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ANALYSIS OF LEVERAGE ON FIRM VALUE THAT IS MODERATED BY CARBON EMISSION DISCLOSURE

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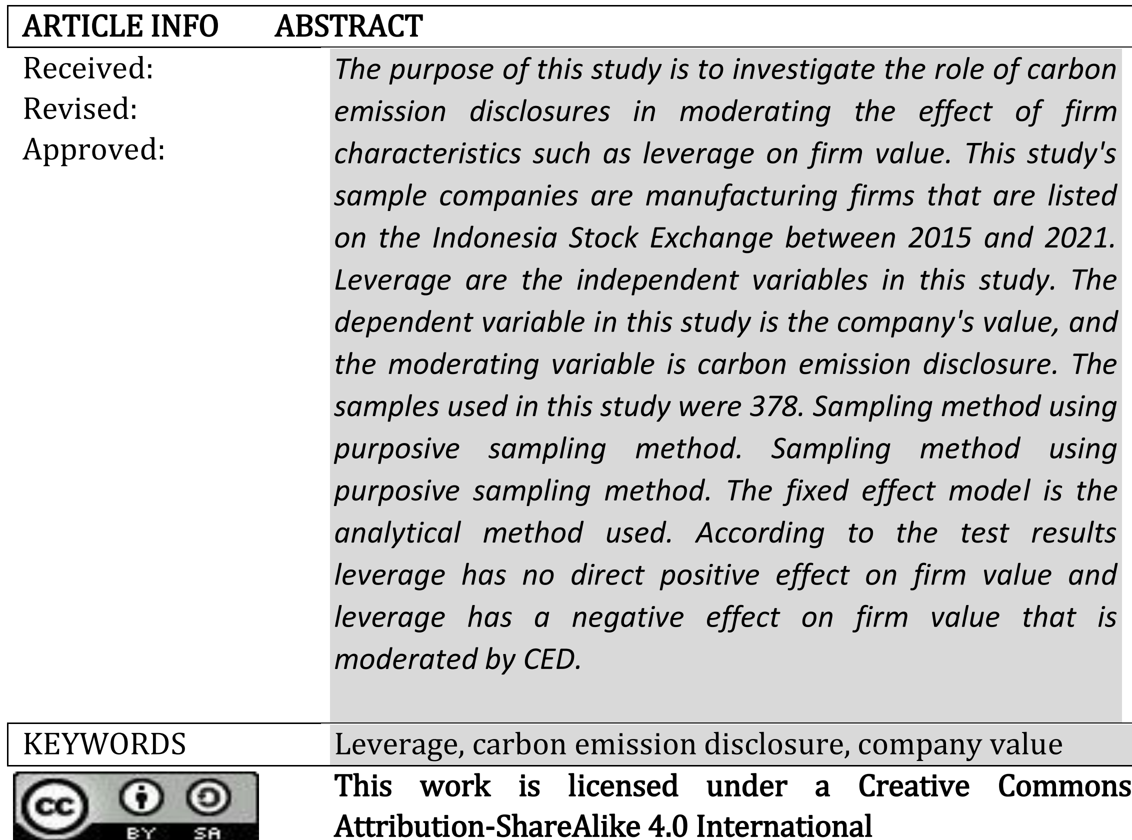

ARTICLE INFO **ABSTRACT**

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The purpose of this study is to investigate the role of carbon emission disclosures in moderating the effect of firm characteristics such as leverage on firm value. This study's sample companies are manufacturing firms that are listed on the Indonesia Stock Exchange between 2015 and 2021. Leverage are the independent variables in this study. The dependent variable in this study is the company's value, and the moderating variable is carbon emission disclosure. The samples used in this study were 378. Sampling method using purposive sampling method. Sampling method using purposive sampling method. The fixed effect model is the analytical method used. According to the test results leverage has no direct positive effect on firm value and leverage has a negative effect on firm value that is moderated by CED.

KEYWORDS: Leverage, carbon emission disclosure, company value

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INTRODUCTION

The industrial world has expanded in various countries, as evidenced by the emergence of new businesses. An increase in the industrial sector causes an increase in emissions from the company's operating activities. Greenhouse gases (GHG) and global warming are produced as emissions become more widespread. Increased global warming and climate change will endanger our planet if they are not addressed. Governmental and non-governmental organizations are attempting to address this by enacting interconnected regulations. To reduce global warming, public awareness and related parties must be raised (Andreas dan Lawer, 2013).

Indonesia has ratified the Kyoto Protocol in order to implement sustainable development and participate in efforts to reduce global Greenhouse Gas (GHG) emissions with Law no. 17 of 2004. According to Article 4 of Presidential Regulation No. 61 of 2011, Indonesia is committed to reducing carbon emissions by mentioning that actors

participate in efforts to reduce GHG emissions. Efforts by companies as business actors to disclose GHG emissions (including carbon emissions) can be seen in the disclosure of carbon emissions (Carbon Emission Disclosure) (Jannah and Muid, 2014). Government Regulation No. 47 of 2012 confirms that businesses must exercise social and environmental responsibilities in all of their operations (Said, 2015).

The Indonesian Institute of Accountants regulates the practice of disclosing social responsibility. Paragraph 9 of the Statement of Indonesian Financial Accounting Standards No.1 implicitly recommends disclosing social responsibility for environmental and social issues. As a result, financial statement users have expanded beyond shareholders to include all other stakeholders such as employees, suppliers, customers, communities, and others.

Previous research on the disclosure of carbon emissions in Indonesia, i.e Pradini's (2013), states that PROPER ranking and company size influence the extent of disclosure of carbon emissions, while profitability and leverage have no effect. According to Jannah and Muid (2014), the extent of emission disclosure is influenced by profitability, company size, and leverage, but not by environmental performance (PROPER ranking). According to Ghozali's (2015) research, the extent of carbon emissions disclosure is influenced by company size and profitability, while PROPER classification and leverage have no effect. According to Hanifah's (2016) research, company size and profitability have no effect on carbon emissions disclosures, whereas leverage has a significant positive effect. Lorenzo's (2009) research on the disclosure of carbon emissions outside of Indonesia discovered, among other things, that there is a direct relationship between company size and market capitalization and disclosure of carbon emissions based on the GRI guidelines. According to Rankin et al. (2011), the existence of an environmental management system, public reporting on the Carbon Disclosure Project (CDP), and the use of GRI all influence the extent of voluntary disclosure of carbon emissions. Then, Chu et al. (2012) discovered in his research that the industrial sector and company size influence greenhouse gas emissions disclosure.

Meanwhile, research on the relationship between emissions disclosure and firm value, such as Saka and Tomoki's (2014) study on the disclosure of carbon emissions and firm value, shows that disclosure of carbon emissions has an effect on firm value. Similarly, Li et al. (2015) investigated the impact of carbon emission disclosures on company value growth via market liquidity and the cost of market equity in China.

According to research on firm value that is influenced by firm characteristics, such as the Febrianti (2012) study, firm value is significantly influenced by firm growth, firm size, and debt to equity ratio (DER), but not by asset structure, liquidity level, profitability, and leverage. According to Putri anharja's (2013) research, (1) CSR has a positive and significant effect on firm value, which is driven by the level of CSR disclosure; and (2) managerial ownership acts as a moderating variable, weakening the relationship of CSR to firm value. According to Astuti and Setiawati (2014), profitability has an effect on firm value. According to Safitri and Wijaya's (2015) research, Earnings Per Share was significantly influenced by Earnings Per Share but not by Leverage Ratio, Dividend Payout Ratio, or Managerial Ownership. According to Chumaidah and Maswar's (2018) research, CSR moderated profitability has an effect on firm value, whereas CSR moderated firm size has no effect on firm value.

Specifically, this study refers to Putri and Raharja (2013) and Chumaidah and Maswar (2018). Because there are few studies that examine the indirect relationship between the company's character and the value of the company, the researcher attempts to test the company's character on the value of the company with the moderating variable of emission carbon disclosure in manufacturing companies in Indonesia. The topic of emission carbon disclosure is intriguing because the responsibility that companies have to the environment does not revolve solely around the company. However, because the company's activities produce excess carbon, the company must bear responsibility for global warming.

We anticipate that as the company's social disclosures improve, stakeholders will be more satisfied and will provide full support to the company for all of its activities aimed at increasing the company's size, increasing profits, reducing the proportion of debt, and ultimately increasing the company's value. The manufacturing companies listed on the Indonesia Stock Exchange from 2015 to 2021 are the focus of this study. Furthermore, the inconsistency of previous researchers' results prompted researchers to re-examine the effect of company characteristics on company value by disclosing moderating variables' carbon emissions.

RESEARCH METHOD

The effect of firm characteristics on firm value is discussed in this study, which includes carbon emissions as a moderating variable. This study employs a quantitative approach with a hypothesis testing research design to test the effect of variables hypothesized in the study. The population in this study is manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2015 to 2021. Purposive sampling is used in this study.

The variables in this study are as follows: 1) the company's characteristics as an independent variable that is proportional to the leverage, 2) the company's value as the dependent variable, and 3) disclosure of carbon emissions as a moderating variable.

The analytical method employed is moderated regression analysis (MRA), which is a subset of linear multiple regression in which the regression equation includes an interaction element (multiplication of two or more independent variables). MRA model specifications are as follows:;

Tobin’s Q = a + b1DER +b2CD_Indeks + b3DER*CD_Indeks + e.

Information:

Tobin’s Q	= Firm Value measured by Tobin’s Q
a	= Constant
b1,b2,…b7	= Coefficient
DER	= Leverage
CD_Index	= Carbon Disclosure Index
e	= error term

There are 2 hypotheses in this study, namely 1) Hypothesis 1 (H1): whether leverage has a direct effect on the value of the company, and 2) Hypothesis 2 (H2) : whether leverage has a negative effect on the value of the company moderated by the disclosure of carbon emissions

RESULT AND DISCUSSION

Descriptive statistics provide an elevated overview or description of a set of data. The minimum, maximum, average, and standard deviation are the descriptive statistics used in this study. The following table provides a clear picture of these descriptive statistics:

Table 1 Descriptive Statistics Results

Variable's Name	Mean	Standard Deviation	Minimum	Maximum	Number of Obs.
Tobin's Q	0.729	1.811	0.03	19.83	378
CD_Indeks	0.238	0.246	0.00	0.889	378
DER	1.908	14.763	0.0003	261.647	378

According to Table 1, The average (mean) value of leverage (DER) under consideration is 1,908. The standard deviation value is 14,763, which is greater than the average value, indicating that the leverage data is heterogeneous, with a high variation in data distribution. The average value (mean) of the firm value (Tobin's Q) studied is 0.729. The standard deviation value of 1,811 is greater than the average value, indicating that the leverage data is heterogeneous, with a high variation in data distribution. The average (mean) value of carbon emissions disclosure (CD Index) under study is 0.238. The standard deviation value is 0.246, which is greater than the average value, indicating that the carbon emission index data is heterogeneous, with a high variation in the data distribution.

The statistical analysis results (MRA on Panel Data Fixed Effect Model) yield the following; 1) leverage has a direct positive effect on firm value at a $p < 0.001$ significance level. Hypothesis 1 (H1) is rejected, and 2) leverage has a positive effect on firm value that is moderated by disclosure of carbon emissions with a $p < 0.01$ significance level. The sixth hypothesis (H2) is not rejected. The R-squared value is 0.124, which equals 12.4%. This means that the independent variables in the model can explain 12.4% of the variance in firm value.

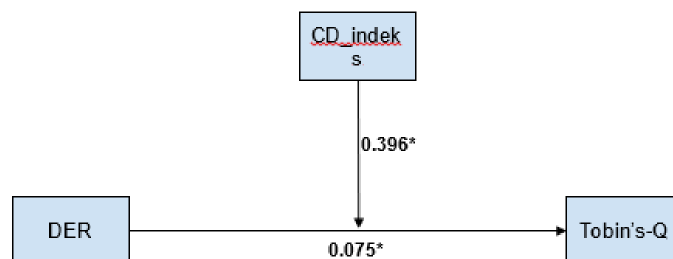

Figure 1. Hypothesis Testing Results

Although hypotheses 1 (H1) states that leverage has a direct positive effect on firm value; however, this has not been proven. The results of testing the third hypothesis do not support the findings of Febrianti (2012) and Safitri (2012). (2015). This occurs, and there may be differences in the data used as well as the year of data collection for different samples.

Hypothesis 2 (H2) states that disclosure of carbon emissions moderates the negative effect of leverage on firm value; this is proven. The presence of a negative multiple path coefficient indicates that disclosing carbon emissions reduces the impact of corporate leverage on firm value. These findings suggest that when leverage is high, companies are less likely to disclose carbon emissions. This occurs because making disclosures will incur additional costs, while the company still has debt obligations that must be met. The findings of this study contradict previous research by Jannah and Muid (2014), which found a positive pattern indicating that leverage has a positive relationship with environmental disclosure, specifically the disclosure of carbon emissions.

CONCLUSION

According to the findings of this study, 1) leverage have no direct effect on firm value, and 2) leverage have an indirect effect on firm value with moderating variables on carbon emission disclosure. This suggests that the disclosure of the company's carbon emissions piques the interest of capital market participants in making investments.

REFERENCES

1. Andreas, & Lawer, C. (2013). Pengaruh Karakteristik Perusahaan terhadap Pengungkapan Tanggungjawab Sosial.

2. Astuti, Leni dan Setiawati, Erma. 2014. "Analisis Pengaruh Profitabilitas, Kebijakan Deviden, Kebijakan Hutang, Dan Kepemilikan Manajerial terhadap Nilai Perusahaan (Studi Empiris Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Tahun 2010-2012)". Seminar Nasional dan Call For Paper. Program Studi Akuntansi-FEB UMS.

3. Chu, Choi Ieng, Bikram Chatterjee and Alistair Brown. 2012. The current status of greenhouse gas reporting by Chinese companies. "*Managerial Auditing Journal*", Vol. 28 Iss 2 pp. 114 – 139.

4. Chumaidah, dan Maswar Patuh Priyadi. 2018. Pengaruh Profitabilitas Dan Size Terhadap Nilai Perusahaan Dengan Csr Sebagai Variabel PemoCSRasi. Jurnal Ilmu dan Riset Akuntansi. Vol. 7 No. 3 2018 ISSN: 2460-0585.

5. Febrianti, M. 2012. Faktor-Faktor yang Mempengaruhi Nilai Perusahaan pada Industri Pertambangan di Bursa Efek Indonesia. Jurnal Bisnis dan Akutansi, Vol.14 No.2, Agustus 2012, Hlm 141-156.
6. Hanifah, U. (2016). Aktualitas Carbon Emission Disclosure: Sebagai Dasar Dan Arah Pengembangan Triple Bottom Line. Syariah Paper Accounting FEB UMS, 125–135. http://hdl.handle.net/11617/7343

7. Ikatan Akuntan Indonesia. 2009. ED PSAK No. 1 (revisi 2009). Salemba Empat. Jakarta.

8. Irwantoko & Basuki. (2016). Carbon emission Disclosure: Studi pada perusahaan manufaktur Indonesia. Jurnal Akuntansi dan Keuangan, 18(2).

9. Jannah, R. dan Muid, D. 2014."Analisis Faktor-Faktor Yang Mempengaruhi Carbon Emission Disclosure Pada Perusahaan Di Indonesia."Diponegoro Journal Of Accounting, Vol. 3, No. 2, pp. 1.

10. Lorenzo, Jose-Manel Prado, Luiz Rodriguez-Dominguez, Isabel Gallego-Alvarez dan Isabel-Maria Garcia-Sanchez. 2009. Factors Influencing the Disclosure of Greenhouse Gas Emissions in Companies World-Wide. Journal of Management Decisions, Vol.47, pp.1133-1157.

11. Perpres No. 61 tahun 2011 mengenai Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca.

12. Perpres No.71 tahun 2011 mengenai Penyelenggaraan Inventarisasi Gas Rumah Kaca Nasional.

13. Pradini, H. S. 2013. "The Analysis of Information Content towards Greenhouse Gas Emissions Disclosure in Indonesia Companies". Fakultas Ekonomika dan Bisnis, Universitas Diponegoro.

14. Putri, Hanni Chyntia Maita dan Surya Raharja. Pengaruh CSR terhadap Nilai Perusahaan dengan Kepemilikan Manajerial sebagai Variabel Moderating. "Diponegoro journal of accounting", Vol.2, No 3, Tahun 2013, Hal 1.

15. Safitri, Yancik dan Trisnadi Wijaya. 2015. Analisis Pengaruh Leverage Ratio, DPR, EPS dan Kepemilikan Manajerial terhadap Nilai Perusahaan. STIE MDP.

16. Saka, Chika and Tomoki Oshika. 2014. "Disclosure effects, carbon emissions and corporate value". Management and policy journal, Vol.5 No.1, 2014