companies are viewed as part of a social system that must conduct their activities in accordance with social norms, values, and expectations. When companies, particularly in environmental management, deviate from public expectations, their social legitimacy may be compromised, especially if they produce high levels of carbon emissions, which are seen as a failure to fulfill their environmental responsibilities (Karim et al., 2021). High carbon emissions reflect a weak commitment to sustainability and a lack of mitigation efforts to address environmental impacts, which can ultimately trigger negative perceptions from stakeholders and increase the company's vulnerability to pressure from regulators, investors, and the public (Yunus et al., 2020). This pressure has the potential to cause reputational risks, operational disruptions, and long-term financial instability, making carbon emissions transparency and the implementation of concrete environmental policies crucial for maintaining legitimacy and public trust. In line with this, previous studies have shown that companies that have successfully reduced carbon emissions not only maintain their legitimacy but also tend to experience increased value and sustainable growth (Latif, 2024; Zheng & Jin, 2023), indicating that the higher the environmental efficiency, the greater the opportunity for companies to grow sustainably.
H_1: Carbon emission intensity is negatively correlated with sustainable growth rate.

Based on legitimacy theory, companies strive to obtain and maintain legitimacy from the public in order to continue operating sustainably, with the mass media playing an important role in shaping public perceptions of corporate social and environmental responsibility. Media exposure, whether in the form of positive or negative news coverage, can increase social pressure on companies to meet environmental expectations, especially if the company is reported to have high carbon emissions, which can trigger negative assessments and damage its social legitimacy. According to Aprilina et al. (2025), environmental information conveyed by the media has a significant influence on shaping consumer and stakeholder perceptions of a company's reputation and environmental responsibility. This is reinforced by the findings of Su et al. (2022), which show that high media exposure increases legitimacy pressure, encouraging stakeholders to be more responsive to environmental issues. Thus, media exposure is expected to strengthen the negative relationship between carbon emission intensity and sustainable company growth, meaning that the higher the media exposure received, the greater the negative impact of carbon emissions on the company's long-term growth performance.
H_2: Media exposure reinforces the positive impact of reducing carbon emissions on increasing sustainable growth rates.

Research Method

This study adopts a quantitative approach using secondary data collected from energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2022–2024 period. The data sources include companies' annual reports, sustainability reports, and media coverage data scraped through Google News platforms. The dependent variable in this study is the sustainable growth rate (SGR), which represents the company's ability to grow using internally generated resources without relying on external financing. It is calculated using the Higgins's formula, which multiplies profit margin by retention rate, asset turnover, and asset-to-equity ratio. The independent variable is carbon emissions intensity (CEI), measured by dividing the company's total carbon emissions by its total revenue, indicating environmental efficiency relative to output. The moderating variable is media exposure, which reflects the degree and tone of media coverage related to the company's environmental performance. This variable is measured using the modification from Janis–Fadner (JF) coefficient, which captures the balance of positive and negative news coverage in the media. The operational definitions and measurements of all variables are presented in Table 1. The research sample was determined using the purposive sampling method in accordance with the criteria proposed by Bougie and Sekaran (2019), as shown in Table 2.

Table 1. Operational Variable

Variable	Symbol	Name	Definition
Dependent variable	SGR	Sustainable growth rate	SGR = (net profit/revenue) x (1–dividend payout ratio) x (revenue/total assets) x (total assets/total equity)
Independent variable	CEI	Carbon emission intensity	CEI = (emission scope 1 + emission scope 2)/revenue
Moderating variable	MED	Media exposure	Media exposure = (positif tone of news – negative tone of news)/total news
Controlled variable	SIZE	Firm size	Natural logarithm of total assets for the year
	LEV	Gearing ratio	Total liabilities/total assets
	ROA	Return on assets	Net income/total assets

Source: Processed by Authors (2025)

Table 2. Research Sample Determination

Criteria	Amount	Percentage
Energy sector companies listed on the IDX	90	100%
Less:		
- New companies listed on the IDX during the 2022-2024 period	(19)	20%
- Companies with no carbon emission data available for 3 consecutive years	(40)	45%
Number of company samples per year	31	35%
Amount of data researched during the period 2022-2024	93	-

Source: Processed by Authors (2025)

To analyze the data, this study uses simple linear regression to test the direct effect of CEI on SGR, and moderated regression analysis (MRA) to examine the interaction effect of media exposure on the relationship between CEI and SGR.

$$SGR = \alpha + \beta 1\, CEI + \Sigma Control + \varepsilon) \quad (1)$$

$$SGR = \alpha + \beta 1\, CEI + \beta 2\, MED + \beta 3\, CEI.MED + \Sigma Control + \varepsilon \quad (2)$$

Where SGR for sustainable growth rate, CEI is carbon emission intensity, MED the media exposure.

Results and Discussion

Table 3. Descriptive Statistics

Variable	N	Frequency	Minimum	Maximum	Mean	Std. Dev.	Variance
CEI	93	100%	0.000	1.273	0.074	0.188	0.035
Above the mean	23	25%					
Below the mean	70	75%					
2022			0.000	0.299	0.044		
2023			0.000	1.273	0.088		
2024			0.000	1.266	0.090		
MED	93	100%	-1.000	1.000	0.426	0.537	0.288
Positive Tone	44	47%					
Neutral Tone	45	48%					
Negative Tone	4	4%					
2022			0.000	1.000	0.512		
2023			-1.000	1.000	0.393		
2024			-1.000	1.000	0.375		
SGR	93	100%	-0.975	0.503	0.079	0.192	0.037
Positive Growth	81	87%					
Negative Growth	12	13%					
2022			-0.975	0.472	0.155		
2023			-0.453	0.503	0.048		
2024			-0.366	0.279	0.035		
SIZE	93	100%	27.772	32.765	30.265	1.372	1.883
LEV	93	100%	0.059	7.203	1.106	1.165	1.358
ROA	93	100%	-0.246	0.616	0.126	0.144	0.021

Source: Processed by Authors (2025)

Based on Table 3, the descriptive analysis of 93 observations, statistical summaries were obtained for the three research variables. The carbon emission intensity (CEI) variable exhibited a minimum value of 0.000 and a maximum value of 1.273, with a mean of 0.074 and a standard deviation of 0.188. This indicates that, in general, companies tend to generate relatively low levels of carbon emissions with moderate variability. The media exposure variable showed a minimum value of -1.000 and a maximum value of 1.000, with a mean of 0.426 and a standard deviation of 0.537. The positive mean value suggests that, overall, media coverage of the companies carries a positive tone, although some firms received negative exposure, as reflected in the negative minimum value. Meanwhile, the sustainable growth rate (SGR) variable had a minimum value of -0.975 and a maximum value of 0.503, with a mean of 0.079 and a standard deviation of 0.192, indicating a general tendency toward sustainable growth among the majority of companies, despite notable variability across firms.

To assess the validity of the model, multicollinearity testing was conducted using the Variance Inflation Factor (VIF) and Tolerance values. The results independent variables had met the criteria of VIF < 10.00 and Tolerance > 0.10, thereby indicating no signs of multicollinearity in the model. Furthermore, heteroscedasticity testing was performed using the Glejser test by regressing the absolute residuals on the independent variables. The significance values obtained were 0.368 for the CEI variable and 0.798 for media exposure, both exceeding the 0.05 threshold, the same results also with the control variables. These results suggest that the independent variables do not significantly influence the absolute residuals, indicating that the regression model does not suffer from heteroscedasticity and satisfies the homoscedasticity assumption, thus ensuring the validity of coefficient estimations.

Table 4. Regression Result

Independent Variable	Equation Model 1			Equation Model 2		
	B	T	Sig.	B	T	Sig.
(Constant)	-0.017	-0.457	0.649	-0.025	-0.642	0.523
CEI	0.069	0.705	0.482	0.062	0.623	0.535
MED				0.024	0.561	0.576
CEI*MED				0.332	0.720	0.473
SIZE	<0.001	1.267	0.208	<0.001	0.726	0.470
LEV	0.005	-0.322	0.748	-0.008	-0.469	0.640
ROA	0.626	4.592	<0.001	0.635	4.584	<0.001
Dependent Variable	SGR					
R Square	0.252			0.266		
Adjusted R Square	0.218			0.214		
F	7.414			5.181		
Sig. F	<0.001			<0.001		

Source: Processed by Authors (2025)

Based on Table 4, the regression results indicate that carbon emissions intensity (CEI) does not have a statistically significant effect on the sustainable growth rate (SGR). However, this relationship was not statistically significant (p-value > 0.05), suggesting that, in the current context, environmental inefficiency has yet to emerge as a critical determinant of long-term financial sustainability in Indonesia's energy sector. Furthermore, the moderated regression analysis indicates that media exposure does not significantly moderate the relationship between CEI and SGR. This implies that the level and tone of media coverage surrounding a company's environmental impact neither strengthen nor weaken the effect of carbon emissions on its sustainable growth capacity. The modification from Janis–Fadner (JF) coefficient, used to measure media exposure, shows that while some companies are subject to both positive and negative news, the intensity and public response remain relatively muted.

These findings contribute to the literature in several important ways. First, they offer new empirical evidence from an emerging market context, where environmental regulation, investor awareness, and media scrutiny are still evolving, unlike in more advanced economies. While prior studies, such as Latif (2024) and Zheng and Jin (2023), have documented the negative financial impacts of high carbon emissions, their focus has primarily been on countries with well-established environmental governance. In contrast, data from OurWorldinData.org reveal a continuing upward trend in Indonesia's per capita carbon dioxide (CO_2) emissions from fossil fuels and industry, diverging from the declining patterns seen in developed countries. This trend reflects the lack of effective implementation of emission-reduction efforts within Indonesia's industrial sector. Moreover, as Özşahin Koç and Deran (2024) note, high debt financing costs can further constrain carbon mitigation efforts, as creditors perceive environmentally risky firms as high-risk borrowers. These conditions underscore the urgent need for regulatory intervention to facilitate a transition toward more sustainable industrial practices. This study extends the current discourse by highlighting that, in less-regulated environments, the relationship between carbon emissions and long-term corporate growth remains weak or uncertain. Second, this research introduces media exposure as a moderating variable in environmental accounting, a dimension rarely explored in existing literature. While Su et al. (2022) highlight the importance of media in shaping public pressure, the empirical evidence here suggests that media in Indonesia has not yet functioned effectively as a social control mechanism on environmental issues. This supports the argument by Newman et al. (2024), who observe a declining public attention span toward textual environmental reporting, due to the rise of more visually engaging formats like video content.

From a theoretical standpoint, these results challenge the practical application of legitimacy theory in contexts where institutional and societal pressures are weak. While the theory assumes that companies seek to maintain legitimacy by aligning with societal norms, including environmental responsibility, the findings suggest

that in Indonesia's energy sector, the absence of strong public, regulatory, or media pressure limits the incentive for firms to integrate sustainability into their growth strategies.

This study highlights the limited effectiveness of carbon disclosure and media scrutiny in influencing corporate growth behavior in emerging markets. For meaningful progress, greater regulatory intervention, improved media independence, and enhanced public awareness are essential to establish a robust legitimacy-based mechanism that rewards environmental responsibility and penalizes unsustainable practices. Possible applications of this research include its use by policymakers and regulators to strengthen emission disclosure standards and promote transparency through integrated reporting systems. It also highlights the need for more effective media engagement and regulatory frameworks that can translate environmental performance into financial incentives or risks. For companies, the findings emphasize the importance of preparing for rising expectations regarding environmental accountability and integrating sustainability into long-term business strategy.

Conclusion

This study investigates the relationship between carbon emissions intensity (CEI) and sustainable growth rate (SGR), along with the moderating role of media exposure in energy sector companies listed on the Indonesia Stock Exchange during 2022–2024. The findings reveal that CEI does not significantly affect SGR, and media exposure does not moderate the relationship. Despite the increasing availability of carbon-related information, its influence on long-term financial performance remains limited in the Indonesian context.

The main advantage of this study lies in its contribution to emerging literature by incorporating a long-term financial indicator SGR and testing media exposure as a moderating variable. These approaches provide a deeper understanding of how environmental inefficiency is perceived in markets with weak regulatory and social pressure. The study also offers a theoretical contribution by evaluating the applicability of legitimacy theory under conditions of low external pressure. However, this study has several limitations. It focuses solely on energy sector firms, which may limit the generalizability of findings to other sectors. Additionally, the measurement of media exposure is also limited to textual coverage, without accounting for the influence of social media or multimedia formats. Future research is recommended to include a broader range of sectors, such as agriculture and logistics, and to consider both financial (e.g., profitability, firm size) and non-financial variables (e.g., board characteristics, government incentives) that may moderate the relationship between environmental efficiency and sustainable growth. For dependent variables, consider the cost of debt or stock performance as the financial impact of carbon emission reductions.

References

Andrian, T. & Kevin. (2021). Determinant factors of carbon emission disclosure in Indonesia. *Journal of Southwest Jiaotong University*, *56*(1), 345–357. https://doi.org/10.35741/issn.0258-2724.56.1.32

Aprilina, V., Lestari, T., Mulyasari, W., & Indriana, I. (2025). Media exposure as a moderator in the ESG-firm value relationship. *Financial and Credit Activity Problems of Theory and Practice*, *2*(61), 597–608. https://doi.org/10.55643/fcaptp.2.61.2025.4699

Ardillah, K., & Rusli, Y. M. (2022). The effect of corporate governance structures, environmental performance, and media coverages to carbon emissions disclosure. *Ultimaccounting Jurnal Ilmu Akuntansi*, *14*(2), 246–263. https://doi.org/10.31937/akuntansi.v14i2.2716

Aulia, F. Z., & Agustina, L. (2015). Pengaruh karakteristik perusahaan, kinerja lingkungan, dan liputan media terhadap environmental disclosure. *Accounting Analysis Journal*, *4*(3). https://doi.org/10.15294/aaj.v4i3.8306

Bolton, P., Halem, Z., & Kacperczyk, M. T. (2022). The financial cost of carbon. *Journal of Applied Corporate Finance*, *34*(2), 17–29. https://doi.org/10.1111/jacf.12502

Bougie, R., & Sekaran, U. (2019). *Research methods for business: A skill building approach* (8th ed). Wiley. https://books.google.co.id/books?id=ikI6EAAAQBAJ

Buertey, S., Ramsawak, R., & Nguyen, B. H. (2025). Sustainability reporting awards and market reaction: The sustainability awareness of investors on the Vietnam stock market. *Corporate Social Responsibility and Environmental Management*, *32*(3), 3423–3437. https://doi.org/10.1002/csr.3135

Burton, M., & Eike, R. (2023). The sustainability-conscious consumer: An exploration of the motivations, values, beliefs, and norms guiding garment life extension practices. *Sustainability*, *15*(15), 12033. https://doi.org/10.3390/su151512033

Chang, H., Ding, Q., Zhao, W., Hou, N., & Liu, W. (2023). The digital economy, industrial structure upgrading, and carbon emission intensity: Empirical evidence from China's provinces. *Energy Strategy Reviews*, *50*, 101218. https://doi.org/10.1016/j.esr.2023.101218

Crippa, M., Pagani, F., Banja, M., Muntean, M., Schaaf, E., Monforti-Ferrario, F., Becker, W., Quadrelli, R., Risquez Martin, M., Taghavi-Moharamli, P., Köykkä, J., Grassi, G., Rossi, S., Melo, J., Oom, D., Branco, A., San-Miguel, J., Manca, G., … Pekar, F. (2024). *GHG emissions of all world countries*. Publications Office of the European Union. https://doi.org/10.2760/4002897

Datt, R., Luo, L., & Tang, Q. (2020). Corporate choice of providers of voluntary carbon assurance. *International Journal of Auditing*, *24*(1), 145–162. https://doi.org/10.1111/ijau.12184

Desai, R., Raval, A., Baser, N., & Desai, J. (2022). Impact of carbon emission on financial performance: Empirical evidence from India. *South Asian Journal of Business Studies*, *11*(4), 450–470. https://doi.org/10.1108/SAJBS-10-2020-0384

Dewantoro, R. A. (2024). Pengaruh intensitas emisi karbon, biaya lingkungan dan budaya organisasi hijau terhadap nilai perusahaan. *EKOMA : Jurnal Ekonomi, Manajemen, Akuntansi*, *3*(5), 1634–1646. https://doi.org/doi.org/10.56799/ekoma.v3i5.4395

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *The Pacific Sociological Review*, *18*(1), 122–136. https://doi.org/10.2307/1388226

Febriani, N., Hayat, A., Sadikin, A., & Juwita, R. (2022). Sustainable growth rate dalam mempengaruhi return saham dengan Covid-19 dan sustainability report sebagai variabel moderasi. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, *6*(3), 352–367. https://doi.org/10.31955/mea.v6i3.2371

Fonseka, M. M., Ramos, C. G., & Tian, G. (2012). The most appropriate sustainable growth rate model for managers and researchers. *Journal of Applied Business Research (JABR)*, *28*(3), 481–500. https://doi.org/10.19030/jabr.v28i3.6963

Guo, Z., & Lu, C. (2020). Corporate environmental performance in China: The moderating effects of the media versus the approach of local governments. *International Journal of Environmental Research and Public Health*, *18*(1), 150. https://doi.org/10.3390/ijerph18010150

Hammami, A., & Zadeh, M. H. (2019). Audit quality, media coverage, environmental, social, and governance disclosure and firm investment efficiency: Evidence from Canada. *International Journal of Accounting & Information Management*, *28*(1), 45–72. https://doi.org/10.1108/ijaim-03-2019-0041

Helfaya, A., Morris, R., & Aboud, A. (2023). Investigating the factors that determine the ESG disclosure practices in Europe. *Sustainability*, *15*(6), 5508. https://doi.org/10.3390/su15065508

Higgins, R. C., Koski, J. L., & Mitton, T. (2022). *Analysis for financial management* (13th ed). McGraw Hill.

Karim, A. E., Albitar, K., & Elmarzouky, M. (2021). A novel measure of corporate carbon emission disclosure, the effect of capital expenditures and corporate governance. *Journal of Environmental Management*, *290*, 112581. https://doi.org/10.1016/j.jenvman.2021.112581

Latif, A. R. (2024). *Carbon emission disclosure moderating the effect of carbon emission intensity, environmental performance, and media exposure on firm value in Indonesia* (Doctoral dissertation, Universitas Hasanuddin).

Nengzih, N. (2022). Carbon emissions intensity and environmental cost effect to corporate financial performance. *Jurnal ASET (Akuntansi Riset)*, *14*(2), 245–254. https://doi.org/10.17509/jaset.v14i2.49056

Newman, N., Fletcher, R., Robertson, C. T., Ross Arguedas, A., & Nielsen, R. K. (2024). *Digital news report 2024*. Reuters Institute for the Study of Journalism. https://doi.org/10.60625/RISJ-VY6N-4V57

Özşahin Koç, F., & Deran, A. (2024). The impact of carbon emissions on corporate cost of debt (COD): A research on Borsa İstanbul (BIST) sustainability index. *Sosyoekonomi*, *32*(60), 33–50. https://doi.org/10.17233/sosyoekonomi.2024.02.02

Schlusberg, M. D. (1969). Corporate legitimacy and social responsibility: The role of law. *California Management Review*, *12*(1), 65–76. https://doi.org/10.2307/41164207

Su, W., Guo, C., & Song, X. (2022). Media coverage, environment protection law and environmental research and development: Evidence from the Chinese-listed firms. *Environment, Development and Sustainability*, *24*(5), 6953–6983. https://doi.org/10.1007/s10668-021-01735-z

Syafik, M., Setiawan, D., Hartoko, S., & Aryani, Y. A. (2025). The role of media exposure on board capital and carbon emission disclosure. *Discover Sustainability*, *6*(1), 1–21. https://doi.org/10.1007/s43621-025-01014-1

Vuković, B., Tica, T., & Jakšić, D. (2022). Sustainable growth rate analysis in Eastern European companies. *Sustainability*, *14*(17), 10731. https://doi.org/10.3390/su141710731

Williamson, K., Satre-Meloy, A., Velasco, K., & Green, K. (2018). *Climate change needs behavior change: Making the case for behavioral solutions to reduce global warming*. VA: Rare. https://rare.org/wp-content/uploads/2019/02/2018-CCNBC-Report.pdf

Yuliana, Y., & Wedari, L. K. (2023). Carbon performance, green strategy, financial performance effect on carbon emissions disclosure: Evidence from high polluting industry in Indonesia. *International Journal of Sustainable Development and Planning*, *18*(5), 1581–1588. https://doi.org/10.18280/ijsdp.180529

Yunus, S., Elijido-Ten, E. O., & Abhayawansa, S. (2020). Impact of stakeholder pressure on the adoption of carbon management strategies: Evidence from Australia. *Sustainability Accounting, Management and Policy Journal*, *11*(7), 1189–1212. https://doi.org/10.1108/SAMPJ-04-2019-0135

Zhang, X. (2016). Measuring media reputation: A test of the construct validity and predictive power of seven measures. *Journalism & Mass Communication Quarterly*, *93*(4), 884–905. https://doi.org/10.1177/1077699015610065

Zheng, S., & Jin, S. (2023). Can companies reduce carbon emission intensity to enhance sustainability? *Systems*, *11*(5), 249. https://doi.org/10.3390/systems11050249