

# The Effect of Structure Ownership and Profitability to Carbon Emission Disclosure in Indonesia Mining Companies

Rosel<sup>1\*</sup>, Meutia<sup>2</sup>, Muhamad Taqi<sup>3</sup>, Rudi Zulfikar<sup>4</sup>

{roseluntirta1@gmail.com<sup>1\*</sup>}

Doctoral Student Universitas Sultan Ageng Tirtayasa<sup>1</sup>  
Universitas Sultan Ageng Tirtayasa<sup>234</sup>

**Abstract.** This study aims to investigate effect of structure of ownerships and profitability on carbon emission disclosure in mining companies. This study uses secondary data obtained from annual report and sustainable report companies. Sampling technique that use in this study was purposive sampling. The number of samples of used in this study was 9 companies from total 49 mining companies that listed in Indonesian Stock Exchange (IDX) on 2016-2020. Total unit analysis in this study was 45. The data were analyzed by using descriptive statistic and logistic regression. The result showed that individually structure ownership by institutional ownership and profitability no effect on carbon emission disclosures in mining companies listed on Indonesian Stock Exchange for the 2016-2020 periods.

**Keywords:** Institutional ownership, Profitability, and Carbon Emission Disclosure.

## 1 Introduction

Global Warning is a one issues of environmental and would be a strategic issues in future. World Economic Forum in The Global Risk Report state that effect of climate change like food crisis, water shortages because long dry season, and melting ice in the north and south pole is causing the rise sea level. According to report world Economic Forum, it's entering its third year pandemic, climate change risk dominating global concern like long term concern [1].

Currently, the company in the world, gradually began to consider the risks associated with climate change. One of the causes of climate change is the increasing industrial expert gas due to the activities of the company so there is an increase in air pollution in the form emission carbon that have to damage the environment. It is known that carbon emissions in Indonesia have reached 37 miles billion tons carbon dioxide and Indonesia is one of the 193 countries signed Paris Agreement that agreed to take down emission carbon to prevent any climate change. Indonesia aims to reduce carbon emission by the amount 29% with its own efforts and 41% with international support [2].

The government of Indonesia through the company's law no. 40 tahun 2007 and circular letter of financial services authority no. 30/SEOJK/04/2016 mentions that the obligation of public companies to file report on social and environmental responsibility report in its annual report or sustainable report. The sustainable report contains carbon emissions disclosure. The existence of emissions carbon disclosure would have a rise in public trust especially stockholder that care with impact of environmental damages. If trust of public increases so value firm will increase. According with result research [3] that take evidence that emission carbon disclosure take positive impact to increase value firm. It's supported by [4] that finding evidence that the firm disclose emission carbon have value firm more high \$ 23 Billion then the firm that not disclose carbon emission. It's so supported by result finding research [5] that finding that emission carbon disclosure influence positive significant to value firm especially to firm that consider problem about value to continuous firm.

Because importantly carbon emission disclosure, so that this research aim to have empirical evidence about factors that impact to carbon emission disclosure. There research that doing use independent variables like financial performance, environmental performance, institutional ownership, and managerial ownership at agricultural and mining sector industry and research of [6] with use firm size, profitability, and liquidity that to moderate correlation between emission carbon disclosure with value firm, and Akhiroh and Kiswanto use independent variables, are visibility, organizationally, profitability, managerial ownership, audit committee, environmental performance, financial distress, and proportion of independent ownerships, and use independent variables are, firm size, environmental performance, and managerial ownership, so research with use independent variables, like regulatory policy, institutional ownership, firm size, and profitability to test influence to carbon emission disclosure [7].

According with previous research about carbon emission disclosure, so the factors, like independent variables that influenced carbon emission disclosure. It's governance factors, media, stockholders ownership, value firm, performance firm, both side of financial and non financial performance, like environment performance. This paper proposal research want to see this influence, both financial performance and non financial aspect that stakeholder position in the firm. There are research still inconsistent result. This research use three theory, that triple bottom theory to observation effect financial performance to environment and human, legitimacy theory to observation impact of existence of stakeholder in firm, and signalling theory to observation impact carbon emission to investors.

The research question in the research is:

- (1) What financial performance yang diwakili oleh profitability variable secara partial influence carbon emission disclosure.
- (2) What existence of stakeholder yang diwakili oleh institutional ownership secara partial influence carbon emission disclosure.

Objective of this study is:

- (1) Want to observation impact of financial performance to carbon emission disclosure.
- (2) Want to observation impact of stakeholder ownership to carbon emission disclosure.

## **2 Literature Review**

### **2.1 Triple Bottom Theory, Legitimacy Theory, and Signalling Theory**

Triple bottom line theory (TBL) first time introduced by John Elkington in 1994 with a book in title *Canibal with Forks*. Mr. John Elkington explain that triple bottom line are economic prosperity, environment quality, and social justice with hope able to change business system that focus to financial so that able to take approach that comprehensive in measure a success. TBL is packing in three focus that 3P, that profit, planet, and people. This theory make a new view that if the company want to go concern in his live so company must be care to 3P [8]. 3P is framework of accounting to report influence sources of the firm that sustainable to used measurement success value of the firm with three criteria is that, economic, environment, and social.

Stakeholders in this case are shareholders and outside of firm able to influence and influenced these are main factors control of the firm in activity so stakeholders have right to have information about activity of the firm, both in financial activity or non financial activity like environmental performance. So able to decision in all activity of firm, include environmental activities about carbon emission disclosure. Much more carbon emission disclosed, so much more supporting stakeholder to the firm in increase earnings of the firm. Much more carbon emission disclosure company so much more stakeholder give full support to the firm in the his activity. Information is a signal from management to investors. One of the good signal in this context is voluntary disclosure. Carbon emission disclosure that voluntary in nature. In Indonesia carbon emission disclosure still voluntary, so voluntary is positive signal to investors [9].

### 3 Methods

This research use quantitative approach to objective to test hypothesis and data source is secondary data from annual report that used to measure financial performance in <https://.idx.co.id/> and sustainable financial report that obtain from sustainability report at legal situs of the mining company.

Population of this research is mining company listed in Indonesian stock exchange in 2016-2020. Amount of population of this research are 49 mining firms. Sampling technique is purposive sampling method with criteria:

- (1) Mining company listed in Bursa Efek Indonesia from 2016-2020 or five year observation.
- (2) The firm consistently produce annual report in complete and sustainable report in 2016-2020.
- (3) Company with explicit to disclose carbon emission minimum one policies about carbon emission.

Regression model have used to measure effect with partial and simultaneous independent variables X1 (institutional ownership) and X2 (profitability) to Y (carbon emission disclosure).

The variables are used in this research are:

- (1) Dependent variable: Carbon Emission Disclosure (CED) measured with content analysis. To know, how scope of wide carbon emission used index adoption by Choy et. al. (2013) use GRI there are five categorical that:
  - a. Climate change, two item disclosure.
  - b. Greenhouse gas, seven item disclosure.
  - c. Energy consumption, three item disclosure.

- d. Reduction and cost, four item disclosure.
  - e. Accountability of carbon emission, four disclosure.
- The formula to count indicator CED are:

$$CED = (\sum di / M)$$

Annotation:

CED : Carbon Emission Disclosure

$\sum di$  : Total score

M : Total item maximum that able to disclosure (18 item)

(2) Independent variable. The first is institutional ownership and second is profitability.

- a. Institutional ownership (X1).

Formula to measure this indicator are:

$$\text{Institutional Ownership} = \frac{\text{(Amount stock have Institution)}}{\text{(Number of stock circulating)}} \times 100\%$$

- b. Profitability (X2)

Formula to measure this indicator are return on assets (ROA) are:

$$\text{Return on Assets} = \frac{\text{(Net Earnings)}}{\text{(Total Assets)}} \times 100\%$$

## 4 Result and Discussions

### 4.1 Descriptif Statistics

**Table 1.** Result of Partial Test

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
KI	45	.218	.795	.61467	.154925
ROA	45	-.098	.186	.03544	.050791
CED	45	.056	.611	.27911	.173099
Valid N (listwise)	45				

Sources: Output SPSS

Statistic deskriptif in this study subscribe the data about variables in this research. Amount of sample or unit analysis are 45 or n=45 (9x5) that source from 9 company x 5 year mining company listed in Bursa Efek Indonesia (BEI) in period 2016-2020 period. In table 1, value minimum variable independent institutional ownership (KI) is 0.218 or 21.8% in PT. Bumi Resources Tbk and maximum value 0.795 or 79.5% in PT. Vale Indonesia Tbk. Mean value of 45 observation is 0,61464 or 61.46%. This meaning that avarage ownership in mining company owner of institutional in mining company.

Statistic deskriptif about profitability variable have minimum data -0,098 Or 9,8% in PT. Bumi Resources Tbk that meaning this company has losses in 2020, and maximum data is

0,186 or 18,6% in PT. Indo Tambangraya Megah Tbk in 2017 that meaning this company have earning 18.6%. Mean value of this observation is 0.03554 or 3.55%. It's meaning average of profitability of average company is very low because just 3.55% in mean.

Statistic descriptif about dependend variable carbon emission disclosure (CED) have minimum value is 0.056 or 5.6% that at PT. Merdeka Copper Tbk in 2016, where just 1 from 18 item disclosure, end maximum value is 0.611 or 61.1% in PT. Bumi Resorces Tbk in 2020, where disclosed 11 from 18 item. Mean data from all observation (45 unit analysis) is 0.27911 Or 27.9%. This meaning that diclosure are average 5 item from 18 item must be disclosed.

#### 4.1 Result of Test Hypothesis

**Table 2.** Result of Partial Test

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	.441	.107		4.112	.000
	KI	-.272	.167	-.244	-1.629	.111
	ROA	.166	.510	.049	.325	.747

Result of test hypothesis is variable institutional ownership (KI) have significance 0.111 that meaning hypothesis rejected and variable profitability (ROA) have 0.747 that meaning hypothesis rejected. In future expected that expanded samples not only at mining sector companies so will get number large quantity of sample and from this result that governance will make policy that requires policies about envirotnmental in Indonesia not just voluntary policies. This is supported by regulations from the government regarding the obligation to pay environmental costs to companies that have the potential to have a negative impact on the environment (Taqi et al., 2021).

## 5 Conclusion

Based on test result statistics descriptive show that many companies in mining company sector suffer loss (see statistics descriptive). It is caused crisis financial in Indonesia and the world because one of the reason economic downturn , one of covid 19 consequence as a causative factor in mining companies In Indonesia. Structure ownership mining company listed in Bursa Efec Indonesia for 2016-2020 period showed that ownerships dominated by institutional ownership. For the carbon emission disclosure in Indonesia for 2016-2020 period showed low level of the disclosure. It is showed required disclosure of item disclosure is far from expectation. Result of the test statistic to test hypothesis showed that in partiality all of independent variable, both institutional ownership and profitability rejected. It is showed that ownership and profitability has not been able to force company in Indonesia to disclosure about carbon emission.

## References

- [1] Nam, Chang Woon. "World economic outlook for 2022 and 2023." *CESifo Forum*. Vol. 23. No. 03. München: ifo Institut-Leibniz-Institut für Wirtschaftsforschung an der Universität München, 2022.
- [2] Basuki, Tyas Mutiara, et al. "Improvement of Integrated Watershed Management in Indonesia for Mitigation and Adaptation to Climate Change: A Review." *Sustainability* 14.16 (2022): 9997.
- [3] Rusmana, O., & Purnaman, S. M. N. (2020). Pengaruh Pengungkapan Emisi Karbon dan Kinerja Lingkungan terhadap Nilai Perusahaan. *Jurnal Ekonomi, Bisnis, dan Akuntansi*, 22(1), 42-52.
- [4] Matsumura, E. M., Prakash, R., & Vera-Munoz, S. C. (2014). Firm-value effects of carbon emissions and carbon disclosures. *The accounting review*, 89(2), 695-724.
- [5] Hardiyansah, M., Agustini, A. T., & Purnamawati, I. (2021). The effect of carbon emission disclosure on firm value: Environmental performance and industrial type. *The Journal of Asian Finance, Economics, and Business*, 8(1), 123-133.
- [6] Hapsoro, D., & Falih, Z. N. (2020). The effect of firm size, profitability, and liquidity on the firm value moderated by carbon emission disclosure. *Journal of Accounting and Investment*, 21(2), 240-257.
- [7] Hermawan, A., Aisyah, I. S., Gunardi, A., & Putri, W. Y. (2018). Going green: Determinants of carbon emission disclosure in manufacturing companies in Indonesia. *International Journal of Energy Economics and Policy*, 8(1), 55.
- [8] Hanifah, U. (2016). Aktualitas Carbon Emission Disclosure: Sebagai Dasar dan Arah Pengembangan Triple Bottom Line. In *Seminar Nasional dan The 3rd Call For Syariah Paper* (pp. 125-135).
- [9] Saraswati, E., Puspita, N. R., & Sagitaputri, A. (2021). Do firm and board characteristics affect carbon emission disclosures?. *International Journal of Energy Economics and Policy*, 11(3), 14.
- [10] Taqi, M., Rusydiana, A. S., Kustiningsih, N., & Firmansyah, I. (2021). Environmental accounting: A scientometric using biblioshiny. *International Journal of Energy Economics and Policy*, 11(3), 369–380. <https://doi.org/10.32479/ijeep.10986>