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Submission date: 14-Jul-2020 10:12PM (UTC+0800)

Submission ID: 1357421231

File name: ianawati_Karil_06_Corporate_Social_Responsibility_As_The....pdf (198.44K)

Word count: 8007

Character count: 44673

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**Corporate Social Responsibility As The Mediating Variable On The
Relationship Between Environmental Certification And Firm Value**

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Abstract

This study is aimed to describe the CSR programs in Indonesia through empirical evidence that the CSR mediate the environmental certifications toward the firm value. This explanatory research population is the non-service corporations enlisted in Indonesian Stock Market (BEI) between 2010- 2012. The study applies non-probability sampling method with the total number of 289 firm years. The method of analysis is SEM (variance-based) using WARP-PLS version 3.0 software. The finding shows that the disclosure of CSR mediates the acquiring of environment certification toward the firm value. It is expected that this study will encourage the government through stock market authority to provide complete direction in making CSR reports referring to universally accepted GRI that will eventually be used in economic decision- making activities for the investor.

Keyword : *Environmental Certification, Firm Value, The disclosure of CSR.*

JEL : M14, Q56

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I. BACKGROUND

The field of social and environmental responsibility (Corporate Social Responsibility) or widely known as CSR has become the growing issue in the business society in the recent decades. The history of the appearance of the CSR issue began in the beginning of 1950, shown by the appearance of Bowen's work (1953).

It stated that there is the importance of conformity between firm's goals and the goals as well as values of society. Around 1960, Keith Davis asserted that there is corporate social responsibility besides economical responsibility. In the year of 1970s was the period of development of thoughts about management of stakeholders since in this period corporations started. The development of the CSR concept in 1990 until now is when the concept of sustainable development was introduced which stimulated the appearance of sustainability report by using triple bottom line method developed by Elkington (1998).

The necessity of CSR disclosure is supported by Indonesian government by issuing the Regulations of the Republic of Indonesia (Undang-Undang Republik Indonesia) No. 25 Year 2007 about Capital Investment, particularly paragraph 15 and the Regulations of the Republic of Indonesia (Undang-Undang Republik Indonesia) No.40/2007 about Limited Company. Those two government regulations become the starting point for every company to disclose its social responsibility (mandatory). However, the regulations do not require every company to make a disclosure about its CSR implementation (voluntary), the Association of Indonesian Accountants through the Statement of Financial Accounting Standard / Pernyataan Standar Akuntansi Keuangan (PSAK) No.1 Paragraph 9 stated, "Firms can also provide additional report and value added statement, especially for industries in which the environmental factors hold important roles". This PSAK becomes the starting point for every company to disclose its social responsibility.

Environmental certification is a kind of reward achieved by an individual or by an institution from external and independent party because of accomplishment or good social performance. For firms, the achievement of environmental certification is important since it gives the firms good or positive image in the eyes of stakeholder. The positive image of the firms will become a competitive advantage, which differentiates the firms from their competitors, gives economic impact to the firms leading to the firms' financial performance.

The implementation of CSR in several firms in Indonesia based on survey has become a necessity. The survey data of SWA magazine conducted in 45 firms (2006), shows that the involvement of the firms in CSR provides several benefits, such as maintaining and improving the firms' image (37,38 percent), maintaining good relationship with society (16,82 percent), and supporting the firms' operational activities (10,28 percent) (informasicsr.blogspot.com). Nevertheless, in practice, there are still found many violations associated with the operation of

the firms that have an impact on the environmental damage on water, environment, air or land. Firms' awareness to implement social and environmental responsibility in Indonesia is still tested particularly to know the motivation of the firms getting involved in social and environmental responsibility. There are many motivations of firms to get involved in the CSR, such as the size of the firms, international experience, the achievement of environmental certification and much more.

The motivation of conducting this research is to provide empirical evidence about the achievement of environmental certification, which provides a competitive advantage that distinguishes the firms from their competitors which lead to positive economic impact to the firms. Alberton et.al. (2009) conducted research in firms, which have environmental certification ISO 14001 in Brazil and found that the firms' profitability increased after the announcement of environmental certification achievement. In the long-term, firms which have environmental certification will obtain better financial performance than firms which have no environmental certification.

The achievement of environmental certification will also increase firms' self-confidence to show more to the society about their ability in controlling firms' operations by maintaining the harmony between environment and society, by implementing CSR in accordance with government's regulations and disclosing the CSR more widely than firms, which have no environmental certification. The increasing public awareness will positively respond the CSR disclosure and this will lead to the improvement of firms' long-term financial performance.

II. RESEARCH QUESTION

Does the CSR disclosure mediate the relationship between environmental certification and firm value?

III. THEORITICAL FRAMEWORK

Firms, which have achieved environmental certification from both public organizations and private parties, indicate that the firms' social performance has met particular conditions and is believed the firms have good social performance. Firms, which have achieved environmental certification, have more advantage than firms with no environmental certification. This is because environmental certification can provide an economical advantage since by obtaining environmental certification will create a positive image to stakeholder related to the quality of the product for the firms, which distinguishes the firms in the consumer's market, and it is important to maintain the market in the long-term. Moskowitz (1972), conducted a research about firm's social performance related to the economic performance and found that there is a positive correlation between the two. This is consistent with the theory of Signaling that the good

news (acquisition of environmental certification) will affect the response of stakeholders that have a positive impact on the company's financial performance.

Obtaining environmental certification such as ISO 14001 provides the firms self-confidence to show the society about their ability in controlling important aspects of the firm's operational activities and the firm is committed to comply with all of the relevant environmental regulations and they will keep improving their environmental performance. A survey conducted by Corbett et.al. (2003) in 15 countries found, that among the main motivations to seek certification is ISO 14001 about 'environmental improvement and the improvement of firm's image'. Furthermore, it will be followed by improvement in procedures and better relationships between government and society. Yusoff and Lechman (2005) conducted a research to see the factors affecting CSR disclosure in Malaysia and Australia. One of the factors examined was the ownership of ISO 14000 and the research findings stated that certification of ISO 14001 has a high effect and affects the firms' involvement in CSR disclosure practice.

Alberton et.al. (2009) examined ISO 14001 certified firms in Brazil which the stocks are publicly traded at BOVESPA. The research findings showed that profitability steps have been improved after the announcement date of the certification. In the long-term, environmental certified firms will obtain better financial performance than environmental uncertified-firms. Peiro et.al.(2014) analyzed the impact of obtaining environmental certification of ISO 4001 from customer's perspective in hospitality service firms. The research findings concluded that guests or customers assess hotels with ISO 14001 certification higher than hotels with no certification.

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Epstein and Roy (2001) could explain the relationship between CSR and firm value in the framework of 'drivers of sustainability and financial performance'. In the framework, it was described the importance of including the philosophy of three bottom lines (profit, people, and the planet) which is sustained in the firm's strategy. From the implementation of the strategy will lead to good performance, which then will be positively responded by stakeholders and will have an impact on financial performance. If this framework is implemented continuously and consistently, it will improve the long-term performance of the firm. Several previous studies used CSR disclosure as the main topic which is connected to firm's financial performance which generated various results. Pava and Krausz (1996), stated that there is a prominent tendency between CSR disclosure and firm's financial performance. In a survey of 95 empirical studies conducted in the period of 1972-2001, Margolin and Walsh (2003) reported that when it was treated as independent variable, firm's social performance was found to have positive correlation towards financial performance in 42 studies (53%), no correlation in 19 studies (24%), negative correlation in 4 studies (5%), and mixed correlation in 15 studies (19%).

Questions that will be answered in this study is what about in Indonesia, will the achievement of environmental certification affect the extent of CSR disclosure and have an impact on firm's value? Hypothesis : CSR disclosure mediate the relationship between environmental certification and firm's value.

IV. RESEARCH METHOD

4.1. Research Design

Research approach used in this study is explanatory research, and analysis method used in processing data is PLS (partial least square) which is one of the statistical methods of SEM (structural equation method) variant-based. The reason of using PLS is that the capital market data in Indonesia is not normal. Thus, using PLS is the correct decision. To analyze the research data, the statistical software of WARP-PLS 3.0 is used.

4.2. Population and Sampling

The population target of this research is publicly-listed companies at Indonesian Stock Exchange / Bursa Efek Indonesia (BEI) with the criterion as follow: non-service companies listed at the Indonesian Stock Exchange/Bursa Efek Indonesia (BEI) in 2010-2012 and disclose its CSR both through companies' annual report and in the form of a sustainability report. Sampling is done by using census method where the population target is used as the research sample. It successfully obtained 289 firm years as the research sample.

4.3. Variable Identification and Operational Definition

This study uses several variables and the operational definitions as follow:

1. Environmental Certification

Environmental certification is a kind of reward from external and independent party about firm's operational activities related to environment management. Environmental certification used in this research is certification recognized both internationally and locally such as ISO 14001, ASEAN Energy Management Awards, ASEAN Coal Awards and environmental certification about environment issued by the Ministry of Environment (i.e. PROPER Award) as well as from on- governmental but credible parties, such as ISRA from NCSR.

The variable measurement being used is a dummy; by giving score one for companies which have achieved environmental certification and 0 for others.

2. CSR Disclosure

To measure CSR disclosure, 'content analysis' is used and the indicators used are indicators listed on Global Reporting Initiative or G3 GRI (2006). Some indicators are used. Those are economic indicator which consists of nine (9)

assessment aspects, environmental indicator which consists of thirty (30) assessment aspects, labor practices and decent job indicator which consists of 14 assessment aspects, human rights performance indicator which consists of nine (9) assessment aspects, public performance indicator which consists of eight (8) assessment aspects, and product responsibility indicator which consists of nine (9) assessment aspects. Detailed explanations about the assessment aspects of each indicator are attached in the Appendix.

The measurement by using dichotomy, which means each item of CSR is given score 1 if it is disclosed, and score 0 for others. Each item will be summed to generate firm's score. The formula for calculating CSR Index used by Branco and Rodrigues (2008), as follows:

$$\text{Corporate Social Responsibility Index} = \frac{\sum_{i=1}^{m_j} d_i}{N}$$

Information:

- (1.) d_i = total item disclosed by Firm j
- (2.) N = total maximum item which should be disclosed by firm

3. Firm Value

The measurement of firm value, in this study, using Price to Book ratio which compares firm's market value and firm's book value and this ratio is the estimated value of the firm, if the firm is liquidated (Sharma dkk., 2013).

The formula used as follows:

$$\text{Price to Book Ratio} = \frac{\text{Stock price per share}}{\text{Shareholder's equity per share}}$$

Information:

Stock price per share is stock price in the end of the year harga saham akhir tahun *Shareholders' Equity per share* is book value shared with the stocks issued.

4.4. Type and Source of Data

This research uses a type of quantitative data, which means data obtained in the form of numbers or percentage of the variables examined. Special data from the variable of CSR disclosure is generally in the form of sentence or narration, which is analyzed to retain a numeric index regarding disclosure of CSR. Another data is data exists on company's annual report and data from sustainability report.

The source of data is secondary data obtained via the internet on the website of Indonesian Stock Exchange (annual report) and website of National Center for Sustainability Reporting (sustainability report).

4.5. Data Analysis Method

Data Analysis Method used is Partial Least Square (PLS) with the assistance of computer software of WARP-PLS 3.0. Steps is done to analyze data:

1. Designing empiric-based model

$$X_2 = \alpha_0 + \beta_1 X_1 + \varepsilon$$

$$Y = \alpha_0 + \beta_2 X_2 + \varepsilon$$

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

2. Examining assumptions underlying path analysis

A model is regarded as fulfilling recursive conditions if among the exogenous variables are independent. Testing conducted with Variance Inflation Factor (VIF), with the condition if the value of $VIF < 5$, the model meets the recursive assumption testing (Sholihin and Ratmono, 2013).

3. Model Evaluation and Interpretation

Model evaluation is done by checking the value of R-Square and p-value to see the inter-variables effect. The value of p-value generated from the PLS process will be compared to the significance level used. Estimating the indirect effect simultaneously with the triangle of PLS-SEM Model is done to examine whether an independent variable affects the dependent variable directly or indirectly through a mediating variable. The conditions of the mediating effect that should be met are the path coefficient from exogenous variable (independent) to endogenous variable (dependent) is significant, the path coefficient from exogenous variable (independent) to a mediating variable is significant and from the mediating variable to dependent variable is consistent, as well.

The conclusions about the mediation as follow: (Hair et al 2010:746)

- a. If the path coefficient from independent variable to dependent variable remains significant and does not change, the mediation hypothesis is not supported.
- b. If the path coefficient from independent variable to dependent variable, the value decreases but still significant, the mediation is partial mediation.
- c. If the path coefficient from independent variable to dependent variable, the value decreases and becomes insignificant, the mediation is full mediation.

V. RESEARCH FINDINGS ANALYSIS AND DISCUSSION

5.1. Data Description

The majority of samples (companies) used in this study are manufacturing companies, around 73%, operating in mining industry 19% and the rests are companies in agriculture sector 8%. The following is the table of research data description:

Table 5.1 Data Description

	N	Min	Max	Median	Mean	Skewness	Kurtosis
Environment certification (EC)	289	.000	1.000	.000	.1661	1.804	1.262
CSR (CSR)	289	.010	1.000	0.140	.2015	2.735	6.943
Firm Value (FV)	289	-13.350	66.320	0.650	3.1682	5.165	30.075

5.2. Description of Variable

1. Environmental Certification

Based on data in Table 5.1, it shows that the lowest point is 0 and the highest is 1 with a mean value of 0,1661 and median of. The variable data EC has skewness value of 1,804 and kurtosis value of 1,262. Based on the condition of normal distribution according to Kuncoro (2004), the variable EC can still be said having normal data. By checking the mean and median data, it shows that more than a half of sample companies are companies with no environmental certification.

There are 241 sample companies, which do not achieve environmental certification, and only 48 companies achieving environmental certification. The majority of companies are achieving environmental certification from PROPER.

2. CSR Disclosure (CSR)

Based on data on table 5.1 above, it shows that the lowest point is 0,01 and the highest is 1 with mean value 0,20 and median value 0,14. Data of CSR variable has skewness value of 2,735 and kurtosis value of 6,943.

Data distribution on CSR variable is not normal because there is no rule and even guidance of action to report or disclose CSR for publicly listed companies in the capital market. Thus, the companies disclosed voluntarily and the majority of the firms disclosed CSR on annual report minimally. It can be seen from the low mean and median value, about 20%. The low CSR disclosure,

followed by not well-distributed on all of the assessment indicators used according to GRI 3 (2006), it can be seen in the table below:

Table 5.2 CSR Recapitulation with 'Content Analysis' CSR Disclosure

Indicators	The number of sample firms (n) (1)	The number of assesment items disclosure (should have been) (2)	N x items disclosure (1 x 2)	Realization disclosure	Mean of disclosure
Economic Indicator	289	9	2601	806	30,98
Environmental Performance	289	30	8670	1367	15,77
Labor Practices and Decent Work	289	14	4046	1290	31,88
Himan Right Performnace	289	9	2601	284	10,92
Public/Soceity Performance	289	8	2312	362	15,66
Product Responsibility	289	9	2601	407	15,65

According to the value of disclosure, capable of being known that CSR disclosure performed by publicly-listed companies in Indonesia is still very low.

It shows that response or firms' attention to the stakeholders is still quite low. From the indicator of economic performance, CSR disclosure performed by the most sample firms is on the item EC1 disclosed by 222 firms, which is about direct obtainment and distribution. It is followed by EC 8 about construction and the impacts of infrastructure investment as well as service provided for the public interest, and the third is item EC 9 about comprehension and explanation the economic significant indirect impact.

From environmental indicator, there are 30 items of disclosure, with the most disclosure is EN26 about an initiative to reduce environmental impact and how impactful the effect, the next is EN13 about protection and habitat rehabilitation as well as EN5 about energy saving through conservation and efficiency improvement.

The indicator of labor practices and the decent job has 14 items of assesment. It is including the most disclosure is on LA1 about the information of total workforces based on job title; LA8 about job contract based on region and physical accident rate; disease due to occupation; the lost days and LA12 about absence and total mortality due to job based on region as well as the percentage of employees receiving regular, and continuous supervision and job development.

The performance of human right indicator consists of 9 assessment items, with the most item, is on item HR5 about gathering and uniting activities identified as significantly risky and actions to support the rights, HR4 about the sum of discrimination cases occurred and HR1 about total agreement containing human rights clause.

The CSR disclosure about social indicator has 8 assessment items, with the most disclosure is on item SO1 about several things that have been performed to assess the impact of firm's operational activities towards society, SO8 about monetary value for law and regulation violations as well as SO4 about actions taken related to corruption cases.

The indicator of product responsibility has 9 assessment items with the most disclosure is on item PR3 about conditioned information of firm's products or services, PR6 is about programs related to the conditioned marketing communication including advertisement, promotion and sponsorship as well as PR1 about product health and safety (see appendix).

3. Firm Value

By using basic data on table 5.1 above, it shows that the lowest point is -13,35 and the highest is 66,32 with a mean value of 3,1682 and the median value of 0,65. FV data is not proper because the distance between the minimal and maximal data is extremely high as well as the distance of the mean value and the median.

FV variable data is not normal distributed and variously high, it can be seen from the high difference between the minimal data and the maximal data as well as the mean data with the median. Several firm's equity data have deficit equity; obtained negative FV.

VI. ANALYSIS AND DISCUSSION

6.1. Testing of Recursive Assumption

A model is regarded has met recursive assumption if, in the model, the inter-variable relationship is independent. The testing was conducted with variance inflation factor (VIF), with the condition if the VIF value is < 5, the model has met recursive assumption test (Sholihin dan Ratmono, 2013).

Table 6.1 Testing of Recursive Assumption

Variable	VIF	conclusion
Environment Certification (EC)	1.436	not related
CSR Disclosure (CSR)	1.521	not related
Firm Value (FV)	1.121	not related

On the table above, the value of VIF from all of the research variables is <5. Thus, it can be regarded the model has met recursive assumption test.

6.2. Testing Result

Table 6.2 Path Coefficient Testing

	Coefficient	p.value	conclusion
CSR-FV	0.26	0.01	Significant
EC-CSR	0.49	<0.001	Significant
EC-FV	0.07	0.17	Insignificant
R-square=0.24			

From table 6.2, it can be known the relationship of research inter-variable used is in the form of path coefficient picture. The research model as follows:

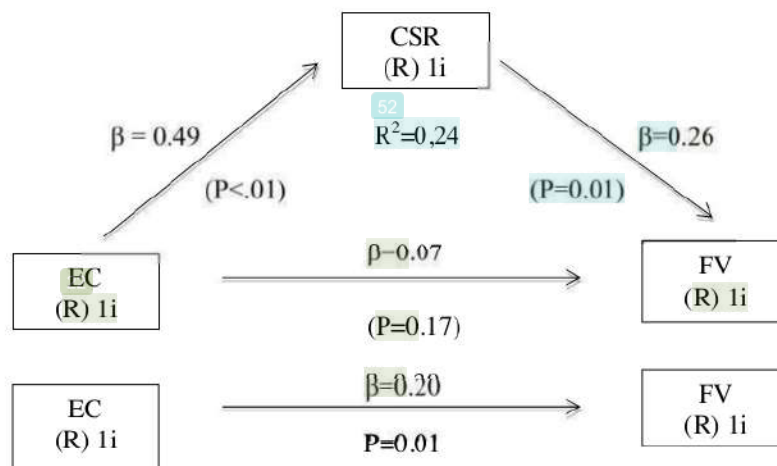


Figure 1. Path Coefficient

6.3. Hypothesis Testing

Hypothesis testing is to test whether an independent variable affects dependent variable directly or not indirectly through mediating variable, performed by estimating indirect effect simultaneously with triangle PLS-SEM Model.

Table 6.4 Direct and Indirect Effect of Environmental Characteristics, Environmental Certification and CSR Disclosure Towards Firm Value

Exogen variable	Endogen variable	Mediating variable	Direct effect without mediating variable		Direct effect and indirect effect/ mediating		conclusion
			variable	p-value	variable	p-value	
EC	FV	CSR	EC-FV	0.012	EC-FV	0.17	Full mediating
					EC-CSR	<0.01	
					CSR-FV	0.01	

From the table 6.4 above, capable of being known, the result of hypothesis testing proposed in this study with an explanation as follows: Environmental Certification (EC) directly affects FV through CSR or in the other words the CSR variable is capable of being mediating variable between EC and FV. This is apparent from p value of EC to FV without inserting mediating variable of 0,012 (significant at α 0,05). The next experiment is by inserting CSR variable as mediating variable is capable of changing p- value to be 0,17 (insignificant at α 0,05) also supported by p-value from EC to CSR of <0,01 (significant at α 0,05) and CSR to FV of 0,01 (significant at α 0,05), it means CSR as mediating variable (fully mediating) in the relationship between EC and FV is supported.

6.4. Discussion

The results of statistical analysis draw conclusion: the CSR variable mediates (fully mediating) the relationship between environmental certification and firm value. Environmental certification affects the extent of CSR disclosure in Indonesia and subsequently the extent of CSR disclosure affects firm value. This is due to in the beginning of testing there is significant and positive effect between environmental certification with firm value, then when it is retested by inserting the CSR variable as mediating variable causing environmental certification no longer have a significant influence towards firm value. Environmental certification obtained through a hard struggle, absolutely would not be abandoned and it would be the main consideration while disclosing CSR disclosed both in annual report and sustainability report. This study result is in accordance with the study of Yusoff dan Lechman (2005) which found that the achievement of environmental certification, particularly ISO 14001 has a high effect and affects firm's involvement in CSR disclosure practices.

There are 48 sample firms achieving environmental certification or only around 17 % of total samples used in this study and the majority of firms achieving environmental certification from PROPER issued by the Ministry of Environment. The rest 241 firms have not yet achieved environmental certification; this is as supporting evidence that there is a lack of attention firms in

Indonesia towards the environment, which is also shown by low CSR disclosure and particularly in relation to environmental factors.

Precisely 30 items for an environmental indicator that should be disclosed based on GRI version, on average only around 5 items disclosed to public by firms in Indonesia or on average only around 17%.

In accordance with the lack of environmental certification achievement and the lack of CSR disclosure by firms in Indonesia, the fact is not in accordance with a survey conducted by SWA magazine in 2006 stating that the companies of providing several benefits have realized the involvement of companies in CSR. It includes maintaining and improving companies' image, maintaining a good relationship with society and supporting companies' operations. This is in line with the statement of Harris (2001) in Nicholson and Bennett (2009) stating that studies (including surveys) with the subject of business ethics using primary data was feared of generating 'poor data' since the material on the business ethics is sensitive. Thus, the use of primary data for business ethics research is hard to be reliable data.

Companies that have environmental certification can gain economically benefit since it gives a positive image on stakeholder related to product quality for companies distinguishing the companies in the consumer market and it is necessary to maintain the market in the long-term. Research by Moskowitz (1972) found there is a positive relationship between social performances with the economic performance of companies. Alberton et.al. (2009) also conducted a research on ISO 14001-certified companies in Brazil, which shares traded on the BOVESPA, and the result indicates increased profitability after the certification announcement date.

The CSR disclosure by companies in Indonesia, even though it is still too low but has been positively responded by stock market (stock investor). Based on the Signaling theory, social and environmental activities provide information to investors about return prospect in the future. The appropriate could meet the expectations of investors CSR disclosure is as a signal of good news provided by the management team to public that companies have a good prospect in the future and ensure the creation of sustainability development (Epstein and Roy, 2010). Investors who consider in detail the additional information such as CSR and have good capability to analyze companies' annual report are normally institutional investors, who usually invest in stocks in greater quantities than individual investor does. This is supported by Jennings (2002), who stated that institutional ownership could improve firm value due to having the ability in supervising the firm. The signaling theory supports this study result, even though the result of CSR disclosure related to sample firms is still not ideal and even minimal. However, the market reaction or the investors in the capital market are positive.

VII. CONCLUSION AND RECOMMEDATIONS

7.1. Conclusion

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CSR disclosure fully mediates the relationship between environmental certification and firm value and this result supports the proposed research hypothesis. This is due to firms achieving environmental certification with great sacrifices, will give more attention when making disclosure of CSR. Broad CSR disclosure will give a positive image to companies so that it will be positively reacted by the market, in accordance with the statement of Alberton et. Al. (2009) after conducting research in Brazil, that there is an increase in profitability after the announcement date of environmental certification achievement. Furthermore, Alberton also stated that in the long-term, environmental certified-companies would retain a better environmental performance than uncertified companies would.

7.2. Recommendations

1. For Companies

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These research findings provide input to companies in terms of the importance of doing social and environmental responsibility(CSR) and report it to a stakeholder in detail, which means following indicators on the GRI. It is intended to the implementation and disclosure of CSR could be positive signal for stakeholder (investor) in making an economic decision so that positively affects firm value.

2. For Government

This study is expected to be input to Indonesian government through Financial Service Authority/Otoritas Jasa Keuangan (OJK) about the importance of making guidance in the report preparation of CSR in detail in accordance to the GRI, which has been universally recognized so that it can become reliable communication media between firms and stakeholders.

3. For Public

Providing input to shareholders about the importance of disclosing CSR on the annual report or sustainability report in the decision-making of stock purchasing in Indonesia, since CSR affects firm value.

4. For Future Studies

By taking into consideration the results of this study and the limitations existed, this research can be used as the reference for subsequent studies to develop the existing model related to firm's motivation in CSR disclosure and the effects to firm value.

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Appendix:

1. GLOBAL REPORTING INITIATIVE (GRI) G3

No	Indicator
Economic Performance Indicator	
Economic Performance Aspects	
1	EC 1. The acquisition and distribution of direct economic values, including revenues, operating costs, employee services and convenience, donations, and other community investments, retained earnings, and payment to funders as well as government.
2	EC2. Financial implications and other risks due to climate change and the chances for the operating activities.
3	EC3. Organizational guarantee to definite incentive program
4	EC4. Significant financial from the government
Market Existence Aspects	
5	EC5. The lowest wage standard ratio range at significant locations of operation.
6	EC6. Policies, practices and proportion of spending on local suppliers at significant locations of operation.
7	EC7. Local officer admission procedure at significant locations of operation.
Indirect Economic Impact Aspects	
8	EC8. Development and the impacts of infrastructure investments and services provided for the benefit of public interests commercially and naturally.
9	EC9. The understanding and explanation of significant indirect economic impacts including how broad the impact is.
Environmental Performance Indicators	
Material Aspects	
10	EN1. The use of materials: detailed based on weight and volume.
11	EN2. The percentage use of recycled materials
Energy Aspects	
12	EN3. Direct energy use of the primary energy resources
13	EN4. Indirect energy consumption of primary resources
14	N5. Energy savings through conservation and efficiency improvements.
15	EN6. The initiatives to obtain products and services based on energy efficiency or renewable energy as well as reduction in terms and conditions of energy requirements as a result of these initiatives.
16	EN7. The initiatives to reduce indirect energy consumption and reductions achieved.
Water Aspects	
17	EN8. Total water withdrawals per source

18	EN9. Water source significantly affected by the water withdrawals
19	EN10. The percentage of total volume of water reused and recycled.
Biodiversity Aspects	
20	EN 11. Location and size of land owned, leased, managed by the reporting organizations located in the areas having high biodiversity outside the protected areas.
21	EN12. The descriptions of various significant impacts caused by the activities, products and services of the reporting organizations towards biodiversity in the protected areas and in the areas having high biodiversity outside the protected areas.
22	EN13. Protection and restoration of habitats
23	EN14. Strategies, actions and future plans for managing impacts on biodiversity
24	EN15. A number of species at risk based on level of risk of extinction on the IUCN Red List (IUCN Red List Species) and on the national conservation list in habitats affected by the operations of companies.
Emissions, Effluent, and Wastes Aspects	
25	EN16. The amount of greenhouse gas emissions which is directly or indirectly specified by weight
26	EN17. Other indirect emissions of greenhouse gasses specified by weight
27	EN18. Other initiatives to reduce greenhouse gas emissions and its accomplishments
28	EN19. The emissions of chemicals that damage the ozone layers (Ozone-depleting Substance / ODS) specified by weight
29	EN20. Nox, Sox, and other significant air emissions specified by type and weight.
30	EN21. The amount of wastewater based on quality and purpose
31	EN22. The amount of weight of waste by type and disposal method
32	EN23. The number and volume of significant spills
33	EN24. The weight of the wastes transported, imported, exported or processed considered dangerous by Basel Convention Annex I, II, III, and IV and percentage of wastes being transported internationally
34	N25. Identities, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the overflow of the water and the disposal of the reporting organizations
Product and Services Aspects	
35	EN26. Initiatives to eliminate environmental impacts of products and services and the extent of the impacts.
36	EN27. The percentage of products sold and the packaging materials drawn from categories
Compliance Aspects	

37	EN28. The monetary value of significant fines and total number of non-monetary sanctions over the violations of environmental laws and regulations
Transportation Aspects	
38	EN29. Significant environmental impacts resulting from the transfer of products and other goods and materials used for the operations of firms and the labors transferring the materials
The Overall Aspects	
39	EN30. A number of expenditures for environmental protection and investment by type.
Labor Practices and Decent Works	
Performance Indicators	
40	LA1. The number of workforces based on type of work, work contract, and regions
41	LA2. The number and rate of employee turnover by age group, gender and regions
42	LA3. The benefits provided for full-time employees and not provided for part-time employees based on the main activities.
Labor / Management Relationship Aspects	
43	LA4. The percentage of employees who are protected by the collective bargaining agreement
44	LA5. The minimum notice period regarding changes in important activities, including whether it is described in the collective agreement.
Occupation Health and Safety Aspects	
45	LA6. The percentage of total workforce represented in formal committee for health and safety between management and workers who help monitor and give advice to the occupation health and safety programs
46	LA7. The level of physical accident, disease because of the occupations, the lost days and absenteeism and number of deaths due to work by regions.
47	LA8. Education programs, training, counseling, prevention, guidance / control of local risks to help its employees, family members and members of society about heavy / dangerous diseases
48	LA9. Health and safety issues covered in the official agreement with employee unions
49	LA10 Average training per hour per employee by category of employee or group of employees
50	LA11 Programs for setting up skills and learning throughout a lifetime which supports the continuity of the work of the late career employees and assists them in setting the end of their career

51	LA12 The percentage of employees who receive a review career development and performance on a regular basis
52	LA13 The composition of the board of managers / employees and the detail of each of the categories / groups according to gender, age group, minority group membership, and other indicators of diversity
53	LA14 Comparison / ratio of basic salary of men and women by group / category of employees
Human Rights Performance Aspects	
Investment and Procurement Practices Aspects	
54	HR1 The percentage and number of investment significant agreements, including human rights clauses or have taken screening / filtration process related to the human rights aspects
55	HR2 The percentage of significant suppliers and contractors that have taken screening / filtration process related to the human rights aspects
56	HR3 The amount of training time for employees in this case regarding the policies and procedures related to the human rights aspects that are relevant to the activities of organizations.
Nondiscrimination Aspects	
57	HR4 The number of discrimination cases occurred and the actions were taken
58	HR5 All associating and assembling activities identified and can cause significant risks and actions taken to support those rights
Child Labor Aspects	
59	HR6 Activities that are identified contain significant risks that can lead to the occurrence of cases of child labor and actions taken to support the elimination of child labors
Forced and Compulsory Work Aspect	
60	HR7 Activities that are identified contain significant risks that may give rise to forced or compulsory work and actions that have been taken to support the efforts of the abolition of forced and compulsory work .
Precautionary Practices / Actions Aspect	
61	HR8 The percentage of security guards trained in terms of organizational policies and procedures related to aspects of Human Rights that are relevant to the activities of organizations.
The Rights of Indigenous People Aspect	
62	HR9 The number of infringement cases related to the rights of indigenous people and actions that have been taken.
Community Performance Indicators	
Community Aspect	

63	SO1	nature, scope and effectiveness of each program and practices conducted to assess and manage the impacts of operations on communities, both at the starting time, during the operations, and at the ending time.
Corruption Aspects 11		
64	SO2	The percentage and total number of business units that have risks of corruption
65	SO3	The percentage of employees trained in anti-corruption policies and procedures
66	SO4	The actions taken in response to incidents of corruption
Public Policies Aspects		
67	SO5	The position of public policies and participations in the process of lobbying and the making of public policies.
68	SO6	The value of financial and natural contributions to political parties, politicians and related institutions by country in which the company operates.
Not Competing Behavior Aspect		
69	SO7	The number of legal actions against violations of the regulations of anti-competition, anti-trust and monopoly practices.
Compliance Aspect		
70	SO8	The value of money from significant fines and total number of monetary sanctions for violations of the laws and regulations committed
Product Responsibility Aspects		
71	PR1	Stages of the lifecycle in which the impacts of products and services relating to health and safety is assessed for improvement, and percentage of the category of important products and services that should follow the procedures. 1
72	PR2	The number of violations of the laws and ethics regarding the impact of health and safety of a product during lifecycle of each product
Label Installation of Products and Services Aspects		
73	PR3	Type of product and service information required by procedures and percentage of significant products and services associated with the information required.
74	PR4	The number of violations and regulations and voluntary codes concerning marketing communication, including voluntary advertising, promotion, and sponsorship in accordance with its products. 1
75	PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.
Marketing Communication Aspects		

76	PR6 Programs for compliance with laws, standards and voluntary codes concerning marketing communication, including advertising, promotion and sponsorship.
77	PR7 The number of violations of regulations and voluntary codes concerning marketing communication, including voluntary advertising, promotion, and sponsorship in accordance with its products related to advertising, promotion and sponsorship.
Customers' Personal Freedom Aspect ⁹	
78	PR8 The overall number of complaints regarding violations of the personal privacy of customers and the loss of customers' data.
Compliance Aspect	
79	PR9 Monetary value of fines for violations of laws and rules on procurement and the use of products and services.

Appendix 2.CSR RECAPITULATION with ‘CONTENT ANALYSIS’

**CSR RECAPITULATION: ECONOMIC PERFORMANCE with
‘CONTENT ANALYSIS’**

25

Item	EC1	EC2	EC3	EC4	EC5	EC6	EC7	EC8	EC9
(n) firms	222	56	102	35	47	47	48	132	117

**CSR RECAPITULATION: ENVIRONMENTAL PERFORMANCE with
‘CONTENT ANALYSIS’**

8

Item	EN1	EN2	EN3	EN4	EN5	EN6	EN7	EN8	EN9	EN10
n. firms	75	40	45	45	80	53	37	41	26	32
Item	EN11	EN12	EN13	EN14	EN15	EN16	EN17	EN18	EN19	EN20
n. firms	29	73	89	67	31	20	15	40	41	27
Item	EN21	EN22	EN23	EN24	EN25	EN26	EN27	EN28	EN29	EN30
n.firms	42	68	20	31	14	138	54	26	16	52

**CSR RECAPITULATION: LABOR PRACTICES AND DECENT JOB with
‘CONTENT ANALYSIS’**

17

Item	LA1	LA2	LA3	LA4	LA5	LA6	LA7	LA8	LA9	LA10	LA11	LA12	LA13	LA14
(n) firms	254	37	97	92	34	75	71	182	81	61	43	136	103	24

**CSR RECAPITULATION: HUMAN RIGHTS
with ‘CONTENT ANALYSIS’**

8

Item	HR1	HR2	HR3	HR4	HR5	HR6	HR7	HR8	HR9
(n)firms	36	25	24	39	55	31	25	24	25

**CSR RECAPITULATION: SOCIAL PERFORMANCE
with ‘CONTENT ANALYSIS’**

8

Item	SO1	SO2	SO3	SO4	SO5	SO6	SO7	SO8
(n)firms	118	33	28	42	27	27	36	51

**CSR RECAPITULATION: PRODUCT RESPONSIBILITY
 with 'CONTENT ANALYSIS'**

item	17								
	PR1	PR2	PR3	PR4	PR5	PR6	PR7		
	PR8	PR9							
(n)firms	46	35	81	38	41	78	31	24	33

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