

Print ISSN: 2288-4637 / Online ISSN 2288-4645
doi:10.13106/jafeb.2021.vol8.no2.0183

Determinants of Socio-Ecological Responsibility Disclosures in Indonesia

Andajani ANDAJANI¹, Dian AGUSTIA²

Received: November 05, 2020 Revised: December 30, 2020 Accepted: January 08, 2021

Abstract

This study aimed to examine the effect of corporate characteristics, including the industrial sector and scale of operation, financial leverage, profitability, operating period, and social reputation, on socio-ecological responsibility based on Global Reporting Initiative (GRI) standards. The study was conducted in the Indonesian context. A total of 90 public companies listed on the Indonesia Stock Exchange were selected as samples, with an observation period of 10 years. A univariate regression analysis was applied to test the hypotheses. The results showed that the industrial sector, scale of operation, financial leverage, profitability, operating period, and social reputation of the corporate had a positive effect on socio-ecological responsibility. This study also obtained evidence that there were differences in the level of socio-ecological responsibility among the industrial sectors. The higher the relationship between the industrial sector and the possibility of the emergence of social and environmental issues, the higher the level of corporate socio-ecological responsibility. From a policy perspective, the implication of the results of this study was that it could be used as a consideration by the authorities or regulators in Indonesia, particularly the Financial Services Authority (OJK), in determining specific indicators of socio-ecological responsibility that must be carried out by corporates.

Keywords: Corporate Characteristics, Socio-Ecological Responsibility, Global Reporting Initiative

JEL Classification Code: O16, R5, G38

1. Introduction

It is an obligation for corporates operating in Indonesia to fulfill their social and environmental responsibilities. This obligation is strictly regulated in Law Number 19 of 2003 concerning State-Owned Enterprises, Law Number 25 of 2007 concerning Investment, Law Number 47 of 2007 concerning Limited Liability Companies, and Regulation of the Financial Services Priority Number 51/POJK.03/2017. These laws and regulations oblige corporates to fulfill corporate responsibilities for work safety, labor rights,

environmental sustainability, and fight against bribery and corruption. However, that there has been no standard until now regarding the form of social and environmental responsibility that corporates in Indonesia must explicitly implement, which is standards on specific indicators that can function as guidelines for corporates in Indonesia to fulfill various aspects of social and environmental responsibility (Atmadya & Dianawati, 2020; Alqirem et al., 2020; Hoang et al., 2020).

Although there is no specific standard as regards guideline, efforts to fulfill and disclose the corporate socio-ecological responsibility in Indonesia have increased quite significantly in the last few decades (Famiola & Adiwoso, 2016). A study by Famiola and Adiwoso (2016) revealed that the increase in the fulfillment and disclosure of the corporate socio-ecological responsibility in Indonesia was not caused by the existence of mandatory laws and regulations, but was rather triggered by the expectations and demands of investors and other stakeholders. Famiola and Adiwoso (2016) emphasized that the corporate socio-ecological responsibility disclosure in Indonesia tends to aim at obtaining the legitimacy of stakeholders who have expectations of corporate sustainability based on three aspects, including economic

¹First Author. [1] Ph.D. Student, Department of Accounting, Faculty of Economics and Business, Universitas Airlangga Surabaya, Indonesia [2] Lecturer, Department of Accounting, Sekolah Tinggi Ilmu Ekonomi Indonesia. Email: andajani19@feb.unair.ac.id

²Corresponding Author. Lecturer, Department of Accounting, Faculty of Economics and Business, Universitas Airlangga, Surabaya, Indonesia [Postal Address: Jalan Airlangga, Surabaya, East Java, 60286, Indonesia] Email: dian.agustia@feb.unair.ac.id

© Copyright: The Author(s)

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

sustainability, social sustainability, and environmental sustainability. Therefore, although there are no specific indicators and clear disclosure standards for the fulfillment of socio-ecological responsibilities, many corporates have attempted to fulfill these socio-ecological responsibilities and disclose them to stakeholders.

Supporting Famiola and Adiwoso (2016), Fajar (2018) stated that efforts to fulfill and disclose the corporate socio-ecological responsibilities in Indonesia tend to be voluntary rather than complying with applicable laws and regulations (mandatory). To fulfill the socio-ecological responsibility and disclose it to stakeholders, Siregar and Bachtiar (2010) and Utama (2011) stated that Indonesian corporates generally refer to the Global Reporting Initiative (GRI) Standards. GRI was established in 1997 with the aim to develop globally applicable guidelines for corporates on economic, environmental, and social performance disclosure. The volunteerism of Indonesian corporates to fulfill their socio-ecological responsibility and disclose it to stakeholders by referring to the GRI Standards is a corporate effort to gain social legitimacy (Siregar & Bachtiar, 2010) and the legitimacy of the governing authorities, even though the governing authorities in Indonesia have not prepared the infrastructure that supports transparency and accountability to disclose the socio-ecological responsibility (Utama, 2011) (Chen et al., 2020).

Some studies revealed that the awareness of corporates in Indonesia to fulfill and disclose their socio-ecological responsibilities voluntarily by referring to the GRI Standards is influenced by various factors. These factors include profitability (Asrori et al., 2019; Devie et al., 2020; Tarigan & Stacia, 2019), financial risk (Devie et al., 2020; Siregar & Bachtiar, 2010), the scale of operation or firm size (Asrori et al., 2019; Tan et al., 2016; Waluyo, 2017), ownership structure (Asrori et al., 2019; Nurleni et al., 2018), industrial sector, the pressure of mass-media coverage (Tan et al., 2016), operating period or firm age, firm growth (Waluyo, 2017), management commitment and corporate reputation (Muafi, 2017), organizational dynamics and institutional effects (Famiola & Adiwoso, 2016).

Several studies in the Indonesian context found consistent empirical evidence, but several other studies found inconsistent empirical evidence. The consistent findings are, for example, studies by Asrori et al. (2019) and Nurleni et al. (2018) that obtained the same evidence that ownership structure has a positive effect on the level of fulfillment of the socio-ecological responsibility. Likewise, the study by Tan et al. (2016) found evidence that the industrial sector has a positive effect on the level of fulfillment of the socio-ecological responsibility. Waluyo (2017) also found the same evidence that the corporate operating period has a positive effect on the level of fulfillment of the socio-ecological responsibility.

Studies that found inconsistent empirical evidence are, for example, Asrori et al. (2019) and Waluyo (2017) that found evidence that the corporate scale of operation has a positive effect on the level of fulfillment of the socio-ecological responsibility, but Tan et al. (2016) found evidence that the scale of operations has no effect on the level of fulfillment of the socio-ecological responsibility. Likewise, Devie et al. (2020) found evidence that financial risk has a negative effect on the level of fulfillment of the socio-ecological responsibility, while Siregar and Bachtiar (2010) found evidence that financial risk has no effect on the level of fulfillment of the socio-ecological responsibility.

This study aimed to re-examine the effect of corporate characteristics on the level of fulfillment of the socio-ecological responsibility in the Indonesian context. The corporate characteristics were limited to six aspects, which were seen as the main determinants of the fulfillment of the corporate socio-ecological responsibility in Indonesia, namely, the industrial sector, scale of operation, financial leverage, profitability, operating period, and social reputation. Different from previous studies, this study was conducted by expanding the sample size, which was 90 public companies, and expanding the observation period, which was 10 years grouped into two 5-year periods. Also, different from previous studies, the six corporate characteristic variables in this study were not tested simultaneously in one univariate regression model, but were tested one by one. With the different univariate regression model, the previously tested variables were included as control variables in the next variable testing.

2. Literature Review

2.1. Industrial Sector and Socio-Ecological Responsibility

Ackers (2017) stated that the industrial sector is very influential on the level of fulfillment of the corporate socio-ecological responsibility because there are industrial sectors that are directly related to social and environmental issues, and there are also industrial sectors that are not directly related to the social and environmental issues (Herzog, 2017; Lindorff et al., 2012; Mobin et al., 2019). The industrial sector has a positive effect on the level of fulfillment of the socio-ecological responsibility (Cha & Abebe, 2016; Garde-Sánchez et al., 2017; Mobin et al., 2019; Syed & Butt, 2017), in the sense that the higher the impact of the corporate's operations on social and environmental aspects, the higher the level of fulfillment of the corporate socio-ecological responsibility (Ackers, 2017; Herzog, 2017; Lindorff et al., 2012).

Kansal et al. (2014), Herzog (2017), and Mobin et al. (2019) revealed that the level of fulfillment of the

corporate socio-ecological responsibility varies depending on the industrial sector, including the characteristics of the production process and the products produced by the corporate. Kansal et al. (2014) and Mobin et al. (2019) explained that the level of fulfillment of the corporate socio-ecological responsibility engaged in the mining sector is higher than the agriculture sectors; likewise, the level of fulfillment of the corporate socio-ecological responsibility engaged in the agriculture sector is higher than the basic industry and chemical sector. The same explanation was provided by Ackers (2017) and Herzog (2017).

In the Indonesian context, Tan et al. (2016) found evidence supporting the findings of the above studies, that the industrial sector has a positive effect on the level of fulfillment of the corporate socio-ecological responsibility. This shows that the higher the impact of the corporate's operations on social and environmental issues, logically, the broader the corporate's obligations to fulfill its socio-ecological responsibility.

2.1.1. Scale of Operation and Socio-Ecological Responsibility

The larger the corporate scale of operation, the broader the corporate's obligations to fulfill its socio-ecological responsibility (Golrida et al., 2019), and therefore, the higher the corporate's efforts to fulfill the socio-ecological responsibility (Dremptec et al., 2019). Relationships with suppliers and customers are also expanding (Hackert et al., 2014). This is logical, because the larger the corporate scale of operation, the more complex the production processes and the products produced, and the impact of the corporate's operations on social and environmental issues will also increase.

Golrida et al. (2019), Dremptec et al. (2019), and Sajida et al. (2019) found empirical evidence that the scale of operation (firm size) has a positive effect on the level of fulfillment of the socio-ecological responsibility. Their findings support previous studies conducted by Kansal et al. (2014) and Hackert et al. (2014). Meanwhile, Crisóstomo and Oliveira (2016) and Arora and Soni (2017) found different empirical evidence. They found evidence that the scale of operation (firm size) does not affect the level of fulfillment of the socio-ecological responsibility, and they presumed that an increase in the scale of operation of the corporates studied is not necessarily followed by an increase in the complexity of the production process and an increase in its impact on social and environmental issues.

In the Indonesian context, Waluyo (2017) and Asrori et al. (2019) found evidence that the scale of operation or firm size has a positive effect on the level of fulfillment of the socio-ecological responsibility. Their findings differ from those of Tan et al. (2016) that found evidence that the corporate scale

of operation has no effect on the level of fulfillment of the socio-ecological responsibility. The difference in findings is considered to have occurred due to differences in research samples or measurements of the corporate scale of operation.

2.1.2. Financial Leverage and Socio-Ecological Responsibility

One indicator of corporate financial risk is financial leverage, which is the proportion of liabilities to equity (Harjoto, 2017), in the sense that the higher the proportion of liabilities above equity, the higher the corporate's obligation to pay creditors' rights and the lower the corporate's ability to pay for investors' rights. However, from a different perspective, Mishra and Modi (2013) and Hsu and Chen (2015) stated that the proportion of liabilities to equity does not always have to be viewed as a corporate's financial risk. They argued that if the corporate is able to manage its debt properly, this debt can be a leverage for corporate growth in the future. Studies on the effect of financial leverage on the level of fulfillment of the socio-ecological responsibility show different findings. Lee et al. (2016), Diemont et al. (2016), Syed and Butt (2017), and Harjoto (2017), for example, found evidence that financial leverage has negative effects on the fulfillment of the socio-ecological responsibility. It is assumed that corporate management views financial leverage as a financial risk, and to reduce this financial risk, the provision of funds to fulfill the socio-ecological responsibility must also be reduced. In contrast to the two studies above, Mishra and Modi (2013), Gregory et al. (2014), and Kansal et al. (2014) found opposite evidence, in which the financial leverage has a positive effect on the fulfillment of the corporate socio-ecological responsibility. The same finding was revealed by Hsu and Chen (2015) and Sajida et al. (2019). They argued that corporate management views financial leverage as an opportunity to encourage the firm growth, and to encourage that growth, the fulfillment of the socio-ecological responsibility must be continuously improved. In other studies, Benlemlih (2017) and Bae et al. (2018) found evidence that financial leverage does not affect the fulfillment of corporate socio-ecological responsibility.

In the Indonesian context, Devie et al. (2020) found evidence that financial risk (leverage) has a negative effect on the level of fulfillment of the socio-ecological responsibility, while Siregar and Bachtiar (2010) found evidence that financial risk (leverage) has no effect on the level of fulfillment of the socio-ecological responsibility. However, the findings of studies by Mishra and Modi (2013), Gregory et al. (2014), Kansal et al. (2014), and Hsu and Chen (2015) the arguments underlying them are logically accepted. They found evidence that financial leverage has a positive effect on the fulfillment of the corporate socio-ecological responsibility, and they argued that management

who is willing to take risks will view financial leverage as an opportunity to encourage firm growth, and to encourage that growth, the fulfillment of socio-ecological responsibility must be continuously improved.

2.1.3. Profitability and Socio-Ecological Responsibility

The results of previous studies on profitability as a determinant of the fulfillment of the socio-ecological responsibility are also varied. Kansal et al. (2014), Giannarakis (2014), Xu and Zeng (2016), Elshabasy (2018), and Tarigan and Stacia (2019) found evidence that profitability has a positive effect on efforts to fulfill the socio-ecological responsibility. They argued that management has an awareness of the corporate's role in maintaining the sustainability of social life and environmental sustainability besides economic sustainability for investors. Therefore, as Xu and Zeng emphasized (2016), the higher the corporate's potential to increase profitability for investors, the higher the management's efforts to share a concern for the community and the environment.

In contrast to the above studies, Mahmood and Malik (2018) and Nizamuddin (2018) found that the level of fulfillment of the socio-ecological responsibility in the corporates they studied remained high even though the profitability of these corporates is low or high. They argued that the high level of fulfillment of the corporate socio-ecological responsibility is not influenced by the profitability factor. It may be due to factors in the industrial sector of the corporate they studied, including the mining and natural resource exploration sectors, which are obliged to maintain socio-ecological sustainability.

2.1.4. Operating period and Socio-Ecological Responsibility

The longer the operating period, the more well known the corporate is by the community, and the higher the community's expectations about the corporate's role in maintaining the sustainability of its social life and environmental sustainability (Kansal et al., 2014). Thus, as stated by Kansal et al. (2014), Garde-Sánchez et al. (2017), and Sajida et al. (2019), the longer the corporate operating period, the higher the level of fulfillment of the socio-ecological responsibility. However, Majumder et al. (2019) found different evidence, in which the corporate operating period has no effect on the level of fulfillment of the socio-ecological responsibility. Based on the results of their study, Majumder et al. (2019) argued that the level of fulfillment of the socio-ecological responsibility remains high regardless of the corporate operating period because the corporates studied are corporates engaged in the natural resource exploration sector.

In the Indonesian context, Waluyo (2017) found the same evidence that the corporate operating period has a positive effect on the level of fulfillment of the socio-ecological responsibility. His study supports the research findings of Kansal et al. (2014), Garde-Sánchez et al. (2017), and Sajida et al. (2019).

2.1.5. Social Reputation and Socio-Ecological Responsibility

The higher the corporate social reputation, the higher the level of fulfillment of the socio-ecological responsibility (Ulke & Schons, 2016) because the higher the corporate social reputation, the management will continue to strive to maintain or improve that reputation by carrying out programs that are considered capable of increasing the legitimacy of stakeholders (Leiva et al., 2016). This argument is expressed as an idea underlying Ulke and Schons' research (2016) and Leiva et al. (2016) who found evidence that the corporate social reputation has a positive effect on the level of fulfillment of the socio-ecological responsibility. Their studies support the research findings of Kansal et al. (2014) and are supported by Aguilera-Caracuel et al. (2017) that revealed the same findings. The study by Kansal et al. (2014) and Aguilera-Caracuel et al. (2017) also found evidence that the level of fulfillment of the socio-ecological responsibility differs significantly based on the level of corporate social reputation.

Opposite to the studies mentioned above, Arikan et al. (2016) found different evidence, in which the corporate social reputation has no effect on the level of fulfillment of the socio-ecological responsibility. They argued that the level of fulfillment of the socio-ecological responsibility remains low regardless of the social reputation because the corporates they studied are corporates operating in the financial and banking industry sectors.

2.2. Hypothesis Development

Based on these empirical facts and logical thinking, the hypotheses in this study are stated as follows:

H1: *The industrial sector has a positive effect on the fulfillment of socio-ecological responsibility.*

H2: *There are differences in the fulfillment of the corporate socio-ecological responsibility among the industrial sectors.*

H3: *The corporate scale of operation has a positive effect on the fulfillment of the socio-ecological responsibility.*

H4: *Financial leverage has a positive effect on the fulfillment of socio-ecological responsibility.*

H5: *Profitability has a positive effect on the fulfillment of socio-ecological responsibility.*

H6: The corporate operating period has a positive effect on the fulfillment of socio-ecological responsibility.

H7: The corporate social reputation has a positive effect on the fulfillment of socio-ecological responsibility.

3. Research Methods and Materials

This study was conducted by selecting 90 samples of public companies in Indonesia that are included in eight industrial sectors based on the grouping conducted by the Indonesia Stock Exchange (IDX) as presented in Table 1:

The IDX classified public companies into nine industrial sectors, but companies engaged in the financial sector were excluded from this study sample for the following reasons. First, the operating activities of financial sector companies in Indonesia (which include financial intermediaries,

insurance, financial institutions, securities companies, and investment companies) do not have a direct impact on social and environmental issues, so that the corporate social and environmental sustainability programs are also very low. This fact is consistent with the facts found by Kansal et al. (2014), Herzog (2017), and Beschorner and Hajduk (2017). Second, financial sector companies in Indonesia do not consistently publish sustainability reports during the observation period, and in the existing sustainability reports, the number of socio-ecological responsibility disclosures according to the 2006 and 2011 GRI standards is relatively low. The sample as presented in Table 1 was selected from corporates that implement sustainability disclosures consistently based on the 2006 GRI and 2011 GRI disclosure standards. The hypotheses in this study were tested with an error tolerance of 5%. The statistical test methods for each hypothesis are presented in Table 2.

Table 1: Sample profiles by industrial sectors

Group	Industrial Sector	Number	%
INDSEC1	Trade, service, and investment	10	11.11
INDSEC2	Infrastructure, Utilities, and Transportation	12	13.33
INDSEC3	Property, Real Estate, and Construction	10	11.11
INDSEC4	Consumer Goods	13	14.45
INDSEC5	Miscellaneous Industry	11	12.23
INDSEC6	Basic Industry and Chemical	12	13.33
INDSEC7	Agriculture	6	6.67
INDSEC8	Mining	16	17.77
Total		90	100.00

Table 2: Statistical Test Methods

Hypothesis	Statistical Test
Hypothesis 1 (H_1)	Model 1 (1-tailed)
Hypothesis 2 (H_2)	ANOVA (2-tailed)
Hypothesis 3 (H_3)	Model 2 (1-tailed)
Hypothesis 4 (H_4)	Model 3 (1-tailed)
Hypothesis 5 (H_5)	Model 4 (1-tailed)
Hypothesis 6 (H_6)	Model 5 (1-tailed)
Hypothesis 7 (H_7)	Model 6 (1-tailed)

Table 3: Descriptive statistics of CSERDI and corporate characteristics

Variable	N	Min.	Max.	Mean	Std. Dev.	K-S ⁽¹⁾
CSERDI	900	,50556	,96628	,78050	,09524	0.150
INSEC	900	1.00	8.00	4,59	2,325	0.154
SIZE	900	7,03644	12,70220	9,49129	1,54937	0.168
LEV	900	,61194	1,49675	,85859	,15893	0.091
ROA	900	,10255	,28761	,18817	,04252	0.099
AGE	900	9	97	34,40	18,503	0.161
SOCR	900	1	6	3,81	1,480	0.111

4. Results and Discussions

4.1. Descriptive Statistics

Descriptive statistics for the research variables used in the regression equation models are presented in Table 3.

Table 3 shows that the lowest level of fulfillment of the corporate socio-ecological responsibility (CSERDI) by the sample corporates is 0.51 from the GRI standard, and the highest is 0.97, with a mean of 0.78. The CSERDI mean of 0.78 indicates that the level of fulfillment of the corporate socio-ecological responsibility by the sample corporates is relatively high. The industrial sector (INSEC) variable mean is 4.59, indicating that the corporates in the study sample are corporates whose business activities have a high impact on socio-ecological issues. The corporate scale of operation (SIZE) variable mean is 9.49, indicating that the sample corporates in this study are corporates that have a relatively large size. The financial leverage (LEV) variable mean is 0.86, indicating that the sample corporates are corporates that have relatively low financial risk. Likewise, the profitability (ROA) variable mean is 0.19 and the operating period (AGE) variable mean is 34.40, indicating that the sample corporates are corporates

that are relatively profitable and have been operating for a relatively long time. The social reputation (SOCR) variable mean is 3.81, indicating that most of the sample corporates are corporates that have a relatively high reputation. Table 3 also shows that all data used in the regression models are normally distributed. This is indicated by the results of the Kolmogorov-Smirnov tests which all show the significance value higher than a (0.05).

4.2. Correlation Between Variables

The correlation between the variables of this study is presented in the form of a matrix as shown in Table 4.

Table 4 shows that the corporate characteristics variables (INSEC, SIZE, LEV, ROA, AGE, and SOCR) have a fairly strong correlation with the fulfillment of the corporate socio-ecological responsibility (CSERDI) variable, which is indicated by the respective *r* values that range from 0.237 to 0.658 with each level of significance of less than 0.05. Table IV also shows that the correlation between corporate characteristics variables (INSEC, SIZE, LEV, ROA, AGE, and SOCR) is very weak, even not statistically significant. This means that the regression models do not contain multicollinearity problems.

Table 4: Correlation matrix between CSERDI and corporate characteristics

Variables		CSERDI	INSEC	SIZE	LEV	ROA	AGE	SOCR
CSERDI	r	1	0,624**	0658**	.501*	.528**	.283**	.237*
	Sig.		.000	.000	.041	.000	.000	.032
	N		900	900	900	900	900	900
INSEC	r		1	,329	,560	,318	,066	,052
	Sig.			,068	,113	,141	,098	,117
	N			900	900	900	900	900
SIZE	r			1	,470	,552	,174	,038
	Sig.				,091	,112	,077	,259
	N				900	900	900	900
LEV	r				1	,330	,061	,093
	Sig.					,211	,068	,095
	N					900	900	900
ROA	r					1	,047	,042
	Sig.						,163	,210
	N						900	900
AGE	r						1	,882
	Sig.							,164
	N							900
SOCR	r							1
	Sig.							-
	N							900

4.3. Hypothesis Test Results

Hypotheses 1 (H_1), H_3 , H_4 , H_5 , H_6 , and H_7 were tested using univariate regression with Model 1 to Model 6. Table 5 presents the results of the feasibility test of these regression models and presents the results of the hypothesis testing.

Table 5 shows that the regression models (Model 1 to Model 6) are fit, in which it reflects that changes (variations) in the independent variables can explain changes (variations) in the dependent variable in each model. This is indicated by the significant F-value in each model at p-value < 0.05. All models are also free from autocorrelation problems, which is indicated by the Durbin-Watson (d) value that met the condition that $d > dU$ and $(4-d) > dU$. In this study, with a total of 900 observations and seven variables, the dL and dU values based on the Durbin-Watson table are 1.87705 and 1.90389, respectively. Thus, the use of each model for hypothesis testing can be continued.

The Effect of the Industrial Sector on the Fulfillment of Socio-Ecological Responsibility

Hypothesis 1 (H_1) states that the industrial sector has a positive effect on the fulfillment of socio-ecological responsibility. Table 5 shows that the regression coefficient for the industrial sector (INSEC) variable is 0.126 and is significant at ≤ 0.01 . The results of this analysis indicate that the H_1 in this study is accepted. Thus, this study proves that the industrial sector has a positive effect on the level of fulfillment of corporate socio-ecological responsibility. These results logically support the results of the study by Kansal et al. (2014) that obtained evidence that the industrial sector has a positive effect on the level of corporate social responsibility disclosure. This study also supports the findings of studies by Cha and Abebe (2016), Syed and Butt (2017), Garde-Sánchez et al. (2017), and Mobin et al. (2019).

Table 5: Multiple regression models for CSERDI with corporate characteristics

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Model 1 : CSERDI = $\alpha + \beta_1$ INSEC + ϵ						
Model 2 : CSERDI = $\alpha + \beta_1$ INSEC + β_2 SIZE + ϵ						
Model 3 : CSERDI = $\alpha + \beta_1$ INSEC + β_2 SIZE + β_3 LEV + ϵ						
Model 4 : CSERDI = $\alpha + \beta_1$ INSEC + β_2 SIZE + β_3 LEV + β_4 ROA + ϵ						
Model 5 : CSERDI = $\alpha + \beta_1$ INSEC + β_2 SIZE + β_3 LEV + β_4 ROA + β_5 AGE + ϵ						
Model 6 : CSERDI = $\alpha + \beta_1$ INSEC + β_2 SIZE + β_3 LEV + β_4 ROA + β_5 AGE + β_6 SOCR + ϵ						
R	0,624	0,691	0,707	0,738	0,772	0,778
R ²	0,390	0,478	0,501	0,544	0,595	0,606
Adjusted R ²	0,389	0,477	0,499	0,542	0,593	0,603
Std. Error of Estimate	0,744	0,689	0,675	0,044	0,061	0,060
Durbin-Watson	1,988	1,963	1,964	1,962	2,007	2,026
F-value	7,762	10,476	19,323	27,370	23,224	28,952
Sig.	0,000	0,000	0,000	0,000	0,000	0,000
Constant	0,663	0,470	0,406	0,406	0,381	0,361
Sig.	0,000	0,000	0,000	0,000	0,000	0,000
Beta value and Sig.						
INSEC	0,126**	0,113**	0,109**	0,112**	0,102**	0,113**
Sig.	0,000	0,000	0,000	0,000	0,000	0,000
SIZE		0,127**	0,125**	0,115**	0,110**	0,112**
Sig.		0,000	0,000	0,000	0,000	0,000
LEV			0,110**	0,185**	0,107**	0,103**
Sig.			0,000	0,000	0,000	0,000
ROA				0,576**	0,609**	0,566**
Sig.				0,000	0,000	0,000
AGE					0,101**	0,103*
Sig.					0,000	0,047
SOCR						0,115**
Sig.						0,000

Table 6: CSER Disclosure Index (CSERDI) and ANOVA for CSERDI by the industrial sector

Panel A: CSERDI across Industrial Sector						
Group	Industrial Sector	Min.	Max.	Mean	Std. Dev.	K-S ⁽¹⁾
INSEC1	Trade, service, and investment	0,50556	0,72881	0,65369	0,0589223	0,120
INSEC2	Infrastructure, Utilities, and Transport	0,63881	0,77805	0,71610	0,0342132	0,144
INSEC3	Property, Real Estate, and Construction	0,71272	0,73941	0,72320	0,0102432	0,118
INSEC4	Consumer Goods	0,74165	0,88636	0,80636	0,1563221	0,081
INSEC5	Miscellaneous Industry	0,72881	0,94145	0,82037	0,0425216	0,095
INSEC6	Basic Industry and Chemical	0,73468	0,88222	0,81276	0,0126574	0,161
INSEC7	Agriculture	0,81078	0,91931	0,83661	0,0342763	0,117
INSEC8	Mining	0,52432	0,96628	0,86896	0,1765835	0,143
Total		0,50556	0,96628	0,78050	0,0952423	0,150
Panel B: ANOVA for CSERDI by industrial sector						
Source	Sum of Square	Df.	Mean Square	F-Ratio	Sig.	
Between group	4566,222	78	58,541	14,785	0.000*	
Within group	291,667	821	,355			
Total	4857,889	899				

Differences in the Level of Fulfillment of the Socio-Ecological Responsibility Among the Industrial Sectors

Hypothesis 2 (H_2) states that there are differences in the fulfillment of the socio-ecological responsibility among the industrial sectors. The level of fulfillment of the socio-ecological responsibility (CSERDI) for each industrial sector is presented in Table 6.

Panel A Table 6 shows that the CSERDI mean of the sample corporates during the observation period is 0.78050 (78.05% of the GRI disclosure standards), while the CSERDI mean among the industrial sectors varied, ranging from 0.65369 to 0.86896. The lowest CSERDI mean is in the trade, service, and investment sector (which is 0.65369) and the CSERDI mean increases in line with the risk of the industrial sector on socio-ecological issues. The highest CSERDI mean is in the mining sector, which is 0.86896.

Panel B Table 6 presents the results of the CSERDI variance analysis among the industrial sectors. Panel B Table 6 shows that there are significant differences in the level of fulfillment of the corporate socio-ecological responsibility among the industrial sectors. This is indicated by the F-ratio of 14.785, which is significant at a p-value of 0.000 (< 0.05). The fact of this statistical test shows that Hypothesis 2 (H_2) is accepted, that there are differences in the level of fulfillment of the corporate socio-ecological responsibility (CSERDI)

among the corporates from different industrial sectors. The acceptance of H_2 provides support for H_1 acceptance, that the higher the relationship among the industrial sectors and the possibility of the emergence of social and environmental issues, the higher the corporate's obligations and efforts to fulfill its socio-ecological responsibility.

The Effect of Scale of Operation on the Fulfillment of the Socio-Ecological Responsibility

Hypothesis 3 (H_3) states that the corporate scale of operation has a positive effect on the fulfillment of the socio-ecological responsibility. Model 2 in Table 5 shows that the regression coefficient for the scale of operation (SIZE) variable is 0.127 and is significant at p-value ≤ 0.01 , after being controlled by the industrial sector (INSEC) variable which has been tested on H_1 . The results of this analysis indicate that H_3 is accepted. Thus, this study proves that the larger the corporate scale of operation, the higher the level of fulfillment of the corporate socio-ecological responsibilities. These results support the research findings of Kansal et al. (2014), Golrida et al. (2019), Dremptetic et al. (2019), and Sajida et al. (2019) that also obtained evidence that the industrial sector has a positive effect on the level of corporate social responsibility disclosure. Model 2 in Table 5 also shows that the regression coefficient of the industrial

sector (INSEC) variable as a control variable is 0.113 and it is consistently significant at $p\text{-value} \leq 0.01$. This means that Model 2 consistently supports the acceptance of H_1 , which has been tested in Model 1.

The Effect of Financial Leverage on the Fulfillment of the Socio-Ecological Responsibility

Hypothesis 4 (H_4) states that the corporate's financial leverage has a positive effect on the fulfillment of the socio-ecological responsibility. Model 3 in Table 5 shows that the regression coefficient for the financial leverage (LEV) variable is 0.110 and is significant at $p\text{-value} \leq 0.01$, after being controlled by the industrial sector (INSEC) variable and the scale of operation (SIZE) variable, which have been tested on H_1 and H_3 , respectively. The results of this analysis indicate that H_4 is accepted. Thus, this study proves that the higher the corporate's financial risk, the higher the level of fulfillment of the corporate socio-ecological responsibility. The results of this study support the findings of Mishra and Modi (2013), Gregory et al. (2014), Kansal et al. (2014), Hsu and Chen (2015), and Sajida et al. (2019). The results of this study show that corporate management views financial leverage as an opportunity to encourage the firm growth, and to encourage that growth, the fulfillment of the socio-ecological responsibility must be continuously improved.

The results of this study do not support the studies by Lee et al. (2016), Diemont et al. (2016), Syed and Butt (2017), and Harjoto (2017) who found evidence that financial leverage has a negative effect on the fulfillment of the socio-ecological responsibility. Harjoto (2017) presumed that corporate management views financial leverage as a financial risk, and to reduce this financial risk, the provision of funds to fulfill the socio-ecological responsibility must also be reduced. Lee et al. (2016) presumed that the reduction in the fulfillment of the socio-ecological responsibility activities for corporates with high leverage is intended to make creditors' rights sufficiently available and can be paid off based on contracts, so that creditor trust in the corporate is maintained.

Model 3 in Table 5 also shows that the regression coefficient of the variables of the industrial sector (INSEC) and scale of operation (SIZE) as control variables are 0.109 and 0.125, respectively, and are consistently significant at $p\text{-value} \leq 0.01$. This means that Model 3 consistently supports the acceptance of H_1 , which has been tested in Model 1 and supports the acceptance of H_3 that has been tested in Model 2.

The Effect of Profitability on the Fulfillment of the Socio-Ecological Responsibility

Hypothesis 5 (H_5) states that corporate profitability has a positive effect on the fulfillment of socio-ecological responsibility. Model 4 in Table 5 shows that the regression

coefficient of the profitability (ROA) variable is 0.576 and is significant at $p\text{-value} \leq 0.01$, after being controlled by the variables of the industrial sector (INSEC), the scale of operation (SIZE), and financial risk (LEV), which have been tested on H_1 , H_3 , and H_4 , respectively. The results of this analysis indicate that H_5 is accepted. Thus, this study proves that the higher the level of corporate profitability, the higher the level of fulfillment of the corporate socio-ecological responsibility.

The results of this study support the findings of Kansal et al. (2014), Xu and Zeng (2016), and Elshabasy (2018) that obtained evidence that profitability has a positive effect on the level of corporate social responsibility disclosure. Kansal et al. (2014) and Xu and Zeng (2016) argued that the higher the profitability, which is reflected in the level of return-on-assets (ROA), the corporate will try to increase or set aside funds to fulfill the socio-ecological responsibility. Elshabasy (2018) and Tarigan and Stacia (2019) also argued that the increase in the fulfillment of the socio-ecological responsibility activities for corporates with high profitability is intended to increase stakeholder legitimacy, so that stakeholder trust and support for the corporate increases.

Model 4 in Table 5 also shows that the regression coefficient of the variables of the industrial sector (INSEC), the scale of operation (SIZE), and financial leverage (LEV) as control variables are 0.112, 0.115, and 0.185, respectively, and are consistently significant at $p\text{-value} \leq 0.01$. This means that Model 4 consistently supports the acceptance of H_1 , H_3 , and H_4 , which have been tested in Model 1, Model 2, and Model 3, respectively.

The Effect of Operating period on the Fulfillment of the Socio-Ecological Responsibility

Hypothesis 6 (H_6) states that the corporate operating period has a positive effect on the fulfillment of socio-ecological responsibility. Model 5 in Table 5 shows that the regression coefficient of the operating period (AGE) variable is 0.101 and is significant at $p\text{-value} \leq 0.05$, after being controlled by the variables of the industrial sector (INSEC), the scale of operation (SIZE), financial risk (LEV), and profitability (ROA), which have been tested on H_1 , H_3 , H_4 , and H_5 , respectively. The results of this analysis indicate that H_6 is accepted. Thus, this study proves that the longer the corporate operating period, the higher the level of fulfillment of the corporate socio-ecological responsibility. The results of this study support the findings of Kansal et al. (2014) that obtained evidence that the operating period has a positive effect on the level of corporate social responsibility disclosure. Kansal et al. (2014) argued that the longer the corporate operating period, which is reflected in the firm age, the broader social relations of the corporate, so that the more impact the corporate's operations have on social and

environmental aspects. Therefore, the longer the corporate operating period, the higher the corporate's efforts to fulfill its socio-ecological responsibility.

Model 5 in Table 5 also shows that the regression coefficient of the variables of the industrial sector (INSEC), the scale of operation (SIZE), financial leverage (LEV), and profitability (ROA) as control variables are 0.102, 0.110, 0.107, and 0.609, respectively, and are consistently significant at $p\text{-value} \leq 0.01$. This means that Model 5 consistently supports the acceptance of H_1 , H_3 , H_4 , and H_5 , which have been tested in Model 1, Model 2, Model 3, and Model 4, respectively.

The Effect of Social Reputation on the Fulfillment of the Socio-Ecological Responsibility

Hypothesis 7 (H_7) states that the corporate social reputation has a positive effect on the fulfillment of the socio-ecological responsibility. Model 6 in Table 5 shows that the regression coefficient of the corporate social reputation (SOCR variable) is 0.115 and is significant at $p\text{-value} \leq 0.01$, after being controlled by the variables of the industrial sector (INSEC), the scale of operation (SIZE), financial leverage (LEV), profitability (ROA), and operating period (AGE), which have been tested on H_1 , H_3 , H_4 , H_5 , and H_6 , respectively. The results of this analysis indicate that H_7 is accepted. Thus, this study proves that the higher the corporate social reputation, the higher the level of fulfillment of the corporate socio-ecological responsibility. The results of this study support the findings of Kansal et al. (2014) that obtained evidence that corporate reputation has a positive effect on the level of corporate social responsibility disclosure. Kansal et al. (2014) believed that the higher the corporate social reputation, which is reflected in the number of awards or certifications, the higher the corporate's efforts to maintain and enhance its social reputation. Therefore, the higher the corporate social reputation, the higher the corporate's efforts to fulfill its socio-ecological responsibility.

Model 6 in Table 5 also shows that the regression coefficient of the variables of the industrial sector (INSEC), the scale of operation (SIZE), financial risk (LEV), and profitability (ROA) as control variables are 0.113, 0.112, 0.103, and 0.566, respectively, and are consistently significant at $p\text{-value} \leq 0.01$. Model 6 also shows that the operating period (AGE) also consistently has a positive effect on CSERDI as has been tested in H_6 . This means that Model 6 consistently supports the acceptance of H_1 , H_3 , H_4 , H_5 , and H_6 , which have been tested on Model 1, Model 2, Model 3, Model 4, and Model 5, respectively.

5. Conclusions

This study obtained empirical evidence that corporate characteristics (industrial sector, the scale of operation,

profitability, financial leverage, operating period, and social reputation) are determinants of socio-ecological responsibility for the corporates. The empirical evidence shows that these corporate characteristics have a positive effect on the socio-ecological responsibility. This means that the corporate's responsibility for socio-ecological issues will increase in line with the increase in operating risk to the environment, and in line with the increase in the scale of operation, profitability, financial leverage, operating period, and an increase in social reputation. This study also obtained evidence that there are differences in the level of socio-ecological responsibility among the industrial sectors. This means that the higher the relationship between the industrial sector and the possibility of social and environmental issues, the higher the awareness of management to fulfill the corporate socio-ecological responsibility.

Even though there are no standards regarding specific indicators that can guide corporates in Indonesia to fulfill various aspects of their social and environmental responsibility until now, the results of this study show that Indonesian corporates have fulfilled these obligations and disclosed them to the public. The guidelines used by Indonesian corporates are the GRI disclosure standards. The empirical facts found in this study also indirectly reflect that the fulfillment and disclosure of the corporate socio-ecological responsibility in Indonesia are triggered by management awareness to meet the expectations and demands of stakeholders. Stakeholders have expectations of corporate sustainability from three aspects, including economic sustainability, social sustainability, and environmental sustainability. Therefore, although there are no specific indicators and disclosure standards for the fulfillment of clear socio-ecological responsibility in Indonesia, many corporates have made efforts to fulfill the socio-ecological responsibility.

References

- Ackers, B. (2017). Independent corporate social responsibility assurance: a response to soft laws, or influenced by corporate size and industry sector? *International Journal of Disclosure and Governance*, 14(4), 278–298.
- Aguilera-Caracuel, J., Guerrero-Villegas, J. & García-Sánchez, E. (2017). Reputation of multinational companies: Corporate social responsibility and internationalization. *European Journal of Management and Business Economics*, 26(3), 329–346.
- Alqirem, R., Afifa, M. A. B. U., Saleh, I., & Haniyah, F. (2020). *Ownership Structure, Earnings Manipulation, and Organizational Performance : The Case of Jordanian Insurance Organizations*, 7(12), 293–308. <https://doi.org/10.13106/jafeb.2020.vol7.no12.293>
- Arikan, E., Kantur, D., Maden, C., & Telci, E. E. (2016). Investigating the mediating role of corporate reputation on

- the relationship between corporate social responsibility and multiple stakeholder outcomes. *Quality and Quantity*, 50(1), 129–149.
- Arora, A., & Soni, T. K. (2017). Corporate Social Responsibility and firm characteristics: evidence from BSE 500. *International Journal of Information, Business and Management*, 9(1), 119–140.
- Asrori, A., Amal, M. I., & Harjanto, A. P. (2019). Corporate Characteristics on the Reporting Index of Corporate Social and Environmental Disclosure in Indonesian Public Companies. *International Journal of Energy Economics and Policy*, 9(5), 481–488.
- Atmadya, A. H., & Dianawati, W. (2020). Carbon emission disclosure, firm value and good corporate governance. *Hamdard Islamicus*, 43(2), 1459–1471. <https://doi.org/10.13106/jafeb.2020.vol7.no12.223>
- Bae, S. C., Chang, K., & Yi, H. C. (2018). Corporate social responsibility, credit rating, and private debt contracting: new evidence from syndicated loan market. *Review of Quantitative Finance & Accounting*, 50, 261–299.
- Benlemlih, M. (2017). Corporate Social Responsibility and Firm Debt Maturity. *Journal of Business Ethics*, 144(3), 491–517.
- Beschorner, T., & Hajduk, T. (2017). Responsible Practices are Culturally Embedded: Theoretical Considerations on Industry-Specific Corporate Social Responsibility. *Journal of Business Ethics*, 143, 635–642.
- Cha, W., & Abebe, M. A. (2016). Board of directors and industry determinants of corporate philanthropy. *Leadership & Organization Development Journal*, 37(5), 672–688.
- Chen, X., Ma, Z., Shi, J., Tu, B., & Xu, S. (2020). Corporate Social Responsibility and Unsecured Debt: Evidence from China. *Journal of Asian Finance, Economics and Business*, 7(11), 1–11. <https://doi.org/10.13106/jafeb.2020.vol7.no11.001>
- Crisóstomo, V. L., & Oliveira, M.R. (2016). An Analysis of the Determinants of Corporate Social Responsibility of Brazilian Firms. *Brazilian Business Review*, 13(4), 72–93.
- Devie, D., Liman, L.P., Tarigan, J., & Jie, F. (2020). Corporate social responsibility, financial performance and risk in Indonesian natural resources industry. *Social Responsibility Journal*, 16(1), 73–90.
- Diemont, D., Moore, K., & Soppe, A. (2016). The Downside of Being Responsible: Corporate Social Responsibility and Tail Risk. *Journal of Business Ethics*, 137(2), 213–229.
- Drempetic, S., Klein, C., & Zwergel, B. (2019). The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review. *Journal of Business Ethics*, 138(1), 1–28.
- Elshabasy, Y. N. (2018). The impact of corporate characteristics on environmental information disclosure: an empirical study on the listed firms in Egypt. *Journal of Business and Retail Management Research*, 12(2), 232–241.
- Fajar, M. (2018). Corporate social responsibility in Indonesia: regulation and implementation issues. *Journal of Legal, Ethical and Regulatory Issues*, 21(3), 3–12.
- Famiola, M., & Adiwoso, S.A. (2016). Corporate social responsibility diffusion by multinational subsidiaries in Indonesia: organisational dynamic and institutional effect. *Social Responsibility Journal*, 12(1), 117–129.
- Garde-Sánchez, R., Bolívar, R., Pedro, M., Hernández, L., & Antonio, M. (2017). Corporate and managerial characteristics as drivers of social responsibility disclosure by state-owned enterprises. *Review of Managerial Science*, 11(3), 633–659.
- Giannarakis, G. (2014). Corporate governance and financial characteristic effects on the extent of corporate social responsibility disclosure. *Social Responsibility Journal*, 10(4), 569–590.
- Golrida, K. P., Muliani, M., & Joshi, P. L. (2019). Re-examining Firm Size and Corporate Social Responsibility: The Visibility Approach. *Emerging Markets Journal*, 9(1), 1–15.
- Gregory, A., Tharyan, R., & Whittaker, J. (2014). Corporate Social Responsibility and Firm Value: Disaggregating the Effects on Cash Flow, Risk and Growth. *Journal of Business Ethics*, 124(4), 633–657.
- Hackert, A. M., Krumwiede, D., Tokle, J., & Vokurka, R. J. (2014). Corporate social responsibility practices and corporate size among global manufacturers. *Journal of International Business Research*, 13(1), 41–58.
- Harjoto, M. A. (2017). Corporate social responsibility and degrees of operating and financial leverage. *Review of Quantitative Finance and Accounting*, 49(2), 487–513.
- Hasan, M. M., & Habib, A. (2017). Corporate life cycle, organizational financial resources and corporate social responsibility. *Journal of Contemporary Accounting & Economics*, 13(1), 20–36.
- Herzog, L. (2017). No Corporate is an Island. Sector-Related Responsibilities as Elements of Corporate Social Responsibility. *Journal of Business Ethics*, 146(1), 135–148.
- Hoang, T. G., Nguyen, T. Q., & George, M. (2020). *Business Partner Roles of Management Accountants Through the Emergence of Sustainability Disclosures*, 7(12), 365–376. <https://doi.org/10.13106/jafeb.2020.vol7.no12.365>
- Hsu, F. J., & Chen, Y.C. (2015). Is a firm's financial risk associated with corporate social responsibility? *Management Decision*, 53(9), 2175–2199.
- Kansal, M., Joshi, M., & Batra, G. S. (2014). Determinants of corporate social responsibility disclosures: Evidence from India. *Advances in Accounting, incorporating Advances in International Accounting*, 30, 217–229.
- Kim, Y. C., Seol, I., & Kang, Y. S. (2018). A study on the earnings response coefficient (ERC) of socially responsible firms: Legal environment and stages of corporate social responsibility. *Management Research Review*, 41(9), 1010–1032.
- Lee, S., Kim, Y. K., & Kim, K. (2016). Corporate Governance, Firm Risk, And Corporate Social Responsibility: Evidence From Korean Firms. *Journal of Applied Business Research*, 32(1), 303–316.

- Leiva, R., Ferrero, I., & Calderón, R. (2016). Corporate Reputation in the Business Ethics Field: Its Relation with Corporate Identity, Corporate Image, and Corporate Social Responsibility. *Corporate Reputation Review*, 19(4), 299–315.
- Lindorff, M., Jonson, E. P., & McGuire, L. (2012). Strategic Corporate Social Responsibility in Controversial Industry Sectors: The Social Value of Harm Minimisation. *Journal of Business Ethics*, 110(4), 457–467.
- Mahmood, C. K., & Malik, Q. A. (2018). Evaluation of Firm's Performance by Corporate Governance and Social Responsibility: a Moderating Role of Corporate Philanthropy. *International Journal of Business & Management*, 13(1), 134–146.
- Majumder, M. T. H., Li, X., Akter, A., & Begum, M. (2019). Corporate attributes and corporate social disclosures: a meta-analytical review. *International Journal of Law and Management*, 16(1), 45–72.
- Mishra, S., & Modi, S. B. (2013). Positive and Negative Corporate Social Responsibility, Financial Leverage, and Idiosyncratic Risk. *Journal of Business Ethics*, 117(2), 431–448.
- Mobin, F., Khan, I., & Rahman, Z. (2019). Striving for legitimacy through CSR: an exploration of employees responses in controversial industry sector. *Social Responsibility Journal*, 15(7), 924–938.
- Muafi, M. (2017). From Corporate Reputation to Environmental Performance. The Context of Corporate Social Responsibility Port Manager in Indonesia. *Journal of Environmental Management and Tourism*, 7(23), 1386–1398.
- Nizamuddin, M. (2018). Corporate Financial Performance and Corporate Social Responsibility: An Exploratory Study of Measurement Approaches. *Journal of Management*, 8(1), 17–35.
- Nurleni, N., Bandang, A., Darmawati, & Amiruddin. (2018). The effect of managerial and institutional ownership on corporate social responsibility disclosure. *International Journal of Law and Management*, 60(4), 979–987.
- Sajida, S., Shahwali, K., & Yunis, M. S. (2019). Determinants of Corporate Social Responsibility Disclosure: The Case of Banking Sector in Pakistan. *Journal of Business & Economics*, 11(1), 101–121.
- Siregar, S. V., & Bachtiar, Y. (2010). Corporate social reporting: empirical evidence from Indonesia Stock Exchange. *International Journal of Islamic and Middle Eastern Finance and Management*, 3(3), 241–252.
- Syed, M. A., & Butt, S.A. (2017). Financial and non-financial determinants of corporate social responsibility: empirical evidence from Pakistan. *Social Responsibility Journal*, 13(4), 780–797.
- Tan, A., Benni, D., & Liani, W. (2016). Determinants of Corporate Social Responsibility Disclosure and Investor Reaction. *International Journal of Economics and Financial Issues*, 6(4), 11–17.
- Tarigan, J., & Stacia, L. (2019). Corporate social responsibility policies and value creation: does corporate governance and profitability mediate that relationship? *Investment Management & Financial Innovations*, 16(2), 270–280.
- Ulke, A. K., & Schons, L. M. (2016). CSR as a Selling of Indulgences: An Experimental Investigation of Customers' Perceptions of CSR Activities Depending on Corporate Reputation. *Corporate Reputation Review*, 19(3), 263–280.
- Utama, S. (2011). An evaluation of support infrastructures for corporate responsibility reporting in Indonesia. *Asian Business & Management*, 10, 405–424.
- Waagstein, P. R. (2011). The mandatory corporate social responsibility in Indonesia: Problems and implications. *Journal of Business Ethics*, 98(3), 455–466.
- Waluyo, W. (2017). Firm Size, Firm Age, and Firm Growth on Corporate Social Responsibility in Indonesia: The Case of Real Estate Companies. *European Research Studies Journal*, 20(4), 360–369.
- Xu, B., & Zeng, T. (2016). Profitability, state ownership, tax reporting and corporate social responsibility: evidence from Chinese listed firms. *Social Responsibility Journal*, 12(1), 23–31.