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Environmental Disclosure on Biodiversity Dimension: Does Media Exposure Matter ?

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ABSTRACT

This study aims to examine the influence of media exposure in regulating the relationship between foreign ownership, institutional ownership, and environmental performance on biodiversity disclosure. The study uses secondary data obtained from sustainability and annual reports of manufacturing companies listed on the Indonesia Stock Exchange during the 2020–2022 period, selected using a purposive sampling method. A quantitative approach is applied using multiple regression analysis, specifically Moderated Regression Analysis (MRA), to test the moderating effect of media exposure. The findings indicate that environmental performance positively affects biodiversity disclosure, and media exposure plays a role in moderating this relationship. However, the measurement of media exposure remains general and does not differentiate between positive and negative news tone. This study provides empirical evidence from Indonesia that highlights the relevance of media exposure and environmental performance in improving biodiversity disclosure practices among corporations.

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Introduction

Biodiversity is one dimension of the environment referring to the diversity of all life, both within and across species, and includes everything in an ecosystem [1]. The existence of biodiversity is very crucial for human life and plays an important role in economic development. Plants, animals, and ecosystems provide vital support for human health [2]. According to [3] the current high rate of ecological harm and loss of biodiversity is one of the ten major threats. [4] argues that the pace of species extinction has increased 1,000 to 10,000 times faster than the natural rate of extinction. Likewise, the loss of biodiversity throughout the Asia Pacific region, including Indonesia, has reached a critical level. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) reported that approximately 1 million species are at risk of extinction globally, many within decades, with Southeast Asia identified as one of the most vulnerable regions. In Indonesia, the issue is particularly alarming: the country has lost over 10 million hectares of tree cover in Kalimantan between 2002 and 2019, including more than 4 million hectares of primary forest. Additionally, about 40% of Indonesia's mangrove forests have degraded, and 25% of endemic mammal species are now threatened. These figures indicate that Indonesia, as one of the world's biodiversity hotspots, faces a severe ecological crisis that calls for stronger environmental accountability, including biodiversity disclosure by corporations. [5], [6].

Disclosure of information on environmental responsibility by firms is a measure to foster accountability and transparency. This allows stakeholders, such as shareholders, to analyze the company's environmental performance and motivate them to take actual efforts to protect the environment [4],[7]. Disclosure of environmental information is not only a requirement, but also an opportunity for companies. By demonstrating a commitment to environmental sustainability, firms can improve their brand and image, establish confidence and support from stakeholders, and attract responsible investment. This is in accordance with research [8],[9].

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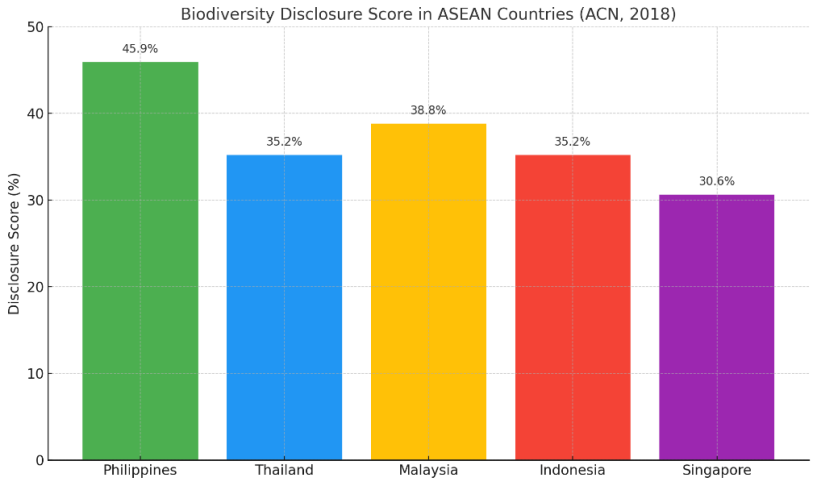

Figure 1. Biodiversity Disclosure Score in ASEAN (ACN, 2018)

Based on the figure 1, it is explained that corporate knowledge of biodiversity in Indonesia is still low, as indicated by the ACN report (2018) entitled "Sustainability Reporting in ASEAN Countries". Indonesia is second from last in biodiversity disclosure in annual reports among ASEAN countries, with a score of 35.2%. This score is substantially lower than the Philippines (45.9%), Thailand (35.2%), and Malaysia (38.8%), and only Singapore (30.6%) has a worse score. Considering that Indonesia is the country with the most biodiversity in Southeast Asia (Setiawan, 2022), the low level of biodiversity disclosure is a source of concern. [10],[11],[12].

The ongoing digital change has enabled the media to significantly influence public opinion regarding environmental issues, particularly biodiversity. Comprehensive media coverage of corporate biodiversity conservation initiatives can enhance public knowledge of the significance of environmental preservation. This is substantiated by study undertaken by [5] and [13]. Media coverage addressing green business practices and social responsibility initiatives can enhance a company's reputation and inspire other organizations to adopt similar measures. Consequently, media exposure can motivate manufacturing enterprises to enhance the transparency of environmental information pertaining to biodiversity.

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This study breaks from earlier findings that encountered varied results, especially in the media exposure variable. Studies [4] and [7] yielded various outcomes. Interestingly, the dynamics that resulted from the results of earlier studies demonstrated that media exposure has the power to impact views and images of companies that differ. However, previous research has yet to reach a consensus on the direction and significance of media exposure's moderating effect, particularly in the context of environmental responsibility disclosures. Most prior studies tend to generalize environmental disclosure without focusing on the biodiversity dimension, which is a critical yet often overlooked aspect. Moreover, there is a lack of empirical evidence in emerging economies like Indonesia, where environmental accountability pressures, regulatory frameworks, and media landscapes may differ significantly from those in developed countries. Based on these findings, this study will try to answer questions from previous research results about what role media exposure plays in moderating shareholders towards biodiversity disclosure—whether it will strengthen or weaken the company's perception, especially in share ownership in disclosing environmental responsibility in the biodiversity dimension in Indonesia, particularly in the manufacturing industry.

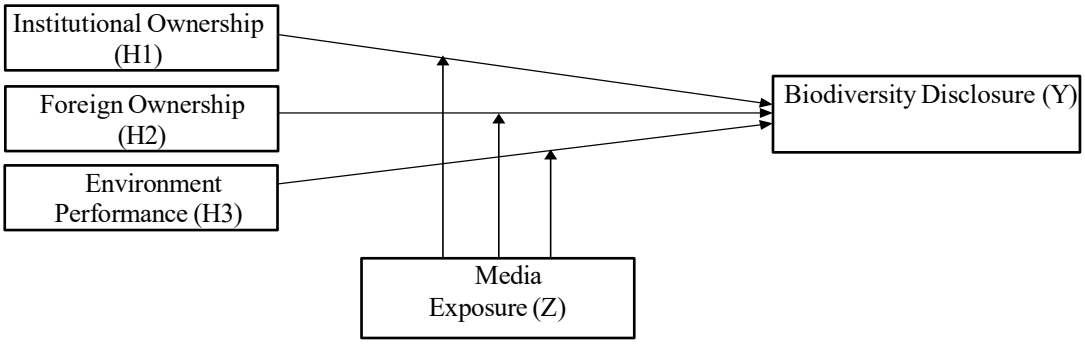

Figure 2. Framework

Foreign capital is capital owned by foreign governments, foreign persons, foreign corporate companies and legal entities, and Indonesian legal entities whose capital is partly or entirely owned by foreign parties [8]. Foreign ownership is the percentage of share

ownership owned by foreign parties, either by individuals or institutions, of shares in companies in Indonesia [4],[7]. Research indicates that foreign ownership is significantly concerned with environmental issues and exerts pressure on companies to disclose their social and environmental responsibilities, owing to the cultural sensitivity to environmental matters prevalent in foreign nations. This can be seen from the large costs incurred by foreign companies for environmental responsibility disclosure activities. It can be inferred that an increase in shares held by foreign investors correlates with a heightened likelihood of extensive environmental responsibility disclosure [4]. This is also confirmed by research [9] which indicates that normally companies with foreign ownership have broader information releases, compared to companies without foreign ownership.

H_1: Foreign Ownership has a positive effect on Biodiversity Disclosure.

Institutional ownership refers to the ownership of shares by organizations or institutions such as insurance companies, banks, investment businesses, asset management firms, and others [9]. Companies with large institutional ownership are better able to monitor management performance. Institutional investors have power and experience and are accountable for implementing corporate governance rules to preserve the rights and interests of all shareholders so that they urge companies to communicate properly [10]; [11]. Thus, institutional ownership can increase the quality and quantity of voluntary disclosure. Overall, institutional ownership can drive corporations to boost environmental responsibility disclosure. Disclosure of social and environmental responsibility is commonly considered as a technique to improve a company's reputation and engender goodwill among customers [14].

H_2: Institutional ownership has a positive effect on Biodiversity Disclosure.

Environmental performance is a company's ability to create a green and clean environment. Environmental performance refers to how well an organization or country manages and protects the natural environment through its policies and practices. This includes efforts to reduce pollution, maintain biodiversity, and use resources sustainably [13]. According to [15] companies with superior environmental performance have a

proactive environmental strategy. This informs investors and other stakeholders through voluntary disclosure regarding the environment. Companies with outstanding environmental performance quality will certainly disclose their environmental responsibilities as a screening method [16]. As stakeholders' eyes on them and to gain legitimacy in their operations, it is not surprising that companies disclose important information to the public [17], [18].

H_3: Environmental Performance has a positive effect on Biodiversity Disclosure

Companies with greater media attention are expected to disclose more information on Social & Environmental Reporting (SER), including biodiversity disclosure [14]. Longitudinal studies have shown a positive correlation between media coverage and a company's social visibility, which is likely to be associated with higher levels of SER [19]. The total amount of media coverage increases the visibility of the company, making it the object of further public attention and scrutiny [15]. For companies, media serves as a strategic tool to attract public attention and improve corporate reputation through social image-building mechanisms. Greater media exposure increases pressure from stakeholders and regulatory bodies, compelling companies to be more transparent in their sustainability practices. Prior research has also found that corporate environmental disclosure levels increase with greater media exposure [11], suggesting that media plays a critical role in influencing corporate disclosure behavior.

H_4: Media Exposure has a positive effect on Biodiversity Disclosure

Media exposure has numerous functions in modulating the relationship between foreign shareholding and environmental disclosure. Research conducted by [20], [22] First, media exposure can raise public and investor knowledge of company environmental policies, which may push companies with significant foreign ownership to be more honest in their disclosures. Second, media exposure can influence stakeholder perceptions of corporate social responsibility (CSR) and sustainability practices, which may influence investment decisions by overseas shareholders. According to [15], international shareholders tend to have stronger worries about environmental issues, making them more willing to invest in

companies that have a positive environmental track record and that actively publish information relating to environmental responsibility.

H_5: Media Exposure can moderate the relationship between Foreign Ownership and Biodiversity Disclosure

Media exposure has the potential to moderate the relationship between institutional ownership and environmental exposure by acting as a means of control and influence [21], explaining that firms with significant institutional ownership may feel more motivated to increase environmental transparency if they perceive that the media is paying special attention to these issues. In fact, the media has the capacity to impact the perception and image of a company in the eyes of the public and investors [22], [13]. When the media provides high exposure to a firm's environmental policies, institutional shareholders may feel additional responsibility to guarantee that the company releases relevant and accurate environmental information. This may result in increased quality and frequency of environmental disclosures, especially if the company is under the public spotlight [23], explaining that if the media does not pay much attention to environmental issues, firms with institutional ownership may be less motivated to provide comprehensive or frequent environmental disclosures due to the lack of external pressure. Therefore, media exposure may play an essential role in modulating the link between institutional ownership and environmental disclosure.

H_6: Media Exposure can moderate the relationship between Institutional Ownership and Biodiversity Disclosure

The media plays an important role in external governance, so it is important to examine the impact of the media on the relationship between environmental performance and environmental disclosure. Theory suggests that the media can effectively increase the level of corporate environmental disclosure through information dissemination mechanisms and monitoring mechanisms [14]. When a company has good environmental performance, media exposure can increase public and investor awareness of its efforts, which in turn can encourage companies to be more transparent and proactive in their environmental

disclosures. Conversely, when a company has poor environmental performance, high media exposure can lead to greater public and investor pressure for improvement, which can also influence companies to improve the quality and frequency of their environmental disclosures [20],[19]. In both cases, the media acts as a catalyst that influences the relationship between environmental performance and environmental disclosure.

H_7: Media Exposure in moderating the relationship between Environmental Performance and Biodiversity Disclosure.

Method

This research is an explanatory study aimed at elucidating phenomena in the empirical realm and seeks to clarify the influence of media exposure in moderating the relationship between foreign ownership, institutional ownership, and environmental performance concerning environmental disclosure in the context of biodiversity. The data used in this research are sustainability reports and annual reports of manufacturing enterprises listed on the Indonesia Stock Exchange (IDX) for the years 2020-2022. The data sources in this study were acquired through the website www.idx.co.id and the websites of companies listed as manufacturing companies on the Indonesia Stock Exchange over the period of 2020-2022. The sampling method utilized was purposive sampling, a research technique intended to gather data for specific objectives and applications [21].

Table 1. Sample Criteria

No	Sample Criteria	Total
1	Manufacturing companies listed on the Indonesia Stock Exchange in the research year 2020–2022	678
2	Manufacturing companies that do not publish annual reports and sustainability reports in 2020 – 2022	(417)
3	Manufacturing companies that have complete data related to the variables in the study.	(75)

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The total sample passes the criteria	186
Outlier Data	7
Total final sample of the study	**179**

Source: Data Processing, Microsoft Excel 2024

Table 2. Variable Measurement

Variable	Measurement
Biodiversity Disclosure (Y)	The biodiversity disclosure variable in this study is based on the research of [5], which introduced 12 additional categories specifically addressing endangered species. The IUCN website, Global Biodiversity Outlook 4, United Nations Development Program, and Millennium Ecosystem Assessment serve as the principal sources for the twelve supplementary index entries. This study's biodiversity and vulnerable species disclosure index consists of 28 components (refer to Table 3).
Institutional Ownership	Ownership of the number of firm shares by institutions such as mutual fund companies, pension funds, insurance, or other investment companies. So it can be formulated as follows: INST = Institutional Share Ownership / Number of Shares Outstanding
Foreign Ownership	Foreign share ownership is the number of shares owned by foreign investors, both people and institutions. The domination of foreign share ownership in a corporation makes the company more open in discussing its corporate environment. The formula used in computing foreign shares is as follows: FRGN = Foreign Share Ownership/Number of Shares Outstanding
Environment Performance	The company's ability to produce a clean and green atmosphere. This skill is to see the degree of the company's duty towards the environment. Environmental performance measurement employs an ordinal scale, namely a value of 1 if the firm implements ISO 14001, a value of 2 if the company is ISO 14001 certified, and 0 if the company does not implement and is not ISO 14001 certified.
Media Exposure	Media Exposure is determined by counting the number of media exposures during the observation period. The media observed can consist of social media, websites, blogs, news, etc. Media exposure is a quantitative variable that denotes the volume of news pertaining to each organization annually [24]. To ascertain the quantity of news items, we executed a Google search using the name of each company enclosed in quote marks as the search query. Subsequently, we chose the Google tool

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"News," which identifies corporate news in newspapers and various media outlets, and offers the overall count of news items. Utilizing advanced search methods, we refined the results by year (from 2020 to 2022).

Source: Data Processing, [5] [13] [24]

Table 3. Biodiversity Disclosure Indexs

No.	Indikator
1.	Afforestation & Reforestation – Company engagement in tree planting, forest plantations, and sustainable forestry.
2.	Ecological Corridors – Conservation of biodiversity corridors around operational sites.
3.	Biodiversity Assessment – Evaluation of biodiversity impact in company operations.
4.	Biodiversity Offsets – Application of biodiversity offset strategies to minimize environmental impact.
5.	Biodiversity Action Plans – Disclosure of biodiversity goals and strategies for future conservation.
6.	Biodiversity Partnerships – Collaboration with local and international organizations for conservation.
7.	Biodiversity Projects – Implementation of projects to promote biodiversity around operational areas.
8.	Land Rehabilitation – Engagement in land restoration and management activities.
9.	Flora Reporting – Documentation of plant species in operational areas.
10.	Fauna Reporting – Documentation of animal species in operational areas.
11.	Charitable Contributions – Donations or support for biodiversity protection and enhancement.
12.	Biodiversity Awareness – Programs to educate employees and communities on biodiversity conservation.
13.	NGO & Association Involvement – Participation in biodiversity-related external organizations.
14.	Investment in Biodiversity – Spending on R&D, technology, and innovation for conservation.
15.	Environmental Policy – Company commitment to biodiversity in its environmental policies.
16.	Awards & Recognition – Acknowledgment of biodiversity conservation achievements.
17.	Biodiversity Strategy – Formal policies and strategies for biodiversity management.
18.	Top-Level Management – Inclusion of biodiversity goals in executive planning.
19.	Native/Endemic Species – Conservation and protection of indigenous species.
20.	Habitat Conservation – Protection and restoration of affected natural habitats.
21.	Ecosystem Conservation – Efforts to sustain ecosystems impacted by operations.
22.	Wetland Conservation – Conservation and restoration of wetlands.
23.	Marine Biodiversity – Protection of marine ecosystems affected by operations.

24. Freshwater Conservation – Conservation of rivers, lakes, reservoirs, and waterways.
25. Endangered Species Protection – Conservation efforts for IUCN-listed or country-specific endangered species.
26. Biodiversity Loss Reporting – Disclosure of biodiversity/species loss due to company activities.
27. Protected Area Operations – Company activities in IUCN Category I-IV protected areas.
28. International Commitments – Compliance with international biodiversity conventions and agreements.

The rating scale for these indicators spans from 0 to 3. A score of "0" is awarded if there is no reference at all to the indication in issue. A score of "1" is applied if the information disclosed is very restricted, confusing, or excessively generic. A score of "2" is granted if the disclosure provides objective, verifiable, and up-to-date information. Meanwhile, a score of "3" is given if the disclosure not only meets the criteria for a score of "2", but also includes specific details such as locations or facilities affected, species affected, number of flora and fauna affected, actions taken or costs incurred, analysis of information trends, or data relationships to strategies, objectives, performance metrics, company targets, or incidents and accidents that occur. [2]

Source: IUCN. Global Biodiversity Outlook 4

The data analysis techniques used are: 1) Classical assumption tests, including: data normality, multicollinearity, heteroscedasticity, and autocorrelation, 2) Multiple linear regression test, this test is to test the influence of foreign ownership, institutional ownership and environmental performance with the following regression equation model:

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + e, \quad \ldots\ldots(1)$$

3) Moderated Regression Analysis, this test is to examine whether the moderating variable will strengthen or weaken the link between the independent variable and the dependent variable. This test will also determine media exposure as a quasi, homologizer, pure, or predictive moderating variable. The moderation regression equation model is as follows:

$$Yi = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + Z + \beta 1X1.Z + \beta 2X2.Z + \beta 3X3.Z + e \ldots\ldots(2)$$

Results and Discussion

The table below identifies the 179 company samples used in this study. The table below illustrates that the average quality of biodiversity responsibility disclosure in

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manufacturing sector companies is 0.184, with the lowest value being 0.00 and the highest being 0.845.

Table 4. Descriptive Statistic

	N	Min.	Max.	Mean	Std. Deviation
Biodiversity Disclosure	179	0,000	0,845	0,184	0,204
Institutional Ownership	179	0,002	1,432	0,622	0,284
Foreign Ownership	179	0,000	2,554	0,293	0,368
Environment Performance	179	0	2	1,26	0,966
Media Exposure	179	1	17	4,95	3,025
X1*Z	179	0,000	16,03	3,002	2,349
X2*Z	179	0,000	16,72	1,558	2,564
X3*Z	179	0,000	34	7,044	7,326
Valid N (listwise)	179				

Source: SPSS, 2024

The results of the descriptive analysis in this study indicate that companies in the manufacturing sector tend to be dominated by institutional ownership, with an average value of 0.622, compared to foreign ownership with a lower average of 0.293. This suggests that domestic institutional investors may play a more active role in influencing corporate policies, including environmental disclosures. This aligns with prior studies that highlight the monitoring role of institutional investors in promoting transparency and accountability [5].

Furthermore, the average environmental performance score of 1.26 implies that manufacturing firms in Indonesia show a relatively good level of commitment to environmental standards, possibly through ISO certification or related practices. This finding supports previous evidence suggesting that firms with stronger environmental governance tend to engage more in environmental responsibility initiatives.

However, the variation in media exposure (mean = 4.95, SD = 3.025) indicates differing levels of public visibility among firms, which could play a crucial role in shaping stakeholder perception and pressure for disclosure—particularly regarding biodiversity issues. These descriptive results offer an important foundation for exploring how ownership

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structure and media exposure interact to influence biodiversity disclosure practices, a topic still underexplored in emerging markets like Indonesia.

Table 5. Multicoliniearity Test

Variable	Regression Model 1		Regression Model 2		Conclusion
	Tolerance	VIF	Tolerance	VIF	
Institutional Ownership (X1)	0,982	1,019	0,261	3,829	No Multicollinearity Occurs
Foreign Ownership (X2)	0,963	1,039	0,256	3,912	No Multicollinearity Occurs
Environment Performance (X3)	0,979	1,022	0,255	3,921	No Multicollinearity Occurs
Media Exposure (Z)			0,106	9,404	No Multicollinearity Occurs

Source: SPSS, 2024

Based on the results of the multicollinearity test in Table 5, all independent variables exhibit Tolerance Values (TV) above the minimum threshold of 0.10 and Variance Inflation Factor (VIF) values below 10. This indicates that the regression models used in this study do not suffer from multicollinearity, ensuring the stability and reliability of the estimated coefficients. Notably, although Media Exposure (Z) has a relatively higher VIF value (9.404), it still falls within the acceptable range. This suggests that while media exposure may share some variance with the predictor variables, it does not distort the regression outcomes.

This result is important, especially considering previous studies [11] that emphasized the potential overlap between institutional characteristics and public visibility in shaping disclosure behavior. The absence of multicollinearity strengthens the validity of subsequent interaction tests involving media exposure as a moderating variable. It ensures that the unique effects of institutional ownership, foreign ownership, and environmental

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performance can be isolated and accurately assessed when predicting biodiversity disclosure outcomes.

Table 6. Heteroscedasticity Test

Variable	Unstandardized Residual*	Unstandardized Residual**	Conclusion
X1_INST	0,688	0,509	No Heteroscedasticity Occurs
X2_FRGN	0,405	0,159	No Heteroscedasticity Occurs
X3_ENVP	0,269	0,179	No Heteroscedasticity Occurs
MEDIA		0,755	No Heteroscedasticity Occurs
X1_Z		0,731	No Heteroscedasticity Occurs
X2_Z		0,173	No Heteroscedasticity Occurs
X3_Z		0,592	No Heteroscedasticity Occurs

Source: SPSS, 2024

The findings of the heteroscedasticity test using the Spearman method show that all independent variables have significance values greater than 0.05. This indicates that the variance of the residuals is constant across observations, suggesting that the regression model used in this study is free from heteroscedasticity. This is an important diagnostic result, as it confirms the validity of the regression assumptions and the reliability of coefficient estimations. Particularly in environmental and ownership-related studies, where variations in disclosure behavior can be influenced by environemt performance, industry type, or external scrutiny [4]**,** ensuring the absence of heteroscedasticity strengthens the robustness of the analysis.

Moreover, the absence of heteroscedasticity for interaction terms (X1*Z, X2*Z, X3*Z) supports the stability of the moderating effect of media exposure. This reinforces the suitability of the model in examining how ownership structures and environmental performance interact with public scrutiny to influence biodiversity disclosure practices within the Indonesian manufacturing sector.

Table 7. Autocorrelation Test

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	Durbin Watson	Conclusion
Model 1	1,663	No Autocorrelation Test
Model 2	1,698	No Autocorrelation Test

Source: SPSS, 2024

Based on the Durbin-Watson values of 1.663 for regression model 1 and 1.698 for model 2, which fall within the acceptable range between 1.5 and 2.5, it can be concluded that there is no autocorrelation in the residuals. This means that the error terms in the regression models are independently distributed across time or observations. This finding is crucial for ensuring the validity of the regression results, especially when investigating environmental disclosures, which may be influenced by both past and current performance indicators. According [25]**,** models that fail to account for autocorrelation often yield biased standard errors, which can mislead inference about the significance of predictors.

The absence of autocorrelation reinforces the reliability of the regression estimations in this study, particularly in testing the moderating effect of media exposure and the role of ownership structures and environment performance in biodiversity disclosure. It ensures that the effects observed are not artifacts of serial correlation, but rather reflect genuine relationships among the variables studied within the manufacturing sector in Indonesia.

Table 8. Multiple Regression Analysis (MRA)

Variable	Regression Model 1		Regression Model 2	
	B	Significance	B	Significance
X1_INST	-0,008	0,879	0,254	**0,008**
X2_FRGN	0,023	0,571	-0,002	0,982
X3_ENVP	0,074	**0,000**	0,076	**0,008**
MEDIA			0,045	**0,001**
X1_Z			-0,048	**0,002**
X2_Z			0,006	0,643
X3_Z			-0,004	0,498
F Test		**0,000**		**0,000**
Adj. R Square		0,112		0,189

Source: SPSS, 2024

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Based on the results of data processing using SPSS, the results of the hypothesis test are summarized in the Table above. The results of the analysis show that the F Test is considered significant or F <0.05 which explains that the model is fit or accepted. The results in the Table above then obtained the following regression model:

Model 1:

BIODIV: 0,090 - 0,008INST+ 0,023FRGN + 0,074ENVP + e…….....(3)

Model 1 (Main Effect Model) examines the direct effects of Institutional Ownership (INST), Foreign Ownership (FRGN), and Environmental Performance (ENVP) on biodiversity disclosure (BIODIV). The regression results show that Institutional Ownership is not statistically significant (p = 0.879), indicating that it does not have a measurable impact on biodiversity disclosure. Similarly, Foreign Ownership also shows no significant influence (p = 0.571). In contrast, Environmental Performance is found to have a positive and significant effect (p = 0.000), suggesting that firms with stronger environmental performance are more likely to disclose biodiversity-related information. Overall, only Environmental Performance contributes significantly to the level of biodiversity disclosure in this model, while ownership structures—both institutional and foreign—do not.

Model 2:

BIODIV: 0,089 + 0,254INST- 0,002FRGN + 0,076ENVP + 0,045MEDIA - 0,048X1*Z + 0,006X2*Z - 0,004X3*Z + e……...(4)

Model 2 (Moderated Regression Analysis) introduces Media Exposure as a moderating variable and includes interaction terms between media and each of the independent variables. With the inclusion of Media Exposure, Institutional Ownership becomes statistically significant (p = 0.008), implying that the influence of institutional ownership on biodiversity disclosure is amplified when media exposure is high. Environmental Performance remains significantly positive (p = 0.008), reinforcing its strong and consistent role in promoting disclosure. Media Exposure itself is also a significant predictor (p = 0.001), highlighting the media's direct role in encouraging transparency regarding biodiversity issues. Interestingly, the interaction term between Institutional Ownership and Media Exposure (X1*Z) is

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significantly negative (p = 0.002), which may suggest that while media intensifies the effect of institutional ownership, it also introduces a degree of complexity or scrutiny that could alter the nature of that influence. Meanwhile, Foreign Ownership and its interaction terms remain statistically insignificant, indicating that foreign investors do not significantly affect biodiversity disclosure even when media coverage is considered. The adjusted R^2 increases from 0.112 in Model 1 to 0.189 in Model 2, signifying that the inclusion of Media Exposure and interaction effects enhances the explanatory power of the model.

Discussion

The hypothesis test findings indicate that the institutional ownership (INST) variable has a B value of -0.008 and a significance level of 0.879 (exceeding 0.05), leading to the rejection of H1. The diminutive regression coefficient and elevated significance value suggest an absence of a substantial association between institutional ownership and the company's biodiversity disclosure. This contradicts the original hypothesis, which posits that institutional investors generally exhibit greater concern for environmental, social, and governance (ESG) factors and promote enhanced transparency in sustainability disclosures among corporations. According to research [4], [26], and [27], one potential explanation is that institutional investors may prioritize short-term financial gains over ESG concerns, or they may regard ESG information as "soft" data that holds less significance for them. This research is corroborated by studies [4]; [28]; [29]; [29], which indicate that institutional ownership does not significantly affect the disclosure of environmental responsibilities, including biodiversity disclosure. Thus, this study concludes that factors such as government restrictions, consumer pressure, or the inherent qualities of the corporation may exert a more significant influence on the extent of biodiversity disclosure. An analysis of the ratio of CSR disclosure by corporations in relation to institutional share ownership reveals that more institutional ownership does not promote more extensive CSR disclosure, nor does the opposite hold true. Consequently, institutional ownership does not substantially influence environmental disclosure.

The foreign ownership (FRGN) variable has a B value of -0.008 and a Sig of 0.571 (higher than 0.05), indicating H2: Rejected. The high significance value suggests that there is no meaningful connection between biodiversity disclosure and foreign ownership. According to the study's findings, corporations' disclosure of biodiversity is not significantly impacted by foreign ownership. These results contrast with legitimacy theory, which predicts that foreign-owned businesses will typically be more open about sustainability information, including biodiversity, due to pressure from global shareholders. This disparity could be brought about by a number of factors, including the various legitimacy strategies employed by foreign-owned businesses, the lack of legitimacy pressure in particular commercial contexts, or the various traits of foreign investors [14]. These findings show that corporations are not significantly influenced by foreign investors to disclose biodiversity-related information more openly. The degree of biodiversity disclosure may be more significantly influenced by other elements, such as laws, pressure from regional stakeholders, or the traits of the businesses themselves [20].

Based on the results of the hypothesis test presented in the previous table, the environmental performance (ENVP) variable shows a B value of 0.074 and Sig 0.000 (less than 0.05), which means H3: Accepted. The environmental performance (ENVP) variable has a positive and significant relationship with biodiversity disclosure. This means that the better the environmental performance of a company, the higher the level of disclosure of information related to biodiversity. These results are in line with legitimacy theory, where companies with good environmental performance aim to build a positive reputation in the eyes of the public, investors, and other stakeholders. Based on research [15], by disclosing biodiversity information, companies can demonstrate their commitment to sustainability and social responsibility. Companies that are ISO 14001 certified also tend to face greater pressure from stakeholders, such as investors and consumers [25].

The media exposure (MEDIA) variable displays a B value of 0.074 and a Sig of 0.000 (less than 0.05), which suggests H4: Accepted. This indicates a significant association between media exposure and biodiversity disclosure. The media exposure variable

demonstrates a positive and substantial connection with biodiversity disclosure. This suggests that the more media exposure a corporation obtains, the higher the level of disclosure of biodiversity-related information. The findings support the idea that media acts as a monitoring agent, encouraging greater transparency. Mass media can improve public awareness about biodiversity and create social pressure on companies to act more responsibly. In accordance with legitimacy theory, media exposure helps establish social norms around sustainability, encouraging firms to disclose biodiversity information to maintain legitimacy. This research aligns with [30], which also found that media exposure significantly influences the disclosure of environmental responsibility. Companies often face increased pressure from society and the government to be transparent about the environmental impacts of their operations [31], [32].

Based on the hypothesis test findings, the interaction variable between institutional ownership (INST) and media exposure (MEDIA) (X1*Z) reveals a B value of -0.048, and Sig 0.000 (less than 0.05), which suggests H5: Accepted. This implies that media exposure moderates the relationship between institutional ownership and biodiversity disclosure. The negative coefficient suggests that the association between institutional ownership and biodiversity disclosure diminishes as media exposure increases. In this context, media exposure acts as a negative moderator, which means that public pressure induced by high media exposure may substitute the role of institutional investors. This is particularly relevant given the rapid growth of media in Indonesia, where media scrutiny may exert stronger influence than institutional pressure [23], [22], [13], [21].

The interaction between foreign ownership (FRGN) and media exposure (MEDIA) (X2*Z) reveals a B value of 0.006 and Sig 0.643 (higher than 0.05), which suggests H6: Rejected. This indicates that the influence of foreign ownership on biodiversity disclosure is not moderated by media exposure. Although the interaction coefficient is positive, it lacks statistical significance. One explanation is that foreign investors have diverse ESG priorities and may focus more on profitability than disclosure, particularly if local regulations do not enforce transparency. As such, media exposure may not significantly impact the behavior

of foreign-owned firms [33], [34]. Moreover, these firms often respond more to international than domestic media, which limits the moderating role of media exposure [21], [16].

The interaction between environmental performance (ENVP) and media exposure (MEDIA) (X3*Z) shows a B value of -0.004 and a Sig of 0.498 (higher than 0.05), which suggests H7: Rejected. This means that media exposure does not significantly moderate the relationship between environmental performance and biodiversity disclosure. The negative coefficient implies that greater media attention might even reduce the strength of this relationship. Companies might shift their focus toward more publicly visible environmental issues like carbon emissions, rather than biodiversity, which may be less understood by stakeholders. Additionally, high media scrutiny might discourage firms from disclosing biodiversity information if they fear potential criticism, even when their environmental performance is strong [4], [7]. Overall, the results suggest that environmental performance remains an independent and consistent driver of biodiversity disclosure, unaffected by media exposure.

Conclusion

Based on the results of the research that has been undertaken, it can be concluded that the company's environmental performance has an effect on biodiversity disclosure in sustainability reports. In addition, media exposure functions as a moderating factor that increases the association between environmental performance and biodiversity disclosure. These findings indicate that corporations with high environmental performance tend to be more transparent in providing information relevant to biodiversity, and media exposure can augment this influence by increasing public accountability and garnering stakeholder attention. Therefore, firms need to pay attention to environmental performance and media exposure in an effort to increase sustainability disclosure, especially connected to biodiversity.

Companies with superior environmental performance tend to be more honest in expressing information linked to biodiversity, demonstrating their dedication to environmental conservation. Furthermore, this study also reveals that media exposure works as a moderating factor that increases the association between environmental performance and biodiversity disclosure. This implies that media exposure, which can contain both positive and negative news, has a major impact on persuading corporations to be more open in disclosing their environmental performance, including measures to protect biodiversity. Thus, media exposure not only operates as a tool to improve company visibility but may also boost public pressure on firms to be more accountable for their environmental implications. These findings provide crucial insights for companies, especially those listed on the stock exchange, to consider environmental conditions and media exposure in their reporting strategy. In this context, comprehensive and accurate biodiversity disclosure can strengthen a company's reputation in the eyes of stakeholders, build public trust, and attract more responsible investment. Therefore, firms should improve their environmental performance while employing media exposure as a tool to strengthen their sustainability disclosure, especially in the element of biodiversity, in order to promote sustainable development goals.

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