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Determinants of Environmental Disclosure in Indonesia

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Abstract:

This study aims to identify the impacts of audit committees, audit committee meetings, and boards of commissioner meetings (BCM) on environmental performance and environmental disclosure (ED). The population of this study was 89 companies listed in LQ45 for the period 2011-2016. By using purposive sampling technique, this study identified 23 companies as samples. Path analysis based on the structural equation model was used. Environmental performance had a significant and positive effect on ED, audit committee meetings also determined ED and BCM, but have no effect on environmental performance. BCM did not have any significant effect on environmental performance. Audit committee had a significant positive effect on audit committee meetings. While size had a positive effect on the audit committee and BCM but did not affect the audit committee meeting. These results indicate that the discussion in audit committee meetings and BCM focused more on the ED rather than environmental performance.

Keywords: environmental disclosure; environmental performance; good corporate governance; industrial sensitivity.

JEL Classification: M40; Q56.

Introduction

According to stakeholder theory, companies have a primary goal to fulfill the stakeholders' expectation (Freedman and Jaggi 1982). Companies must disclose their activities, not only activities to gain profits, but also environmental and social activities. Environmental disclosure becomes important along with increasing worldwide attention about the environment (Abdullah, Yusof and Nor 2010; Smith, Yahya and Marzuki Amiruddin 2007) and increasing number of cases affecting environment (Iqbal 2017, Ramadhan 2018).

Environmental disclosure among Indonesian companies is still considerably low. As companies with good financial performance, LQ45 companies may have better environmental disclosure. According to Yanto *et al.* (2016), company with better financial performance tends to have better environmental performance proxied by PROPER. The study attempts to identify the determinants of environmental disclosure among LQ45 companies by using balanced panel data in the period

of 2012 to 2017. Initial study obtained 84 emitters included in the LQ45 index, but only 10 emitters or 11.9% provide sustainability reports for five consecutive years.

Factors that influence the company's environmental disclosure have studied in previous studies; Industrial types, environmental management systems (Wijaya 2012), company size, profitability, media coverage, environmental performance (Aulia and Agustina 2015, corporate governance (Astinila and Jayanto 2015), managerial ownership (Oktafianti and Rizky 2016), profitability, leverage, cost of equity (Hajawiyah, Adhariani and Djakman 2019). This study analyzes the interaction between environmental performance and environmental disclosure, extending the study of Tadros and Magnan (2019).

1. Literature Review

Legitimacy theory comes from political economy theory and is based on the idea of "social contracts" (Patten 2002). Organizations that expect their activities to run well, the organization must be able to fulfil social contracts with the community. Therefore, companies should be able to minimize differences in society, which is often called "legitimacy gap" and can affect the continuity of its business activities (Dowling and Pfeffer 1975, Guthrie 1990, Suchman 1995). In addition, this environmental disclosure is mainly based on stakeholder theory where Freedman and Jaggi (1982), Friedman (2007) stated that companies have a primary goal, namely to fulfil the expectations of their stakeholders. In this case, stakeholders are the owners of the company, so the main goal of the company is to provide maximum prosperity to the owners.

Stakeholder theory also states that environmental disclosure performed by companies is the demand of all stakeholders (Lu and Taylor 2018). Firms' environmental disclosures are motivated by both economic and legitimacy incentives (Tadros and Magnan 2019). In American context, environmental disclosure reporting is made voluntarily, where companies have many ways to report their environmental performance, for example through websites, annual reports, and other financial reports (Lu and Taylor 2018). Companies with good environmental performance and high environmental disclosure would provide this information to all stakeholders. However, many studies also refer to legitimacy theory to explain the reason of companies voluntarily disclose information. Legitimacy theory states that in order to gain legitimacy from the community, the company have to operate normally and in accordance with the expectations of the community where it operates (Cong and Freedman 2011; De Villiers and Van Staden 2006; Deegan 2002; Dowling and Pfeffer 1975; O'Donovan 2002; van Staden and Hooks 2007).

The two theories show that environmental performance is a result company's activities to control the impacts of its operation on environment. Companies with better environmental performance tend to have wider environmental disclosure (Awuy, Sayekti and Purnamawati 2017; Tadros and Magnan 2019). The purpose of this disclosure is to show stakeholders that the company has succeeded in implementing environmental programs well, so that it would enhance the company's image. Therefore, the existence of boards of commissioners is important in supporting company programs. This means that the number of boards of commissioner meetings would greatly determine the quality of the company's environmental performance.

The Ministry of Environment and Forestry of Indonesia ranked the companies according to environmental performance criteria. Therefore, the existence of boards of commissioner meetings that discuss environmental issues could encourage the company to be included in the PROPER criteria. Having a good rating also means that the company has good environmental performance. Thus, company's management tends to show the results of environmental performance by disclosing in annual reports. Therefore, this study proposes the following two hypotheses:

H1: Companies having better environmental performance tend to have wider environmental disclosure in their annual report.

H2: The Board of Commissioners Meeting has a positive and significant effect on environmental performance

Environmental disclosure for companies has a very important meaning, especially to improve the quality of financial statements and to increase the trustworthiness of all stakeholders. Research by Gray *et al.* (1998) stated that the company has a social contract with all stakeholders, so the demand for accountability in the company's financial statements increases. Accountability of financial statements can be enhanced by audit committee. Audit committees in companies have a significant contribution in improving the accountability of financial statements. Therefore, understanding the quality of good financial statements should be understood an audit committee. In each meeting, the audit committee should discuss environmental issues having a significant impact on the company. Thus, this information can be expressed through an accountable environmental disclosure, in order to increase the legitimacy among its stakeholders.

Investors would interpret broad environmental disclosures as a positive signal about companies attempting to manage their performance against potential costs in the future (Blacconiere and Patten 1994; Lu and Taylor 2018). Overall the above arguments show that audit committee meetings influence environmental disclosure. Therefore, the hypothesis developed in this study is as follows:

H3: Audit committee meeting has a positive and significant effect on environmental disclosure

The results of meetings held by the audit committee not only increase the meeting of boards of commissioners, but also can improve environmental performance. Indeed, the audit committee's attention in meetings is related to the company's financial performance which would be reflected in financial statements but does not rule out the possibility of discussing environmental issues that can directly affect the financial statements of the company.

Therefore, it is not surprising that previous research showed various kinds of good practice examples in both environmental (and social) reports (Guthrie and Parker 2012; Guthrie 1990; Hughes, Anderson and Golden 2001; Kelly, 1981; Kwong, Kent and Marshall 1997; Patten 2002; Tilt and Symes 1999). By using many companies observed, it can provide an overview of disclosure (Deegan and Rankin 1996; Kwong, Kent and Marshall 1997). In addition, other studies provide a description of inadequate environmental disclosures and do not show a relationship with the company's environmental performance (Ali Fekrat, Inclan and Petroni 1996; Harte and Owen 1991), and some even show a negative relationship between environmental disclosure and environmental performance (Hughes, Anderson and Golden 2001; Patten 1991; Patten 1992; Patten 2002).

Thus, the more environmental issues discussed at the audit committee meeting would be able to increase the company's environmental performance. If there are environmental issues having a significant influence on the company's financial statements, they would certainly be submitted to boards of commissioners. This information provides the basis for boards of commissioners to carry out meetings and discuss it. Therefore, the audit committee meeting will also encourage the number of meetings conducted by boards of committee which will ultimately drive the overall environmental performance of the company, the hypothesis developed is:

H4: Audit committee meeting has a positive and significant effect on environmental performance

Audit committee is considered important to maintain the quality of financial statements and often increases the work of the board of commissioners. The results of the audit committee meeting would provide certain recommendations that should be immediately followed up by boards of commissioners, so that the boards of commissioners must immediately carry out a meeting to discuss the recommendations given by the audit committee.

However, Vafeas (1999) believes that a larger number of audit committee members may be an ineffective form of governance that results in more frequent meetings. In contrast, Al-Najjar (2011) and Raghunandan and Rama (2007) found that the size of the audit committee had a positive relationship with the number of audit committee meetings. Furthermore, other studies found that there was a significant positive relationship between the proportion of accounting experts on the committee and the number of audit committee meetings (Raghunandan and Rama 2007, Sharma, Naiker, and Lee 2009). Therefore, we assume that the proportion of accounting experts on audit committees has an impact both on the issues of discussions and reporting. We also estimate that the proportion of accounting experts on audit committees has a positive relationship with the number of audit committee meetings (Yin *et al.* 2012). Therefore, we propose more meetings conducted by the audit committee would lead to the increase the number of meeting held by boards of committee.

H5: Audit Committee Meeting has a positive and significant effect on the Board of Commissioners Meeting

H6: Audit Committee has a positive and significant effect on the Audit Committee Meeting

H7: The Audit Committee has a positive and significant effect on the Board of Commissioners Meeting

Company size that reflects the complexity and scale of business economics could determine how many audit committees they have. In line with stakeholder theory, the greater the company, the more stakeholders of the company. The more parties who put pressure on large companies are, and then there is a tendency for these companies to act in accordance with the interests of stakeholders. External parties pay more attention to company activities than attention to small companies. This is because large companies are considered to have transaction complexity compared to small companies. Therefore, large companies need far more human resources, especially in terms of audit committees, because audit committees have very important functions in the company. In addition, the complexity of transactions and important issues in large companies require audit committees to hold more meetings to discuss and share roles among them.

Research by Yin *et al.* (2012) found that the proportion of independent directors, leverage, and growth negatively affected the number of audit committee meetings. Consistent with the findings of Méndez and García (2007), Menon and Williams (1994), Raghunandan and Rama (2007) found that company size was positively related to the number of audit committee meetings. This coordination meeting is intended to maintain the quality of financial statements and overall company performances. This condition means that company size affects the number of meetings conducted by the audit committee. Therefore, the study proposes the following hypotheses:

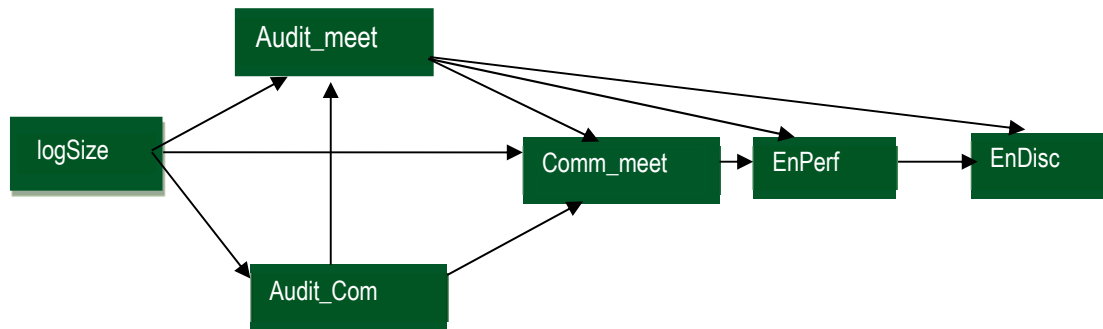
H8: Size has a positive and significant effect on the Audit Committee Meeting

H9: Size has a positive and significant effect on the Board of Commissioners Meeting

H10: Size has a positive and significant effect on the Audit Committee

To provide clearer picture on hypotheses proposed, the following theoretical framework provides more detailed information about the relationships among variables of the study. Environmental disclosure is hypothesized to be influenced by environmental performance, and audit meeting frequency. In turn, environmental performance is determined by audit meeting board of commissioner (BoC) meeting. Audit meeting, audit committee, and company size determine BoC meeting.

Figure 1. Research Model



2. Methodology

The population of this study was 89 companies included in the LQ45 category in the period of 2011-2016. The research sample was determined by using a purposive sampling technique which produced a sample of 23 companies. Therefore, the units of analysis of this study were 138. The sampling criteria are presented in following Table 1:

Table 1. Sampling Procedures

Criteria	Number
Companies listed in LQ45 in the period of 2011-2016	89
Companies did not participate in PROPER	-54
Companies do not have complete data	-12
Number of sample companies	23
Total units of analysis (23 Companies X 6 years)	138

Source: secondary data, 2018

The study employs six variables consisting of five endogenous variables—audit committee, audit committee meeting, Board of commissioner meeting, environmental performance, and environmental disclosure—and one exogenous variable. In addition, four variables are mediators i.e. audit committee, audit committee meeting, Board of Commissioner meeting, and Environmental performance. The following Table 2 shows the operational definition of each variable of this research:

This research uses two techniques of analysis i.e. descriptive and path analyses. Descriptive analysis aims to describe the extent of research variables, while Path analysis is used to examine the relationships among variables simultaneously (Yanto *et al.* 2016; Beaujean 2019). Furthermore, before performing hypothesis testing, the study performs the goodness of fit and the normality tests. Normality test conducted by looking at coefficient of kurtosis and critical ratio (c.r.). The threshold of coefficient of kurtosis should not be more than 10.00 (Widhiarso 2012), while multivariate of c.r. must be less than 2.58 (Ghozali 2007). If this study does not meet normality requirements, the study should check the Mahalanobis distance (Ghozali 2007) or do some bootstrap techniques as suggested by Widhiarso (2012).

Table 2. Operational Definition of Variables

Criteria	Number
Size	Company size is proxied by assets ownership
Audit Committee	Number of Audit Committee Members
Audit Committee Meeting (ACM)	Number of meetings held by the audit committee during the year of observation
Boards of Commissioner meeting (BoC)	Number of meetings conducted by members of the board of commissioners
Environmental Performance	PROPER rating earned by company in the year of observation.

Source: previous research

3. Result and Discussion

The results of the descriptive analysis show that the average environmental disclosure only reached 12% with a standard deviation of 9.19. Likewise, the environmental performance proxied by PROPER reached rank 2 (Red) out of the 5

available ratings. The role of the Board of Commissioner (BoC) varied with a minimum number of 1 person and a maximum number of 26 people with a standard deviation of 4.53. For more details, Table 1 provides descriptive statistics of the data.

The results of the analysis show that environmental disclosure was influenced by environmental performance proxied by PROPER with beta of 0.17 ($p < 0.05$). This means that the higher the environmental performance is; it will be followed by an increase in the width of environmental disclosure. However, the value of the beta was still not satisfactory as it has small magnitude. Besides that, environmental disclosure was also influenced by the frequency of audit meetings (0.36, $p < 0.05$) which means that the discussion of environmental disclosure at the meeting of the audit committee members was quite intensive. In other words, the audit committee's role in environmental disclosure was considered significant.

Table 3. Descriptive Statistics

Variable	Min	Max	Mean	Std Deviation
Environmental Disclosure (EnvDisc)	0	34	11.87	9.19
Environmental Performance (EnvPerf)	2	4	2.25	0.58
Board of Commissioner (Comm_meet)	1	26	6.74	4.53
Size of Audit Committee (Audit_Com)	2	7	3.38	0.73
Audit Committee meeting (Audit_meet)	2	59	11.33	12.38
Size (in million)	1,327	6,834	370	1,222

Source: processed data, 2018

The effect of the Board of Management (BoC) on environmental performance was not significant (-0.14 , $p > 0.05$). Likewise, the role of the Audit Committee on environmental performance was also insignificant, with beta of -0.03 ($p > 0.05$). In other words, the BoC paid little attention to environmental performance and the discussions about environmental performance in audit committee meetings were still very limited. The attention of the audit committee was more focused on preparing financial reports that contain environmental information, not on the preparation of good environmental performance.

The frequency of meetings of the BoC was influenced by the Audit Committee (Audit Comm) meeting and Size of the Audit Committee with the estimate values of 0.44 ($p < 0.005$) and 0.20, respectively ($p < 0.05$). Besides, the frequency of the BoC meeting was also influenced by the size of the company (0.19, $p < 0.05$). This also means that the more frequency of Audit Committee meetings, the more often the frequency of meetings from the BoC meeting. Moreover, the more members of the audit committee also lead to the increase of BoC meetings. The larger the company affects the number of BoC meetings. However, company size did not affect the number of audit committee meetings (0.15, $p < 0.15$), but affected the number of Audit Committee members (0.31, $p < 0.05$). For more details, the following is presented in Table 4.

Table 4. Path Analysis Results

Hypothesis	Variable	P	Remark	Significance	Decision
H1	Env. Disclosure	Env. Performance	0.17	0.04	Accepted
H2	Env. Performance	Board of Comm. Meeting	-0.15	0.14	Accepted
H3	Env Disclosure	Audit Comm. Meeting	0.36	***	Accepted
H4	Env. Performance	Audit Comm. Meeting	-0.03	0.78	Rejected
H5	BoC Meeting	Audit Comm. Meeting	0.44	***	Accepted
H6	Audit Comm. Meeting	Audit Comm	0.34	***	Accepted
H7	BoC Meeting	Audit Comm.	0.20	0.01	Accepted
H8	Audit Comm. Meeting	Log Size	0.15	0.08	Rejected
H9	BoC Meeting	Log Size	0.19	0.01	Accepted
H10	Audit Committee	Log Size	0.31	***	Accepted

Source: processed data, 2018

This study found that Environmental Disclosure was influenced by both Environmental Performance and the Frequency of Audit Committee Meetings. On the other hand, Environmental Performance was not influenced by BoC Meetings and Audit Committee Meetings. The BoC Meeting was influenced by three variables *i.e.* Audit Committee Meetings, Number of Audit Committee Members, and Company Size. The Company Size did not affect the Audit Committee Meeting but affected the Number of Audit Committee members. Thus, the results of path analysis accepted seven hypotheses namely H1, H3, H5, H6, H7, H9, and H10 and rejected the three hypotheses namely H2, H4, and H8.

This study uses eight indices to measure the goodness of fit of the model. The analysis shows that this CMIN model was 5.12 with p value of 0.401 ($p > 0.05$) with a CMIN/DF value of 1.03. The indices of GFI, AGFI, NFI, TLI, CFI all had values above 0.9 as a threshold. The analysis also shows that the RMSEA value reaches a value of 0.013 with a threshold of 0.08. Thus, all indices had satisfactory performance. Table 5 below provides the test results for the goodness of fit test of the model.

Table 5. Goodness of Fit Test

Index	Value	Threshold	Remark
Chi Square	5.12 ($p = 0.401$)	Insignificant	Satisfying
CMIN/DF	1.03	Less than 3	Satisfying
GFI	0.988	≥ 0.9	Satisfying
AGFI	0.949	≥ 0.9	Satisfying
CFI	0.999	≥ 0.9	Satisfying
NFI	0.964	≥ 0.9	Satisfying

Source: secondary data, 2018

This research shows that environmental disclosure is influenced by environmental performance and audit committee meetings. These results mean that environmental disclosure has become a serious issue according to the audit committee, which is indicated by the number of meetings that was carried out. The audit committee considers providing more support to boards of commissioners (BoC) to gain legitimacy from all stakeholders. In accordance with stakeholder theory which states that environmental disclosure made by the company is the demand of all stakeholders (Lu and Taylor 2018). In USA the environmental disclosure is made voluntarily, where companies have many ways to report their environmental performance, for example through websites, annual reports, and other financial reports (Lu and Taylor 2018). Companies with good environmental performance and high environmental disclosure would provide this information to all stakeholders (Tadros and Magnan 2019).

In Indonesian business context, the study of Wijaya (2012) stated that environmental management systems have an effect on environmental disclosure. Legitimacy theory states that companies must align their values with values in society, so that the legitimacy gap can be avoided. An environmental management system with certification of ISO 14001 shows that the company is required to comply with environmental standards. Companies with good environmental management systems will make high environmental disclosures to convince the public that the values adopted by the company are in harmony with the values that exist in society. Thus, the company will gain the legitimacy from the community to continue its business activities.

In addition, this research shows the role of good corporate governance proxied by audit committee and BoC. The results also showed that the audit committee significantly influence environmental disclosure, but the frequency of BoC meetings does not affect environmental performance as a form of management's responsibility to improve environmental disclosure. These results indicate that audit committees proxied by the number of audit committee meetings have a significant influence in increasing environmental disclosure. This indicates that in Indonesia the concern about environmental disclosure is not only a focus of management, but it has extended to the main audit committee roles in the preparation of the company's financial statements.

These results are in line with Badjuri (2011) who found that good corporate governance—proxied by the number of board of commissioner meetings, the number of audit committees, and the number of audit committee meetings—has no significant influence to environmental disclosure. Likewise, the number of audit committees also does not influence the extent of company's environmental disclosure. The average size of the company audit committee is 3 (three) people may cause less variability of audit committee members. The study concluded that the size of audit committee does not have effect on the oversight and disclosure mechanism of the company. Audit committee members may be just to fulfill the BAPPEPAM regulation No. IX.I.5 regarding the establishment and guidelines for the implementation of the audit committee, without considering the complexity of the company. The number of meetings conducted by the audit committee does not guarantee that the implementation of monitoring of the company's environmental disclosures will be effective. Audit committee meetings are not a measure of effectiveness of audit committees in carrying out their duties. Therefore, the frequency of audit committee meetings does not affect the implementation of corporate environmental disclosures.

The results of this study are consistent with the results of research conducted by Aziz (2014) stating that there is no effect of good corporate governance proxied by the size of the audit committee with the level of corporate environmental disclosure. This means that no matter how many members of the audit committee will influence the company's environmental disclosure, because it has not been able to make an effective mechanism for company management.

The results of this study are also consistent with research conducted by Ariningtika and Kiswara (2013). Good corporate governance—proxied by the number of board of commissioners—does not have a significant influence on environmental disclosure. This happens because the responsibilities of the board of commissioners are to supervise and ensure that the company implements good corporate governance based on rules and coordinates the activities of the board of commissioners. However, the board of commissioners may not participate in making operational decisions, one of which is about the company's environmental disclosure because they do not have a direct relationship with the activities or daily operations of company (Ariningtika and Kiswara 2013).

In addition, the results of this study indicate that the number of audit committee members has a good role in encouraging the number of audit committee meetings and the number of meetings of the board of commissioners. This is in accordance with OJK Regulation No. 55/POJK.04/2015 concerning the establishment and guidelines for the implementation of the audit committee's work. Therefore, this condition encourages members of the audit committee of most companies in Indonesia to pay more attention to environmental disclosure. The hypothesis that the number of meetings of audit committee members influences environmental disclosure is accepted, while the hypothesis that the number of meetings of audit committee members influences environmental performance is rejected.

Furthermore, the results of this study also show that company size influences audit committee meetings, BoD meetings, and audit committees. This means that the company size in Indonesia determines the performance of the audit committee and the board of commissioners. Therefore, the audit committee and the board of commissioners attempt to understand the condition of the company as a whole and comprehensively. More specifically, companies begin to pay more attention to environmental disclosure to increase the legitimacy from its stakeholders. Stakeholder theory states that environmental disclosure as a form of corporate responsibility for conducting activities in accordance with stakeholder expectations. Therefore, all company activities would be supported by company's stakeholders. In general, the larger the company would experience stronger pressure from its stakeholders, so that the extent of the environmental level of disclosure is much more needed.

Large companies will conduct extensive environmental disclosure if they get pressure from their stakeholders. However, in Indonesia, 30 of 43 sample companies conducted environmental disclosures in the low and very low categories. In addition, the composition of share ownership in the six companies is dominated by institutions with a percentage of more than 50% ownership. The level of control of the dominant party is very large, so that every activity company carried out has been considered in accordance with the expectations of the dominator. Investors as the main parties who have power to put pressure on companies have yet played their roles to require company to have broader environmental disclosure. Managers ultimately make compulsory disclosures with at the minimum cost. This could cause the company size does not significantly influence environmental disclosure.

Conclusion

The attention of Indonesian companies to environmental disclosure began to increase steadily. Attention to environmental disclosure is facilitated by audit committee as a guardian of the quality of the company's financial statements. The number meeting conducted by audit committee influences environmental disclosure but does not affect environmental performance. This indicates that the company's attention is no longer on the financial aspects but rather on the environmental aspects. On the other hand, the company's attention to the environment is also determined by the size of the company. The larger the company is, the greater the attention of the audit committee to the environment. In addition, the existence of this audit committee also determines the direction of policies taken by the board of commissioners. It is proven that the number of audit committee meetings affects the number of meetings held by the board of commissioners.

Furthermore, this study still has weaknesses, namely sampling techniques. Where still not all companies are classified in LQ45 Indonesia, but only companies that participate in PROPER are the research samples. Future research should add more sample of companies that listed on the Indonesian stock exchange. The government—as one of the company's stakeholders —needs to continue improving facilitation and putting more pressure to companies to implement PROPER optimally to increase transparency in the managing environmental impacts caused by company operations.

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