The effect of environmental performance and disclosure on financial performance

Haninun Haninun*

Department of Accounting,
Faculty of Economics and Business,
University of Bandar Lampung,
Jl. Z.A Pagar Alam No.26, Labuhan Ratu,
Bandar Lampung, 35142, Indonesia
Email: haninun@ubl.ac.id
*Corresponding author

Lindrianasari Lindrianasari

Department of Accounting,
Faculty of Economics and Business,
University of Lampung,
Jalan Prof. SumantriBrojonegoro,
No. 1 GedongMeneng,
Bandar Lampung, 35145, Indonesia
Email: sari_170870@yahoo.com

Angrita Denziana

Deceased, formerly of: Department of Accounting,
Faculty of Economics and Business,
University of Bandar Lampung,
Jl. Z.A Pagar Alam No.26, Labuhan Ratu,
Bandar Lampung, 35142, Indonesia
Email: angrita_adz@yahoo.co.id

Abstract: The research objective is to obtain empirical evidence that environmental performance and environmental disclosure affect the financial performance. The distinctive point of this study with previous research is the use of different variables and measurement method. Previous researchers examined the relationship between variables used while the researchers wanted to test the effect of independent variables on the dependent variable and to use control variables of the firm size and company growth. The hypothesis of this study is based on stakeholder theory, legitimacy theory, signalling theory and political economic theory. Purposive sampling method is used to gather the data of the manufacturing companies listed on the Indonesia Stock Exchange and PROPER program 2010–2014. Multiple linear regressions are used as the analysis method, and type of the data is secondary by using the documentation method. The study result shows that environmental performance and environmental disclosure positively significantly affect financial performance.

Keywords: environmental performance; disclosure; financial performance.

Reference to this paper should be made as follows: Haninun, H., Lindrianasari, L. and Denziana, A. (2018) 'The effect of environmental performance and disclosure on financial performance', *Int. J. Trade and Global Markets*, Vol. 11, Nos. 1/2, pp.138–148.

Biographical notes: Haninun Haninun obtained her Magister of Accounting in the Economic Faculty of the Accounting Department from Lampung University graduate on 26 June 2010, since 10 September 2015, she enrolled as a Doctoral student at the Lampung University in Lampung and since 16 September 2013, she is active as a Secretary of the Studies Centre of the Accounting and Finance Development at the University of Bandar Lampung. Her research topic is in the area of corporate social responsibility, she have been performed her publication at the *Science Journal Lahore*, and the *Indonesian Journal of Accounting and Finance*.

Lindrianasari Lindrianasari is a Professor of Accounting in the University of Lampung. She completed her Master's and Doctoral in Accounting Science at University of Gadjah Mada, Indonesia. She was conducted the sandwich program at the Australia National University (funding by ADB and Indonesia Government) to strengthen research methodology capability under the supervision of Greg Sheiler (2005) and Mark Wilson (2011). Her research topics are in the area of corporate governance and environmental accounting. She have been performed her publication at the *Management Research Review*, *Journal of Global Business Advancement, Indonesian Journal of Accounting Research*, *Journal of Indonesian Economic and Business*, and *Corporate Ownership and Control Journal*, and *International Journal of Monetary, Economics and Financial*.

Angrita Denziana obtained her PhD in Accounting from the Economic Faculty, Accounting Department, Padjadjaran University and graduated in 26 July 2013. And since 16 September 2013, she was active as the Chairman of the Studies Centre of the Accounting and Finance Development at the University of Bandar Lampung. Her research topics were in the area of financial accounting and fraud. She had publications in the *International Journal Monetary and Finance*, *Science Journal Lahore*, and the *Indonesian Journal of Accounting and Finance*.

This paper is a revised and expanded version of a paper entitled 'The effect of environmental performance, environmental disclosure on financial performance (an empirical study on manufacturing companies listed in Indonesian Stock Exchange)' presented at SIBR-UniKL, 2017, Conference on Interdiciplinary Business and Economics Research, Kuala Lumpur, Malaysia, 3–4 February, 2017.

1 Introduction

Globalisation can take the form of economic, political or financial globalisation. The very forces that fuel the globalisation process finance, trade, investment, technology and migration – have economic, social and environmental repercussions (Aslam, 2013). The rise of sustainable development is a concern to planet/earth that suffers from damage which is caused by exploitation to meet the human need economically (Musyarofah, 2012). Currently, one of the challenges for the company is to adjust production potentials and technologies to the terms of cost competitiveness (price) while keeping relatively high environmental standards (Gizelak, 2016). Environmental performance becomes important to be inspected because climate change, global warming, and environmental damage that are caused by production process lead to so many changes in manufacturing technology in order to understand environmental careness or environmental awareness (Basuki, 2015). Businesses depend on natural and human resources, thus they should take responsibilities for the consequences of their operations and also make contributions to the communities in which they operate (Wisuttisak and Wisuttisak, 2016).

Government must proclaim, encourage and raise awareness about the importance of CSR (Golja and Paulistic, 2010). Corporate environmental reporting is useful for shareholders if it increases the return on shareholders' investment or reduces corporate risk (Wangambe and Kenya, 2013). With that case, there comes triple bottom line (TBL) models consisting of three P-aspects (*profit*, *people*, and *planet*) (Elkington, 1998). In the TBL concept, they become a strategic part in the framework of a company's success (Supriyono, 2015). Social and environmental responsibility concept becomes unseparated part from company life sustainability (Dahlia and Siregar, 2008). It is an interesting phenomenon that many businesses refuse social responsibility and environmental public policy (PP) No 47th, 2012. The rejection of unwarranted practices of social and environmental responsibility in the world is generally voluntary, environmental social responsibility that will cost the company and reduce profits for the owner, (Lako, 2015), but even though so, recently, social responsibility which is known as corporate social responsibility (CSR) had become part of company governance system. There are so many companies started to realise that CSR has so many strategic roles like: giving signal to many sides that companies have big commitment and awareness to business ethics, society and environment which are believed will get response from many sides.

One of government efforts in Indonesia is to increase company awareness to environment with form of company performance ranking in life environmental management program (PROPER), this program is held by ministry of environment. This program uses rating measurement with colour indicator which is shown by gold for the best performance, then green, blue, red and black for the worst. The purposes of this program are to urge and push company performance to increase in case of environmental management.

The implementation of environmental responsibilities can be reported in annual report. Annual report is information disclosure by a company. Disclosure is very important dimension from company accounting quality. The more sustainability report disclosure by company, the higher disclosure quality, which is expected will get response from stakeholders, and in the end may increase financial performance. The researches that had proven this paradigm are Belkaoui and Karpik (1989) and Ullman (1985). The result of this research shows direct relation and positive relation between social disclosure and financial performance. The research's question is: do environmental performance, environmental disclosure give effect on financial performance?

The differences of this research from earlier research are different data and variable measurement, which both tested the relation between variables used. These differences reinforce previous researches that only tested the relationship between variables, because this study tests the influence and adds control variables, so it is expected to add the insight of report user. The research contribution is expected to be helpful for company, to increase its awareness in environmental management, which for this long just focuses on company short term profit, without taking any care to environmental damage that will cause disadvantage to itself and for investors. This research can be useful as knowledge that may give information about company, so that can help in decision making of investment. The article writing will be arranged as follows: background, as had been done before, theoritical foundation, literature review that is used for hypothesis development, research method that will explain data, sample, the result of research and conclusion.

2 Theoretical review

2.1 Research theory

The research is based on stakeholder theory, legitimacy theory, signalling theory, and political economic theory. These four theories are deemed suitable because company is not an entity, which just operates for its own sake but gives benefit for stakeholder (Chariri, 2007). The main purpose of company is to balance conflicts among stakeholders. According to Gray et al. (1995), company life sustainability depends on support from stakeholder, so company activity is to find that support. Stakeholder theory is a theory that describes to which side of company has responsibility (Freeman et al., 1984). Company has to keep the relationship with its stakeholder by accommodating its stakeholder's desire and needs, especially the stakeholder that has power on resource availability which is used for company operational activity, such as labour, market of company product and others (Chariri and Ghozali, 2007).

Legitimacy theory focuses on interaction between company and society (Deegan, 2002). Dowling and Pfefeer (1975) said that an organisation tries to create congruence among social values attached on its activity with norms of behaviour in social system where the organisation is a part of this system. As long as both systems are congruent, we can see this case as company legitimacy. While the uncongruence actually or potentially occurs among both values system, there will be a threat to company legitimacy. Signalling theory explains that there is a push to management for giving information to interested parties in order to reduce information asymmetry. In this theory, management motivation in giving information is expected to be able to give shareholder's prosperity description to outsiders (Scott, 2009). Meanwhile, political economic theory also recognises social and environment disclosure in annual report as strategic tool to reach companies goals and able to affect the attitude of stakeholders (Gray et al., 1995).

2.2 Hypothesis development

Environmental performance is the result that can be measured by environmental management system, which based on environmental policy, environmental objective and environmental target In Indonesia, one of the instruments that can be used in measuring environmental performance is PROPER. PROPER has been announced regularly to society, so the rated company will receive reputation incentives and disincentives depending on the level of obedience. The colour rating usage is a communicative form of delivery performance to society, so it will be easier to understand or remember it. Valuation ranking of PROPER program is as following: gold, is given to person in charge of operations and/or activities who has been consistently showing environmental excellency in production and/or service process, running an ethical and responsible business to society. Green, is given to person in charge of operations and/or activities who has done environmental management beyond compliance through environmental management system execution, uses resources efficiently through 4R efforts (reduce, reuse, recycle, and recovery), and does social responsibilities (CSR/Comdev) well. Blue, is given to person in charge of operations and/or activities who has done required environmental management efforts in accordance with the regulations and/or the laws. Red, is given to person in charge of operations and/or activities who has done environmental management efforts that are not in accordance with the requirements in the regulations and/or the laws. Black, is given to person in charge of operations and/or activities who has done intentional or imprudent action that causes pollution and/or environmental damage and violation of regulations (KLH).

The information contained in financial statements is used by investors to obtain estimation about earnings and dividends in the future and the risk of this valuation (Brigham and Houston, 2006). Therefore, financial performance measurement from financial statements can be used as shareholders and investors wealth growth measuring tool, this is in accordance with stakeholder theory. Companies with good performance will get the attention of stakeholders who can improve financial performance. Moreover, in legitimacy theory, if the performance of the corporate environment is good then it will get the legitimacy of the community which is a strategy for the development of the company. Various studies have been conducted related to environmental performance and financial performance with different results, some of them are Al-Tuwajri et al. (2003), Tuan (2012) and Iqbal et al. (2013) proving the research result that there is positive effect of environmental performance on financial performance. Meanwhile, Sarumpaet (2005) and Naila (2013), in their researches, conclude that there is no relation between environmental performance and financial performance.

H1 Environmental performance positively affects financial performance.

Disclosure means not covering or not hiding, if it is associated with data, then disclosure means giving useful data to interested parties. Therefore, these data have to be really useful, because if the data are not useful, this disclosure purpose will not be achieved (Chariri, 2007). The disclosure is necessary for insurance companies to face financial losses related to environmental incident (Nikolou and Yannacopoulos, 2009). Al-Tuwajri et al. (2003) defined environmental disclosure as a collection of information related to environmental management activities by company in the past, present, and future. This information can be obtained in many ways, such as qualitative statements, assertions or quantitative facts, financial statement forms or foot notes. The company purpose on disclosure is the used method to manage company relations with its stakeholders (Finch, 2005). Disclosure is expected to be able to give clear evidence that the production process of the company is not only profit-oriented, but also to pay attention to environmental and social issues, so this can increase stakeholder's trust which will have an impact on increasing the company value through increased investment or increased profits. Sawir (2005) said that financial performance is the achievements of the companies in a specific period that reflect this company health rate. Company financial performance is one of fundamental valuation aspect about company financial condition which can be done by analysing company financial ratios, such as: liquidity ratio, leverage ratio, activity ratio and profitability ratio calculated based on financial statements in a specific period. Financial statements are a part of financial reporting proces (Ross, 2008).

This is in accordance with stakeholder theory, legitimacy theory, signalling theory, and political economic theory. In this study, stakeholder theory is used to explain that disclosure is conducted to maintain firm relationships with its stakeholders the theory of legitimacy is to explain the firm's relationship with society, signalling theory is used to explain that through disclosure means management provides information to reduce information asymmetry. This study explains that disclosure is a company's strategy to achieve its goal of providing a good image to the parties that concern about the company. The previous studies about environmental disclosure and financial performance are performed by Dahlia and Siregar (2008) which in their researches, they conclude that there is positive effect of CSR disclosure on return on equity (ROE) but does not have any effect on CAR. Meanwhile, (Malarvizhi and Matta, 2016), there is no significant association between the level of environmental disclosure and firm performance. Based on the description above, the proposed hypothesis is:

H2 Environmental disclosure positively affects financial performance.

3 Research method

3.1 Sample, variable and measurement of variable

The population in this research is large companies listed in Indonesia Stock Exchange (BEI) in 2009–2014. The samples are gathered by purposive sampling method, and the data type is secondary data. Independent variables are environmental performance and environmental disclosure. Environmental performance is measured by PROPER rating: gold with five points, green with four points, blue with three points, red with two points, and black with one. Environmental disclosure is measured by index (Dalia and Siregar, 2008).

The dependent variable in this research is financial performance that is proxied by return on assets (ROA) using net income/total asset equation, ROE using net income/total equity equation. The control variable is company size and company growth.

3.2 Model analysis

The analysis method uses multiple linear regressions that are obtained from ordinary least square (OLS) method (Ghozali, 2005). OLS technique requires bigger amount of data than the total number of variables involved in the model (Gujarati and Porter, 2010). In this research, the total number of data used is 108 observations (n = 108), while total number of used variables is five variables including control variable. This means that OLS requirement has been fulfilled. The equation model will be used is:

$$\text{Financial Performance} = f(\text{Envronment Performance})$$

$$\text{Financial Performance} = f(\text{Envronment Disclosure}).$$

Empirical model

$$\text{Model 1} \quad Y = \alpha + \beta_1 EP + \beta_2 TA + \beta_3 \text{growth} + \varepsilon$$

$$\text{Model 2} \quad Y = \alpha + \beta_2 ED + \beta_2 TA + \beta_3 \text{growth} + \varepsilon$$

The hypothesis test is done by model test (statistical test) that is used to find that all input independent variables in this model that affect dependent variable together at the significant level of 0.05.

4 Discussions

4.1 Descriptive statistics analysis

Table 1 explains that financial performance variable as dependent variable consists of ROA and ROE. ROA has a minimum ratio value of –0.19 and maximum value of 0.66, mean value of 0.121 and standard deviation value of 0.124. As seen from the ROA value, 50% of the samples above have ROA below the average, meaning that most of companies have low assets return. ROE has a minimum ratio value of –2.34 and maximum value of 1.26, mean value of 0.203 and standard deviation value of 0.372. As seen from the ROE value, more than 50% of companies have ROE under the average, meaning that most of companies have quite low equity return rate.

Table 1 Descriptive statistics

	N	*Minimum*	*Maximum*	*Mean*	*Std. deviation*
EP	108	2.00	5.00	3.116	0.61021
ED	108	0.08	0.85	0.3406	0.18561
ROA	108	–0.19	0.66	0.1207	0.12385
ROE	108	–2.34	1.26	0.2028	0.37161
Valid N (list wise)	108				

Environmental performance of independent variable has minimum value of two and maximum value of five, mean value of 3.116, which means that the companies have done obedience to environmental maintenance, but this implementation has not been appropriate yet, and as seen from the average value, it shows that some companies have done environmental maintenance and achieved above average rate.

Environmental disclosure has minimum value of 0.08 and maximum value of 0.85 or mean value of 0.34. As seen from average value of below 50%, it means that there are still many sample companies did not disclose their environmental awareness activities in annual report. This can happen because the companies think that environmental disclosure is not required disclosure (voluntary disclosure).

4.2 Hypothesis test

Table 2 Hypothesis test result summary (each models statistical-test)

Model	*Predictor*	*Dependent*	*T*	*Sig*	*Conclusion*
1	Environmental performance	ROA	1.780	0.05	Significant positive
	Environmental performance	ROE	2.302	0.05	Significant positive
2	Environmental disclosure	ROA	1.815	0.04	Significant positive
	Environmental disclosure	ROE	1.159	0.02	Significant positive

5 Discussions

5.1 The effect of environmental performance on financial performance

Based on T-test result, the information obtained is that environmental performance variable significantly affects financial performance that is proxied by ROA and ROE. In Table 2, the environmental performance effect on ROA is shown by positive t value of 1.780 with significance of 0.05 or smaller than level of significance 0.05, as well as ROE shown by positive t value of 2.302 with significance of 0.05 or smaller than level of significance 0.05. This shows that hypothesis (H1) is accepted which means that the high and low of financial performance can be affected by PROPER rank achieved by companies. This is in accordance with studies by Al-Tuwajri et al. (2003), Tuan (2012) and Iqbal et al. (2013), proving that there is positive effect of environmental performance on financial performance, but not in accordance with studies by Lindrianasari (2007) and Sarumpaet (2005), which did not find any relation and effect of environmental performance on economic performance.

The study result is in accordance with stakeholder theory and legitimacy theory, where company has to keep relationship between its stakeholder by accommodating its stakeholder’s desire and needs, especially stakeholder that has power on resource availability which is used for company operational activity, such as labour, market of company product and others, while legitimacy theory focuses on interaction between company and society. Company participation in PROPER program shows the company commitment to environmental management that will be useful for stakeholders and be expected to be able to increase stakeholder image specially consumers as resulting product users so that may increase company profit.

5.2 The effect of environmental disclosure on financial performance

In this study, environmental disclosure is calculated by disclosure index. From the hypothesis testing result, it is obtained that H2 is accepted, and it can be seen in Table 2 that the effect of environmental performance on ROA is shown by positive t value of 1.815 with significance of 0.04 or smaller than level of significance 0.05, as well as ROE that is shown by positive t value of 1.159 with significance of 0.24 or bigger than level of significance 0.02 level of 0.05, this means that environmental disclosure positively affects financial performance that is proxied by ROE with level of significance 0.05 (0.02 < 0.05) This shows that hypothesis (H2) is accepted. This is in accordance with earlier studies by Dahlia and Siregar (2008), but not in accordance with studies by Malarvizhi and Matta (2016) which did not find any relation and effect of environmental disclosure on firm performance.

The study result is in accordance with stakeholder theory, legitimacy theory, a theory valuing disclosure by companies in reaction to stakeholder request, but it is also useful to explain the reason why accounting report is viewed as social, politic, and economic documents. Political economic theory also recognises social and environment disclosure in annual report as strategic tool to reach companies goals and can affect the attitude of stakeholders. The other theory in addition to this study is signalling theory. This theory explains that there is a push to management for giving information to interested parties in order to reduce information asymmetry. In this theory, management motivation is to give information that is expected able to give shareholder's prosperity description to outsiders. (Scott, 2009), so it can increase stakeholder's trust which may increase company profit.

6 Conclusions, limitations and suggestions

Based on study and test result that have been done, it can be concluded as follows:

Environmental performance is a reflection from company awareness to environmental management and a way to allocate its resources as a form of company attention to its environment. Environmental performance that is measured by PROPER rank positively affects financial performance that is proxied by ROA and ROE, and it is supported by stakeholder theory and legitimacy theory focusing on interaction between company and society that may increase benefit for both sides. Environmental disclosure that is measured by disclosure index positively affects financial performance that is proxied by ROA and ROE, and it is supported by stakeholder theory, legitimacy theory, signalling theory, and political economic theory that recognise social and environmental disclosure in annual report as strategic tool to reach companies goals and can affect the attitude of stakeholders.

The amount of observation data is only 108 companies, and this is caused by limited time, and difficulty in obtaining annual report data completely in companies. Financial performance is just measured by two proxies which are ROA and ROE, while there are other types of ownership structures. As well as environmental performance which only uses PROPER with five categories, there are other types of measurements. From the limitation above, suggestions that can be given by researcher are as follows: future research should extend the observation period to get better test results. For further research, researchers are suggested to examine other variables beside these research variables that may affect financial performance level.

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