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# Determinants of Carbon Emissions Disclosure in Basic and Chemical Industry Companies: A moderating role of Board of Commissioners Size

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**Abstract:** *Disclosure of carbon emissions in the financial statements of basic industrial and chemical companies is a form of company participation in reducing environmental impacts, especially air pollution. However, not all companies in the industry have fully disclosed their carbon emissions. Only about 17% have disclosed their carbon emissions. This study aims to obtain empirical evidence on whether leverage, firm size, profitability, and institutional ownership affect the disclosure of carbon emissions. Also, to obtain evidence of whether the size of the board of commissioners moderates the relationship between these variables to the disclosure of carbon emissions. The sample for this study were companies in the basic and chemical industry listed on the Indonesia Stock Exchange in 2015-2020, 13 companies were selected purposively. The results showed that leverage and firm size had a positive and significant effect, while profitability had a positive but insignificant effect on the disclosure of carbon emissions. However, institutional ownership negatively and significantly affects the disclosure of carbon emissions. The size of the board of commissioners moderates the influence of leverage on the disclosure of carbon emissions in a negative and significant direction. As for the effect of profitability on the disclosure of carbon emissions, the size of the board of commissioners moderates insignificantly.*

**Keywords:** *Disclosure of Carbon Emissions, Leverage, Company Size, Profitability, Institutional Ownership, and Board of Commissioners Size.*

## Introduction

The industrial revolution in England in the 18th century influenced the acceleration of world economic growth, including Indonesia. At the end of April 2014, Indonesia was included among the 10 countries with the world's largest Gross Domestic Product (GDP). In addition to accelerating the economy's pace, the rapidly growing industry has decreased environmental quality. The decline in the quality of the environment occurs in almost all parts of the world, including Indonesia.

The results of a study from the Meteorology, Climatology and Geophysics Agency (BMKG) between 1981 and 2010 normal air temperature in Indonesia was 26.6 °C, but in 2020 the average temperature was 27.3 °C. Based on BMKG records, during the period 1981-2020, the hottest temperatures in Indonesia occurred in 2016 with an anomaly of 0.8 °C, also in 2019 with an anomaly of 0.6 °C, and in 2020 with an anomaly of 0.7 °C (Meteorology, Climatology and Geophysics Agency, 2021).

Another environmental issue is related to the disclosure of carbon emissions by companies in Indonesia. The results of previous studies prove that the disclosure of carbon emissions in Indonesia is still very low (Akhiroh and Kiswanto, 2016; Herman and Saleh, 2017; Deantri et al., 2019). This shows that many companies still need a sense of responsibility to provide and inform about carbon emissions, energy use, strategies, and policies for handling these carbon emissions. To overcome this and maintain the environment, the Financial Services Authority (OJK) requires companies listed on the stock exchange to make reports and disclose corporate social and environmental responsibility (Financial Services Authority Circular Letter, 2016).

Another environmental problem facing the world today is climate change and global warming. This encourages countries to promote the handling of climate change and global warming. The Paris Agreement is an agreement in the United Nations Framework Convention on Climate Change regarding mitigating greenhouse gas emissions, adaptation, and finance (Financial Services Authority, 2017). Indonesia is also interested in pushing for the agreement's implementation because climate change and global warming greatly affect the Indonesian economy as an agricultural country. Indonesia's commitment is shown through the signing the Paris Agreement in 2016 in New York, United States.

Several researchers have researched the factors that influence the disclosure of carbon emissions (Donnelly and Mulcahy, 2008; Prado et al., 2009; Choi and Prasos, 2013; Akhiroh and Kiswanto, 2016; Herman and Saleh, 2017; Hapsoro and Ambarawati, 2018; Deantri et al., 2019). However, these factors will be stronger or vice versa if there are factors that moderate them, and these moderating factors must have sufficient strength to influence the relationship between the independent and dependent variables. This study examines the effect of leverage, company size, profitability, and institutional ownership on the disclosure of carbon emissions moderated by the size of the board of commissioners.

The results of research on 13 companies in the basic and chemical industries listed on the Indonesia Stock Exchange show a positive and significant influence of leverage and company size on the disclosure of carbon emissions. Profitability also has a positive but insignificant effect, while institutional ownership significantly negatively affects the disclosure of carbon emissions. The size of the board of commissioners moderates significantly in a negative direction for the effect of leverage and company size on carbon emissions disclosure. However, it is not significant in moderating the effect of profitability by disclosing carbon emissions.

## Literature Review

### *Agency Theory*

In agency theory, Jansen and Meckling (1976) explained that principals and agents are attached to a work contract. Principals give authority to agents to make decisions that will increase the prosperity of shareholders. However, agents sometimes act contrary to the agreed work contract in practice. Agents make decisions prioritizing their interests, resulting in conflicts between principals and agents. This conflict of interest arises because the assumptions used in agency theory are that each party is motivated to put forward its interests (Alijana and Purwanto, 2017).

In agency theory, there is an information asymmetry between the agent and the principal, where the agent knows more information related to company activities than the principal. Managers as agents can decide which information will be reported or published to external parties (including principals) or which will not be reported (Silitonga, 2020). One way to reduce the information asymmetry problem is to require managers to disclose and report every company activity (Jensen and Meckling, 1976).

### *Legitimacy Theory*

Utomo (2019) explains that legitimacy theory focuses on organizational interactions with society and government. The assumption in legitimacy theory is that entities carry out their business activities according to what is desired and in line with the values contained in society or accordance with social contracts (Kirana, 2009; Mandaika and Salim, 2015). Companies that carry out their business activities in accordance with social boundaries and norms that apply in society will make companies more legitimate (Irwantoko, 2016). From the perspective of legitimacy theory, companies will voluntarily disclose or report their activities, including disclosures related to carbon emissions, if management considers that

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this is what the community expects. With these disclosures, it is hoped that the company will gain legitimacy from the public.

*Disclosure of Carbon Emissions*

Disclosure of carbon emissions is a form of company contribution to climate change, especially global warming (Akhiroh and Kiswanto, 2016). Disclosure of carbon emissions contains carbon mitigation carried out by companies, namely efforts to reduce carbon emissions such as energy calculations spent and policies related to company carbon emissions (Luo et al., 2013).

*Leverage*

Godfrey et al. (2010) explained that leverage is debt to finance company activities calculated from total debt to equity or assets. The level of corporate leverage can affect decisions, where companies with high levels of leverage will focus on paying off debts rather than making voluntary disclosures (Choi et al., 2013).

*Company Size*

Basyaib (2007) explains that firm size is a scale for classifying the size of a company. The size of the company, among others, can be seen from the size of revenue, total assets, and total capital. Company size is a reflection of the resources owned by the company, whereas a large company means having more resources (Choi et al., 2013).

*Profitability*

Profitability describes a company's ability to earn profits in a period and shows management effectiveness (Kasmir, 2010), describing business continuity for the long term (Hery, 2017). ROE (Return on Equity) is an often-used measurement of profitability.

*Institutional Ownership*

Institutional ownership is the proportion of share ownership owned by institutional owners and Blockholders at the end of the year. Institutional owners are meant to be investment companies, banks, insurance companies, and institutions. While block holders are individual owners on behalf of individuals above 5%, which are not included in managerial ownership.

*Size of the Board of Commissioners*

The board of commissioners is a shareholder representative whose duties are to supervise and provide direction to the company's management (directors) and assess whether management is able to fulfill its responsibilities for developing and implementing the internal control of a company incorporated as a limited liability company (Simanungsong, 2018). Meanwhile, the National Committee on Governance Policy (2006) explains that the board of commissioners is part of the company's organs which has the duties and responsibilities of supervising and providing advice to the directors and ensuring that the company implements Good Corporate Governance.

## Literature Review and Hypothesis Development

Leverage shows the extent to which the company's activities are financed by debt. In agency theory, companies with high leverage ratios face more agency problems, so they are required to disclose more information about the company (Sri Wahyuningrum et al., 2020; Rindawati and Asyik, 2015). These disclosures are not only mandatory but also voluntary. Environmental disclosure is a voluntary disclosure that shows responsibility toward stakeholders and maintains their trust (Rindawati and Asyik, 2015). Disclosures made by the company also aim to maintain its reputation so that the company continues to obtain loans (Hapsoro and Ambarawati, 2018).

*H1: Leverage has a positive effect on the disclosure of carbon emissions.*

Every company contributes to carbon emissions, although with different emission levels. Large companies usually produce more carbon emissions, so they receive attention and pressure from the community regarding environmental issues (Deantri et al., 2019). Large companies have high agency costs (Subiantoro and Mildawati, 2015). Large companies will disclose more information to reduce agency costs than small ones.

*H2: Company size has a positive effect on the disclosure of emissions.*

Environmental activities are considered company costs so that the company's economic performance will determine whether environmental activities will become a priority (Prado-Lorenzo et al., 2009). While Choi et al. (2013) also explained that companies with high profitability would be better able to fund additional costs, including disclosing carbon emissions. In legitimacy theory, it is explained that companies with good financial performance are required to provide information related to the environment. Companies disclose carbon emissions to reduce negative images, increase company value, and gain legitimacy from stakeholders (Irwantoko, 2016).

*H3: Profitability has a positive effect on the disclosure of carbon emissions.*

In agency theory, it is explained that the owner of the institution acts as a party overseeing managerial performance in making every company decision. Institutional ownership will make supervision more effective because it can control the opportunistic behavior of managers and reduce the level of information asymmetry. Fitriana (2019) explains that the owner of the institution acts as a supervisor and provides direction to management, including disclosing the company's Corporate Social Responsibility.

*H4: Institutional ownership positively affects the disclosure of carbon emissions.*

Corporate governance mechanisms play a role in ensuring the quality of corporate reporting (Johl et al., 2013). Oversight by the board of commissioners will help corporate governance practices improve, and disclosure of company information becomes wider even though the company has a high level of leverage. Tyas and Khafid (2019) explain that the board of commissioners is able to moderate the relationship between leverage and sustainability reports. Therefore, a board of commissioners is needed to encourage environmental disclosure, including disclosure of carbon emissions.

*H5: The size of the board of commissioners is able to strengthen the influence of leverage on the disclosure of carbon emissions.*

Luo et al. (2013) explained that the size of the assets owned by a company causes strong pressure from stakeholders and the community to carry out better carbon management. Stakeholders tend to pay more attention to large companies, so a form of control and supervision is also needed for these companies. Tyas and Khafid (2019) explain that large companies need good governance to manage their financial capabilities and meet stakeholders' interests. Corporate governance will maintain stakeholder trust by fulfilling corporate responsibilities, including social and environmental responsibility (Stuebs and Sun, 2015). The board of commissioners oversees the company's activities and responsibilities through extensive information disclosure.

*H6: The size of the board of commissioners can strengthen the influence of company size on the disclosure of carbon emissions.*

Stakeholder expectations are increasing along with the increase in company profitability. Rudyanto and Siregar (2017) explain that good corporate governance is needed by companies with high profitability so that companies can meet stakeholder expectations. The demand for disclosure of corporate information comes from both external and internal parties. Internal pressure comes from the company supervisor, namely the board of commissioners. The board of commissioners views high profitability is a great opportunity to disclose a wide range of information, including voluntary disclosures related to carbon emissions. The results of research conducted by Jaggi et al. (2009) show that the board of commissioners plays a role in encouraging companies to disclose greater carbon emissions.

*H7: The size of the board of commissioners is able to strengthen the influence of profitability on the disclosure of carbon emissions*

**Research Methods**

This study uses a quantitative approach with leverage, company size, profitability, and institutional ownership as independent variables and disclosure of carbon emissions as the dependent variable. While the size of the board of commissioners is a moderating variable. This study measures leverage by the

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ratio of long-term debt to equity. Company size is measured using the Ln of total assets. Profitability is measured by the earnings after tax to equity ratio. Institutional ownership is measured by the ratio of the total shares owned by the institution to the number of outstanding shares. Disclosure of carbon emissions is measured by the ratio of the total items disclosed to a score from ISO14064-1. The size of the board of commissioners is seen from the number of commissioners in each company. Hypothesis testing uses moderating regression analysis with the formula:

$$Y= a + b1X1 + b2X2 + b3X3 + b4X4 + M + b5X1*M + b6X2*M + b7X3*M + e$$

Where :
Y: disclosure of carbon emissions
X1: leverage
X2: company size
X3 : profitability
X4: institutional ownership
M: the size of the Board of Commissioners

The population in this study are basic and chemical industry companies that publish annual and/or sustainability reports from 2015 – 2020. The research sample was selected using purposive sampling with the criteria that companies must disclose at least 1 disclosure and issue annual reports and/or sustainability reports during the observation period. The number of companies that met the criteria for the sample was 13 out of 77 in the basic and chemical industries. The research data is taken from the annual report and/or sustainability report of the company that is the sample.

## Results And Discussion

Based on the information presented in Table 1, the influence of the leverage variable on the disclosure of carbon emissions shows a coefficient value of 0.349 and a significant level of 0.000 or < 0.05. This shows that leverage positively affects the disclosure of carbon emissions, which means H1 is accepted. The results of this study support the research results of Novianti et al. (2020), namely that the leverage ratio has a positive relationship to the disclosure of carbon emissions. Carbon-intensive companies will face stricter supervision from the government, so creditors will encourage companies to make more disclosures, including disclosure of carbon emissions as a form of company obedience to the government. The results of this study are also consistent with agency theory which states that companies with higher leverage ratios will disclose more information (Jensen and Meckling, 1976).

**Table 1**. Moderating Regression Result

| | B | T | Sig. |
|---|---|---|---|
| (Constant) | -3.480 | -3.407 | 0.001 |
| Leverage (X1) | 0.349 | 5.265 | 0.000 |
| Company Size (X2) | 0.124 | 3.510 | 0.001 |
| Profitability (X3) | 0.160 | .517 | 0.607 |
| Institutional Ownership (X4) | -0.239 | -3.752 | 0.000 |
| Size of the Board of Commissioners (M) | 0.420 | 2.373 | 0.020 |
| X1*M | -0.082 | -6.619 | 0.000 |
| X2*M | -0.013 | -2.106 | 0.039 |
| X3*M | -0.062 | -1.158 | 0.251 |

The effect of company size on the disclosure of carbon emissions has a coefficient of 0.124 with a significant level of 0.001 or <0.05. This means that there is a positive and significant influence of company size on the disclosure of carbon emissions, which means that H2 is accepted. Companies with a large scale also have a greater impact on the environment and society and will receive more attention. Therefore the disclosure of carbon emissions carried out by companies is a company media to maintain the company's reputation. The company does not want its image to be damaged in the eyes of the public, so the company will try to make broader disclosures. This study's results align with agency theory, which explains that the costs of monitoring information (agency costs) for large companies will be higher than for small companies because the shareholders are widely dispersed (Herman and Saleh, 2017). So that to reduce agency costs, companies will tend to disclose more extensive information.

The coefficient of the effect of profitability on the disclosure of carbon emissions is 0.160, with a significant level of 0.607 or > 0.05. This means that profitability has no significant effect on the disclosure of carbon emissions, so it is concluded that H3 is rejected. These results indicate that companies with high profitability will keep their carbon emissions private from their financial statements. This study's results differ from the legitimacy theory, which states that companies will try to take advantage of high profitability to gain legitimacy, a positive image from society, and increase company value. Herman and Saleh (2017) reveal that companies that earn high profits perceive that these companies have achieved financial success, so they no longer have the urgency to make environmental disclosures. This is because, with a good financial condition, the company has a good reputation for attracting investment from investors.

Institutional ownership affects the disclosure of carbon emissions with a coefficient of -0.239 and a significant level of 0.000 or <0.05. This means there is a negative and significant impact on the disclosure of carbon emissions; thus, H4 is rejected. These results indicate that greater institutional ownership does not increase broader disclosure of carbon emissions. It is indicated that the institution's owners in basic industrial and chemical companies are focusing on improving financial performance, so environmental disclosure should be given more attention. The results of this study support the results of Sari and Rani's research (2015). The negative effect of institutional ownership on environmental disclosure can arise because the focus of institutional owners is company profits which will have a direct impact on the return that will be obtained by Sari and Rani (2015). The results of this study are inconsistent with agency theory which states that institutional owners will pressure companies to make more extensive disclosures to reduce information asymmetry. Donnelly and Mulcahy (2008) say that institutional investors tend to refrain from demanding public disclosure because they can easily access internal information.

The coefficient value of the influence of leverage on the disclosure of carbon emissions, moderated by the size of the board of commissioners, is -0.082, and its significance value is 0.000 (<0.050). These results indicate that the size of the board of commissioners weakens the effect of leverage on the disclosure of carbon emissions. These results indicate that the board of commissioners has yet to be able to carry out its role in encouraging companies to disclose their carbon emissions more broadly. This can occur due to intervention from other parties that affect the role and independence of the Board of Commissioners in carrying out its functions and responsibilities. Zulhaimi and Nuraprianti (2019) state that members of the board of commissioners oversee the company's internal controls. The effectiveness of supervision is not only measured by the number of members of the Board of Commissioners but also focuses on the value and trust received in the company as well as the ability and integrity of the Board of Commissioners.

The effect of company size on the disclosure of carbon emissions moderated by the size of the board of commissioners is -0.013, with a significance value of 0.039 (<0.050). These results indicate that the board of commissioners needs to improve the effect of company size on the disclosure of carbon emissions. That can explain because there are large companies, but the number of commissioners is small. While business activities in large companies are usually more complex and involve many stakeholders. This causes the board of commissioners unable to reach all lines of the company's business and results in ineffective supervision (Ghozali and Chariri, 2014). This condition impacts reducing the incentive for companies to carry out environmental disclosures.

The coefficient value of the effect of profitability on disclosure of carbon emissions moderated by the size of the board of commissioners is -0.062, with a significance value of 0.251 (> 0.050). These results indicate that the size of the board of commissioners is not able to strengthen the effect of profitability

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on the disclosure of carbon emissions. This happens because the average profit earned by the company still needs to be higher, so it has yet to be able to increase the efficiency of the company. This condition impacts the company's ability to carry out social and environmental activities. Under these conditions, it will also be difficult for the board of commissioners to ask companies to disclose their carbon emissions.

## Conclusion, Limitations, and Suggestions

The results of research conducted on companies in the basic and chemical industries listed on the Indonesian stock exchange in 2015-2020 show that leverage and company size have a positive and significant effect on the disclosure of carbon emissions. Profitability does not affect the disclosure of carbon emissions, while institutional ownership has a negative and significant effect on the disclosure of carbon emissions. The results of this study on the effect of profitability and institutional ownership on the disclosure of carbon emissions are different from the results of Fitriana's research (2019); Tyas and Khafid (2019).

The size of the board of commissioners in this study is a moderating variable. Based on the test results indicate that the size of the board of commissioners weakens the effect of leverage, company size, and profitability on the disclosure of carbon emissions. These results are different from previous studies, including Tyas and Khafid (2019); Luo et al. (2013); Stuebs and Sun (2015); and Jaggi, et al. (2009). The limitation of this study is the relatively small data. Not all companies in the basic and chemical industries listed on the Indonesian stock exchange disclosed their carbon emissions in 2015 – 2020. This research and several previous studies regarding the disclosure of carbon emissions focus on one type of industry. Research on the disclosure of carbon emissions in all types of industries (financial and non-financial) has yet to be widely carried out, so it will be interesting. Likewise, the scope of the countries studied can be expanded to several countries.

## References

Akhiroh, T., & Kiswanto. 2016. The Determinant of Carbon Emission Disclosures. *Accounting Analysis Journal*, 5(4).

Aljana, B. T., & Purwanto, A. 2017. Pengaruh Profitabilitas, Struktur Kepemilikan Dan Kualitas Audit Terhadapmanajemen Laba. *Diponegoro Journal of Accounting*, 6(3).

Basyaib. F. 2007. *Keuangan Perusahaan Pemodelan Menggunakan Microsoft Excel*. Jakarta: Kencana Prenada Media Group.

Choi, B. B., Lee, D., & Prasos, J. 2013. “An Analysis of Australian Company Carbon Emission Disclosures”. *Pacific Accounting Review*, 25 (1), 58-79.

Deantri, S. O., Pinasti, M., & Herwiyanti, E. 2019. Faktor-Faktor Yang Mempengaruhi Pengungkapan Emisi Gas Rumah Kaca Dari Perspektif Akuntansi Hijau. *Jurnal Ekonomi Syariah,* 7(1), 88 -111.

Donnelly, R., & Mulcahy, M. 2008. Board structure, Ownership, and Voluntary Disclosure in Ireland. *Corporate Governance: An International Review,* 16(5).

Fitriana, R. 2019. Pengaruh Kepemilikan Institusional, Profitabilitas dan Ukuran Perusahaan Terhadap Pengungkapan Corporate Social Responsibility. *Jurnal Ilmu Keuangan dan Perbankan*, 8(2).

Ghozali, I., & Chariri, A. 2014. Teori Akuntansi (4th ed.). Semarang: Badan Penerbit Universitas Diponegoro

Godfrey, J., Hodgson, A., Tarca, A., Hamilton, J., & Holmes, S. 2010. *Accounting Theory*. New York: John Wiley and Sons, Inc.

Hapsoro, D., & Ambarawati. (2018). Antecedents and Consequences of Carbon Emission Disclosure: Case Study of OIL, Gas and Companies in Non-Annex 1 Member Countries. *Journal of Indonesian Economy and Business*, 33(2).

Herman, L. A., & Saleh, S. 2017. Model Hubungan Karakteristik Perusahaan dan Pengungkapan Informasi Lingkungan Perusahaan. *Jurnal Pundi*, 1(3).

Hery. 2017. *Kajian Riset Akuntansi*. Jakarta: PT. Grasindo.

Irwhantoko. 2016. *Carbon Emission Disclosure: Studi Pada Perusahaan Manufaktur Indonesia*. Tesis. Universitas Airlangga.

Jaggi, B., Allini, A., Macccioni, R., & Zagaria, C. 2017. The Factors Motivating Voluntary Disclosure of Carbon Information: Evidence Based on Italian Listed Companies. *Organization and Environment,* 31(2), 178-202.

Jensen, M., & Meckling, W. 1976. Theory of The Firm: Managerial Behavior, Agency Cost and Ownership Structure. *Journal of Financial Economics*, 305-360.

Johl, S. K., Kaur Johl, S., Subramaniam, N., & Cooper, B. 2013. Internal audit function, board quality and financial reporting quality: Evidence from Malaysia. *Managerial Auditing Journal*, 28(9).

Kasmir. (2010). Pengantar Manajemen Keuangan. Jakarta: Kencana Prenada Media Group

Kirana, R. C. 2009. Studi Perbandingan Pengaturan Tentang Corporate Social Responsibility di Beberapa Negara dalam Upaya Perwujudan Prinsip Good Corporate Governance. Tesis. Universitas Sebelas Maret.

Luo, L., Tang, Q., & Lan, Y. 2013. Comparison of propensity for carbon disclosure between developing and developed countries. *Accounting Research Journal*, 6(1), 6-34.

Mandaika, Y. & Salim. 2015. Pengaruh Ukuran Perusahaan, Kinerja Keuangan, Tipe Industri, dan Finansial Leverage terhadap Pengungkapan Corporate Sosial Responsibility. *Jurnal Akuntansi*, 8(2).

Novianti, F., Purnamawati, G. A., & Kurniawan, P. S. 2020. Determinasi Pengungkapan Emisi Karbon Pada Perusahaan Pertambangan dan Pertanian di Indonesia. *Jurnal Ilmiah Mahasiswa Akuntansi*, 11(1).

Prado-Lorenzo, J., Rodriguez-Dominguez, L., Gallego-Alvarez, I., & Garcia-Sanchez, I. 2009. Factors Influencing the Disclosure of Greenhouse Gas Emissions in Companies World-Wide. *Journal of Management Decisions*, 47(7).

Rindawati, W. M., & Asyik, F. N. 2015. Kepemilikan publik terhadap pengungkapan Corporate Social Responsibility (CSR). *Jurnal Ilmu dan riset Akuntansi*, 4(6).

Rohmawati, E., & Sutapa. 2020. Pengaruh Good Corporate Governance (GCG) Terhadap Nilai Perusahaan (PBV) Dengan Corporate Social Responcibily (CSR) Sebagai Variabel Intervening. Prosiding Konferensi Ilmiah Mahasiswa Unissula (KIMU) 3. ISSN. 2720-9687.

Rudyanto, A., & Siregar, S. V. 2018. The Effect of Stakeholder Pressure and Corporate Governance on the Quality of Sustainability Report. *International Journal of Ethics and Systems*. doi:10.1108/IJOES-05-2017-0071

Silitonga, M.K. 2020. Pengaruh Good Corporate Govervace terhadap kinerja keuangan perusahaan. Skripsi. Universitas Sanata Dharma.

Simangungsong, M., T. 2018. Analisis Pengaruh Karaktristik Perusahaan Terhadap Pengungkapan Corporate Social Responsibility (CSR) Dengan Ukuran Dewan Komisaris Sebagai Variabel Moderating. Tesis. Universitas Sumatera Utara.

Sari, W.N & Rani, P. 2015. Pengaruh Kepemilikan Institusional, Kepemilikan Manajerial, Return on Assets (ROA) Dan Ukuran Perusahaan Terhadap Pengungkapan Corporate Social Responsibility (CSR) Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Periode 2011-2013. *Jurnal Akuntansi dan Keuangan*, 4(1).

Sri Wahyuningrum, I. F., Putri, N., & Hidaya, R. 2020. Pengaruh Kinerja Keuangan dan Karakteristik Perusahaan terhadap Pengungkapan Lingkungan di Perusahaan yang terdaftar di Singapore Exchange. *Jurnal Ilmu Lingkungan*, 8(2).

Stuebs, M., & Sun, L. 2015. Corporate governance and social responsibility. *International Journal of Law and Management*, 57(1).

Tyas, V. A., & Khafid, M. 2019. The Effect of Company Characteristics on Sustainability Report Disclosure with Corporate Governance as Moderating Variable. *Accounting Analysis Journal*, 8(3).

Utomo, M. N. 2019. *Ramah Lingkungan dan Nilai Perusahaan*. Surabaya: CV Jakad Publishing.

10.24198/jaab.v6i2.48054

Zulhaimi, H., & Nurapriyanti, N. R. 2019. Pengaruh Profitabilitas, Ukuran Dewan Komisaris, dan Ukuran Perusahaan Terhadap Corporate Social Responsibility Disclosure. *Jurnal Riset Akuntansi Dan Keuangan*, 7(3).