

**LECTURER AND STUDENT COLLABORATION RESEARCH**

**COMPARATIVE ANALYSIS OF ENVIRONMENTAL  
MANAGEMENT DISCLOSURE IN ASEAN COUNTRIES  
(STUDY ON OIL, GAS, AND MINING COMPANIES)**

**SCIENTIFIC ARTICLE**

Submitted to Qualify the Requirement of  
Undergraduate Program of  
Accounting Department



Written by :

**LUFY YUWANA MURSITA**  
**2012310003**

**SEKOLAH TINGGI ILMU EKONOMI PERBANAS  
SURABAYA  
2016**

## APPROVAL OF SCIENTIFIC ARTICLE

Name : Lufi Yuwana Mursita  
Birthday : Pacitan, 26 October 1994  
NIM : 2012310003  
Major : Accounting  
Study Program : Undergraduate  
Concentration : Management Accounting  
Title : Comparative Analysis of Environmental Management  
Disclosure in ASEAN Countries (Study on Oil, Gas, and  
Mining Companies)

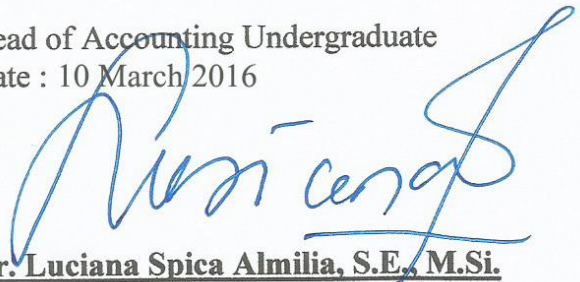
Approved and well received by :

Thesis Adviser  
Date : 08 March 2016



**Dr. Nanang Shonhadji, S.E., Ak., M.Si.**

Head of Accounting Undergraduate  
Date : 10 March 2016



**Dr. Luciana Spica Almilialia, S.E., M.Si.**

**COMPARATIVE ANALYSIS OF ENVIRONMENTAL MANAGEMENT  
DISCLOSURE IN ASEAN COUNTRIES  
(STUDY ON OIL, GAS, AND MINING COMPANIES)**

**Lufi Yuwana Mursita**  
Accounting Undergraduate  
STIE Perbanas Surabaya  
Email : lufimursita@gmail.com

**ABSTRACT**

*This research aims to measure and compare the extent of environmental management disclosure in ASEAN countries. It also extends the research by examining the association between corporate governance score and environmental management disclosure and also identifying the cause of difference among ASEAN countries. Therefore, this study is explanatory sequential mixed method which after using quantitative approach it continues with qualitative approach. This study utilized 17 oil, gas, and mining companies from six countries as research sample with total data of 51 annual reports along 2012-2014. To find the result, it conducts descriptive analysis, Kruskal Wallis, and Regression Analysis provides by SPSS version 22.0. The qualitative approach refers to related prior studies, book, and official website. The result shows that environmental management disclosure in ASEAN are still averagely low. It is found a significant difference extent of disclosure among ASEAN countries along the observed period. Besides that, corporate governance score significantly affects the extent of disclosure. The difference among countries is identified as the effect of the existing regulation, the policy taken by company, and national cultures.*

*Key words : environmental management disclosure, ASEAN countries, corporate governance score, difference, external factors*

**INTRODUCTION**

The increasing number of company is followed by the coming up of environmental problems. Environmental crisis because of high level waste which is resulted by production or exploration process and product remains. Several studies mentioned that some companies have a set of reputational problem because of the irresponsibility in environmental problems, especially companies which exploit and get the resources from the nature. The example is explained by Eljayash (2012) that oil and gas company has high demand to be more aware to the environmental problems such as pollution which is resulted. Another case is mining company that often makes a damage in the environment because of the exploration activity (Foncesa et al, 2012). In other hand,

both of these companies product are the inseparable needs of the human in the world. Therefore, the oil, gas, and mining company now is increasing the trend of environmental issues involvement to maintain the society trust and their sustainability.

Hadi (2011:37) stated that environment side of the company closely related to local community, issue community, employee, and customer, which the relation is in the form of sustainable development, waste management, emission, energy usage, and product life cycle. Information about this activity is what the stakeholders need, considering the environment impacts of the activity non-performance endangers the environment, such as contamination, air pollution, etc. Burnett et al (2011) states that eco-effective management increases

firm value and it is sustained beyond the current period. Also because of realizing this fact, afterward, the stakeholders demand towards this kind of information is being relatively high.

The fulfillment of information demand by the company points out the awareness of management that sustainability is inseparable with society acceptance. Business and society can be most fully understood in relationship to the broader natural environment which they interact each other (Lawrence & Weber, 2014:212). Given the importance of both financial and non-financial disclosure from the stakeholders, Global Reporting Initiatives, a non-profit organization, since 2000 issued a guideline for preparing annual report. GRI (2013:5) stated that they support company sustainability by setting a reporting guidelines, including reporting principles, standard disclosures, and implementation manual.

GRI guideline is a standard to combine information which contains economic, environmental, social, and governance aspects which the most important part of company continuity determinants. Previous study by Schadewitz and Niskala (2010) resulted information that GRI reporting is an important explanatory factors for a firm market value. This reporting helps firm to achieve higher number of investor and increased stock price indirectly. It then coincides with the existence of OECD Principles of Corporate Governance that company used to assess the level of corporate governance. This principle also contains requirements of disclosure which then can be used to decide whether a company is in good corporate governance or not. This matter motivates the author to also examine the association between corporate governance score and environmental management disclosure in which the corporate governance score may the one of environmental management disclosure determinant.

Several studies about environmental disclosure have been held, especially in measuring the extent of disclosure. Ullah et al (2014) investigates the environmental disclosure practices in annual report in Bangladesh. The result suggests that the extent of environmental disclosure is still low. Other sampled research is by Salama (2012) resulted that for company in United Kingdom, the extent of disclosure is positively affected by the size and industry type. While Mukherjee et al research (2010) suggests that in India, the influencing factors of disclosure are effective tax rate, liquidity, and leverage.

ASEAN countries in ASEAN Economic Community, according to [www.asean.org](http://www.asean.org) (2015), continue to be actively engaged in addressing global environmental issues in accordance with the principle of common but differentiated responsibilities. It means that environmental aspect is one of emphasis in the countries cooperation. Each country government encourages the all of the society and company to play a role in this effort. Environmental disclosure should be a way for company in the ASEAN countries to perform their synergy to this objective. Besides that, to fulfil both national and cross-national investor demand of information, the companies now are developing the quantity and quality of the information, both in financial statement and annual report. Therefore, this study seeks to analyze ASEAN countries annual report information disclosure.

This study purposes to investigate the extent of oil, gas, and mining company environmental management disclosure in ASEAN countries. Generally, oil, gas, and mining company gives higher responsibility towards the environment because its activity which explores more natural resources. Besides that, this study also examine the correlation between corporate governance score and environmental disclosure. The last, there is also qualitative approach to further explore the causes of difference in environmental

management disclosure among the countries.

## **THEORETICAL REVIEW AND HYPOTHESIS DEVELOPMENT**

### **Environmental Management Disclosure**

Environmental management itself is closely related with environmental cost. Environmental cost is defined as cost that are incurred because poor environment quality exists (Hansen and Mowen, 2006:699). The difference is in reporting, which environmental management is reported in annual report while environmental cost is in financial statement of the company. According to the definition of environmental cost, environmental management then is about how managers maintain the environment from destruction. Environmental management is defined as a set of processes and practices that enable organization to reduce environmental negative impact and increase its operating efficiency (<http://www.epa.gov/ems/>, 2015). Supporting that statement, Lawrence and Weber (2011:261-262) also states that environmental management confers four competitive advantages to the firm, including cost saving, product differentiation, technological innovation, and strategic planning.

### **Legitimacy Theory and Social Contract Theory**

Legitimacy is a psychological condition people alignments or group who are very sensitive towards environment symptoms, both physically and non- physically (Hadi, 2011:87). Making conclusion from several arguments of legitimacy theory definition in related literature, legitimacy theory is a theory which states that management has determinants to remain legitimate. Some of factors that bring to positive effect are public communication, perception building, and disclosure, one of is social disclosure. Environmental disclosure as the part of social disclosure is one of factor which maintains company management

legitimation. The disclosure reduces legitimacy gap, defined as asymmetry in company activity with society's expectation and perception of it. Conflict because of this discrepancy is anticipated.

Besides the legitimacy theory, social contract theory is also underlying this study. Social contract theory states that within interrelated society life, one most needed is harmonization and balance, covering with the environment (Hadi, 2011:95). Company, essentially, is the part of large society which both of them are influencing each other. Thus, in order to attain equality, social contract is required, in the form of agreements, either explicitly or implicitly for mutual protection. Environmental issue is a major issue that can rise conflict between company and society. Society does not want to be losses because of the company activities. In other hand, company which attempts a good management in this matter has been tried to perform its role as the part of social contract. This means that company can position its existence in that mutually beneficial cooperation.

### **Disclosure Guideline for Oil, Gas, and Mining Company**

Global Reporting Initiative provides guidance for all reporting in particular sectors. This helps company in the five sectors to make reporting more relevant and focused. Besides that it encourages the companies to be more transparent. This will give stakeholders more information they need, and help these sectors become more sustainable ([www.globalreporting.org](http://www.globalreporting.org), 2012).

GRI (2013:3) mentioned that oil and gas company disclosure is based on the GRI Oil and Gas Sector Disclosure, while mining company is based on the GRI Mining and Metals Sector Disclosure. These specific GRI guidelines are issued in May 2013 to facilitate the need of disclosing key aspects of sustainability performance that are meaningful and relevant to oil, gas, and mining company

which are not sufficiently covered in the G4 Guidelines. This standard contains additional disclosure requirements, definitions, and guidance on existing G4 indicators for the specific sector. The aspects of environmental management disclosure based on GRI is listed on Appendix 1.

Company can reach environmental transparency by disclosing all information related with environmental activity in the annual report or sustainability report. The disclosure recommends to fulfill items ruled by GRI guideline. GRI has given the way to disclose comprehensively by providing an index of disclosure in order company can explain its all environmental activity. The index consists of category of disclosure. In each item of disclosure, company can describes details of the activity.

The existence of regulation motivates the availability of sustainability report from all types of company in any area. In other hand, not all company provide annual report which contains environmental disclosure because of the lack mandatory regulation concerning the sustainability report. According to CSR Asia ([www.csr-asia.com](http://www.csr-asia.com), 2012), in Asia, mandatory sustainability reporting is a relatively new development. Therefore, it is worthwhile for companies to encourage local stock exchanges to move towards mandatory reporting in order to improve national and regional sustainability outcomes.

### **Corporate Governance and ASEAN Corporate Governance Scorecard**

There is no specific definition of corporate governance that causes different definition among countries. Plessis et al (2007:6-7) defines corporate governance as :

The process of controlling management and of balancing the interests of all internal stakeholders and other parties who can be affected by the corporation's conduct in order to ensure responsible behavior by corporations and to achieve the maximum level of

efficiency and profitability for a corporation.

Besides that, Solomon (2008:14) has his own definition of corporate governance, which suggests that corporate governance is the system of checks and balances which ascertain that company carries out their accountability to all stakeholders and is socially responsible in all areas of business activity. Based on those definitions, it can be concluded that corporate governance contains these components : process of supervision/controlling, ensuring the company's responsibility and accountability, and relating with interests of stakeholders. In practice, expertise develops principles of corporate governance. However, each regions has their own principles such as OECD Principles of Corporate Governance.

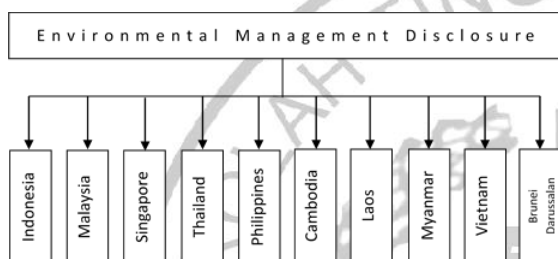
OECD explains that corporate governance is concerned with ensuring the flow of external capital, findings ways to attract various stakeholders in the firm to undertake optimal level of investment in capital. Five areas or aspects which are included to this principle are Right of Shareholders, Equitable of Shareholders, Role of Stakeholders, Disclosure and Transparency, and Responsibilities of the Board. Developing the integrated capital market, ASEAN Finance Ministers, in 2009, endorsed ASEAN Capital Market Forum (ACMF) Corporate Governance (CG) Initiative. To attain this mission, ACMF released ASEAN Corporate Governance Scorecard which referred to OECD Principles of Corporate Governance.

ASEAN countries is recommended to use and developing their corporate governance based on this scorecard (ACMF, 2014). This research identifies corporate governance in ASEAN countries. Hence, measuring the company corporate governance score is appropriate to use Corporate Governance Scorecard which is based on OECD Principles of Corporate Governance.

## Theoretical Framework

Six countries in ASEAN is the main object analyzed in this research. According to the previous study and theoretical basic above, in this study, there will be three steps done by the author. First, those countries are examined to know and compare the extent of disclosure, respectively. Second is the analysis of association between corporate governance score and environmental management disclosure (i.e. by the extent of disclosure).

Graphically, the theoretical framework is shown as below :



Source : developed by author

**Figure 1**  
**Theoretical Framework of Comparative Analysis**



Source : developed by author

**Figure 2**  
**Theoretical Framework of Correlation Test**

Result of study in several countries suggests that environmental management disclosure in country level is averagely low (Ullah et al, 2013). Besides that, the environmental management disclosure also effected by some factors (Buniamin, 2010). The fact shows that there is difference in ASEAN countries macro-economic condition, regulation, and the other existing diversity. However, the extent of environmental management disclosure in each countries is going to be different.

Walls et al (2012) study result shows that there is a significant association between corporate governance and

environmental performance. While the increasing of environmental performance has positive association with environmental management disclosure (Clarkson et al, 2006). This indicates that there is correlation between corporate governance and environmental management disclosure.

Based on the previous study and theoretical framework, below are hypothesis of study :

H<sub>1</sub> : There is significant difference in environmental management disclosure extent of oil, gas, and mining company among ASEAN.

H<sub>2</sub> : There is significant association between corporate governance score and environmental management disclosure in oil, gas, and mining company of ASEAN countries.

## RESEARCH METHOD

### Population, Sample, and Sampling Technique

This research involves companies in countries which are included to ASEAN. There are ten countries covering Indonesia, Malaysia, Singapore, Philippines, Vietnam, Thailand, Cambodia, Myanmar, Laos, and Brunei Darussalam. The criteria of the sample company are :

1. Go public oil, gas, and mining company
2. Originally come from the subjected countries
3. Issue and publish annual report in company or stock exchange website
4. Use English as reporting language

Data of those companies for the process of analysis is taken from annual report in period of 2012-2014. This is considered as the most up-to-date information to provide actual investigation about environmental management disclosure in ASEAN. The 3 years data is expected to perform both consistency and improvement of company environmental management disclosure. Therefore, the sampling method is categorized to area sampling because this study only analyzes

the company within particular area, or in this case is ASEAN.

### **Data and Data Collection Method**

As the data type aforementioned, this research will use annual report of companies which is included to the sample. Annual report which becomes the main data source of this study is taken from 10 countries' stock exchange websites, including Indonesian Stock Exchange, Malaysia Stock Exchange, Philippines Stock Exchange, Singapore Stock Exchange, Stock Exchange of Thailand, Hanoi Stock Exchange & Ho Chi Minh Stock Exchange, Cambodia Stock Exchange, Philippine Stock Exchange, and Lao Securities Exchange. In case of in some of those stock exchange, the annual report sometimes cannot be found, the search will be done further to the company website. So as the countries which does not have stock exchange.

### **Operational Definition and Variable Measurement**

The following is the operational definition and measurement of those variables :

#### **1. Corporate Governance Score**

Corporate governance score is measured by reference to ASEAN Corporate Governance Scorecard designed by ASEAN Capital Market Forum. This scorecard, actually, based on OECD Principles which contains five areas, covering right of shareholders, equitable of shareholders, role of stakeholders, disclosure and transparency, and responsibilities of the board.

The number of corporate governance score is determined based on the ASEAN Corporate Governance Scorecard. It contains 5 area as mentioned in the prior sub-chapter. While related with this study, area taken to the measurement is Disclosure and Transparency. List of the disclosure items is listed in Appendix 2. Each of those area has points of disclosure

which will be identified. Company's annual report and website will be checked whether it discloses the points or not. Disclosed point in each area is given with 1, while not disclosed point is 0.

2. **Environmental Management Disclosure**  
Environmental management disclosure is the interpretation of management practice inside the annual report. The extent of disclosure is indicated by the items disclosed by the company based on the GRI guideline. The measurement of environmental management disclosure comprises extent, both of the quantity and quality. To analyze this amount, this study uses content analysis and qualitative approach. Extent of disclosure quantity is the percentage of total environmental management items disclosed by the oil, gas, and mining company in annual report compared with total environmental disclosure items (34 items) which should be reported based on GRI sector guidelines.

The extent of quantity resulted from this formula becomes the proxy of environmental management disclosure in its correlation analysis with Corporate Governance Scorecard variable. Then, result of this quantitative analysis on environmental management disclosure extent then is identified using qualitative analysis. It is to explore the causes of the quantitative study result, whether there is difference or not in the environmental management disclosure among ASEAN oil, gas, and mining countries.

### **Data Analysis Technique**

This research adopts statistic technique in analyzing the variable. Since the first research is designed as quantitative research, the analysis will use a number to be analyzed and to meet the determination of result. Data will be processed by using these technique in SPSS Statistic version



22.0 for Windows program with the process described as below.

### 1. Descriptive Analysis

Descriptive analysis describes data by identifying the mean, deviation standard, variance, maximum, minimum, sum, range, kurtosis, and skewness (Ghozali, 2013:19). Using this technique, the general condition of data can be identified. According to Smith (2012:62) descriptive analysis is essentially simple to compare the observed value with the expected one to find and judge whether the difference is big enough or not. This technique is especially used to overview the extent of environmental management disclosure in ASEAN companies.

### 2. Kruskal Wallis

Kruskal Wallis is one of statistical analysis method to test a hypothesis. It used to examine the means difference among three or more groups by determining the difference significance between a group with another group, especially for non-parametric data. This analysis is utilized since data used in this study cannot fulfil the assumption of parametric data test.

The result of this analysis is going to be further identified using qualitative approach. It purposes to find the reasons of result which proves the hypothesis. The technique in conducting the qualitative analysis is finding some factors affecting the difference of environmental management disclosure among ASEAN countries.

### 3. Regression Analysis

Regression analysis is to measure both the direction and strength of association among variables to measure the impact of the influence (Ghozali, 2013:40). In this research, regression analysis helps to measure the association between corporate governance score as independent variable and environmental management disclosure as dependent variable. However, before conducting regression analysis, it needs

to conduct test of classic assumption. In this case, normality test is utilized. It is to ensure that the data used for the analysis is normally distributed.

## DATA ANALYSIS AND DISCUSSION

### Descriptive Analysis

Content analysis is conducted to measure the extent of environmental management disclosure on 17 oil, gas, and mining companies from 6 countries in ASEAN. The six countries are Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam. Result of this analysis becomes the data for the descriptive analysis. Descriptive analysis is utilized to result descriptive statistics both based on company and country. Analysis by company is to identify the score mean of company disclosure and also to point out the company with the maximum and minimum score of disclosure along the period. While analysis by country is to identify the mean of country disclosure and to know which country in the minimum and maximum score of disclosure.

Within the period of 2012-2014, oil, gas, and mining companies in ASEAN countries disclose environmental management disclosure in their annual report averagely about 26,53 percent. The maximum disclosure among 17 companies is 61,76 which is found in Padaeng Industry Public Company Limited annual report. While the minimum disclosure is 9,8 percent that is the result of content analysis in SGS Singapore annual report.

It is also known that oil, gas, and mining company in ASEAN countries discloses environmental management in 2012 in average of 23,70 percent. The biggest extent of disclosure is 58,82 percent. Otherwise, the minimum disclosure in the year is 8,82 percent. Different with 2012, the average extent of disclosure in 2013 increases about 3,46 percent to be 27,16 percent. The highest extent of environmental disclosure is 58,82 and the minimum disclosure is 11,76. In

2014, companies in ASEAN countries averagely disclose about 28,72 percent by increase of 1,56 percent. The maximum disclosure also increases to be 67,65 percent. However, the minimum disclosure decrease to be back to 8,82 percent. The minimum extent of environmental disclosure is found in the same company along 2012-2014 respectively. As well as the maximum extent is also identified in the same company along the taken period. A company with the highest disclosure is Padaeng Industry Public Company Limited, while the lowest one is SGS Singapore.

In other hand, based on the analysis by country, along the period of 2012-2014, country with the highest mean of environmental disclosure is Thailand by the extent of 47,06 percent. Otherwise, the lowest extent of disclosure is 17,16 percent which is owned by Vietnam. The average extent of environmental management disclosure analyzed by countries is 26,98 percent. According to yearly analysis, in 2012, the minimum disclosure score is performed by Singapore of 12,75 percent, while in 2013-2014 is performed by Vietnam of 20,59 percent and 13,24 percent respectively. Besides that, the maximum score is found in Thailand about 38,24 percent, 44,12 percent, and 58,82 percent in each year 2012-2014. The yearly average of disclosures are 24,10 percent, 27,49 percent, and 29,33 percent respectively.

### Kruskal Wallis

The main objective of the research is to investigate difference in environmental management disclosure of oil, gas, and mining companies among the ASEAN countries. The result of analysis is defined on following table.

Table 1 depicts that there is significant difference among ASEAN Countries in the period of 2012-2014 (sig. 0,002). The result of analysis ensures that the overall environmental management disclosure is significantly different. In 2012, the level of difference significance is

0,115 or 11,5 percent which is more than 0,05 or 5 percent. It means that the difference of environmental management disclosure among ASEAN countries in 2012 is not significant.

**Table 1**  
**Comparative Analysis of Environmental Management Disclosure by Country**

Country	Sig.
Disclosure (%) Overall	0,002
Disclosure (%) 2012	0,115
Disclosure (%) 2013	0,387
Disclosure (%) 2014	0,091

Source : SPSS output, developed by author

Along 2012, oil, gas, and mining companies in ASEAN countries report the environmental activity in the range of 12,74 percent up to 38,24 percent and show contiguous extent of disclosure difference. The average extent of environmental management disclosure in 2013 of the sample countries is in range of 20,59 percent up to 44,12 percent. The maximum and minimum disclosure in 2013 increases from 2012 about 5,88 percent and 7,85 percent respectively. The Kruskal Wallis result represents the difference magnitude of environmental management disclosure among the countries in 2013. The level of significance is 0,387 or 38,7 percent which is also more than 0,05 or 5 percent. The difference significance decreases from 2012. In 2014, the oil, gas, and mining companies in ASEAN countries disclose their environmental management disclosure averagely in the range of 13,24 percent up to 58,82 percent. Environmental management disclosures among ASEAN countries in 2014 are still insignificantly different in 0,091 or 9,1 percent. However, the wide range of disclosure by countries is found making the higher significance of difference than the previous years.

From all above analysis, it is known that by yearly identification along 2012-2014, the environmental management disclosures of ASEAN countries have

insignificant difference in all years. Otherwise, by the simultaneously identification shown in the table 1, the disclosures are generally different among the countries. This fact provides evidence that there is difference in extent of oil, gas, and mining company environmental management disclosure quantity in each ASEAN countries ( $H_1$  accepted).

### Regression Analysis

The second objective of this research is to examine the association between corporate governance score and oil, gas, and mining company environmental disclosure in ASEAN countries. After analyzing the extent difference among the oil, gas, and mining companies in ASEAN countries, it is also analyzed the effect of corporate governance score which identified as one of determinant of the disclosure. Prior studies mentioned that good corporate governance in each countries have a significant effect towards environmental performance of the company. This analysis is going to prove the prior research result.

Beside executing regression analysis, to find the best result, it also needs to test the distribution normality of the data. Normality test is utilized to ensure that data used in the analysis is normally distributed. However, from this test, it is known that the data contains several outliers which causes the test should be conducted more than once. This research then successfully finds the normally distributed data after missing nine outliers data at the significance of 0,136 ( $\geq 0,05$ ). This abnormal is strongly alleged as the effect of each company uses same corporate governance score within the observed period. This is caused by the usage of Disclosure and Transparency aspect of ASEAN Corporate Governance Scorecard as the basis of measurement which produces only one corporate governance score in each company along the three years period. Nevertheless, with the data, it is found a good result of

regression analysis. Below is the result of regression analysis.

**Table 2**  
**Regression Analysis Result**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-31,610	11,911		-2,654	,011
Corporate Governance Score (%)	,608	,135	,579	4,494	,000

a. Dependent Variable: Environmental Disclosure (%)

Source : SPSS output

Locating the corporate governance score as independent variable and environmental management disclosure as dependent variable, according to regression analysis above, it is identified that the significance level is on 0,000. It means that corporate governance has a significant relation ( $\leq 0,05$ ) with environmental management disclosure of oil, gas, and mining companies in ASEAN Countries. The F test resulted Adjusted R Square of 0,319 or 31,9 percent. It means that environmental management disclosure extent by oil, gas, and mining companies is 31,9 percent affected by their corporate governance score, while the rest (68,1 of 100 percent) is affected by other determinants or factors.

The result of the analysis is successfully shows the support the hypothesis formulation. It proves that there is significant association between corporate governance score and oil, gas, and mining company environmental management disclosure of the ASEAN countries. This result is relevant with the prior study.

### Extent of Environmental Disclosure in ASEAN Countries

The measurement of environmental management disclosure is conducted by content analysis in annual report to find 34 aspects ruled in GRI Disclosure Index. The extent of disclosure is the result of found aspect divided by 34 as the total number of aspects. This research examines disclosure of 17 oil, gas, and mining companies'

activity from six countries in ASEAN. The number taken from the calculation is transformed to the form of percentage of disclosure.

Finding the result of descriptive analysis by country, the extent of environmental management disclosure in ASEAN along 2012-2014 is 26,98 percent. It means that from 34 items listed on GRI guideline, only about nine items which can be found inside the annual report of ASEAN countries. In 2012, mean of environmental management disclosure reaches 24,10 percent or about eight items disclosed. It found an increase to be 27,49 percent in 2013. It shows that for about nine items related with environmental activity which are provided by the companies. While in 2014, the disclosure is about 28,72 percent or almost ten items disclosed in the annual reports.

According to the extent number of disclosures within 2012-2014, generally, Thailand is countries with the highest one of 47,06 percent or 16 items disclosed. In this research, Thailand represents two companies with average extent of 61,67 percent and 32,35 percent, respectively. It shows that one of the companies reports a high environmental issue which then dominates the country extent of disclosure. In other hand, Vietnam is the country with the lowest extent of environmental disclosure of 17,16 percent or almost 6 items disclosed in their annual reports.

The result of the analysis shows that the environmental management disclosure in oil, gas, and mining companies' annual report is generally still low. This result is similar with previous study conducted by Ullah et al (2013) which mentioned that textile companies listed in Bangladesh Stock Exchange reports a low level of environmental disclosure with the mean of 16,17 percent. It also supports study by Buniamin (2010) which results conclusion that environmental reporting of all types of company in Malaysia is still low by the mean of 3,24 percent.

However, based on the data, it is always found an increase of environmental management disclosure of ASEAN countries in every year. It also supports the prior study by Foncesa et al (2012) which resulted conclusion that the promotion to provide stakeholders more meaningful and accurate information about sustainability progress through the annual report because of some mining factors had changed, especially to be better.

### **Comparative Analysis of Environmental Disclosure in ASEAN Countries**

As the main objective in this study, the result of comparative analysis are highlighted. This research examines whether there is a difference of environmental management disclosure in ASEAN countries addressing the oil, gas, and mining companies. The analysis consists of two types, they are through the comparison by country overall and yearly.

The 2012 yearly comparison results a significant number of 0,115 or more than 0,05. In 2013, the result mentions significance of 0,387 or more than 0,05. Also in 2014, the significance is on 0,091 or more than 0,05. This presents that according to yearly comparative analysis, the difference of environmental management disclosure is always insignificant. The insignificant difference in 2012-2014 is identified because of the enactment of new regulations related corporate social responsibility or environmental management disclosure in ASEAN countries. In 2011 and 2012, there are emerging mandatory regulations in Indonesia, Philippines, and Singapore, while the rests have ruled by regulations which issued before 2011. This indicates that Indonesia, Philippines, and Singapore are responding the regulations by increasing the level of disclosure. The result is the insignificant difference of disclosure among the countries.

However, the result of general analysis depicts significance number of 0,002 or less than equal to 0,05. This means

that generally, the environmental management disclosure within 2012-2014 in oil, gas, and mining companies annual reports are significantly different among those countries. This result support the hypothesis that there is difference in extent of oil, gas, and mining company environmental management disclosure in each ASEAN countries.

Besides that, this is also relevant with Eljayash et al (2012) which proved that the differences in environmental disclosure in Arab oil countries is still low compared with the other oil companies in developed countries. Even ASEAN countries does not all consists of developed countries, but the research object of both researches is oil companies. It means that environmental management disclosures in ASEAN companies and Arab companies are comparable.

#### **Correlation Analysis of Corporate Governance Score and Environmental Disclosure**

The second main objective is answered by the result of regression analysis mentioned in the last sub-chapter. Besides testing the difference of environmental management disclosure among ASEAN countries, this research also examine one of the disclosure extent determinants that is corporate governance score. This is to know whether corporate governance score will affect the extent of environmental management disclosure.

The regression result shows the significance number of 0,000 or less than equal to 0,05 which means that the corporate governance score has correlation with extent of environmental management disclosure of oil, gas, and mining companies in ASEAN countries. It also performs that corporate governance score impacts about 26,6 percent towards the extent of disclosure. Finally, it is concluded that the second hypothesis is also accepted.

This correlation test result supports the prior study held by Walls et al (2012) which mentioned that there is significant

association between corporate governance and environmental performance. Although the dependent variables are rather different, in which the current study is using environmental management disclosure, it has to be noted that environmental disclosure is the part of environmental performance. Furthermore, the relevance of the study also can be accepted.

#### **Extended Analysis on Environmental Disclosure**

This research utilizes GRI disclosure in determining the extent of disclosure, which there are 12 aspects and 34 items related to environmental management disclosure ruled by the guideline. Based on the content analysis result, it is also identified the companies frequently disclosed environmental items or aspects within 2012-2014. Along the period, all companies regularly disclose the aspect of Environmental Investment which informs the total environmental protection expenditures (frequency of 100 percent). This is usually found in the part of environmental issue or financial statement of the annual report. Regarding to this result, it means that oil, gas, and mining companies give attention towards environmental aspects. Furthermore, they agree that environmental investment is important to be budgeted. As the type of oil, gas, and mining companies, they have a high responsibility towards environment because of the high impact, so that environmental expenditure is one kind of mandatory for those companies.

Most of companies also frequently discloses (55,88 percent frequent) items included to Materials aspect. This aspects obtains disclosure of materials by weight or volume and recycled of input materials. Based on content analysis, these items are identified in the part of business operation or environmental issue of the annual report. In this case, it can be concluded that the disclosure of Materials aspect pushes by two factors, first is because the need of

economic disclosure, and the second is for the environmental necessity.

In the same number of disclosure frequency (55,88 percent), Biodiversity aspect is also often found in the oil, gas, and mining companies annual report. This aspect shows about operation impacts on biodiversity, habitats protected or restored, and IUCN red list species. The most frequently disclosed of these three items is the habitats protected or restored. This information is generally found in annual report in the section of environmental issue and mostly informs that they are regularly the type of habitat being protected or restored.

In other hand, there is also an item that never disclosed (zero percent) by all companies along the period of 2012-2014. That is Supplier Environmental aspect which requires company to disclose about new suppliers screened using environmental criteria and supply chain environmental impacts. Knowing the zero percent frequency to disclose, it shows that oil, gas, and mining companies basically do not maintain relationship with suppliers by firstly identifying its environmental performance. However, most of oil, gas, and mining companies' business operation does not need the existence of supplier for their raw materials, except for the indirect materials, because they generally get the raw materials from their own mining process.

The other aspects are more common disclosed are Product and Services and also Transport. Those frequently disclosed aspects or items mark the focus and attention of environmental issue chosen by the company. It is based by many factors, including the business operation necessity seen from economic aspect or the high awareness of the company towards environmental aspects. In other hand, the external factors are also affected the number of disclosure, such as regulation of stock exchange or country.

### **Factor Influencing Environmental Management Disclosure**

Many factors can affect the extent and focus of environmental management disclosure. One of determinant found in this study is corporate governance score which in ASEAN countries, it gives a significant effect towards the environmental management disclosure. The prior studies also find other internal factors, such as company size and environmental sensitivity (Buniamin, 2010) and organizational image and reputation (Zeng et al, 2011).

In other hand, external factors are also indicated to affect the extent of environmental management disclosure. Prior research by Ioannou and Seargeim (2011) showed that after the adoption of mandatory sustainability reporting laws and regulations in the company or country level, the social responsibility of business increases. This means that environmental management disclosure extent is affected by the existence of rules which cause environmental management disclosure in the form of sustainability report to be a mandatory.

Annual report is another kind of reports need to be delivered by the company in every year besides financial statement. Most of company in the world arrange the annual report with same elements of information disclosed but there is no report standards or rule for the arrangement. Generally, the systematic of annual report is made by the stock exchange and company joins the standard made by stock exchange where it listed. Because of that, the company discloses their information in different extents even with in same section of information. This goes to be the constraint of this study which not all companies discloses environmental management disclosure within annual report in high level extent. However, no company do not issue an annual report along the period. Besides that, this research stands to utilize the annual report to determine the extent of environmental management disclosure. The usage of

annual report aims to maintain comparability of the data resources.

Sustainability reporting is the best way and report to inform all company aspects comprehensively, including environmental aspects of the company. Actually, it has to be the best report to examine the extent of environmental disclosure because of the enactment of Global Reporting Index. Otherwise, the issuance of sustainability report is not a mandatory in all countries. It is based on the existing regulation which can be issued by market regulator/stock exchange, government, or both of them (Carrots and Sticks, 2013:13).

The literature review informs that national stock exchange of each country has different policy for the disclosure of sustainability reporting. Three aspects are considered, they are the existence of reporting guideline, existence of sustainability index, and information of sustainability reporting as listing requirement. There are two of six countries with stock exchanges mandate the listing company to publish sustainability report, they are Malaysia (Malaysia Stock Exchange) and Thailand (Thailand Stock Exchange). It means that listing company has to provide the information of company in sustainability report. While the rests are not required to issue sustainability report although the stock exchange provides reporting guideline, sustainability index, or both. Companies are encouraged to report on their sustainability performance with the existing standards.

Company in the country with mandatory regulation of sustainability reporting, at the end of year, also issue sustainability report besides the annual report. Along the process of collecting the annual report from the website, it is found several companies issue both annual report and sustainability report as expected. However, some of them only issue annual report and unexpectedly, there is also annual report which is combined with sustainability report to be a set.

Unfortunately, there is also companies which only issues annual report but the contents is overall about financial statement. This is one of reasons to reduce the number of data can be used in this research.

In fact, there are companies that provide both annual report and sustainability report, either as mandatory or as voluntary. However, for the comparability reason, this research stands to utilize annual report as the basis of analysis. Sustainability report is not used as additional information of the disclosure extent. According to the result of annual reports content analysis, this reporting condition induces some companies do not disclose environmental management description in annual report since they have issued the sustainability report. It causes lack of environmental management disclosure analyzed in annual report. One of the company is SGS Singapore which has low level of disclosure. In other hand, there are also several companies which disclose environmental aspects in average extent of disclosure though they do not publish sustainability report.

The company which combined annual and sustainability reports result high extent of disclosure. Padaeng Industry Public Company Limited (Thailand) is the only one company which combines both of annual report with sustainability report. As the analysis result, the annual report generates maximum extent of environmental management disclosure that leads Thailand to be the highest rank. From this analysis, it is concluded that the existence of regulation affects the environmental management disclosure extent. It can causes either increase or decrease of the extent, depends on the policy taken by company for their report issuance. The existing condition and policy had by ASEAN countries causes the low level of environmental management disclosure even they are operating in environment highly impact business, in this case is oil, gas, and mining company.

Another factor which can influence the extent of environmental management disclosure also found by Orij (2010) who examined the relationship between corporate social responsibility levels and national cultures. The study suggests that culture is clearly associated to corporate social responsibility. The national cultures itself is based on Hofstede's cultures dimensions which consist of power distance, individualism, masculinity, uncertainty avoidance, long term orientation, and indulgence. Since this is a cross-national research which compares environmental management disclosure among six ASEAN countries, the national culture dimensions influence towards the environmental management disclosure also can be taken into account. To more elaborate about this matter, this research refers to Geert Hofstede website which becomes the center and provides culture dimensions scoring of all countries in the world. Geert Hofstede's website ([www.geert-hofstede.com](http://www.geert-hofstede.com)) provides information about each dimension definitions. Using logical thinking, this research also relates the information provided in the website with the environmental management disclosure condition, in which the national culture is one of disclosure determinants.

**Table 3**  
**Level of Hofstede's National Culture**

	Power Distance	Individualism	Masculinity	Unc. Avoidance	Long Term Or.	Indulgence
Indonesia	78	14	46	48	62	38
Malaysia	100	26	50	36	41	57
Philippines	94	32	64	44	27	42
Singapore	74	20	48	8	72	46
Thailand	64	20	34	64	32	45
Vietnam	70	20	40	30	57	35

Source : [www.geert-hofstede.com](http://www.geert-hofstede.com)

Note : score  $\leq 50$  is low, score  $> 50$  is high

According to the website, it is found that all ASEAN countries power distance are high. It means that those countries accept the hierarchical order which the power is centralized in the manager or another higher position, in this case is in the company, while the lower position is following the chosen decision. Relating with environmental management disclosure, it shows that companies in ASEAN countries disclose environmental management disclosure based on the mandate given by manager or another higher position. There is no compromise from the lower position to strive for power equality which means they cannot report the environmental management disclosure by their idea. This fact is considered leading the extent of disclosure to be low because the environmental policy depends on the mindset of the leader.

In the individual dimensions, all of countries are categorized on low level or generally called as collectivism. This suggests that the member of a country or organization has highly interdependence each other. This is relevant with social contract theory which mentions that company has a contract to the social or environment since their establishment. The collectivism character of ASEAN countries describes the environmental management disclosure is the representation of the awareness towards public interest related to environmental issue. This dimension category is considered causing the higher environmental management disclosure since the dimension is matched with social need.

Five of six ASEAN countries are identified in the low level of masculinity, or in other word is called femininity. It means that the country or company prioritizes relationship, caring each other, and life quality. By this fact, it is shown that environmental management disclosure is one of media to protect relationship of the company and society, environment balance, and maintain the society life quality. It is considered to lead the environmental



management disclosure to be higher because the femininity level should be proportional with number of environmental activity.

Uncertainty avoidance are low in five of six countries. It shows that most of countries in ASEAN are flexible and relax towards new things and tolerable to deviance. It describes the attitudes and responds of the company to emerging regulation related with the company. Many new environmental regulations were enacted since 2011 and 2012. By the low uncertainty avoidance, it is estimated that the company has no explicit respond to follow the rule. The decision to obey or disobey the rule is affected by the flexibility character of the company. This causes environmental management disclosure going to be low than if the company are in high level of uncertainty avoidance.

A half of countries have long term orientation (pragmatic culture) while the other has short term orientation (normative culture). In the pragmatic culture, the company or country shows its ability to adapt new change and persistence in achieving goals. In other hand, normative culture respect to existing tradition and quickly in achieving goals. Pragmatic culture maintains their existing tradition rather than paying attention to societal change. It means that although the present trend of environmental management disclosure is high, but the focus to improve the economic aspect of company is also still the most attention. This is different with normative culture which respect to tradition but considers the low propensity to save the future so it has to adapt to societal change. The environmental issue is one of the key in the future business, not only the economic aspect. Hence, country with pragmatic culture will have lower environmental management disclosure than the normative one.

The last dimension, five of six countries are categorized to low level of indulgence or called as restraint. This means that the country has high tendency to

cynicism and pessimism and has low preference to having fun. This character leads the company finds themselves are restrained by social norm and holds that taking take for indulgence is a wrong. Therefore, country with this such dimension is considered to have higher environmental management disclosure because by the existence of new regulations concerning with the practice, the company will feel being restrained by the regulation and budget their expenditure for environmental expense, rather than only focusing in economic activity.

Based on all national culture influence analysis, following the definition and the likelihood to respond towards environmental activity suggestion, it is concluded that environmental management disclosure in ASEAN countries are led to be higher by the dimensions of high collectivism, femininity, and restraint. However, the other dimensions, including high power distance and low uncertainty avoidance, also affect the disclosure conversely to be lower. As the statistical analysis result which shows that environmental management disclosure in ASEAN is still low, it is considered as the effect of very high level of power distance and lower level of uncertainty avoidance that lead more the company to disclose lower rather than to be higher. It is also affected by the level of orientation and evidently is more by the pragmatic culture.

In other hand, analysis also can be conducted by considering the number of score provided by the Geert Hofstede's website. In the previous general analysis, number of 0-50 is called as the low score while number of 51-100 is the higher one. The division is intended to break the scale into two groups which depict the overall effect of each national cultures. In the next analysis, based on the Geert Hofstede's website information, it is determined that score which goes to the zero means closer to the highest quality of low side culture. Otherwise, score which goes to one

hundred will be closer to highest quality of high side culture.

## **Hofstede's Culture Score Interpretation**

### **1. Indonesia**

According to Geert Hofstede's website all dimensions score, Indonesia has the third rank in environmental management disclosure among ASEAN countries along 2012-2014 from the cumulative effects of high power distance, collectivism, femininity, low uncertainty avoidance, long term orientation, and restraint dimensions. The increase in disclosure is caused by the good score of collectivism, femininity, long term orientation, and medium score of restraint. While the decrease is caused by the sufficiently high power distance and medium number of uncertainty avoidance. However, these cultures lead Indonesia in the average score of environmental management disclosure.

### **2. Malaysia**

Based on the score of Hofstede national culture, Malaysia environmental management disclosure extent is the cumulative effect of high power distance, collectivism, femininity, low uncertainty avoidance, short term orientation, and indulgence. The scores of each dimension cause Malaysia in the second rank of environmental management disclosure among ASEAN countries. A maximum power distance, low uncertainty avoidance, short term orientation, and indulgence cause the low level of disclosure in Malaysia. While the rank is strived by the medium number of collectivism and minimum femininity.

### **3. Philippines**

Philippines is on the fourth rank of environmental management disclosure as the cumulative effect of high power distance, collectivism, masculinity, low uncertainty avoidance, short term orientation, and restraint. This characteristic is generally like

Indonesia and Malaysia. The increasing of disclosure is predicted caused by medium score of collectivism and minimum score of restraint. Otherwise, very high power distance, masculinity, low uncertainty avoidance, and very short term orientation lead mostly to the low level of environmental disclosure.

### **4. Singapore**

According to its score, Singapore environmental management disclosure is the result of cumulative effect of high power distance, collectivism, femininity, low uncertainty avoidance, long term orientation, and restraint cultures. The cultures are built by the multi-ethnic society which consist of many races from all over the world. They cause Singapore in the fifth rank in environmental management disclosure among six ASEAN countries because they perform the high power distance and very low uncertainty avoidance which have greater effects to the low level of environmental disclosure.

### **5. Thailand**

Thailand is country with the highest extent of environmental management disclosure. It indicates the cumulative effect of high power distance, collectivism, femininity, high uncertainty avoidance, short term orientation, and restraint cultures. The score of collectivism, femininity, and uncertainty avoidance which outstanding than the other countries are predicted as the factors which dominate the cause of high extent of environmental management disclosure among ASEAN countries.

### **6. Vietnam**

Hofstede culture dimensions score of Vietnam shows that the level of environmental disclosure in Vietnam is the cumulative effects of high power distance, collectivism, femininity, low uncertainty avoidance, long term orientation, and restraint. The increasing of disclosure is predicted

because of the good score of collectivism, femininity, long term orientation, and medium score of restraint. However, the high power distance and low uncertainty avoidance lead more to the low level of environmental management disclosure.

According to all discussion above, it is known that the significant difference of environmental management disclosure by oil, gas, and mining companies in ASEAN is affected by many factors, including the external factor they are existing regulations and the policy taken by companies as the response towards the regulations. The difference regulation in each country and company policy results the difference in level of environmental management disclosure even though it is examined from same types of information resource that is annual report. Besides that, the extent of disclosure is also affected by the national culture.

## **CONCLUSION, LIMITATION, AND RECOMMENDATION**

This research aims to examine the difference of oil, gas, and mining companies' environmental management disclosure in ASEAN countries. Besides that, this also analyzes the correlation between corporate governance score and environmental management disclosure and identify the difference exist on environmental management disclosure. These research objectives are applied to the data in the period of 2012-2014. From the discussion, the following is the result of this research.

To identify difference in environmental management disclosure in oil, gas, and mining companies of ASEAN countries, the overall disclosures are firstly measured. The result of content analysis shows that the average disclosure by ASEAN countries is still low. While the comparative analysis proves that there is a significant difference in oil, gas, and

mining companies' environmental management disclosure.

According to the result of Regression Analysis, there is significant correlation between corporate governance score and environmental management disclosure. It presents that corporate governance score affects the extent of environmental management disclosure in ASEAN countries.

The difference exist on environmental management disclosure in ASEAN countries is caused by many factors which also including external factors. In this country comparative analysis, regulations related environmental management activity and disclosure issued by each stock exchange or government affects the extent of disclosure. In the company perspective, the policy taken by company in responding the existing regulation also affects the extent of disclosure. Besides that, since this is a cross-national research, national cultures is considered also gives influence to the disclosure.

Out of the result, this research has several limitations. Based on some prior studies, it is mentioned that there are many variables can affect environmental management disclosure. Yet, in this research, variable used as determinant of environmental management disclosure is only utilized corporate governance score. This is because correlation analysis is an extended research after the measurement and comparative analysis of disclosure extent. The single variable to be treated as independent variable is considered as the best variable to perform one of determinants of the environmental management disclosure.

The measurement of corporate governance score is still limited to the aspect of Disclosure and Transparency, while the ASEAN Corporate Governance Score consists of five aspects can be assessed. However, Disclosure and Transparency aspect is used after being considered as the most related aspects with

environmental management disclosure. The last, the result of corporate governance score assessment is abnormally distributed in the early normality test. The data is found normally distributed in the fifth normality test after missing some outliers. This data abnormal distribution is indicated because of the corporate governance score for each company along 2012-2014 has the same number as the effect of using ASEAN Corporate Governance Scorecard.

Based on the result and limitation of this study, there are recommendations which given to shareholder and future researcher. For shareholder, the trend of environmental management disclosure should be an important consideration in investment. Somehow, environmental management disclosure is an emerging trend of reporting which performs the company responsibility and awareness towards environmental issue besides focusing on economic side. In other hand, future researcher is also expected to conduct next research by utilizing other or all types of company in order to result more comprehensive extent of disclosure and involve all of ASEAN countries, enlarging the period of analysis to compare the extent of environmental management disclosure with also comparing pre and post period of regulations enactment or by another comparison basis, and using the limitation identified in this research as the reference for future researcher to conduct the similar research.

## REFERENCES

- Anonym. 2006, *Challenges and Prospects for the ASEAN Economic Community*, accessed from: <<http://www.asean.org/>> [September 21, 2015]
- Anonym. 2011, *ASEAN Sets Another Landmark for Economic Integration*, accessed from: <<http://www.asean.org/>> [April 25, 2015]
- Anonym. 2012, *Mandatory Reporting: Does It Make a Difference?*, accessed from: <<http://www.csr-asia.com/>> [January 06, 2016]
- Anonym. 2012, *Sector Guidance for G4*, accessed from: <<https://www.globalreporting.org/>> [October 30, 2015]
- Anonym. 2015, *ASEAN Stars by Market*, accessed from: <<http://www.aseanexchanges.org/>> [April 25, 2015]
- Anonym. 2015, *Environmental Management Systems EMS*, accessed from: <<http://www.epa.gov/ems/>> [April 24, 2015]
- Anonym. 2015, *Tanya Jawab ISO 14000*, accessed from: <<http://www.menlh.go.id/>> [April 25, 2015]
- Anonym. 2015, *The Effects of Oil Drilling*, accessed from: <<http://www.rainforestfoundation.org/>> [October 29, 2015]
- Anonym. 2016, *National Cultures*, accessed from: <<http://www.geert-hofstede.com/>> [January 12, 2016]
- Buniamin, S. 2012. "The Quantity and Quality of Environmental Reporting in Annual Report of Public Listed Companies in Malaysia". *Issues in Social and Environmental Accounting*, 42, 115-135.
- Burnett, R. D., Skousen, C. J., & Wright, C. J. 2011. "Eco-Effective Management: an Empirical Link between Firm Value and Corporate Sustainability". *Accounting and the Public Interest*, 111, 1-15.
- Carrots and Stick. 2013. *Sustainability Reporting Policies Worldwide – Today's Best Practice, Tomorrow's Trends*. Africa : GRI.
- Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. 2008. "Revisiting The Relation Between Environmental Performance and Environmental Disclosure: An Empirical Analysis". *Accounting, Organizations and Society*, 33(4), 303-327.

- Creswell. 2014. *Research Design : Quantitative, Qualitative, and Mixed Methods Approaches*. New Delhi : SAGE.
- Eljayash, K. M., James, K., & Kong, E. (2012). "The Quantity and Quality of Environmental Disclosure in Annual Report of National Oil and Gas Companies in Middle East and North Africa". *International Journal of Economics and Finance*, 4(10), 201-217.
- Fonseca, A., McAllister, M. L., & Fitzpatrick, P. (2014). "Sustainability Reporting Among Mining Corporations: a Constructive Critique of the GRI Approach". *Journal of Cleaner Production*, 84, 70-83.
- Ghozali, I. 2013. *Aplikasi Analisis Multivariate dengan Program IBM SPSS 21 Update PLS Regresi*. Semarang : Badan Penerbit Universitas Diponegoro.
- GRI. 2013. *Reporting Principles and Standard Disclosures*. Netherlands : GRI.
- Hadi, N. 2011. *Corporate Social Responsibility*. Yogyakarta : Graha Ilmu.
- Hansen, D., Mowen, M., & Guan, L. 2007. *Cost Management : Accounting and Control*. Singapore : Cengage Learning.
- Hofstede, Hofstede, and Michael Minkov. 2010. *Cultures and Organizations: Software of the Mind*. Revised and Expanded 3rd Edition. New York: McGraw-Hill USA.
- \_\_\_\_\_. 2001. *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations*. Second Edition, Thousand Oaks CA: Sage Publications.
- Ioannou, I., & Serafeim, G. (2014). "The Consequences of Mandatory Corporate Sustainability Reporting: Evidence from Four Countries". *Harvard Business School Research Working Paper*, (11-100).
- \_\_\_\_\_, G. 2011. "The Consequences of Mandatory Corporate Sustainability Reporting". *Harvard Business School Research Working Paper*, (11-100).
- Ismail, M. S., Ramli, A., & Darus, F. (2014). "Environmental Management Accounting Practices and Islamic Corporate Social Responsibility Compliance: Evidence from ISO 14001 Companies". *Procedia-Social and Behavioral Sciences*, 145, 343-351.
- Mbekomize, C. J., & Wally-Dima, L. 2013. "Social and Environmental Disclosure by Parastatals and Companies Listed on the Botswana Stock Exchange". *Journal of Management and Sustainability*, 33, p66.
- Noor, Juliansyah. 2013. *Metodologi Penelitian*. Jakarta : Prenada Media Group.
- Orij, R. (2010). "Corporate Social Disclosures in The Context of National Cultures and Stakeholder Theory". *Accounting, Auditing & Accountability Journal*, 23(7), 868-889.
- Plessis, J.J., McConvill, J., & Bagaric, M. 2007. *Principles of Contemporary Corporate Governance*. Australia : Cambridge University Press.
- Post, J. E., Frederick, W. C., Lawrence, A. T., & Weber, J. 2014. *Business and society: Corporate Strategy, Public Policy, Ethics*. Singapore : McGraw-Hill.
- Salama, A., Dixon, R., & Habbash, M. 2012. "An Examination of Environmental Disclosures in UK Corporate Annual Reports". *Journal of Accounting, Business & Management*, 191.
- Sekaran, U., Bougie, R. 2013. *Research Methods for Business – A Skill-Building Approach*. United Kingdom : John Wiley & Sons Ltd.
- Sen, M., Mukherjee, K., & Pattanayak, J. K. 2011. "Corporate Environmental Disclosure Practices in India".

- Journal of Applied Accounting Research*, 122, 139-156.
- Smith, M. 2012. *Research Methods in Accounting*. Singapore : SAGE Publication.
- Solomon, J. 2007. *Corporate Governance and Accountability*. New Jersey : John Wiley & Sons.
- Sugiyono. 1999. *Metode Penelitian Bisnis*. Bandung : CV Alfabeta.
- Ullah, H., Hossain, M. M., & Yakub, K. M. 2014. "Environmental Disclosure Practices in Annual Report of the Listed Textile Industries in Bangladesh". *Global Journal of Management And Business Research*, 141.
- Walls, J. L., Berrone, P., & Phan, P. H. 2012. "Corporate Governance and Environmental Performance: is there really a link?". *Strategic Management Journal*, 338, 885-913.
- Weber, R. P. 1990. *Basic Content Analysis*. London : SAGE.
- Zeng, S. X., Xu, X. D., Yin, H. T., & Tam, C. M. (2012). "Factors That Drive Chinese Listed Companies in Voluntary Disclosure of Environmental Information". *Journal of Business Ethics*, 109(3), 309-321

## APPENDICES

### Appendix 1. List of Environmental Management Disclosure Items

No.	Aspects	Number of Items
1	Materials	2
2	Energy	5
3	Water	3
4	Biodiversity	4
5	Emissions	7
6	Effluents & Waste	5
7	Products & Services	2
8	Compliance	1
9	Transport	1
10	Environmental Investments	1
11	Supplier Environmental	2
12	Environmental Grievance Mechanisms	1
<b>Total</b>		<b>34</b>

### Appendix 2. List of Corporate Governance Scorecard (Disclosure & Transparency)

No.	Indicator	Point
1	Transparent ownership structure	5
2	Quality of annual report	12
3	Disclosure of Related Party Transactions (RPT)	3
4	Directors and commissioners dealings in shares of the company	1
5	External Auditor and Auditor Report	3
6	Medium of Communications	4
7	Timely filing/release of annual/financial reports	4
8	Company Website	9
9	Investor Relations	1
<b>Total</b>		<b>42</b>