

## Conference Paper

# Determinants of the Quantity of Environmental Disclosure in Australian Companies

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### Abstract

The objective of this study is to examine the effects of company characteristics, company financial performance, and type of audit firm on environmental disclosure. The population in the study was companies listed on the Australian Securities Exchange (ASX) in year of 2017. Using purposive sampling technique, this study only select 100 companies with the highest market capitalization in Australia. Samples that met the criteria amount to 99 units of analysis. The data collection used documentation technique. The research data analysis used descriptive statistics and inferential statistics. The results of the regression analysis show that company size and industry type have a significant positive effect on environmental disclosure. While company age, leverage, profitability, and audit firm type do not affect on environmental disclosure. Based on the results of the study, it can be concluded that the companies included in the category of sensitive industries reveal more environmental information than companies in the category of non-sensitive industries. Suggestions for further research are to use other proxies to measure company financial performance, and add or use other independent variables such as environmental performance and good corporate governance that may significantly influence environmental disclosure.

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## 1. Introduction

Many things, one of which is derived from company operational activities, cause environmental damage. Company operations can cause pollution and environmental damage due to waste generated by the company or other company activities that are not environmentally friendly. The growing business world makes the company must always move dynamically to follow the desires or market demands in order to compete. The company has the main goal to get maximum profit. However, the company should not only aim for profit or earning but also must pay attention to social responsibility in the community and the environment. The efforts to preserve the living environment by the

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company will provide benefits to the company, including the interest of shareholders and stakeholders on the company's profits due to environmental management that is responsible in the eyes of the community.

Companies need to disclose environmental information to form a positive image that in the view of stakeholders the company has concerns towards the environment (Suhardjanto, 2010). Brown & Deegan (1998) said environmental disclosure is important to do because through environmental disclosure in the company annual reports, the public can monitor the activities carried out by the companies in order to fulfil their social responsibility. The companies that do not pay attention to environmental impacts because of their activities have been terminated. Environmental problems due to company activities also occur in developed countries like Australia. In 2009, the Australian oil and gas sector company, PTT Exploration and Production Public Company Limited (PTTEP) experienced an oilfield explosion and spilled crude oil in the waters of Montara, the Timor Sea and East Nusa Tenggara (NTT) for 74 days (Gumelar, 2018). Studies in Australia show that there is a gap between environmental disclosure and environmental performance (Lindrianasari, 2007).

Based on a survey have been conducted by Wendling, et al. (2016) who joined the study group of Yale University (Yale Center for Environmental Law and Policy) and Columbia University (Center for International Earth Science Information Network) produced Environmental Performance Index, where Australia is ranked 13th out of 180 countries studied as environmentally friendly countries. Meanwhile, according to data from KPMG (2017), 77% of Australia's 100 largest companies issued sustainability reports. The amount is decrease by four percent compared to 2015 (81%). Australia is in position 27 in the disclosure of sustainability reports from 49 countries studied. However, this is inversely proportional to environmental report data issued by companies in Australia, where not all large companies issue reports on their environmental activities.

Environmental Disclosure is the disclosure of information related to the environment in the company annual report. Research on environmental disclosure is also widely done. The results of the research are also varied. Many factors affect environmental disclosure. The results of previous studies indicate that there are some variables still showing inconsistent results regarding their effects on environmental discourse. Ghomi & Leung (2013) and Wahyuningrum & Budihardjo (2018) found the influence of company age on environmental disclosure. Meanwhile, research of Paramitha & Rohman (2014) and Emre (2014) found there is no influence of company age on environmental disclosure.

Research conducted by Ghomi & Leung (2013), Dibia & Onwuchekwa (2015), Burgwal & Vieira (2014), Welbeck, et al. (2017), Hermawan et al. (2018), and Ohidoa et al.

(2016) found company size has an effect on environmental disclosure, while Gatimbu & Wabwire (2016) found there is no relationship between company size and environmental disclosure. Meanwhile, the different results indicated by Ghomi & Leung (2013), Gatimbu & Wabwire (2016), Emre (2014), and Ohidoa, et al. (2016) who did not find the effect between leverage and environmental disclosure.

The results of studies conducted by Gatimbu & Wabwire (2016) and Hermawan, et al. (2018) found the effect of profitability on environmental disclosure while Burgwal & Vieira (2014), and Dibia & Onwuchekwa (2015) found there is no effect between profitability and environmental disclosure. Meanwhile, Emre (2014) found the result that profitability has a negative effect on environmental disclosure.

Burgwal & Vieira (2014), Ghomi & Leung (2013), Emre (2014), and Wahyuningrum & Budihardjo (2018) conducted research on the influence of industrial type on environmental disclosure. Result of studies conducted by Burgwal & Vieira (2014), Emre (2014), Ohidoa et al. (2016), and Wahyuningrum & Budihardjo (2018) found the influence of industrial type on environmental disclosure. Meanwhile, Ghomi & Leung (2013) found a different result, namely there is no influence between the type of company with environmental disclosure. Research results regarding this variable are also inconsistent.

Wahyuningrum & Budihardjo (2018) showed that there are effect of audit firms type on environmental disclosure, whereas Dibia & Onwuchekwa (2015) showed the opposite result or there is no effect of audit firms type on environmental disclosure. The results obtained from the studies of Ghomi & Leung (2013), Dibia & Onwuchekwa (2015), Burgwal & Vieira (2014), Hermawan et al. (2018), and Ohidoa et al. (2016) found that company size has an effect on environmental disclosure, meanwhile Gatimbu & Wabwire (2016) found there is no relationship between company size and environmental disclosure.

The existence of varied research results shows research gap in similar research. This encourages raising these issues and adding company size as a control. Previous research shows that company size tends to state that company size has a significantly positive effect on environmental disclosure.

## 2. Literature Review and Hypothesis

The theoretical groundworks in this research are legitimacy theory and stakeholder theory. Legitimacy theory depends on the assumption that there is a 'social contract' between the company and the community in which the company operates (Deegan, 2002). Public legitimacy is a strategic factor for companies in order to develop the companies going forward. Companies that do social disclosure, they feel their existence

and activities will get status in the community or the environment around the company operates or can be said to be legitimate company. Reverte (2009) also supported the opinion that explicitly legitimacy theory recognizes that business is limited by social contracts that make companies agree to show various social activities undertaken. Stakeholder theory states that the success of a company depends on its ability to balance the various interests of stakeholders. This theory also states that the company is an entity that operates not only for the interests of the company itself but also must be able to provide benefits to its stakeholders (Rosiana et al., 2013). This theory assumes that the sustainability of a company's performance does not only depend on shareholders. According to the stakeholder theory model, when stakeholders control important resources in an organization, the company inevitably has to respond to requests for information from stakeholders. Meanwhile, according to legitimacy theory, companies need legitimacy for their activities from the community in which the company operates. Social reporting appears as a tool to build and influence the political and economic environment around the company, surely, which is most in line with company interests.

## 2.1. Company Age

The increasing company age is closely related to company development and behaviour change, where these changes will move towards progress that will be experienced in stages according to the age of the company. The company's age also represents several aspects of stakeholder strength, strategic posture and company financial performance (Emre, 2014). Company age can be related to legitimacy theory where the organization can be seen as something given by the community to the company and what the company wants from the community. The stakeholders will ask the companies to be more extensive in conducting environmental disclosures. This requires companies to make broader environmental disclosures in order to meet the expectations of stakeholders and obtain legitimacy or justification and endorsement of activities carried out from the community. Therefore, company age will have an impact on the level of environmental disclosure. This is in line with the results of the studies conducted by Ghomi & Leung (2013) and Wahyuningrum & Budihardjo (2018) who discovered the fact of a positive relationship between company age variable on environmental disclosure.

H<sub>1</sub>: Company age has a significant positive effect on environmental disclosure.

## 2.2. Company Age

Company size indicates the size of company in terms of total assets, level of sales, and stock market value. In the stakeholder theory, the activities of large companies are more visible than small companies, so that the demands and pressures from stakeholders and the community will be even greater. Luo, Lan, & Tang (2012) stated that large companies will get a lot of pressure from the public and stakeholders have high expectations regarding carbon management practices. The larger size of company, the more information disclose by companies (Dewi & Keni, 2013). To respond to this pressure, the way companies can take is to make social environmental disclosure in order to get support from stakeholders and gain legitimacy from the community. Welbeck, et al. (2017), Hermawan et al. (2018), and Ohidoa et al. (2016) results also show that there was a positive relationship between company size and environmental disclosure.

H<sub>2</sub>: Company size has a significant positive effect on environmental disclosure.

## 2.3. Leverage

Investors can interpret the use of debt as a company's ability to pay off corporate obligations in the future. The higher the level of leverage, the more likely the company will violate credit agreements. Stakeholder theory states that one of the stakeholders is that creditors tend to put pressure on the company to prioritize paying off all forms of debt rather than conduct voluntary disclosure such as environmental disclosure because it will only add to the company's financial burden. Environmental disclosures made by companies with poor financial conditions will cause concern from debt holders, suppliers, and customers (Choi et al., 2013). Conducting voluntary disclosure such as environmental disclosure will add extra cost for the company. Thus, there is a tendency for companies with high leverage will prefer not to make disclosures in order to save costs (Choi et al., 2013). In addition, pressure from creditors becomes the reason for companies prefer to concentrate on paying off all obligations rather than voluntary disclosure.

H<sub>3</sub>: Leverage has a significant negative effect on environmental disclosure.

## 2.4. Profitability

The increasing profitability of a company reflects an increase in company efficiency, so it shows that company performance is getting better. Profitability indicates the availability of company funds. The greater the operational funds, the more flexible the company will be in determining its activities. Companies with high profitability are more capable of making disclosures compared to companies with low profitability. Profitability can be used as a basis for demanding companies to make voluntary disclosures. In accordance with stakeholder theory, stakeholders such as government and wider community will be more demanding of companies with high profitability to make voluntary disclosure reports because these parties assess that the companies have the ability to do so and will not be a burden for the companies. Choi et al., (2013) stated companies with good financial conditions will easily exert their ability to make voluntary disclosure reports and are better at resisting outside pressure. This is consistent with the findings of Gatimbu & Wabwire (2016), Hermawan et al., (2018), showing that the profitability relationship can provide a significant positive effect on environmental disclosure.

H<sub>4</sub>: Profitability has a significant positive effect on environmental disclosure.

## 2.5. Audit Firm Type

Auditors with high reputations such as the big four do not like to associate with clients who only report a little information about their company in their annual reports (Dibia & Onwuchekwa, 2015). The selection of a public accounting firm is one of the ways for the company to legitimize itself in the eyes of stakeholders. Companies with big four Audit Firm have more trust by the public because the quality of the reports issued is international standard. This is consistent with research conducted by Wahyuningrum & Budihardjo (2018) which found a significant positive effect between audit firm type on environmental disclosure in Australia.

H<sub>5</sub>: Audit Firm Type has a significant positive effect on environmental disclosure.

## 2.6. Industry Type

Industries or companies can be categorized in various sectors, such as health, mining, finance. In each industry sector has a different sensitivity to nature or environment. Industrial sensitivity in this case, can be interpreted as how much influence of the industry activities those are in direct contact with the environment. In general, companies with

a high level of industrial sensitivity to the environment will also get high attention from the community because of its operational activities that have the potential to affect nature. Research conducted by Burgwal & Vieira (2014) illustrated companies that have a high level of industrial sensitivity will receive more attention from the public and other interests because industrial activities have the potential to affect broad interests, in terms of economic, social and environment. In line with the statement, studies conducted by Burgwal & Vieira (2014) and Wahyuningrum & Budihardjo (2018) shows that the type of industry is able to have a significant negative effect on environmental disclosure.

H<sub>6</sub>: Profitability has a significant positive effect on environmental disclosure.

### 3. Research Method

This study used a deductive approach with the type of quantitative research and is a hypothesis testing study research design to examine the influence of the variables hypothesized in the study. The population in this study was companies listed on the Australian Securities Exchange (ASX) in 2017. The sample of this study was determined by the purposive sampling method, in which the sample according to the criteria were 99 companies with one year of observation and 99 units of analysis were obtained. Sample selection criteria can be seen in Table 1.

TABLE 1: Research Sample

Criteria	Number
Top 100 companies with the biggest capitalization at ASX as of June 2017	100
Companies that do not have positive equity	(1)
<b>Number of Sample Companies / Analysis Units</b>	<b>99</b>

Source: The processed secondary data, 2019.

The dependent variable in this study was environmental disclosure; there were six independent variables, namely company age, company size, leverage, profitability, audit firm type, and industry type. As for the explanation of the operational definition of each variable used in this study are found in Table 2.

Hypothesis testing used descriptive statistical analysis techniques and inferential analysis techniques. The data were in the form of annual reports, sustainability reports, and 100 ASX company webs listed on the Australian Securities Exchange in 2017. The

TABLE 2: Operational Definitions of Research Variables

No	Variables	Definitions	Measurement
1	Environmental Disclosure (ED)	Measuring Environmental Disclosure based on the number of items disclosed.	Content Analysis using the environmental indicators of GRI Standard 2016
2	Company Age (AGE)	Measuring company age based on the length of the month from the company established until the year of research.	Logn (Number of Month)
3	Company Size (SIZE)	Measuring company size based on total assets owned by the company.	Logn (Total Asset)
4	Leverage (LEV)	Measuring the extent to which a company is financed by debt.	Debt to total asset
5	Profitability (PROF)	Measuring company ability to generate profits. This measurement uses ROE ratio (Return On Equity).	Return On Equity
6	Audit Firms Type (AUD)	The type of public accounting firm chosen as an auditor to provide an opinion on the company's financial statements.	big four KAP= 1 non-big four KAP = 0
7	Industry Type (TYPE)	Industry type based on sensitivity to the environment.	Sensitive company = 1 non-sensitive company=0

analysis methods used to examine the hypotheses in this study were descriptive statistics, classical assumption tests, Multiple Regression Analysis, and hypothesis testing (goodness of fit). The multiple regression equation is shown in equation 1.

$$ED = \alpha + \beta_1AGE + \beta_2SIZE + \beta_3LEV + \beta_4PROF + \beta_5AUD + \beta_6TYPE + \epsilon . \tag{1}$$

## 4. Results and Discussions

### 4.1. Descriptive Statistics

Descriptive statistics provide an illustration or description of data that is seen from the average value (mean), standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness (Ghozali, 2016). This study uses descriptive statistics which includes the mean value, standard deviation, maximum value, minimum value, and frequency distribution. The variables used in this study are dependent and independent variables. The dependent variable in this study is environmental disclosure (ED), while the independent variables in this study are company age (AGE), company size (SIZE),



leverage (LEV), profitability (PROF), audit firm type (AUD), and industry type (TYPE). The following are the outputs of the descriptive statistical calculations using the SPSS 23 application.

TABLE 3: Descriptive Statistics Results

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
AGE	99	3.18	7.86	6.29	1.00
PROF	99	-0.64	0.69	0.14	0.16
LEV	99	0.05	0.95	0.52	0.22
AUD	99	0.00	1.00	0.99	0.10
TIPE	99	0.00	1.00	0.32	0.47
SIZE	99	6.20	13.79	9.12	1.58
ED	99	0.00	64.00	12.61	12.25
Valid N (listwise)	99				

Source: The processed secondary data, 2019.

## 4.2. Regression Results

The multiple regression analysis model in this study consists of independent variables which are company age (AGE), company size (SIZE), leverage (LEV), profitability (PROF), audit firm type (AUD), industry type (TYPE), and dependent variable which is environmental disclosure. The result of the ANOVA test or F test above, obtained F count value of 8.780 with a probability of 0.000. Because the probability value is much smaller than 0.05, the regression model in this study can be used to predict ED, or it can be said that AGE, LEV, PROF, AUD, TYPE, and SIZE together influence ED. Based on the hypothesis testing, it can be written the regression equation shown in equation 2 and the results of hypothesis testing can be seen in Table 3.

$$\begin{aligned}
 \text{ED} = & -0.063 - 0.015 \text{ AGE} + 0.397 \text{ SIZE} - 0.734 \text{ LEV} + 0.755 \text{ PROF} \\
 & - 0.768 \text{ AUD} + 2.011 \text{ TIPE} + \epsilon.
 \end{aligned}
 \tag{2}$$

## 4.3. Hypothesis Discussion

TABLE 4: Hypothesis Test

Hypothesis	B	Sig	Results
1. Company age has a significant positive effect on ED	-0.015	0.924	Rejected
2. Leverage has a significant negative effect on ED	-0.734	0.363	Rejected
3. Profitability has a significant positive effect on ED	0.755	0.438	Rejected
4. Audit firm type has a significant positive effect on ED	-0.768	0.603	Rejected
5. Industry type has a significant positive effect on ED	2.011	0.000	Accepted

### 4.3.1. The Effect of Company Age on Environmental Disclosure

The first hypothesis ( $H_1$ ) states that company age has a significant positive effect on environmental disclosure. The result of the study indicates that company age has no significant effect on the variable of environmental disclosure and tends to have a negative direction. Based on this finding, it can be interpreted that new or old age of a company does not affect corporate environmental disclosure efforts if the level of corporate awareness regarding the importance of environmental disclosure and company commitment to strive for environmental disclosure is still lacking. The ineffectiveness of company age on environmental disclosure can also be caused by companies that have an older age are not affected to do more social disclosure because they are accustomed to carrying out social responsibility to the community and the surrounding environment. Therefore, it is considered as a habit carried out by the companies and has been known to the wider community, so there is no need to include the complete social disclosure in their annual reports. A long-established company does not guarantee that it will be more extensive in disclosing its environmental information. Long-established companies tend to gain legitimacy from the community by carrying out social responsibility (CSR) programs that really help the community, so they tend not to disclose environmental information.

### 4.3.2. The Effect of Company Size on Environmental Disclosure

The second hypothesis ( $H_2$ ) states that company size has a significant positive effect on environmental disclosure. The result of this study is in line with stakeholder theory, large company activities will be more visible than small companies so that the demands and pressures from the community will be greater. Then, the company will choose to report more information about the activities carried out by the company, one of which is the disclosure of environmental information. This research is in line with studies conducted

by Burgwal & Vieira (2014), Welbeck, et al. (2017), and Gatimbu & Wabwire (2016) who found that company size has a significant positive effect on environmental disclosure.

#### 4.3.3. The Effect of Leverage on Environmental Disclosure

The third hypothesis ( $H_3$ ) states that leverage has a significant negative effect on environmental disclosure. The result of this study shows that leverage has no significant effect on environmental disclosure variable and tends to have a negative direction. Based on this finding, it can be interpreted that high and low levels of corporate leverage do not affect corporate environmental disclosure efforts. This means companies with a high level of leverage can also disclose environmental information. As is known, ED is a form of corporate responsibility towards stakeholders. Companies with high leverage ratio have an obligation to make broader disclosures than companies with low leverage ratio (Prasethiyo, 2017). This can also be related to agency theory where the more extensive information is disclosed by companies with high leverage, the more information is obtained by investors and so they can gain trust in guaranteeing their rights as creditors. Prasethiyo (2017) explained according to agency theory, companies that have a greater proportion of debt in their capital structure will have greater agency costs. Companies to report detailed information about company conditions, one of which is related to company environmental information, use agency fees. Leverage can be a determinant of voluntary environmental reporting because companies may need to resolve asymmetric information and agency issues with stakeholders (Ghomi & Leung, 2013). Besides that, Ohidoa et al. (2016) explained that polluting companies would have a preference for reporting more environmental information if they have more debt. Thus, in this study, leverage does not have a significant effect on environmental disclosure and it means that there are other factors that influence the level of environmental disclosure such as the level of company sensitivity to environmental impacts.

#### 4.3.4. The Effect of Profitability on Environmental Disclosure

The fourth hypothesis ( $H_4$ ) states that profitability has a significant positive effect on environmental disclosure. The result of the study indicates that profitability has no significant effect on environmental disclosure variable. Based on this finding, it can be interpreted that the greater the profitability of a company does not affect the company's environmental disclosure efforts if the level of corporate awareness regarding the importance of environmental disclosure and the company's commitment to strive for

environmental disclosure is still lacking. The earnings owned by the company prioritized for the company's operational activities, so that the utilization for social activities is smaller, can also cause the ineffectiveness of profitability on environmental disclosure. Companies with high profitability are also not necessarily likely to do social activities because they are more profit oriented. The companies consider that they have gained enough legitimacy from stakeholders because they have been able to produce high profitability so that they feel no need to conduct environmental disclosure. Good financial performance indicates high profits but this is not an incentive for companies to increase their environmental disclosure or in other words companies do not use profits as a material in preparing environmental disclosures (Deswanto & Siregar, 2018).

#### **4.3.5. The Effect of Audit Firm Type on Environmental Disclosure**

The fifth hypothesis ( $H_5$ ) states that audit firm type has a significant positive effect on environmental disclosure. The result of the study indicates that audit firm type does not significantly influence on the environmental disclosure variable. Based on this finding, it can be interpreted that the audit firm type of a company does not affect the level of corporate environmental disclosure. In this study, audit firm type also tends to have a negative but insignificant effect. This means that companies which use the services from the Big Four do not necessarily have more environmental disclosure scores compared to companies that do not use audit services from the non-Big Four. The ineffective of Audit Firm size to the extent of annual reports disclosure due to the lack of attention from users of financial information regarding the differences in the results of services provided by the Public Accounting Firm as an external examiner. Companies whose reports have been audited by the big four are considered having higher quality in disclosing financial statements. Because of this assumption, the public already has an assumption that the reports have met the applicable standards. Companies that use large public accounting firms, financial statements issued by the company have a high level of trust so that the extent of voluntary disclosure is considered not to greatly influence the decisions of investors or creditors.

#### **4.3.6. The Effect of Type of Industry on Environmental Disclosure**

The sixth hypothesis ( $H_6$ ) states that the type of industry has a significant positive effect on environmental disclosure. The result of the study indicates that the type of industry has a significant positive effect on environmental disclosure. This result is

in line with stakeholder theory and legitimacy theory, companies that have a greater negative impact on the environment will be given more attention by the community because its operational activities have the potential to affect nature. Then the companies will choose to carry out environmental responsibility and disclose information about the environment in the report they makes. This is done by them in order to gain legitimacy from stakeholders for the sake of the sustainability of their business (Solikhah & Winarsih, 2016). This study is in line with the studies conducted by Burgwal & Vieira (2014), Emre (2014), Ohidoa et al. (2016), and Wahyuningrum & Budihardjo (2018) who found that the type of industry has a significant positive effect on environmental disclosure.

#### 4.4. Level of Environmental Disclosure Quantity

In this section describes the general description of environmental disclosure measured by the quantity of disclosure sentences on 99 companies in Australia listed on the Australia Stock Exchange and are companies included in the ASX 100 index. The average level of environmental disclosure quantity scores is 19.70%. This value is obtained from the comparison of the average total of environmental disclosure score to the maximum total environmental disclosure score obtained by the company. The average level of environmental disclosure quantity score that only has a value of 19.70% indicates that companies in Australia in 2017 generally disclosed environmental information in a concise manner and did not use many sentences on each item reported in annual and sustainability reports and on the company's website.

Energy is the theme of GRI with the highest level of quantity score among other levels, amounting to 27.17%. This value is also higher than the average level of environmental disclosure score (19.70%). After energy, the theme that has the second highest average level score is emissions. The value of the average level of emissions is 26.13%. This indicates that companies in Australia have more attention about energy and emissions so as to reveal more information on both themes. In contrast to energy and emissions, the theme of environmental compliance is a very rare theme for companies to disclose in Australia. Environmental compliance only has a value of 2.86%, where the value is very much lower than the average level value of environmental disclosure. This indicates that only very few companies disclose information about environmental compliance.

## 5. Conclusions and Suggestions

This research is conducted to find out how much influence of company age, company size, leverage, profitability, audit firm type, and industry type on environmental disclosure in companies listed on the Australian Stock Exchange for the 2017 period. The findings of this study mention only two of the six hypotheses that are proven. The results of multiple regression analysis prove the empirical results that there is a positive influence between company size and industry type on environmental disclosure, while company age, leverage, profitability and audit firm type have the opposite results. Environmental disclosure variable has an average level of quantity score of 19.70%. This value shows that companies listed on ASX 100 in 2017 generally disclosed environmental information in a concise manner and did not use many sentences on each item reported in the report released by the company (annual and sustainability report) and on the company's website. The limitation of this study is that it consists of 99 companies listed on ASX 100 where most of these companies are large companies. This means the results of the study may not be generalized for small companies, so for further research it is better not only to take companies from the largest market capitalization so that the data resulted becomes more diverse. Future studies should add research variables such as environmental performance and good corporate governance that might significantly influence environmental disclosure. Companies can pay attention to and improve environmental disclosure items as well as add narratives or explanatory sentences to the items disclosed. Following GRI Standards so that they are more complete and globally accepted can make additional disclosure items.

## References

- [1] Bae Choi, B., Lee, D., & Psaros, J. (2013). An analysis of Australian company carbon emission disclosures. *Pacific Accounting Review*, 25(1), 58–79. <https://doi.org/10.1108/01140581311318968>
- [2] Borghei-Ghomi, Z., & Leung, P. (2013). An Empirical Analysis of the Determinants of Greenhouse Gas Voluntary Disclosure in Australia. *Accounting and Finance Research*, 2(1), 110–127. <https://doi.org/10.5430/afr.v2n1p110>
- [3] Brown, N., & Deegan, C. (1998). The public disclosure of environmental performance information - A dual test of media agenda setting theory and legitimacy theory. *Accounting and Business Research*, 29(1), 21–41. <https://doi.org/10.1080/00014788.1998.9729564>

- [4] Burgwal, Van De. D., & Vieira, R. J. O. (2014). Environmental disclosure determinants in Dutch listed companies. *Revista Contabilidade & Finanças - USP*, 25(64), 60–78.
- [5] Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures – a theoretical foundation. *Accounting, Auditing & Accountability Journal*, 15(3), 282–311. <https://doi.org/10.1108/09513570210435852>
- [6] Deegan, C. (2004). Environmental disclosures and share prices - A discussion about efforts to study this relationship. *Accounting Forum*, 28(1), 87–97. <https://doi.org/10.1016/j.acfor.2004.04.007>
- [7] Deswanto, R. B., & Siregar, S. V. (2018). The associations between environmental disclosures with financial performance, environmental performance, and firm value. *Social Responsibility Journal*, 14(1), 180–193. <https://doi.org/10.1108/SRJ-01-2017-0005>
- [8] Dibia, N. O., & Onwuchekwa, J. C. (2015). Determinants of Environmental Disclosures in Nigeria: A Case Study of Oil and Gas Companies. *International Journal of Finance and Accounting*, 4(3), 145–152. <https://doi.org/10.5923/j.ijfa.20150403.01>
- [9] Emre, H. (2014). Company Characteristics and Environmental Disclosure: An Empirical Investigation on Companies Listed on Borsa Istanbul 100 Index. *The Journal of Accounting and Finance*, 19p(62), 145–164. Retrieved from <http://www.journal.mufad.org/attachments/article/734/9.pdf>
- [10] Ghozali, I. (2016). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 23*. Semarang: Badan Penerbit Universitas Diponegoro.
- [11] Gumelar, G. (2018). Persoalan Tak Berujung Tumpahan Minyak Montara. Retrieved February 20, 2018, from CNN Indonesia website: <https://www.cnnindonesia.com/ekonomi/20181217120659-85-354220/persoalan-tak-berujung-tumpahan-minyak-montara>
- [12] 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), 55–61.
- [13] Kiende Gatimbu, K., & Masinde Wabwire, J. (2016). Effect of Corporate Environmental Disclosure on Financial Performance of Firms Listed at Nairobi Securities Exchange. Kenya. *International Journal of Sustainability Management and Information Technologies*, 2(1), 1–6. <https://doi.org/10.11648/j.ijsm.20160201.11>
- [14] KPMG. (2017). Edge of Page - The KPMG survey of corporate responsibility reporting 2017. In *The road ahead - The KPMG Survey of Corporate Responsibility Reporting 2017*. <https://doi.org/10.1038/nnano.2013.238>

- [15] Lindawati, A. S. L., & Puspita, M. E. (2015). Corporate Social Responsibility: Implikasi Stakeholder dan Legitimacy Gap dalam Peningkatan Kinerja Perusahaan. *Jurnal Akuntansi Multiparadigma*, 157–174. <https://doi.org/10.18202/jamal.2015.04.6013>
- [16] Lindrianasari. (2007). Hubungan antara Kinerja Lingkungan dan Kualitas Pengungkapan Lingkungan dengan Kinerja Ekonomi Perusahaan di Indonesia. *Jurnal Akuntansi & Auditing Indonesia*, 11(2), 159–172.
- [17] Ohidoa, T., Omokhudu, O. O., & Oserogho, I. A. F. (2016). Determinants of Environmental Disclosure. *International Journal of Advanced Academic Research*, 2(8), 49–58.
- [18] Reverte, C. (2009). Determinants of corporate social responsibility disclosure ratings by Spanish listed firms. *Journal of Business Ethics*, 88(2), 351–366. <https://doi.org/10.1007/s10551-008-9968-9>
- [19] Rosiana, G. A. M. (2013). Pengaruh Gcg Dan Csr Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Variabel Pemoderasi. *E-Jurnal Akuntansi Universitas Udayana*, 5(3), 723–728. <https://doi.org/10.21107/infestasi.v12i1.1797>
- [20] Solikhah, B., & Winarsih, A. M. (2016). Pengaruh Liputan Media, Kepekaan Industri, Dan Struktur Tata Kelola Perusahaan Terhadap Kualitas Pengungkapan Lingkungan (The Effect Of Media Coverage, Industry Sensitivity And Corporate Governance Structure On Environmental Disclosure Quality). *Jurnal Akuntansi Dan Keuangan Indonesia*, 13(1), 1–22.
- [21] Wahyuningrum, I. F. S., & Budihardjo, M. A. (2018). Relationship between Company Financial Performance, Characteristic and Environmental Disclosure of ASX Listed Companies. *E3S Web of Conferences*, 24, 3–7.
- [22] Wendling, Z. A., John, E. W., Esty, D. C., Marc, L. A., & Sherbinin, A. de. (2016). Environmental Performance Index: Global Metrics for the Environment. In *Yale University*.