# ENVIRONMENTAL DISCLOSURE PRACTICES: A NEO INSTITUTIONAL THEORY PERSPECTIVE ACROSS INDUSTRIES

Alfian Sayuti<sup>\*</sup>, Rahman Prasetyo

Faculty of Economics and Business, Bumigora University, Mataram, Indonesia \*alfian@universitasbumigora.ac.id

#### Abstrak

Isu lingkungan hidup menjadi salah satu topik yang dibahas dalam konferensi internasional sejak Stockholm 1972 hingga Stockholm 2022. Indonesia ikut serta dalam peningkatan kinerja keberlanjutan, sehingga pembuatan regulasi dan kebijakan terkait isu lingkungan hidup sangat diperlukan bagi perusahaan yang beroperasi di Indonesia. Penelitian ini mengkaji pengungkapan lingkungan berdasarkan jenis industri (model 1) dan mengkaji pengungkapan lingkungan sebelum dan sesudah terbitnya peraturan terkait pelaporan keberlanjutan (model 2). Data yang digunakan adalah perusahaan pertambangan dan manufaktur yang terdaftar di Bursa Efek Indonesia tahun 2020-2021. Hasil penelitian membuktikan bahwa terdapat perbedaan risiko lingkungan antara perusahaan pertambangan, perusahaan high profile dan low profile. Selain itu, terdapat perbedaan skor pengungkapan lingkungan hidup sebelum dan sesudah terbitnya peraturan terkaat teori Neo-Institusional yang menyatakan bahwa regulator dapat memberikan tekanan pada suatu institusi.

Kata Kunci: Pengungkapan Lingkungan, Jenis Industri, Teori Neo-Institusional

#### Abstract

Environmental issues have been one of the topics discussed at international conferences since Stockholm 1972 to Stockholm 2022. Indonesia is participating in the improvement of sustainability performance, so the creation of regulations and policies related to environmental issues is necessary for companies operating in Indonesia. This research examines environmental disclosure based on industry type (model 1) and examines environmental disclosure before and after the issuance of regulations related to sustainability reporting (model 2). The data used are mining and manufacturing companies listed on the Indonesia Stock Exchange in 2020-2021. The results of the study prove that there are differences in environmental risks between mining, high-profile and low-profile manufacturers. Furthermore, there are differences in environmental disclosure scores before and after the issuance of these regulations. These findings enhance the Neo-Institutional theory that regulators can exert pressure on an institution.

Keywords: Environmental Disclosure, Type of Industry, Neo-Institutional Theory

### Introduction

It is clear that environmental issues are a concern for various fields, including accounting, social, economy, and academics. Indeed, international organisations and academics are focusing on these issues (Shoeb et al., 2022). Furthermore, the main topic of International Conferences has been discussed from 1972 to 2022, with various locations and dates (United Nation, 2023). It is also clear that this issue is of concern to investors. Investment is going towards sustainable development firms based on a company's disclosure of its environmental and social impacts (Bolognesi & Burchi, 2023). Policy regarding the environment can increase interest in investors to invest in the companies (Ahmad et al., 2023).

The study reveals clear differences in environmental disclosure levels between lowprofile manufacturing and mining companies, based on industry type comparison. Mining firms are more likely to cause environmental damage than corporations in other sectors of industry (Khanifah et al., 2020). This makes it likely that investors will respond to the environmental performance of mining companies. This is also reflected in Sayuti et al. (2020) study, where mining companies have the highest disclosure of biodiversity issues. The industrial sector in Indonesia is responsible for a significant portion of greenhouse gas emissions, contributing 29% of total emissions. Transportation, land use, forests, energy supply, housing, agriculture, and office are also major contributors.

Researchers conduct diverse environmental studies across sectors, highlighting unique challenges in each sector. Mining companies focus on biodiversity, while manufacturing industry has the higher emissions issues (Sayuti et al., 2020). This research analyses differences in environmental disclosure based on industry type, subenvironmental disclosure (emissions and biodiversity), and differences in 2020 and 2021, considering regulations promoting annual reporting of environmental and social issues. This research tests neo-institutional theory, which asserts that businesses must align their current procedures with established structures and rules within a specific field (DiMaggio & Powell, 1983) in (Gerged et al., 2021). Some have researched sub-indexes of environmental disclosure, such as policy, pollution, energy, and financial issues (Gerged et al., 2021). This research differs from previous studies in several ways. Firstly, it compares sub-indices based on industry type. Secondly, it uses a neoinstitutional theory approach. Thirdly, it differences examines in environmental disclosure in 2020 compared to 2021 using panel data from mining, high-profile, and lowprofile industries. This research used a paired sample t-test and one-way ANOVA with 408 participants. The chapter covers literature reviews, research methods, results, discussion, and conclusions.

# Neo-Institutional Theory

Neo-institutional theory provides a comprehensive understanding of corporate environmental disclosure. It addresses how businesses respond to various constraints (Gerged et al., 2021). The theory also addresses the mechanisms by which structures, including schemes, regulations, norms, and routines, get established as authoritative directions for social conduct (Bello et al., 2021). Neo-institutional theory explains how the pressure from stakeholders influences a company's decisions (Rudyanto, 2019).

This research follows Carrasco & Vílchez (2022), which issues sustainability as an isomorphic mimetic. Sustainability is a complex issue that can be interpreted as both internal and external activities, influencing a company's processes and gaining legitimacy from stakeholders Carrasco & Vílchez, 2022). This

categorises the position research of environmental disclosure as isomorphous mimetic follow (Gerged et al., 2021). They found that voluntary corporate environmental disclosure in the region is influenced by government environmental activities and NGO initiatives, leading to increased disclosure and enhanced corporate reputation, which ultimately increases the market value of companies through mimetic isomorphism. Rudyanto (2019) makes a compelling case that investors are understandably cautious about sustainability reports, given that Indonesian corporations are creating them using mimetic force.

Neo-institutional theory is also used by research Hague & Ntim (2022), which discusses environmental issues. There is no doubt that neo-institutional theory's efficiency-oriented justifications are supported by evidence showing organisations engage in sustainability initiatives, such as reduced emissions, environmental innovations, and resource efficiency, in response to climate-related risks. This, in turn, supports the organisations' efforts to reduce greenhouse gas emissions and enhance their corporate carbon performance (Hague & Ntim, 2022). Furthermore, Gerged et al. (2021) make a compelling case that firm being enhanced value is by managers enhancing their environmental disclosure programmes and meeting the needs of influential individuals.

summary, neo-institutional theory In explores the influence of stakeholders on companies' decision-making, particularly in relation to corporate environmental disclosure following regulations from the Financial Service Authority. Furthermore, environmental disclosure has different levels between industry types, such as high-profile and low-profile Hackston, 1996; (Milne & Suttipun & Yordudom, 2022). It is important to examine whether this regulation has had an impact on the differences observed previously. After all, environmental issues are of concern to investors and can affect firm value (Gerged et al., 2021). The proposed actions are expected to prompt companies to address environmental concerns related to their operations, thus forming an isomorphic mimetic.

### **Empirical literature and Hypotheses Development**

Recent study compares the level of environmental disclosure of the minina high-profile low-profile industry, and manufactures. High-profile industry contributes around 40% of total carbon emissions in (Hardivansah Indonesia et al., 2021). Meanwhile, the mining industry in Indonesia is subject to regulations like Minister of Energy and Mineral Resources Regulation No. 16 of 2021, which impact natural terrain, land conversion, forest habitat disturbance, and biodiversity (Khanifah et al., 2020). This will undoubtedly influence the level of pressure from regulators on mining the industry regarding environmental policy. Minina companies, like the oil and gas sector, present more environmental issues because they have a high level of environmental risk (Garner & Lacina, 2019).

The relationship between increased transparency regarding the environment and vulnerability to environmental risk (laws, prohibitions, and natural disasters) is up for debate (Garner & Lacina, 2019). Furthermore, there is a debate about whether low-profile should increase environmental companies disclosure due to the impact on firm value (Gerged et al., 2021) and the high real costs associated system construction, with information identification, measurement, and reporting (Deswanto & Siregar, 2018). Lowprofile operations are different from mining or agricultural companies. The two industries' businesses are closely tied to nature, and the environment has a direct impact on their circumstances. This means that an increasing number of environmental issues must be disclosed by these businesses (Deswanto & Siregar, 2018). Furthermore, stakeholders put more pressure on high-profile industries than low-profile industries (Hardiyansah et al., 2021). Consequently, low-profile industries are not under the same pressure to boost environmental disclosure as high-profile companies.

The government must take the lead in enhancing environmental disclosure in public companies in Indonesia. Global nations are implementing carbon laws and promoting lowcarbon economies to limit global temperature rise to 2°C (Shu et al., 2023). In developing

nations like China, the government must establish regulations and laws to address environmental issues (Tu et al., 2020). Businesses are legally obliged to make a significant contribution to environmental protection through regulations (Deswanto & Siregar, 2018).

Indonesia's government has established regulations on environmental issues, including Law No. 40/2007, 32/2009, and 47/2012. OJK 16/SEOJK.04/2021 determines the format and content of public company annual reports, promoting environmental disclosure. The OJK, established under Law no. 21/2011, ensures a sustainable financial system by supervising public companies on the Indonesia Stock Exchange. The instrumental perspective of neoinstitutional theory asserts that economic organisations must compete for vital resources to safeguard shareholder interests and enhance company performance due to institutional forces that are normative, cognitive, and regulatory (Aguilera et al., 2007) in (Ntim & Soobaroyen, 2013). Isoform is a concept that describes a phenomenon where a population is constrained by units that look like other units in the same environment (DiMaggio & Powell, 1983). Neo-institutional theory predicts that Indonesian public companies will respond to OJK regulations by presenting environmental issues in reports for high-profile and low-profile companies.

**H1**: There are differences in environmental disclosure, emission, bidodiversity based on type of industry

**H2:** There are differences in environmental disclosure before and after the issuance of environmental issue regulations



Figure 1: Conceptual Framework of Model 1 Source: Self Proceed



#### Methodology Sample

This research focuses on manufacturing and mining companies listed on the Indonesia Stock Exchange, selected using purposive sampling for financial and annual reports, including sustainability reports.

Table 1: Sample Selectio

source. sei	Пюсееи			
Type of industry	Population	Does not satisfy the sample criteria	Final sample	Percentage <sup>a</sup>
Mining	44	0	44	19,6%
High-profile	104	1	103	46%
Low-profile	78	1	77	34,4%
Total			224	100%
Observation 2 period			448	

<sup>a</sup>The percentages are rounded up

### Measurement of Variables and Analysis Data

This study determines the type of industry by adapting the criteria used by (Milne & Hackston, 1996; Yulia & Afrianti, 2014). The GRI Standard 2016 is the best way to measure environmental disclosure. It offers clear advantages, such usefulness for as shareholders in decision-making processes

(Suttipun & Yordudom, 2022) and guidance in preparing better sustainability reports (Pereira et al., 2021). To assess environmental disclosure using content analysis, assign a 1 if the company discloses GRI Standard issues, add 1 to a total of 30, and divide by 30. Meanwhile, to measure emission and biodiversity issues, follow the total score for each issue (see Figure 3).





The content analysis of environmental disclosure using GRI Standards has several limitations in this study. These include the fact that environmental disclosure is analysed in annual, sustainability, and separate reports. The data is sourced from reporting periods and companies with GRI Standard references index. Topic GRI 307 only covers environmental performance discussions, with whistleblowing systems discussing environmental issues in complaints. The study compares environmental disclosure values between mining companies

using ANOVA analysis and paired sample t-test before and after OJK regulation 16/SEOJK.04/2021.

# FINDING AND DISCUSSIONS

# **Descriptive Statistics**

Table 2 shows environmental disclosure statistics from 448 observations, with a mean value of 0.167, higher than Deswanto & Siregar (2018) -0.0028. The maximum and minimum values are 0.0000 and 0.7667, with a median of 1.000 and a standard deviation of 0.186.

p-ISSN 2087-8133| e-ISSN : 2528-326X

Descriptive Statistics of Environmental Disclosure				
	Environmental Disclosure			
Valid	448			
Mean	.167634			
Median	.100000			
Std. Deviation	.1860177			
Skewness	1.066			
Kurtosis	.438			
Minimum	.0000			
Maximum	.7667			
c c	Source: Solf Proceed			

Table 2 Descriptive Statistics of Environmental Disclosure

Source: Self Proceed

#### Hypotheses Testing Result

The study compares environmental disclosure scores using 88 mining industries, 206 high-profile manufacturers, and 154 low-profile manufacturers. Anova analysis and paired simple t-test were used, but the Kruskal-Wallis test was used due to abnormal data distribution. The Kruskal-Wallis test is also used

by (Daryaei et al., 2020) to see differences between industrial sectors. Table 3 clearly shows that there are significant differences in environmental, emission, and biodiversity disclosure across mining industry, high-profile, and low-profile manufacturers. In fact, subindex emissions have a significant effect at the 0.01 and 0.1 level.

Table 3					
Test Statistics of Model 1: Kruskal-Wallis Test					

	Environmental	Emissions	Biodiversity	
Kruskal-Wallis H	13.668	5.081	59.730	
Asymp. Sig.	.001***	.079*	.001***	
t statistics in brackets *** p < 0,01 **p<0,05 *p<0,1				
Source: Self Proceed				

The data normality test for model 2 is not normally distributed, so hypothesis 2 is tested using the Wilcoxon Test. This non-parametric test examines the hypothesis that the median difference is zero for the non-parametric equivalents of the parametric one-sample (Harris & Hardin, 2013). Table 4 shows negative scores in pre-post issuance regulation 16/SEOJK.04/2021 environmental disclosure scores, with 0 indicating no decrease. The positive ranks indicate that 197 companies increased their environmental disclosure post-regulation. The 27 data points that have the same score both pre- and post-publication show that there were differences between pre- and post-regulation issuance.

				Table 4		
			Model 2:	Wilcoxon Sig	ne <u>d Ranks Tes</u>	
			Mean	Sum of		Post – Pre
		Ν	Rank	Ranks	Ζ	-12.190 <sup>b</sup>
Post -	Negative Ranks	0 <sup>a</sup>	.00	.00	Asymp. Sig. (2-tailed)	<,001***
Pre	Positive Ranks	197 <sup>b</sup>	99.00	19503.00	t statistics in brackets *** $p < 0.01$ and	
	Ties	27 <sup>c</sup>			**p<0,5	
	Total	224				

Source: Self Proceed

### **Additionally Test**

This study uses two models to test hypotheses about environmental disclosure in the mining industry. Model 1 reveals differences before and after OJK regulations. Additional tests, including Bonferroni and Games-Howell tests, confirm these findings. Results show different environmental disclosure scores for high-profile and low-profile manufacturing companies.

		Additonally Test	
	(I) Type_Industry	(J) Type_Industry	Sig.
Bonferroni	1.Mining	2	<,001***
		3	<,001***
	2.High-Profile	1	<,001***
		3	1.000
	3.Low-Profie	1	<,001***
		2	1.000
Games-Howell	1.Mining	2	.005**
		3	.001***
	2.High-Profile	1	.005**
		2	.666
	3.Low-Profie	1	.001***
		2	.666

Table 5

Source: Self Proceed

### Discussions

The study investigated differences in environmental disclosure based on industry type and before and after OJK regulation 16/SEOJK.04/2021, using Kruskal-Wallis Test and Wilcoxon Signed Ranks Test, as nonparameteric tests were used to answer the hypothesis. The study reveals clear variations in environmental disclosure, emissions, and biodiversity disclosure among mining industries, high-profile, and low-profile manufacturers, based on the three types of companies. These results are supported by studies (Milne & Hackston, 1996; Suttipun & Yordudom, 2022). High-profile industries reveal more environmental and social issue information than low-profile types (Milne & Hackston, 1996). Furthermore, those operating in hiahlv prominent industries disclose more about the environment than those in lower-profile industries (Burgwal & Vieira, 2014). This is in line with data released by the Deforestation and Forest Degradation Management Agency. Indonesia's total carbon emissions are predicted to reach 2,950 billion tons in 2020, accounting for 40% of high-profile industry sector emissions (Hardiyansah et al., 2021).

Apart from that, the mining industry has operational differences compared to

manufacturing companies. The (Saenz, 2018) study clearly shows that the mining industry causes social conflict, particularly environmental conflict. The solution is simple: address the issues. This includes waste reduction, environmental planning, green areas, ecofriendly waste handling, biodiversity offsets, funding community programmes, and forming committees for community involvement (Saenz, 2018). Therefore, the mining industry has a different impact on the environment than manufacturing companies.

The study confirms the second hypothesis, based on neo-institutional theory, which states that institutional forces, political, economic, and social, can influence the adoption of new business practices and innovations (DiMaggio & Powell, 1983) in (Ntim Soobaroyen, 2013). The study clearly & indicates that the government's role in environmental Indonesian policies can significantly influence company disclosures of environmental issues.

### Conclusion

This study definitively tests and proves two main hypotheses. First, there are differences in environmental disclosure between mining, high-profile and low-profile manufacturing companies. These results are supported by studies (Milne & Hackston, 1996; Suttipun & Yordudom, 2022). High-profile industries have a greater environmental impact due to emissions and varying environmental effects for maning companies, such as biodiversity, land, water, and dust. This results in differences in environmental disclosure.

16/SEOJK.04/2021 Second, rule has significantly impacted environmental disclosure, as per neo-institutional theory. This indicates that government regulations can significantly influence companies' actions to enhance their environmental disclosure. The study shows that governments, regulators, and standard makers are implementing effective regulations to enhance sustainability, including warning companies for environmental negligence to prevent social conflict.

Although hypotheses 1 and 2 are accepted, this study has limitations. First, the main data analysis only uses the Kruskal-Wallis Test and the Wilcoxon Signed Ranks Test. Future research should improve the model by using different test tools such as MANCOVA. Secondly, the industrial types tested are limited to only three types. Future research should add other types of industry, such as transportation, construction, and hotel sectors.

# References

- Aguilera, R. V., Rupp, D. E., Williams, C. A., & Ganapathi, J. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. *Https://Doi.Org/10.5465/Amr.2007.25275 678*, *32*(3), 836–863. https://doi.org/10.5465/AMR.2007.25275 678
- Ahmad, H., Yaqub, M., & Lee, S. H. (2023). Environmental-, social-, and governancerelated factors for business investment and sustainability: a scientometric review of global trends. *Environment, Development and Sustainability*, *0123456789*. https://doi.org/10.1007/s10668-023-02921-x
- Bello, M. S., Said, R. M., Johari, J., & Kamarudin, F. (2021). Moderating Role of Corruption Control on Firm Level Determinants of Corporate Sustainability

Disclosure Compliance in Nigeria. *Estudios de Economia Ap, 39*(4).

- Bolognesi, E., & Burchi, A. (2023). The impact of the ESG disclosure on sell-side analysts' target prices: The new era post Paris agreements. Research in International Business and Finance. *64*(November 2022), 101827. https://doi.org/10.1016/j.ribaf.2022.1018 27
- Daryaei, A. A., Fattahi, Y., Hasani, R., & Sadeqi, H. (2020). Value of cash and accounting conservatism: The role of audit quality and firm growth. *Cogent Economics and Finance*, *&*(1). https://doi.org/10.1080/23322039.2020.1 816281
- Deswanto, R. B., & Siregar, S. V. (2018). The associations between environmental disclosures with fi nancial performance , environmental performance , and fi rm value. *Social Responsibility Journal*, *14*(1), 180–193. https://doi.org/10.1108/SRJ-01-2017-0005
- 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/https://doi.org/10.2307/20 95101
- Garner, S. A., & Lacina, M. J. (2019). Environmental disclosures and changes in firm value: new evidence from the BP oil spill. *Accounting Research Journal*, *32*(4), 610–626. https://doi.org/10.1108/ARJ-06-2018-0095
- Gerged, A. M., Beddewela, E., & Cowton, C. J. (2021). Is corporate environmental disclosure associated with firm value? A multicountry study of Gulf Cooperation Council firms. *Business Strategy and the Environment*, *30*(1), 185–203. https://doi.org/10.1002/bse.2616
- Haque, F., & Ntim, C. G. (2022). Do corporate sustainability initiatives improve corporate carbon performance? Evidence from European firms. *Business Strategy and the Environment*, *31*(7), 3318–3334. https://doi.org/10.1002/bse.3078
- Hardiyansah, M., Agustini, A. T., & Purnamawati, I. (2021). The Effect of Carbon Emission Disclosure on Firm

Value: Environmental Performance and Industrial Type. *Journal of Asian Finance, Economics and Business, 8*(1), 123–133. https://doi.org/10.13106/jafeb.2021.vol8. no1.123

- Harris, T., & Hardin, J. W. (2013). Exact Wilcoxon signed-rank and Wilcoxon Mann-Whitney ranksum tests. *Stata Journal*, *13*(2), 337–343. https://doi.org/10.1177/1536867x130130 0208
- Khanifah, K., Udin, U., Hadi, N., & Alfiana, F. (2020). Environmental performance and firm value: Testing the role of firm reputation in emerging countries. *International Journal of Energy Economics and Policy*, 10(1), 96–103. https://doi.org/10.32479/ijeep.8490
- Milne, M. J., & Hackston, D. (1996). Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing & Accountability Journal, 9*(1), 77–108.
- Ntim, C. G., & Soobaroyen, T. (2013). Corporate governance and performance in socially responsible corporations: New empirical insights from a neo-institutional framework. *Corporate Governance: An International Review*, *21*(5), 468–494. https://doi.org/10.1111/corg.12026
- Ortega Carrasco, P., & Ferrón Vílchez, V. (2022). Sending corporate social responsibility signals: What organizational characteristics must be met? *Revista Brasileira de Gestao de Negocios, 24*(1), 92–111.

https://doi.org/10.7819/rbgn.v24i1.4146

- Pereira, C., Monteiro, A. P., Barbosa, F., & Coutinho, C. (2021). *International Journal of Advanced and Applied Sciences Environmental sustainability disclosure and accounting conservatism. 8*(9), 63– 74.
- Rudyanto, A. (2019). 1210-5138-1-Pb. *Jurnal Akuntansi Multiparadigma*, *10*(20), 433– 447.
- Saenz, C. (2018). A social conflict diagnostic tool for application in the mining industry: A case study in Peru. *Corporate Social Responsibility and Environmental Management, 26*(3), 1–11. https://doi.org/10.1002/csr.1714

Sayuti, A., Santoso, B., & Putra, I. (2020).

Pengungkapan Lingkungan: Studi Pada Sturuktur Kepemilikan Dan Tipe Industri. *Jurnal EMBA: Jurnal Riset ..., 8*(2), 9–20. https://ejournal.unsrat.ac.id/index.php/e mba/article/view/28379

- Shoeb, M., Aslam, A., & Aslam, A. (2022). Environmental Accounting Disclosure Practices: A Bibliometric and Systematic Review. *International Journal of Energy Economics and Policy*, *12*(4), 226–239. https://doi.org/10.32479/ijeep.13085
- Shu, H., Tan, W., & Wei, P. (2023). Carbon policy risk and corporate capital structure decision. *International Review of Financial Analysis, 86*(November 2022), 102523. https://doi.org/10.1016/j.irfa.2023.10252 3
- Suttipun, M., & Yordudom, T. (2022). Impact of environmental, social and governance disclosures on market reaction: an evidence of Top50 companies listed from Thailand. *Journal of Financial Reporting and Accounting*, *20*(3–4), 753–767. https://doi.org/10.1108/JFRA-12-2020-0377
- Tu, W. J., Yue, X. G., Liu, W., & Crabbe, M. J. Valuation C. (2020). impacts of environmental protection taxes and heavy-polluting regulatory costs in industries. International Journal of Environmental Research and Public Health. 1-21. *17*(6), https://doi.org/10.3390/ijerph17062070
- UnitedNation. (2023). *Environment and Sustainable Development*. Www.Un.Org. https://www.un.org/en/conferences/envir onment
- van de Burgwal, D., & Vieira, R. J. O. (2014). Environmental disclosure determinants in Dutch listed companies. *Revista Contabilidade & Finanças - USP, 25*(64), 60–78.
- Yulia, A., & Afrianti, A. (2014). Analisis Perbedaan Pengungkapan Corporate Social Responsibility Pada Perusahaan High Profile dan Low Profile (Studi Empiris Perusahaan Manufaktur yang Terdaftar di BEI). Jurnal Dinamika Akuntansi Dan Bisnis, 1(1), 92–106. https://doi.org/10.24815/jdab.v1i1.3594