THE RELATIONSHIP BETWEEN MARKET PRESSURE AND THE EXTENT OF BIODIVERSITY DISCLOSURE

Ni Putu Stefy Chaterina Wijaya, Putu Agus Ardiana

Accountant, Udayana University, Email: stefy.chaterina21@student.unud.ac.id

Abstract

This study aims to examine the association between market pressure and the extent of biodiversity disclosure among companies across all sectors listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period. A total of 990 sustainability reports published by these companies within the same period were analysed. Content analysis was employed to measure the extent of biodiversity disclosure as the dependent variable, while market pressure served as the independent variable. This study used Institutional theory to explain the association between the variables. Pearson correlation and multiple linear regression analyses were conducted to investigate both simple and more complex relationships, specifically the association between non-Asian market pressure and the extent of biodiversity disclosure. The results indicate a positive relationship, suggesting that companies tend to respond to institutional pressures from non-Asian markets by increasing transparency in biodiversity disclosure to maintain legitimacy and a good reputation in the international market.

Keywords: Biodiversity Disclosure, Multi-Sector, non-Asian Market Pressure, Institutional Theory

INTRODUCTION

The biodiversity crisis is increasingly recognized as one of the most critical environmental threats at the global level. The loss of biodiversity poses significant risks to the continuity and stability of industries worldwide (Aiama et al., 2016). According to *The Economics of Biodiversity* report (Dasgupta, 2021), biodiversity is considered a vital natural asset. Indonesia is one of the world's 17 megadiverse countries, hosting approximately 17% of the world's flora and fauna species. Indonesia plays a pivotal role and is even referred to as the global center of biodiversity (Yayasan Konservasi Alam Nusantara, 2023). Biodiversity is a non-renewable resource and is highly vulnerable to environmental changes. Various economic sectors contribute both directly and indirectly to biodiversity loss, making their involvement essential in biodiversity conservation efforts across Indonesia.

While these sectors significantly contribute to Indonesia's economic development, their operational activities have been identified as major drivers of biodiversity degradation. At the same time, these sectors are key players in supporting national economic growth through their contributions to Gross Domestic Product (GDP). The obligation for sustainability reporting, including environmental issues such as biodiversity, has been mandated by the Financial Services Authority Regulation (POJK) No. 51/POJK.03/2017 on the implementation of sustainable finance for financial institutions, issuers, and public companies. Biodiversity disclosure is not only a regulatory requirement but also a critical tool for fostering transparency, building public and stakeholder trust, and enhancing corporate accountability and legitimacy (Azizi et al., 2025).

In Indonesia, research focusing specifically on biodiversity disclosure remains limited. Studies assessing the extent of biodiversity disclosure have reported concerning results. For instance, Zai & Widianingsih (2025) found that the level of biodiversity disclosure in Indonesia's mining sector remains relatively low, indicating that biodiversity has yet to become a strategic priority in corporate business practices. According to Boiral & Saizarbitoria (2015), managing biodiversity by engaging a range of stakeholders, including non-governmental organizations (NGOs), can help companies maintain legitimacy in the eyes of the public and regulators, and mitigate external pressures. Biodiversity issues are increasingly attracting attention from various stakeholders, including investors, governments, NGOs, and the broader public.

From the perspective of institutional theory, these demands can be understood as forms of external pressure that compel companies to adapt and conform by aligning their reporting practices. Organizations respond to institutional pressures in pursuit of legitimacy (DiMaggio & Powell, 1983). International markets, in particular, represent a significant source of such external pressures, as companies aiming to export products or services are required to meet the expectations and standards of consumers, investors, and regulators in the destination countries. The varying characteristics of international markets reflect different forms of institutional pressure—coercive, normative, and mimetic—as outlined by institutional theory.

Despite the increasing attention to biodiversity issues, few studies have specifically examined the relationship between such external pressures and the extent of biodiversity disclosure in the Indonesian context. The study by Roberts & Elamer (2025) provides a foundation by demonstrating that coercive (laws and regulations), normative (professional standards), and mimetic (imitation of successful peers) pressures influence firms' decisions to disclose biodiversity-related information.

Azizi et al. (2025) highlight that institutional theory offers insights into the adoption of sustainability-related business practices, emphasizing that organizational behavior is shaped by external institutional pressures and social interactions. External environments compel firms to modify their operations in order to gain stakeholder recognition and legitimacy, leading to uniformity—referred to as isomorphism. In Europe, policymakers have introduced firm regulations such as the EU Taxonomy, the Sustainable Finance Disclosure Regulation (SFDR), and the Corporate Sustainability Reporting Directive (CSRD), which either mandate or strongly encourage companies to adopt biodiversity management practices and disclose related information.

Market pressure, as a form of external institutional force, can drive companies to align with prevailing social expectations, particularly in sustainability practices and biodiversity disclosure. In this study, market pressure is categorized based on the main geographic regions where the company's products or services are marketed, namely non-Asian and Asian markets. Companies oriented towards non-Asian markets, such as Europe, typically face higher external pressures from regulators, investors, and consumers to demonstrate strong commitments to sustainability.

Previous studies by Fondevila & Etxeberría (2023) and Bhattacharyya & Yang (2019) indicate that companies operating in global markets with higher environmental pressure tend to provide more comprehensive biodiversity disclosures. This suggests that the characteristics of the markets in which firms operate can significantly influence the extent of environmental transparency. Additionally, Haniffa & Cooke (2005) found that companies in developing countries often disclose social and environmental

information in response to pressure from international stakeholders—such as foreign investors and global consumers—who demand higher sustainability standards. These findings underscore that a company's market orientation can impact the level of sustainability disclosure, including biodiversity-related information.

Furthermore, Amran & Devi (2008) argue that companies engaged in international business partnerships or operating in global markets are more likely to adopt comprehensive sustainability reporting practices as a response to coercive pressures from global stakeholders and regulators. Hence, non-Asian market pressure may be positively associated with the extent of biodiversity disclosure by companies. Based on this rationale, the following hypothesis is proposed:

H1: Non-Asian market pressure is positively associated with the extent of biodiversity disclosure.

RESEARCH METHODOLOGY

This study aims to examine the relationship between non-Asian market pressure and the extent of biodiversity disclosure among companies in Indonesia across 11 sectors listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period. A quantitative associative approach was employed. By covering a broad range of sectors, the findings are expected to provide a more comprehensive understanding of biodiversity disclosure practices in Indonesia.

A literature review was conducted to develop the research hypothesis. Purposive sampling was used to select the sample based on specific inclusion criteria. The final sample consists of 990 firm-year observations.

The dependent variable, namely the extent of biodiversity disclosure (BIODIVDISC), was measured using a biodiversity disclosure index through content analysis. The disclosure items were based on the GRI Standards for biodiversity. Each disclosure item was scored as follows: a score of 1 was assigned if the company disclosed the item in accordance with the GRI indicators, a score of 0 was assigned if the item was not disclosed.

The total score was then divided by the maximum number of possible disclosure items, and multiplied by 100% to produce the biodiversity disclosure index. The formulation is as follows:

$BIODIVDISC = \frac{\sum di}{Mmax} \ x \ 100\%$...(1)

The independent variable in this study is market pressure (MARKETPRESS). This variable was categorized into Asian and non-Asian market pressure using a dummy variable approach: a value of 1 was assigned if the company had market orientation toward non-Asian regions, a value of 0 was assigned if the company operated only within Asian markets.

The research sample comprises companies from the 11 IDX-listed sectors that met the selection criteria during the 2020–2023 period, totaling 990 firm-year observations.

The data collection method used was non-participant observation, meaning the researcher did not interact directly with respondents but acted solely as an independent observer. Relevant data were gathered by downloading annual and sustainability reports from the official websites of the Indonesia Stock Exchange (www.idx.co.id) and each company's official website. The collected data were then compiled, tabulated, analyzed, and interpreted.

The data analysis technique used in this study is multiple linear regression analysis, with the following model specification:

$$BIODIVDISC_{it} = \beta_0 + \beta_1 MARKETPRESS_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where:

β_0 = Intercept

β_1 = regression coefficient for the independent variable

$BIODIVDISC_{i,t}$ = biodiversity disclosure score of firm i in year t

$MARKETPRESS_{i,t}$ = market pressure of firm i in year t

$\varepsilon_{i,t}$ = error term

RESULTS AND DISCUSSION

The initial analysis conducted in this study was a descriptive statistical analysis, which provides an overview of the research variables, including the number of observations (N), minimum and maximum values, mean, and standard deviation. The results of this analysis are presented in Table 1. Descriptive Statisticsble 1.

Table 1. Results of Statistical Analysis

	N	Min	Max	Mean	Std. Deviation
BIODIVDISC	990	0,25	1,00	0,4556	0,25323
MARKETPRESS	990	0	1	0,37	0,482
Valid N (listwise)	990				

Source: Research Data, 2025

Before performing the multiple linear regression analysis, classical assumption tests were conducted, including multicollinearity and heteroscedasticity tests.

The multicollinearity test indicated that the Variance Inflation Factor (VIF) for the market pressure variable was 1.000, which is below the critical value of 5, suggesting no multicollinearity in the regression model.

The heteroscedasticity test, performed using the Glejser test, revealed a significance value of 0.000 for the market pressure variable. Since this is below the 0.05 threshold, it indicates the presence of heteroscedasticity. This may be due to differences in the variance of biodiversity disclosure scores between firms categorized under dummy values 0 and 1. However, this study focuses on examining relationships between variables rather than making predictive claims, thus the impact of heteroscedasticity is limited.

The multiple linear regression analysis was used to assess the relationship between non-Asian market pressure and the extent of biodiversity disclosure among firms across 11 sectors listed on the Indonesia Stock Exchange. Based on Table 2, a positive and highly significant relationship was found between non-Asian market pressure and biodiversity disclosure.

The regression equation derived from the analysis is as follows:

BIODIVDISC = 0,415 + 0,109MARKETPRESS + ε

The coefficient of determination (Adjusted R^2) was 0.042, indicating that 4.2% of the variation in biodiversity disclosure is associated with non-Asian market pressure. The remaining 95.8% is explained by other variables not included in the model.

The F-test for model fit yielded an F-value of 44.855 with a significance level of 0.000, which is below the 0.05 threshold, confirming the model's validity.

The t-test results showed a positive regression coefficient for the market pressure variable, with a significance level at the 1% confidence level ($p < 0.01$), confirming a strong and statistically significant relationship.

Table 2. Multiple Linear Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.415	.010		41.937	.000
MARKETPRESS	.109	.016	.208	6.697	.000

Source: Research Data, 2025

The regression analysis results demonstrate that non-Asian market pressure has a positive and statistically significant association with the extent of biodiversity disclosure at the 99% confidence level.

These findings are in line with institutional theory (DiMaggio & Powell, 1983), which posits that organizations tend to adopt similar behaviors in response to external and internal pressures in order to gain legitimacy within their operating environment.
In the context of this study, when Indonesian companies face market pressures from international stakeholders—such as consumers, regulators, or investors from countries with stricter biodiversity regulations—they are more likely to adjust their reporting behaviors and disclosure policies accordingly.

This finding is also consistent with the work of He & Yang (2024), which highlights that firms from developing countries face dual pressures from both home and host countries. External pressures from developed host countries, in particular, push companies to enhance the quality and quantity of environmental disclosures to maintain legitimacy and a positive reputation in global markets.

Overall, these results suggest that biodiversity disclosure is not merely a compliance activity but also a strategic response to institutional pressures, especially those originating from international markets. In this case, non-Asian markets, which generally have more stringent sustainability demands, reinforce norms and expectations that drive companies toward greater transparency. The presence of global reporting frameworks such as the Global Reporting Initiative (GRI) further strengthens the role of biodiversity disclosure as a legitimacy-enhancing mechanism.

CONCLUSION

This study finds that non-Asian market pressure is positively and significantly associated with the extent of biodiversity disclosure among publicly listed companies in Indonesia during the 2020–2023 period. The greater the company's exposure to non-Asian markets, the more extensive its biodiversity disclosure tends to be. This reflects companies' efforts to adapt to institutional pressures and maintain legitimacy and reputation in international markets by meeting stakeholder demands for greater transparency and sustainability accountability.

However, the study has certain limitations. It focuses solely on the relationship between market pressure and biodiversity disclosure, using a binary dummy variable to differentiate between Asian (0) and non-Asian (1) markets. While useful, this measurement remains relatively general. Future research is recommended to employ more detailed and quantitative indicators, such as export volume, sales proportion by region, and others. Additionally, biodiversity disclosure in this study was assessed only based on the four main indicators from GRI 304-1 to GRI 304-4. Future studies are encouraged to expand the scope of biodiversity disclosure by including sub-topics under these indicators to provide a more comprehensive and in-depth analysis.

REFERENCES

Aiama, D., Carbone, G., Cator, D., & Challender, D. (2016). *Biodiversity Risks and Opportunities in the Apparel Sector*. International Union for Conservation of Nature.

Amran, A. and Devi, S. S. (2008). The Impact of Government and Foreign Affiliate Influence on Corporate Social Reporting: The Case of Malaysia. *Managerial Auditing Journal*, 23(4), 386-404. https://doi.org/10.1108/02686900810864327

Azizi, L. *et al.* (2025). Biodiversity Disclosure in the European Finance Sector. *Ecological Economics*, 228, 1 – 21.

Bhattacharyya, A., & Yang, H. (2019). Biodiversity Disclosure in Australia: Effect of GRI and Institutional Factors. *Australasian Journal of Environmental Management*, 26(4), 347–369. https://doi.org/10.1080/14486563.2019.1629544

Boiral, O., & Heras-Saizarbitoria, I. (2017). Managing biodiversity through stakeholder involvement: Why, who, and for what initiatives? Journal of Business Ethics, 140(3), 403–421.

Dasgupta, P. (2021). The Economics of Biodiversity: The Dasgupta Review. London: HM Treasury.

DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147 – 160. https://doi.org/10.2307/2095101

Fondevila, M. M. & Etxeberría, I. A. (2023). Trends in Private Sector Engagement with Biodiversity: EU Listed Companies Disclosure and Indicators. *Ecological Economics*, 210. https://doi.org/10.1016/j.ecolecon.2023.107864

Haniffa, R. M., & Cooke, T. E. (2005). The Impact of Culture and Governance on Corporate Social Reporting. *Journal of Accounting and Public Policy*, 24(5), 391 – 430. https://doi.org/10.1016/j.jaccpubpol.2005.06.001

He, J. & Yang, S. (2024). Does Internationalization Improve Environmental Disclosure illingness and Quality? The Moderating Role of Green Investors. PLOS ONE, Public Library of Science, 19(9), 1–20. https://doi.org/10.1371/journal.pone.0307638

Roberts, L. & Elamer, A. A. (2025). Country-Level Drivers of Biodiversity Disclosures: International Evidence and Policy Implications. *Accounting Forum*, 1–29. https://doi.org/10.1080/01559982.2025.2468992

Zai, S. N. P., & Widianingsih, Y. P. N. (2025). Uncovering Transparency in Biodiversity Accounting Standards in Indonesia's Mining Sector. *Accounting Profession Journal*, 7(1), 42–51.