

**THE QUALITY OF VOLUNTARY
SUSTAINABILITY REPORT ASSURANCE
STATEMENTS: EVIDENCE FROM FORTUNE
GLOBAL 500**



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DECLARATION OF ORIGINALITY

I, Muhammad Bahrul Ulum, hereby declare that this thesis is true and accurate to be my own work specially written for partial requirement to complete Undergraduate Program of Accounting and has not initially been presented in any other occasions. I bear full responsibility for my undergraduate thesis.

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MOTTO AND DEDICATION

“Have a courage and be kind”

14.03.2015

(Taken from “Cinderella” that I watched in the middle of my work to finish this undergraduate thesis)

This Thesis is dedicated to:

My beloved parents and families

All my friends

My fellow Akuntansi UNDIP 2011 family

PREFACE

Alhamdulillah rabb al-'alamin. First of all, I would like to express my gratitude for Allah SWT for all of the blessings, guidance, and peace in my heart. Thanks for giving me health and thanks for giving me such a family, friends, and environment that are so supportive that I am here finally writing this foreword of my undergraduate thesis. Thank YOU.

After struggling a few months full of immense effort, I finally completed my undergraduate thesis entitled: **The Quality of Voluntary Sustainability Report Assurance Statements: Evidence from Fortune Global 500**. However, I realize that all the process will not running smoothly without the help from all related parties. Therefore, with humility and high admiration I would like to thank to:

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I realize that this thesis is far from perfect. Therefore, I will happily receive constructive feedback. I do hope that this thesis can be beneficial and useful for everybody who reads.

Semarang, March 16th 2015

Muhammad Bahrul Ulum

ABSTRACT

Number of companies adopting sustainability report assurance is increasing rapidly. Prior researches have explored factors that might drive companies to voluntarily adopt assurance on their sustainability reports. But, few researches focus on the quality of sustainability report assurance statements provided. The first objective of this research is to investigate how the quality of assurance statement differs among different assurance providers. The second objective of the research is to explore whether quality of assurance statement is jointly affected by national legal environment where company is located and the company's choice of assurance provider.

Population of this Research is Fortune Global 500 Companies 2014 list. Final sample of this research is 135 companies. Independent sample t-test is used to test how the quality of assurance statement differs among different assurance providers. Multivariate regression analysis is used to test whether quality of assurance statement is jointly affected by national legal environment and assurance provider.

The analysis' result indicates that national legal environment has a negative and significant effect on assurance statement quality. Assurance provider also has a negative and significant effect on quality of assurance statement, while industry has a negative and slightly significant effect on it.

Keywords: assurance, sustainability report, assurance quality

ABSTRAK

Jumlah perusahaan yang mengadopsi praktik assurance pada laporan keberlanjutan bertambah secara pesat. Penelitian sebelumnya telah menyelidiki faktor apa yang mendorong perusahaan untuk mengadopsi praktik assurance pada laporan keberlanjutan mereka secara sukarela. Namun, masih sedikit penelitian yang fokus pada kualitas dari laporan assurance yang disediakan. Tujuan pertama dari penelitian ini adalah menginvestigasi bagaimana perbedaan kualitas laporan assurance di antara penyedia jasa assurance yang berbeda. Tujuan kedua dari penelitian ini adalah menyelidiki apakah kualitas laporan assurance yang disediakan dipengaruhi oleh lingkungan hukum nasional dan penyedia jasa assurance.

Populasi penelitian ini adalah perusahaan yang masuk pada daftar tahun 2014 Fortune Global 500. Sampel dari penelitian ini berjumlah 135 perusahaan. Independent sample t-test digunakan untuk menguji bagaimana perbedaan kualitas laporan assurance di antara penyedia jasa assurance yang berbeda. Analisis multivariate regression digunakan untuk menguji apakah kualitas laporan assurance dipengaruhi oleh lingkungan hukum nasional dan penyedia jasa assurance.

Hasil penelitian menunjukkan bahwa lingkungan hukum memiliki pengaruh negatif dan signifikan terhadap kualitas laporan assurance. Penyedia jasa assurance juga memiliki pengaruh negatif dan signifikan terhadap kualitas laporan assurance, sedangkan industri memiliki pengaruh negatif dan sedikit signifikan terhadap kualitas laporan assurance.

Kata Kunci: assurance, laporan keberlanjutan, kualitas assurance

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CHAPTER I

INTRODUCTION

1.1 Background

Sustainability reporting practice has become mainstream nowadays. An International survey by KPMG on 2013 shows that nearly three quarters of the 4,100 biggest companies from 41 countries around the world adapt the practice of sustainability reporting. The reporting practice is higher in the world's largest 250 companies (G250) than the other companies. Ninety three percent of G250 companies, taken from top 250 companies on Fortune Global 500, undertake sustainability reporting (KPMG 2013).

In line with the sustainability reporting practice, the practice of assurance on sustainability reporting has been rising. Taking G250 companies for a sample, the number of companies seeking independent third party assurance on their sustainability report is increasing over time. In 2013, 59% of G250 companies issuing sustainability reports assure these reports (KPMG 2013). This raises questions about what drives companies to seek and engage in voluntary sustainability assurance.

Prior researches have explored factors that might drive companies to adopt assurance on their sustainability reports. Researches on specific country such as Zorio *et al.* (2013) and Cho *et al.* (2014) find that industry is one of the key factors influencing the decision to seek third-party assurance on sustainability reports. Companies in environmentally sensitive industry are more likely to assure their sustainability reports. Other researches with international setting such as

Simnett *et al.* (2009) find that industry and country related factors related to the choice to assure sustainability report. In line with prior research, Kolk and Perego (2010) also find the relation between country-related factors and the decision to assure the reports on Fortune G250 companies for the years 1999, 2002, and 2005.

Whereas these studies provide evidence that firm and country characteristic promote companies to adopt assurance statements service, they do not consider about variability level of assurance quality, which can vary not only across countries, but also across firms within a country. As argued by Perego (2009), a voluntary practice of assurance statement in sustainability reports serves as an additional communication mechanism as it arguably enhances the clarity and reliability of these statements (Deegan, Cooper, and Shelly, 2006). Simnett *et al.* (2009 p.939) posit that companies' purchase of assurance is driven by their objective to increase stakeholder or user confidence in the quality of the sustainability information provided and/or to increase stakeholder trust in the level of organizational commitment to sustainability agendas. Jones and Solomon (2010) argue that it is important for companies to consider whether or not to seek independent external assurance to enhance their sustainability report credibility thus companies need auditors to verify the accuracy of the reported sustainability information (Ballou, Heitger, and Landes, 2006). If sustainability reports are not audited, they may be perceived simply as an advertisement for the company and not as a signal for future corporate value (Mock, Strohm, and Swartz, 2007 p.70).

Generally, the external assurance provider can be categorized into four categories: Big 4 auditor, certification bodies, specialist consultancies, and others

(independent stakeholder panels, etc). However, major accounting firms seems to dominate the market. KPMG (2013) find that 67 percent of 1.099 surveyed companies choose to have the reports assured by major accounting firms. Corporate Register (2013) documents that the market share of accountants on sustainability report assurance increases from 37 percent in 2007 to 51 percent in 2011. The other providers: certification bodies, specialist consultancies, and others hold 27 percent, 15 percent, and 7 percent respectively.

The first objective of this study is to investigate how the quality of assurance statement differs between different assurance providers. Prior research suggests that Big 4 auditor provides higher audit quality relative to other (Khurana and Raman 2004; Francis and Yu 2009). The trend to hire auditor (big four) documented by Corporate Register may indicates that accounting firms especially Big 4 auditor provides more comprehensive approach to assure sustainability report. As Francis and Yu (2009) argue that Big 4 auditor have a higher audit quality because they have more collective experience in administering the audit of public companies (p.1521). Mock *et al* (2007) find that level of assurance statement related to assurance provider. However, they did not investigate whether relation differs between assurance providers.

The quality of assurance statement is determined by content analysis. This study use index developed by Perego and Kolk (2012) based on framework provided by O'Dwyer and Owen (2005). The quality of assurance statement then is reflected in the score. O'Dwyer and Owen (2005) find that overall, specialist consultants tend to give more effort in assurance engagement so that they provide

higher quality than accountants. In contrast, Perego and Kolk (2012) using the same framework find that accounting firms provide highest assurance statement quality (average of 13,71 points), significantly higher than specialists (average of 10,8 points) but only slightly better from certification bodies (average of 13,5 points). This study will re-investigate this relation between assurance provider and their assurance statement quality as it still give meaningful descriptive result in the emerging sustainability report assurance practice.

The second objective of this paper is to explore whether quality of assurance statement is jointly affected by the legal environment where company is located and the company's choice of assurance provider. As noted by Kolk and Perego (2010) that the demand of voluntary assurance statement services is influenced by the legal environment in which a firm operates. Perego (2009 p.414) argues that, in countries with stronger legal systems, a firm has less to gain from external audits because existing country level institutions impose constraints on contracting parties and may therefore give sufficient protection. In addition, Perego and Kolk (2012) find that assurance statement quality is highly dependent upon the type of provider. This research uses agency theory as the framework to explain the relation.

Population of this study is Fortune Global 500 2014 list companies. The final sample is 135 sustainability report assurance statements for the year 2013 from Fortune Global 500 companies. Fortune Global 500 has been used by some prior researches in this field of study (see, for example, Kolk and Perego (2010), Perego and Kolk (2012), and Junior *et al.* (2014)). These large multi

national companies (MNCs) have been more much more active in sustainability reporting practice, which means that their ‘behavior’ can help to explain sustainability reporting practice among MNCs (Perego and Kolk, 2012). Company size (measured by natural logarithm of total assets), leverage, profitability (measured by ROA), and industry (classified into sensitive and insensitive industry) are included as control variables as literature on voluntary demand for assurance propose these variables having association with the voluntary demand for assurance (Simnett et al, 2009).

1.2 Problem Formulation

Prior researches have found that the demand of assurance on sustainability report is influenced by the country related factors. Kolk and Perego (2010) noted that the demand of voluntary assurance statement services is influenced by the legal environment in which a firm operates. This study is intended to explore the effect of legal environment on quality of assurance statement through question:

RQ1. Does legal environment affects the quality of sustainability report assurance statement?

In addition, as prior researches have found the variability of assurance statement quality among assurance providers, this study also intended to explore the relation between them through question:

RQ2. Does the choice of assurance provider affects the quality of sustainability report assurance statement?

1.3 Research Objectives and Contributions

This research has two objectives. The first objective of this research is to investigate how the quality of assurance statement differs among different assurance providers. The second objective is to explore whether quality of assurance statement is jointly affected by legal environment where company is and the company's choice of assurance provider.

This research might contribute to the literature and practices about assurance, especially for non-financial assurance, as follows:

1. This research enriches the current researches on sustainability report assurance since this study focus on the quality of the assurance provided. This research not only describe the variability of sustainability report assurance statement quality but also explore some factors that might affected the quality, in this case are legal environment and assurance provider.
2. This research also enriches the literature about the effects of country legal environment on accounting and finance practices.
3. For the company and assurance practitioner, this research might brings result that could be taken as evaluation for their current practice on sustainability report assurance.
4. For stakeholders having concern on sustainability, this study will show how the quality of assurance differs among different assurance provider or/and different legal environment where the companies in that might being their consideration to make a decision.

1.4 Structure of the Study

CHAPTER I : INTRODUCTION

This chapter consists of background, problem formulation, research objectives and contribution, and structure of the study. Background section explains about the phenomena and research gaps that promote this study. Based on the situation explained in the background, then research questions arise in problem formulation section. The objectives of this study and the contributions this study might brought will be explained in research objectives and contribution section. Lastly, structure of the study section will give general explanation about each chapter existed in this study.

CHAPTER II: LITERATURE REVIEW

This chapter elaborates the underlying theories and the other concepts that relevant with this study. This chapter also explains and summarizes prior reseaches in this field of study. Based on the theories, concepts, and reseaches that summarized in theoretical framework, the development of hypothesis also explained in this chapter.

CHAPTER III: RESEARCH METHODS

This chapter explains research methods employed in this study that consists of: research variables and operational definition of variables, population and sample, type and source of data, data collection method, and analysis methods.

CHAPTER IV: RESULT AND ANALYSIS

This chapter consists of the description of research object, data analysis, and data interpretation. Argumentations about the result also explained in this chapter.

CHAPTER V: CONCLUSION

This chapter draws conclusions based on the analysis of results. This chapter also explains the research implications, limitations of this research, and suggestions for future research.

CHAPTER II

LITERATURE REVIEW

2.1 Underlying Theories and Prior Researches

2.1.1 Agency Theory

Agency theory is widely used to explain organizational phenomena in term of agency relationship. Agency relationship is a contract under which a party (principal) engages another party (agent) to do some services on the principal's behalf including delegation of some decision making authority to the engaged agent (Jensen and Meckling, 1976). As there are two parties in the relationship, agency problems may arise between two contracting parties. Agency problem arises when the principal and agent have different desires or goals and when it is difficult or expensive for the principal to verify what the agent is actually doing (Eisenhardt, 1989).

In agency relationship, it is impossible that agency problems not occurred. Either the principal or agent will take actions to mitigate the problems. Taking these actions incurs cost for both parties. It is generally impossible for either the principal or agent ensuring that the agent will make optimal decisions in the perspective of the principal at zero cost (Jensen and Meckling, 1976). The principle, for example, will incur monitoring costs and giving incentives for the agent to make agent behave properly. The agent may incur bonding costs by signing contract with the principal that they can not act freely or opportunistically due to the contract.

2.1.2 Assurance on Sustainability Report

Assurance service is a service intended to enhance the level of decision maker confidence in the information provided by the company. In assurance service, an external professional employs procedures designed to check information and reports credibility on the results (AICPA). Assurance service can be useful both for reporting entity and user of the reports. Assurance service that enhances the credibility of information can decrease uncertainty, foster better decisions and reduce transactions cost (AICPA).

In context of sustainability reporting, the practice to employ independent third party to assure sustainability reports is increasing year by year. Perego and Kolk (2012) find that the proportion of assured sustainability reports is increasing from 21,4% in 1999 to 55,8%, in 2008. Prior researches have studied what drives companies to assure their sustainability reports. Simnett et al. (2009) and Cho et al (2014) find that companies in sensitive industry (such as mining and utilities) and companies in finance industry positively and significantly associated with the decision to assure the reports. Simnett et al. (2009) and Kolk and Perego (2010) both find that the decision to assure sustainability reports is related with national legal environment of the country where companies located in.

2.1.3 Legal Environment Effects: Complementary Effect Vs Substitution

Effect

Recent literature on accounting and finance suggests that national legal environment is one of key determinants of business practice and development (see La Porta et al., 2000; Ball, Khotari and Robin, 2000). Recent research also explores the relation between legal environment and supply-demand of high quality audit (see Choi and Wong, 2002). Choi and Wong (2002) find that audit fee in strong legal environment is significantly higher than those in weak legal environment. They argue that in strong legal environment, audit fee is not merely determined by the complexity of work undertaken, but also determined by the higher level of litigation risk due to the stronger legal environment. They also test the two competing hypothesis in regard with demand of high quality audit, those are: complementary effect hypothesis and substitutional effect hypothesis.

The complementary effect hypothesis argue that in strong legal environment investor has sufficient protection that reduce the agency conflict. Therefore, there are more outside investor and capital market is better developed. In such a market environment, investors rely heavily on companies' financial report to make a decision. This will trigger more demand on high-quality audit (Choi and Wong, 2002). On the other hand, the substitution effect hypothesis propose that high-quality audit can serve as substitute for weak legal environment to mitigate the agency conflicts. When company pursue high-quality audit to mitigate the agency conflicts (Fan and Wong, 2001) or to build company

reputation (Gomes, 2000) then audit act as substitution of weak legal environment.

2.1.4 Assurance Provider and Audit Quality

Assurance on sustainability report can be conducted by various profession. Corporate Register (2013) classifies the external assurance provider into four categories: Big 4 auditor, certification bodies, specialist consultancies, and others (independent stakeholder panels, etc). However, major accounting firms seems to dominate the market. KPMG (2013) finds that 67 percent of 1.099 surveyed companies choose to have the reports assured by major accounting firms. Corporate Register (2013) documents that the market share of accountants on sustainability report assurance increase from 37 percent in 2007 to 51 percent in 2011. The other providers: certification bodies, specialist consultancies, and others hold 27 percent, 15 percent, and 7 percent respectively.

There are few researches regarding the effect of different assurance providers on the quality of assurance statements. Deegan et al. (2006) find that there is much variability and ambiguity inherent within the contents of third-party statements. Mock et al. (2007) show that type of assurance provider is the key factor associated with level of assurance. Later, Perego (2009) find that Big 4 accounting firms provide higher quality of assurance in comparison with other assurance providers in term of assurance reporting format and procedures used when conducting verification. But, Big 4 accounting firms provide lower quality in term of recommendations and opinion.

2.1.5 Prior Researches

Early researches in this field of study find that accounting professions are providing assurance services other than financial statements assurance (Hasan et al, 2005). In term of sustainability report assurance, Deegan et al (2006) find that there is much variability and ambiguity inherent within the content of third-party statements. Recent researches have explored the factors that drive companies to assure their sustainability reports. Simnett et al. (2009) indicates that assurance is related with the the desire to enhance disclosed information credibility. Simnett et al. (2009) and Cho et al (2014) find that companies in sensitive industry (such as mining and utilities) and companies in finance industry positively and significantly associated with the decision to assure the reports. Simnett et al. (2009) and Kolk and Pergo (2010) both find that the decision to assure sustainability reports is related with national legal environment of the country where companies located in.

In term of assurance quality, Mock et al (2007) find that assurance provider is a key factor associated with the level of assurance. Perego and Kolk (2012) also indicate the same result that the quality of assurance statement is highly associated with the assurance provider. They find that assurance statements provided by accounting firms have mean quality score of 13,75. The quality is just slightly higher (insignificant) with the mean quality score of assurance statements provided by specialists that is 13,50. While the mean quality score of assurance statements provided by certification bodies and other assurance providers are 10,80 and 5,89 respectively.

In regard with the works undertaken, O'Dwyer and Owen (2005) explain that consultants and accountant assurers give different approaches in regard with their assurance works. Consultants tend to give more strategic approach on the assurance exercise, which might be considered as added value for stakeholders. Perego (2009) indicates that accounting firms provide higher assurance quality related with reporting format and procedures undertaken, while the opinion and recommendations are found to have lower quality than other assurance providers.

The summary of some highlighted prior researches can be seen in table 2.1 below.

Table 2.1
List of Prior Researches

No	Researcher	Purpose / Objective of Research	Data Analysis	Sample	Result
1	Deegan et al. (2006)	Studying European and UK triple bottom line (TBL) report assurance statements	Descriptive	All European and UK TBL assurance statement	There is much variability and ambiguity inherent within the contents of third-party statements.
2	Simnett et al. (2009)	Understand the emerging assurance market and role of assurance in establishing company credibility	Descriptive, Sequential Logit Model	2.113 companies (from 31 countries) that produced sustainability reports between 2002-2004	<ul style="list-style-type: none"> • Industry (Mining, Utilities, Finance); companies operate in stakeholder oriented countries, and stronger legal system are more likely to have their SR assured.

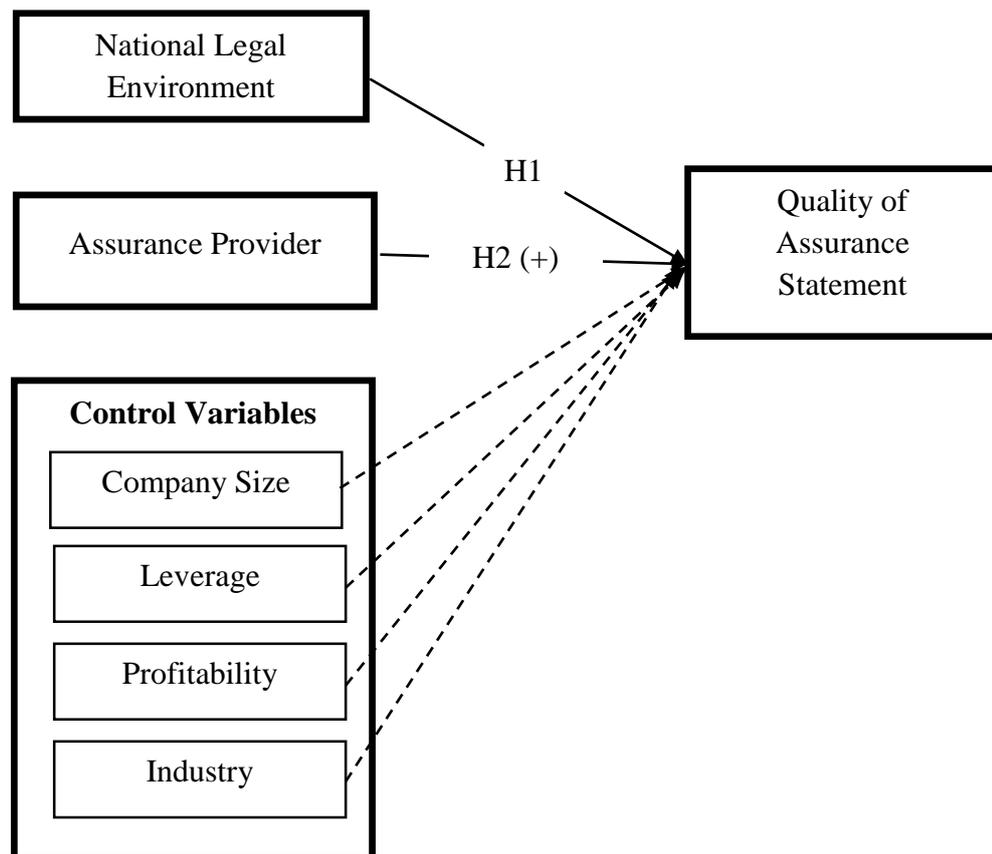
					<ul style="list-style-type: none"> • Companies from stakeholder-oriented countries are more likely to choose auditor as assurer.
3	Kolk and Perego (2010)	Exploring the factors, specifically country-level characteristics, associated with the voluntary adoption of sustainability assurance statements	Logistic regression	Fortune G 250 published reports in 1999, 2002, and 2005	Companies operating in countries that are more stakeholder-oriented and have a weaker governance enforcement regime are more likely to adopt a sustainability assurance statement.
4	Perego and Kolk (2012)	Investigating how auditing practices evolves with various assurance standards and type of assurance statements	Descriptive	Fortune G 250 companies for the year 1999, 2002, 2005, and 2008	<ul style="list-style-type: none"> • Improvement of the quality of sustainability assurance statements over time (1998-2008)

-
- Mean Quality score in 4 years investigated:
Accountant (13.71),
specialists (10.80),
certification (13.50), others
(5.89)

Source: Designed for this study, 2015.

2.2 Theoretical Framework

Figure 2.1
Theoretical Framework



2.3 Hypothesis Development

Based on the agency theory, assurance may provided to mitigate the agency problems. There are two competing hypothesis regarding with the effect of national legal environment on the quality of assurance, those are complementary effect hypothesis and substitution effect hypothesis. The complementary effect hypothesis proposes that the assurance served as complementary effect in highly developed capital market as the result of strong legal environment. The sufficient

protection in strong legal environment result in more developed capital market. As the capital market is more developed, more investors involves in the market. In such condition, investors rely heavily on information provided by the company (Choi and Wong, 2002). As a result, the companies in stronger legal environment try to provide high quality assurance to enhance the credibility of their reports.

In contrary, substitution effect hypothesis proposes that assurance may served as substitution of weak legal environment to mitigate the agency conflicts. The substitution effect hypothesis argues that companies pursue high-quality audit to mitigate the agency conflicts (Fan and Wong, 2001) or to build company reputation (Gomes, 2000). Perego (2009) and Simnett et al. (2009) posit that national legal environment significantly affects the quality of assurance. Based on the competing hypothesis, the proposed hypothesis regarding the effect of national legal environment on the quality of assurance statements is:

H1. National legal environment has a significant effect on the quality of assurance statements.

Simnett et al. (2009) indicates that assurance is related with the the desire to enhance disclosed information credibility. In the field of sustainability report assurance, there are various professions that can provide such assurance. Mock et al (2007) and Perego and Kolk (2012) indicate that the quality of assurance statement is highly associated with type of assurance provider. Simnett et al. (2009) argues that accounting firms have well developed global standards and strict ethics, independence, and control requirements. Francis and Yu (2009) argue that Big 4 auditor have a higher audit quality because they have more

collective experience in administering the audit of public companies. In addition, accountants have good reputation that they are well known in society. Therefore, accountants, especially the Big 4, are less likely to behave myopically or opportunistically (Simnet et al, 2009). As a result, accountants proposed to serve as an effective control mechanism (Watts and Zimmerman, 1983).

Therefore the proposed hypothesis regarding the effect of assurance providers on the quality of assurance statements is:

H2. Accounting firms have positive effect on the quality of assurance statements.

CHAPTER III

RESEARCH METHODS

3.1 Research Variables and Operational Definition

3.1.1 Dependent Variable

The dependent variable in this study is the quality of sustainability report assurance statement. The quality of assurance statement is determined by content analysis. This research employs index developed by Perego and Kolk (2012) based on the framework provided by O'Dwyer and Owen (2005). The index consists of 19 criterias. The criterias evaluate the quality of assurance statements on 3 aspects: reporting format, assurance procedures, and recommendations and opinion. The possible score based on the criteria is ranged from 0 to 27. Assurance statements are perceived having higher quality if they have higher score. The index is enclosed in appendix.

3.1.2 Independent Variables

In this study, the hypothesis predicts that the quality of sustainability report assurance statement is affected by national legal environment and type of assurance providers.

3.1.2.1 National Legal Environment

National legal environment is determined by "Rule of Law" score for the year 2013 taken from The Worldwide Governance Indicators (WGI). The possible score is ranged from -2,5 to 2,5. The score reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in

particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The higher rule of law score indicates stronger legal environment, while lower rule of law score indicates weaker legal environment.

3.1.2.2 Assurance Provider

Assurance services can be conducted by various professions. In this study, assurance provider is determined by dummy variable. If the assurator is accounting firm then the variable is given value of 1. While the assurator is other than accounting profession, a 0 is assigned.

3.1.3 Control Variables

The control variables in this research are size, leverage, profitability, and industry. Those variables, based on literature and prior researches, are associated with the voluntary demand of assurance. Size is measured by total asset ($\ln(\text{ASSET})$). Profitability is measured by return on asset (ROA). Leverage is measured by dividing total debt with total assets. Companies may use different currency in their reports. The currency used in this research is US dollar. Thus, financial data with currency other than US dollar are converted into US dollar using exchange rate at the reporting date based on Yahoo finance exchange rate (www.finance.yahoo.com/currency-converter/).

Industry classification follows the Dow Jones Indicator: oil & gas, basic materials, industrials, consumer goods, health care, consumer services, telecommunications, utilities, financials, and technology. Industry then measured by using dummy variable. As argued by Simnett et al. (2009), mining, utilities,

production, and financial industries are more sensitive and having greater environmental and social risks. Thus, companies in sensitive industry (oil & gas, basic materials, industrials, utilities and financials) are codified as 1, while the rest of companies in insensitive industry codified as 0.

3.2 Population and Sample

Population of this study is all assurance statements on sustainability reports from Fortune Global 500 companies 2014 list. Given that information in sustainability report that is assured may contain all categories (e.g: using GRI 4 categorization: economic, environmental, and social) or single category (such as environmental information only), this research focus on assurance statement for information in the comprehensive sustainability reporting (contain not only single aspect). This approach is expected to avoid bias in comparing the assurance statements since the information assured is nearly the same.

3.3 Type and Source of Data

This research uses secondary data. Sustainability reports are downloaded directly from companies' website and from third party database such as CorporateRegister. Financial data are taken from companies' website. Data about national legal environment are obtained from The Worldwide Governance Indicators dataset.

3.4 Data Collection Method

Data in this study are collected by:

1. Literature study

Data and theory in this study were obtained from the literature, articles, journals and previous researches which are relevant to this research and anvil theory.

2. Documentation study

This study uses secondary data obtained from companies' website and The Worldwode Governance Indicators dataset.

3.5 Analysis Method

3.5.1 Descriptive Analysis

Descriptive statistics describe the data by looking at mean, standard deviation, variant, maximum and minimum value, sum, range, curtosis, and skewness (Ghozali, 2011). The descriptive statistics in this study show the number of observations, minimum and maximum value, mean, median, and standard deviation.

3.5.2 Regression Assumption Tests

Regression assumption tests or classical assumption tests are tests to check whether required statistical assumptions for regression analysis is fulfilled or not. In this study, tests of classical assumption being conducted are multicollinearity test, heteroskedasticity test, and normality test.

3.5.2.1 Multicollinearity test

Multicollinearity test intended to test whether correlation between independent variables existed in the regression model. The correlation should not exist so that the regression model is good. Collinearity statistics value is used to test the multicollinearity. Multicollinearity exists when Tolerance value $\leq 0,10$ or VIF value ≥ 10 (Ghozali, 2011).

3.5.2.2 Heteroskedasticity test

Heteroskedasticity test is intended to test if there is inequality residual variance between an observation and other observations (heteroskedasticity). A good regression model should not contain heteroskedasticity. Heteroskedasticity can be checked by looking at plot graphic between ZPRED and SRESID. If the graphic shows a certain pattern then heteroskedasticity exists. While the pattern is random and not form any pattern then heteroskedasticity does not exist. (Ghozali, 2011).

3.5.2.3 Normality test

Normality test is intended to check whether the residual in the regression model having normal distribution. F test and T test assume that the residual having normal distribution. So, the residual should have normal distribution so that F test and T test result is valid. This research provides 2 tests to check normality of data: graphical analysis and Kolmogorov-Smirnov test.

Graphical test provides histogram and normal probability plot to check normality. Data is normal when there is no extreme skewness shown in histogram or the residual is normally distributed. Normal probability plot shows normal

residual distribution when the dots are located close to the diagonal line. The second test is Kolmogorov-Smirnov test. Ghazali (2011) explains that Kolmogorov-Smirnov test can be used to test normality of residual. This test is conducted by having hypothesis,

H0: Residual data have normal distribution

H1: Residual data have no normal distribution

Therefore, the p-value should more than 0,05 so that H0 is not rejected.

3.5.3 Univariate Test

Independent-samples T test is used to decide whether two independent samples have different means (Ghozali, 2011). Using this test, we test whether the quality of assurance statement significantly differs among different assurance providers

3.5.4 Multivariate Regression Analysis

Multivariate Regression Analysis is intended to test the dependency of dependent variable with multiple independent variables. Regression analysis not only shows how strong the relation of dependent and independent variables but also direction of the relation (Ghozali, 2011). The analysis is employed to test proposed hypothesis.

The regression model in this research is:

$$\text{Quality} = \alpha + \beta_1 \text{LEGAL} + \beta_2 \text{Assurer} + \beta_3 \text{SIZE} + \beta_4 \text{LEV} + \beta_5 \text{ROA} + \beta_6 \text{Industry} + \varepsilon \quad (3.1)$$

Annotation:

- Quality : The quality of sustainability report assurance statement. Measured by content analysis.
- LEGAL : National legal environment. Measured using “Rule of Law” score for the year 2013.
- Assurer : Assurance provider. Measured using dummy variable. 1 is assigned when assurance provided by accounting firm. Otherwise codified as 0.
- SIZE : Company’s size. Measured by natural logarithm of company’s total asset.
- LEV : Company’s leverage. Measured by dividing total debt with total assets.
- ROA : Company’s profitability. Measured by Return on Asset (ROA). ROA calculated by dividing net income by total assets.
- Industry : Industry classification. Measured by dummy variable. 1 is assigned if company comes from high profile industry. Companies come from low profile industry codified as 0.

The regression output provides at least model summary output, ANOVA output, and regression coefficients output. Model summary output shows the adjusted R^2 value. ANOVA output shows the F statistical result. Regression coefficients output shows the coefficient for each independent variable and t-test result.