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AUDIT COMMITTEE CHARACTERISTICS AND ENVIRONMENTAL DISCLOSURE QUALITY AMONG MALAYSIAN ENVIRONMENTALLY SENSITIVE INDUSTRIES

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Abstract

This study is conducted i) to examine the level of environmental disclosure quality (EDQ) among environmentally sensitive industries (ESI) and ii) to determine the relationship between the Size, Independence, Meeting Frequency, Financial Expertise and Legal Background of audit committee (AC) and the EDQ among ESI for the year 2016. By using the purposive sampling technique, 237 final samples of ESI are selected from 938 companies listed on Bursa Malaysia. For the first objective, the results from this study found that only 45.42% of ESI are disclosed about environmental quality. While for second objective, only size of audit committee has a positive significant impact towards the environmental disclosure quality, the other for variables found that not affect the dependent variable. The limitation of this study is focusing on a single year; it only provides a snapshot of environmental disclosure. Furthermore, there are also lacks of terms in determining the criteria of each element in the index. Thus, this has caused the difficulties in determine the rating score and might have different results because the justification is based on the researchers' own judgment. This study would be significant to the related regulatory bodies to develop new requirement in inculcate and increase the awareness about the environmental disclosure to all public listed companies especially the ESIs.

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Keywords: Environmental reporting, environmentally sensitive industries, environmental disclosure quality, audit committee.



1. Introduction

In the recent years, environmental issue has created awareness amongst various stakeholders such as government bodies, Non-Governmental Organisations (NGO), customers, communities, investors, financial agencies and institutions, employees and society as a whole. Most of stakeholder concern about environmental impacts towards the firms especially in terms of the emission of carbon footprint, disposal of toxic wastes and greenhouse gases that can have negative impacts on both companies' business and environment. The truth is most stakeholders pressure the industries to be more responsible for their actions and take into consideration regarding environmental and sustainability development issues in their decision-making process (Fatima et al., 2015). These issues will definitely influence industries in performing their daily operating activities and society also has become more conscious towards pollution created by most industries especially among Environmentally Sensitive Industries (ESI). ESI is defined as an industry which has the greatest potential threat to the natural environment. Disclosure regarding environmental information quality shows that the business organizations are engaging in activities which are related to environment and responsible to conserve the environment (Ismail & Abdul Rahman, 2016). In addition, governments had taken steps to promote green technology across ESI in Malaysia. The strategy towards environmental protection and conservation should be disclosed by the industries especially to the investors because they are very concerned about environmental preservation thus, they have created environmental awareness (Fatima et al., 2015). Environmental disclosure usually viewed by mitigates stakeholder environmental regulation or legislation in the future (Bhattacharyya, 2014). Moreover, environmental disclosure is apparent as an effective tool that enables the firm to communicate to their stakeholder regarding environmentally friendly activities as an important information source about the environmental impact of firm's operations and natural resources consumption performance (Akbas, 2016).

2. Problem Statement

Companies use Environmental Disclosure (ED) as a mechanism to manage society expectation towards corporate operation and increases reputation (Abdullah, 2017). Most of the ESI have implemented ED which involves mandatory and voluntary reporting by organization on non-financial issues to their stakeholder (Ufere et al., 2017). Environmental disclosure policies in annual report can allow other information users to make informed judgements about the efficiency and the impact of managers' sustainability decision and action (Bouri, 2017). Previous study that has been conducted before presents that the disclosure of environmental information quality in ESI was low. Environmental disclosure practices have been associated socially responsible behaviour to improve the firm sustainable performance (Longoni & Cagliano, 2018). Based on Akbas (2016), there are some factors that influence EDQ and one of them is the characteristics of Audit Committee (AC). AC characteristics had given a significant affect towards auditing process and the performance of corporate governance. This study is carried out to examine whether size, independence, financial expertise, legal qualification and number of meeting among AC are influence the Environmental Disclosure Quality (EDQ) among ESI.

3. Research Question

The research questions that have been carrying out in this study are:

- i) What is the level of environmental quality disclosure among ESI for 2016?
- ii) Is there any relationship between the AC characteristics and the environmental disclosure quality among ESI?

4. Purpose of the Study

There are two purposes of this study. First, it aims to purpose of the study to examine the level of EDQ among ESI for the year 2016. The second one is to determine the relationship between the characteristics of AC and the EDQ among ESI in Malaysia.

5. Research Methods

5.1. Literature Review

In this sense, it is not surprised that the disclosure on corporate environmental has attracted substantial development into consideration from academic researchers (Akbas, 2016). The one initiative taken by Malaysian government is by providing ISO 9001 & ISO 14001. It is a guideline of Quality Management and Environment Management which is the system that refers to the International Standard that can assists an association by enhancing its environmental performance and empower the components of the environmental management system to be coordinated into the centre of business process. In addition, previous study by Fernandes et al. (2018) stated that ED has become an important tool that provides information to the investors regarding the environmental investment and their activities in the companies. Moreover ED is a practise which concern information sharing with the stakeholder about the environmental pollution and natural resources consumption performance. And this ED practise will improve the performance of the companies in the term of financial and environmental quality (Longoni & Cagliano, 2018). There are more involvements in environmental related activities which contribute some effort in conserving the environment (Iatridis, 2013). There must be an initiative towards the environmental protection so that there will be more investor that will invest in the companies that are more concern and more responsible.

Even though the role of AC has now focused on voluntary CSR disclosure, stakeholders have given a pressure to AC to include CSR disclosure after a series of happenings such as collapses related to accounting and auditing scandals at WorldCom, Global Crossing, Enron, Parmalat and HIH Insurance that have led to the increase in demand for transparency about the operations of firms regarding environmental disclosure (Appuhami, 2017). Besides that, an AC is a core decision making body, where the AC is responsible to monitor both financial and non-financial reporting practices in the organisation while reducing the information dissymmetry between the management and stakeholder. Although traditionally, the role of AC is focused on giving disclosure for Corporate Social Responsibility, this role has widened with the increase in pressure from the stakeholder to include CSR and ED in the problem such as the Enron scandal (Appuhami, 2017). To facilitate better resource management and environmental preservation, the

National Climate Change Policy has been launched in August 2010. Bursa Malaysia acts as an authoritative body for public listed companies, where it had made a voluntary CSR disclosure in the annual reports about recognising the value of the social and the well-being of the environment in Malaysia (Akbas, 2016).

As stated by Fatima et al. (2015) and NAICS Code ESI were classified as industrial products, consumer products, plantations, properties, trading and services, constructions, mining and infrastructure industries. There were studies conducted on the companies that belong to an ESI, which are: Chemical, Mining, Petroleum, Energy, Utilities and Resource companies. Environmentally sensitive in nature, it is assumed that these industries tend to be more concerned about the environment and will be more likely to disclose regarding the environmental information in their annual reports (Aziz et al., 2014). In previous research, it suggested that the disclosure level reflects the type of industry while “mining, oil, and chemical industries will highlight about the environmental, health and safety issues” as contrast to finance and insurance companies as cited by (Reverte, 2009). This shows that the companies are aware of the environment. These disclosures are more aligned to the companies with activities that significantly affected the environment. The sensitive industries are complying with strict environmental rules and regulation about the emission effect on the environment. Therefore, the companies must follow the rules and disclose more about environmental concern; otherwise, the stakeholder may assume that the companies are the worst regarding the matter of concerning about environmental protection (Welbeck et al., 2017).

5.2. Hypothesis Development

5.2.1. Size of Audit Committee (SIZE) and Environmental Disclosure Quality (EDQ)

The size of AC was giving more prominent assets and experts to successfully do their obligations (Madi et al., 2014). Thus, a higher number of AC members is mostly going to assist such as revealing and resolving the potential issues in specifying the process in corporate (Appuhami, 2017). This demonstrates that AC measurement is a fundamental factor for AC to supervise the corporate disclosure practices. Previous researchers have discovered experimental confirmation that numerous executives on AC seem to upgrade the level of ED quality (Akbas, 2016). The size of the AC has a significant relationship where the results show better performance. Based on Yang and Krishnan (2005) and Tashakor (2014) there are insignificant relationship because there are potential in revealing reporting process due to the different opinion from different expertise. Hence, this hypothesis has been proposed:

Hypothesis 1 (H1): There is a significant relationship between the size of audit committee (SIZE) and the environmental disclosure quality (EDQ).

5.2.2. Independence of Audit Committee (INED) and Environmental Disclosure Quality (EDQ)

Independence of AC is important for the committee to discharge their duties effectively. An independence non-executive director is one who has no family bonding to other directors of the company and is not involved in the operations or management of the company. Director independence is perceived universally as an important characteristic for AC in monitoring the manager activities and improves the monetary level and non-monetary disclosure. That is the key trademark of an AC which is typically

connected with AC effectiveness. Abbott (2004) stated that the independence of an AC and misstatements is adversely related.

Different investigations had been identified with independence of AC gives experimental confirmation that independence can be imperative properties for financial reporting (Siagian & Tresnaningsih, 2011). Klein (2002) discovered that there is insignificant association between the independence of AC with corporate voluntary disclosure. Persons (2009) highlighted that AC's independence is important in measuring the ethics disclosure's effectiveness. Previous study shows that, there is a significant relationship between independence of AC and the ED quality and this study finds that AC monitors the quality of the ED process effectively (Tashakor, 2014). Hence, this hypothesis has been proposed:

Hypothesis 2 (H2): There is a significant relationship between the independence of audit committee (INED) and the environmental disclosure quality (EDQ).

5.2.3. Frequency of Audit Committee Meeting (MEETING) and Environmental Disclosure Quality (EDQ)

The frequency of AC meeting refers to the number of meeting held by the AC per financial year. This meeting should be conducted once at the regular interval, with the interim of 120 days between any two meetings to such an extent that around four meetings are held in a year. Meanwhile, Abdullah (2017), stated that the frequency of AC meeting demonstrated that AC is very dynamic in monitoring the company environmental reporting in ESI. Besides, Tao and Hutchinson (2013) stated that regular meeting enhances the adequacy of ED quality and ER in ESI. Along these lines, this study assumes frequent AC meeting will enhance into a better environmental reporting in ESI.

From the previous study, also stated that formal meeting of the AC is the core of its work and adequate time is to be permitted to empower the AC to attempt as full disclosure on the EDQ (Appuhami, 2017). Additionally, AC is responsible in ensuring that the implementation of company policies is in the congruence with the stakeholder's interest and social contracts. On the other hand, the AC reflected by the frequency of the AC meeting during one year may give effect towards the EDQ (Chariri, 2017). However, in Malaysia there is no regulatory necessity to command the minimum number of AC meeting to be held every year (Yatim, 2009). Based on previous study, Persons (2009) stated that the more effective an AC meeting is held, the larger the companies will make in voluntary ethics disclosure. While, Xie (2009), stated that there is insignificant relationship between the number of meeting and voluntary disclosure. Based on the previous study, there is a significant relationship between frequency of AC meeting and the EDQ. The AC should hold the meetings at least four times a year. The AC members are responsible in monitoring risk that will give impact to the company's activities on the environment (Chariri, 2017). Hence, this hypothesis has been proposed:

Hypothesis 3 (H3): There is a significant relationship between the frequency of audit committee meeting (MEETING) and the environmental disclosure quality (EDQ).

5.2.4. Financial Expertise of Audit Committee (EXPERT) and Environmental Disclosure Quality (EDQ)

AC financial expertise is the person who is an expert in analyzing or evaluating the financial statement with level of complexness akin to the business on which the audit committees that they serve. The AC financial expertise will be depending on the proportion of members who have an expertise in accounting and finance. AC should include at least a member who has a relevant accounting or finance qualification or background to dismiss their duties effectively (Appuhami, 2017). In Malaysia, members of AC are required to have a good understanding of financial reporting issue (Foo, 2017).

Previous studies indicate that there is a significant relationship between the financial expertise of AC and disclosure. This shows when Mangena and Pike (2005) used the data utilized from 262 UK companies which find that there is a significant relationship between AC financial expertise and the interim disclosure level. Furthermore, using the data taken from the sample of 256 UK firms, Mangena and Tauringana (2007) found that the compliance with the disclosure requirement is positively related to AC with financial expertise. However, this study indicates that well-educated and expert AC members are better prepared for their monitoring roles and perform their duties effectively and efficiently. Any negative relation from the previous study is that they are further clarified that the span of the committee and financial expertise of the AC members give huge negative relationship (Che Abdul Hamid et al., 2015). Thus, the hypothesis can be developed as follow. Hence, this hypothesis has been proposed:

Hypothesis 4 (H4): There is a significant relationship between the financial expertise of audit committee (EXPERT) and the environmental disclosure quality (EDQ).

5.2.5. Legal Background of Audit Committee (LEGAL) and Environmental Disclosure Quality (EDQ)

One of the measurements of AC's expertise is whether they have legal background or not. Moreover, a person can be said to have legal background when they have the academic or professional qualification related to the legal studies. Krishnan et al. (2011) define the AC as a legal expert when they have a law school degree or working experience as a lawyer. The AC member with a legal experience can be a great asset as practitioners of the profession and understands the implications of any breach of duties. In fact, Schwarcz (2006) concluded that there is a strong perception from the public, that lawyer, to certain extent, have responsibilities to prevent environmental reporting failure.

However, from the perception of Krishnan et al. (2011), the AC with legal expertise understands legal liability that could occur from poor quality information, we accept that their 'natural attention and interest will be attending to legal risk, giving more support to compliance and internal control. There is no previous study that mentioned about positive relationship between legal background of AC and the EDQ. Hence, this hypothesis has been proposed:

Hypothesis 5 (H5): There is a significant relationship between the legal background of audit committee (LEGAL) and the environmental disclosure quality (EDQ).

5.3. Sample Selection

As at 28 September 2018, there are 938 companies listed on bursa Malaysia, and there are eight ESI that has been classified which are construction, consumer products, energy, industrial product, plantation, property, transportation and utilities (Fatima et al., 2015 and NAICS Code). ESI are companies which classified as industries that are sensitive towards the environment which gives a huge negative impact to the natural environment (Fatima et al., 2015). From the population of 938 companies, only 254 ESI that had disclosed about EDQ meanwhile, two companies did not have the annual report of the respective year in the Bursa Malaysia and another 15 companies where those companies which did not disclose about environmental information in their annual report during 2016. Therefore, only 237 companies have been selected to generate data as sample.

Table 01. Distribution of Sample Companies

No.	Section	Companies Selected	Percentage (%)
1.	Construction	21	8.86
2.	Consumer Products	67	28.27
3.	Energy	17	7.17
4.	Industrial Products	55	23.21
5.	Plantation	25	7.64
6.	Property	28	11.81
7.	Transportation	14	5.91
8.	Utilities	10	4.22
	Total	237	100%

As shown in Table 01, content analysis has been used to collect the data in examining the relationship between independent variables and dependent variable. Content analysis for the dependent variable, ED quality index was adopted from Fatima et al. (2015). They used divided grading theme which assign “0” if the items are not disclosed in the company’s annual report, “1” if the items are disclosed as general in the company’s annual report, while “2” if the items are disclosed in more specific terms but it is non-quantitative and “3” if the items are disclosed and quantitative but non-monetary, lastly assign “4” if the items are disclosed for both monetary and quantitative in the company’s annual report. With the 9 categories of disclosure checklist, a total of 46 environmental disclosure quality items, a company are capable to score maximum of 184 points (46×4) in the checklist. CSR and Statement of Sustainability section were referred in analysing the content regarding the ED Quality index. While for independent variables information, it has been referred to Statement of Corporate Governance of their annual report.

Size of AC is measured by the number of board directors which the AC serves in the board at the end of financial year (Appuhami, 2017). The independence of AC is the proportion of Independence Non-Executive Directors of the AC who serve in the board. The independence of AC is measured from the number of Independent Non-Executive Directors on the AC divided by the total number of directors on the AC serve in the board at the end of the financial year (Appuhami, 2017). The frequency of AC meeting is measured by number of AC’s meeting held annually during the financial year of study (Appuhami, 2017). The AC financial expertise can be measured from the number of board of directors on the AC who has financial expertise or accounting background divided by the total number of directors on the AC serve in

the board at the end of financial year (Appuhami, 2017). One of the measurements of director's expertise is whether they have legal background, the legal background of AC can be measured from the number of board of directors on the AC who serve in the board who has legal background or qualification divided by the total number of directors on the AC at the end of financial year.

6. Findings

The model employed in this study is as follows;

$$EDQ_{it} = \beta_0 + \beta_1(SIZE)_{it} + \beta_2(INED)_{it} + \beta_3(MEETING)_{it} + \beta_4(EXPERT)_{it} + \beta_5(LEGAL)_{it} + \varepsilon_{it}$$

Based on the results shown in Table 02, the level of environmental disclosure quality (EDQ) is reported maximum number is 103 with the mean score for overall sample of the study is 45.42. It shows that the level of the disclosure is consider low as it is less than 50% of the total index.

Table 02. Descriptive Statistics

	Mean	Std. Deviation	Min	Max
Dependent Variable: Environment Disclosure Quality	45.417	14.935	27.00	103.00

The normality test was conducted, and the results showed that only the EXPERT and LEGAL are normally distributed however the other variables are non-normally distributed with skewness and kurtosis outside the range of ± 2.0 . Therefore, all the variables are transformed to get normal distribution using Van der Waerden transformation method as proposed by Cooke (1998) before proceeding with further analysis. According to Abdul Rahman and Ali (2006), normal data will have a standard skewness within ± 1.96 and standard kurtosis of ± 2 . Table 2 shows that all the data are normally distributed.

Table 03. Normality Analysis

	Skewness	Kurtosis
EDQ	0.008	-0.236
SIZE	0.893	-0.249
INED	-1.074	-0.023
MEETING	0.198	0.226
EXPERT	-0.011	-0.176
LEGAL	0.611	-0.497

As all the data are normally distributed, the Pearson correlation analysis was conducted to test the relationship between SIZE, INED, MEETING, EXPERT, LEGAL and EDQ among public listed companies in Malaysia. Table 3 shows that all the variables tested have no multicollinearity problem as the value not more than 0.9 (Gogtay & Thatte, 2017). It indicates that all the variables are not highly correlated to each other. Thus, no variable was dropped in this.

Table 04. Correlation Analysis

	EDQ	SIZE	INED	MEETING	EXPERT	LEGAL
EDQ	1	.203**	-0.090	0.029	-.157*	-0.097
		0.002	0.165	0.660	0.015	0.136
SIZE		1	-0.124	0.029	-.284**	-0.018
			0.057	0.661	0.000	0.786
INED			1	0.124	0.088	0.079
				0.057	0.177	0.226
MEETING				1	-0.056	-0.043
					0.395	0.509
EXPERT					1	-0.071
						0.276
LEGAL						1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Subsequently, the regression analysis was conducted as the extension of correlation analysis to test Hypothesis 1, Hypothesis 2, Hypothesis 3, Hypothesis 4 and Hypothesis 5 in a single model. As shown in Table 3, tolerance values and variance inflation factor (VIF) results indicate that multicollinearity is not an issue and it satisfied the multicollinearity assumption since all these tolerance values are greater than 0.1 and all VIF is lesser than 10 (O'Brien, 2007). As shown in the Table 4, all the five variables (SIZE, INED, MEETING, EXPERT and LEGAL) have explained for 4.5% of the variance of EDQ. In addition, the results showed that the model is well-specified as indicated by F value of 3.233 at a significant level of $p = 0.008$ ($p < 0.01$). This study hypothesized that size of audit committee (SIZE), independence of audit committee (INED), frequency of audit committee meeting (MEETING), financial expertise among audit committee (EXPERT) and legal background of audit committee (LEGAL) might influence and have significant relationship on environmental disclosure quality (EDQ). Regression analysis in table 5 shows the standard coefficient and t-value of SIZE at 0.062 and 2.422 respectively. Since the p-value is 0.016 ($p < 0.05$), there is sufficient evidence at 95% confident level to conclude that there is a significant positive relationship between SIZE and EDQ among public listed companies in Malaysia. Therefore, Hypothesis 1 is supported.

Table 05. Regression Analysis

Dependent variable	EDQ				
R square	6.5 %				
Adjusted R square	4.5 %				
F	3.233				
Sig.	0.008				
Model	Standardized coefficient	t	Sig	Tolerance	VIF
(Constant)		-0.159	0.874		
SIZE	0.062	2.422	0.016**	0.908	1.101
INED	-0.155	-0.851	0.396	0.957	1.045
MEETING	0.021	0.319	0.750	0.976	1.024
EXPERT	-0.112	-1.678	0.095	0.907	1.103
LEGAL	-0.097	-1.512	0.132	0.983	1.017

**Statistics is significant at the 0.05 level

However, the p-value of other variables, INED, MEETING, EXPERT and LEGAL are 0.396, 0.750, 0.095 and 0.132 respectively which are more than 0.05. It shows that the variables do not achieved at least 95% confident level, thus it indicates that there is no sufficient evidence to support the Hypothesis 2, Hypothesis 3, Hypothesis 4 and Hypothesis 5. It can conclude that there are no significant relationships between: independence of audit committee and EDQ; frequency of audit committee meeting and EDQ; financial expertise of audit committee and EDQ; & legal background of audit committee and EDQ.

7. Conclusion

The first objective of the study is to measure the environmental disclosure quality among ESI for the year 2016. This study found that only 45.42% mean score which is less than 50% from overall sample of this study have disclosed about environmental disclosure quality in their annual report. This result indicates a moderate awareness among ESI in disclosing about environmental reporting.

The second objective of the study is to identify the influence of audit committee characteristics toward the EDQ. From the analysis, this study has found that only size of audit committee has a significant positive relationship toward EDQ among ESI. This means that for every unit increase in the size of audit committee, it will result in an increase of every unit in the environmental disclosure quality. This is consistent with the study done by Akbas (2016). It can be concluded that the more people in the team might influence the decision of environmental disclosure quality as it become huge debate among the stakeholders. However, the other four AC characteristics show that there are no significant impact towards the decision of environmental disclosure quality among ESI. Based on the findings, the results do not support the hypotheses. Klein (2002) discovered that there is insignificant association among the independent AC with corporate voluntary disclosure. Moreover, the independent directors have lack of control to withhold information for their own benefits. Meanwhile, the insignificant relationship between MEETING and EDQ is consistent with the study done by Xie (2009). As for EXPERT and LEGAL show that audit committee with financial expert and legal background members does not affect the contribution of environmental disclosure quality among the ESIs. The findings are insignificant with the previous studies' findings, Che Abdul Hamid et al. (2015), and Krishnan et al. (2011). This can be concluding that the requirement of the disclosure about the environmental is still on voluntary basis.

This study would like to recommend to the related regulatory bodies to develop new requirement in inculcate and increase the awareness about the environmental disclosure to all public listed companies especially the ESIs. Although this study has reached its objectives, there are limitations as well. Firstly, by focusing on a single year, it only provides a snapshot of corporate disclosure. A longitudinal study enables any trend in the reporting practice to be observed. Furthermore, there are also lacks of terms in determining the criteria of each element in the index. This is because there is an inconsistency of terms that have been disclosed in the annual report of the companies. Thus, this has caused the difficulties in determine the rating score and might have different results because the justification is based on the researchers' own judgment. However, the limitation mentioned above will not invalidate the findings of the study.

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