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Environmental Accounting from the New Institutional Sociology Theory Lens: Branding or Responsibility?

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ABSTRACT

Drawing on the new institutional sociology theory, this study aims at exploring the implementation of environmental accounting. Data were collected from sustainability and annual reports of 39 listed manufacturing companies in Indonesia from 2010 to 2017. The hypotheses of the study were tested using multiple linear regression analysis. The results indicated that company reputation has a positive effect on environmental accounting. However, public ownership has no effect. These results showed that community power failed to encourage companies to disclose environmental accounting. The environmental reports provided by companies were merely ceremonials for the sake of good company reputation. Hence, this study findings contribute to the policy development in which the government might need to tighten regulations for companies to mitigate their operation impacts on the environment and provide awards for those succeeding in implementing environmental accounting.

Keywords:

Company reputation, environmental accounting, branding, responsibility, public ownership

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Akuntansi Lingkungan dari Lensa Teori Sosiologi Kelembagaan Baru: Branding atau Tanggung Jawab?

ABSTRAK

Dengan menggunakan teori institusional sosiologi, penelitian ini bertujuan untuk mengetahui sejauh mana penerapan akuntansi lingkungan. Penelitian ini menganalisis laporan keberlanjutan dan laporan tahunan 43 perusahaan manufaktur yang terdaftar di bursa saham di Indonesia selama periode 2010 sampai 2017. Hasil penelitian menunjukkan bahwa citra perusahaan berpengaruh positif dan signifikan terhadap pelaporan akuntansi lingkungan. Namun, kepemilikan publik tidak memiliki pengaruh yang serupa. Hasil penelitian ini mengindikasikan bahwa kekuatan masyarakat belum berhasil mendorong perusahaan untuk menerapkan akuntansi lingkungan, melainkan perusahaan menerapkan pelaporan akuntansi lingkungan untuk mempertahankan reputasi dan citra baiknya. Hasil penelitian ini dapat menjadi masukan bagi pemerintah agar memperketat regulasi terkait dampak operasi perusahaan terhadap lingkungan, serta memberi penghargaan terhadap perusahaan yang berhasil dalam penerapan akuntansi lingkungan.

1. Introduction

Many cases of environmental damage such as air and water pollution, chemical waste, acid rain, radiation, nuclear waste, and forest fires cause unrest among people (Susilo & Astuti, 2014). Pollution tragedy in Japan Minamata Bay

in 1954 (Juan, 2006), forest fires in Greece (BBC News Indonesia, 2018), oil spill by Exxon Valdez in Brooklyn (New York Times, 2013), and the explosion of British Petroleum platforms in the Mexico Gulf in 2010 (Pallardy, 2016) are examples of environmental damage cases that

threaten the world. In Indonesia, several companies have been involved in similar issues such as PT Freeport Indonesia, PT Chevron Pacific Indonesia, PT Lapindo Brantas, PT Thailand Exploration and Production (PTTEP), and PT Pertamina (Irfani, 2017; Detik News, 2011; Kompas, 2016; Oktara et al., 2018; BBC News Indonesia, 2018). These cases imply that companies pay less attention to environmental issues affected by their production processes.

Companies should consider the effect of their operations on the environment because 54 percent of consumers regard environmentally friendly attributes as criteria when purchasing products, and investors prefer to invest in companies environmentally friendly companies (Moreau & Parguel, 2011; Cormier et al., 2010; Dewi & Oriana, 2014). To meet the demands of these stakeholders, management has begun to focus on environmental accounting in order to ensure that its operations are in accordance with ethics and social values, ensuring stakeholder confidence is maintained (Akrouf & Othman, 2016; Flammer, 2012; Laskar & Maji, 2018).

Environmental accounting practices can also be a corporate strategy to increase competitive advantage that can contribute to help to maintain corporate sustainability (Welbeck et al., 2017; Laskar & Maji, 2018). In addition to increasing the good reputation and trust of stakeholders, the motive for implementing environmental accounting must also be based on corporate responsibility and awareness as an institution (Chang & Zhang, 2015). Once the company has realized environment care is an inseparable part of its duties, environmental accounting practices can be carried out without waiting for the pressure from the stakeholder.

The application of environmental accounting can increase internal and external corporate values (Flammer, 2012; Wang et al., 2017). Internal values increase because employees feel proud that the company operations do not bring a negative impact on the environment (Wang et al., 2017;

Mathews, 1995). This will motivate employees to work better for the improvement of the company. In addition, the external value increases because stakeholders have trusted the company. In this case, the corporate operations can be maintained in such a way that the market value of the company increases (Flammer, 2012; Huang & Kung, 2010).

Corporate awareness and responsibility to care for the environment can be explained in the framework of the New Institutional Sociology Theory (NIS) (Fernando & Lawrence, 2014; Zeng, Xu, Yin, & Tam, 2012). The NIS views that organizations are formed from norms and beliefs that exist in their environment (Fernando & Lawrence, 2014). Adjusting to the community norms becomes essential to maintain the legitimacy and acceptance within the community. When the community has standard norms and beliefs, companies are encouraged to fulfil these norms to remain to exist in the community (Fernando & Lawrence, 2014). For instance, when the community emphasizes the sustainability of the environment, companies need to consider the environment in their operating activities to maintain their existence.

Prior studies indicated that one important factor driving the adoption of environmental accounting is the corporate ownership structure (Haladu & Salim, 2016; Chang & Zhang, 2015). Companies whose shares are widely owned by the public are more likely to disclose environmental information, which means that public ownership has a positive effect on environmental accounting (Haladu & Salim, 2016; Adnantara, 2013). However, other studies show different results in which the impact of public share ownership on environmental accounting is negative (Chang & Zhang, 2015) or no effect at all (Rainsbury et al., 2016; Li & Zhang, 2010). This difference may be possible due to the different study samples among countries and the control variables used by the researchers.

Another factor that influences the application of environmental accounting is company

reputation (Welbeck et al., 2017). Companies focus on implementing environmental accounting to avoid negative images and maintain a good reputation (Blombäck & Scandeliuss, 2013). The company expects that maintaining a good reputation can increase its financial return by increasing the value of intangible assets (Branco & Lúcia, 2008) because companies with good reputation reveal environmental information (Branco & Lúcia, 2008; Zeng et al., 2012; Hasan & Yun, 2017; Kansal et al., 2014).

However, other studies show that companies whose operations have a major impact on the environment and have a bad reputation disclose environmental information (Welbeck et al., 2017; Vanhamme & Grobbsen, 2009). This difference is possible because of the different types of samples in which research with manufacturing companies produce a positive influence (Zeng et al., 2012), while studies involving all industry sectors has a negative effect (Welbeck et al., 2017). This negative effect is caused by companies' activities that harm the environment, such as conducted by the mining sector, and hence, this creates a bad reputation.

This paper is structured as follows. The next section covers a literature review on environment accounting as well as the theoretical framework used in this study. This, then followed by the research method. Results and discussions are presented next. Lastly, conclusions are drawn along with the avenue for future research.

2. Literature review and hypotheses development

The new institutional sociology theory (NIS) considers a process whereby structures, rules, norms, and routines are established as guidelines for the institution's social behaviour (Scott, 2004). It also views an institution operates in a social order consisting of norms, values, and assumptions about appropriate and acceptable behaviour (Fernando & Lawrence, 2014). In summary, the NIS explores how organizational action is structured and shaped

by institutional forces. Determination of appropriate and acceptable behavior becomes exceptionally pivotal for the institution so that its existence can be accepted to maintain resources and increase the capability of institutional resilience. In accounting, the adoption of a particular system is primarily driven by the external pressure (Covaleski & Dirsmith, 1988; Moll et al., 2006), and hence, this NIS is relevant for this study as it captures the issues of external and internal organizational context. This theory may help to explain whether the adoption of environmental accounting is internally encouraged as part of companies' responsibility or it is more externally pressured and used as merely a branding.

NIS is divided into two dimensions, namely, isomorphism and decoupling (DiMaggio & Powell, 1983). Isomorphism is defined as a concept that provides the best explanation of the homogenization process (DiMaggio & Powell, 1983). The process in question is a process that forces organizations in the same field to resemble the practices of other organizations in dealing with the same environmental conditions (Fernando & Lawrence, 2014).

Isomorphism is divided into two types: competitive isomorphism and institutional isomorphism (DiMaggio & Powell, 1983). Competitive isomorphism is defined as how competitive forces encourage organizations to adopt the most inexpensive and efficient costs, structures, and practices (Fernando & Lawrence, 2014). Meanwhile, institutional isomorphism is broken down into three types: coercive isomorphism, mimetic isomorphism, and normative isomorphism (DiMaggio & Powell, 1983). The three types of isomorphism encourage organizations to adopt practices and structures that are similar in their fields, regardless of the actual functioning of the organization (DiMaggio & Powell, 1983). Through the isomorphism dimension, the institutional theory is based on the premise that organizations respond to their institutional environmental pressures and adopt

socially accepted procedures or practices as the right organizational choice (Fernando & Lawrence, 2014).

In relation to environmental accounting, coercive isomorphism arises due to formal and informal pressures in a company's environment related to social trust and expectations (DiMaggio & Powell, 1983). The pressure comes from stakeholders' criticism and regulation from the government, and hence, there is a force to encourage organizations to change their practices, in this case, the application of environmental accounting (Scott, 2004). Through the perspective of coercive isomorphism, managers conduct environmental accounting to comply with government regulations and meet stakeholder expectations. In short, when coercive isomorphism exists, environmental accounting is considered only to comply with regulation and community norms.

Mimetic isomorphism involves a company's efforts to imitate or resemble the practices of other companies, especially to gain a competitive advantage in terms of legitimacy (Fernando & Lawrence, 2014). Companies that fail to implement good practices as other companies do are at risk of losing their legitimacy. Thus, to maintain that legitimacy, they must balance themselves by adopting the practices of other companies (Nikolaeva & Bicho, 2011). Based on this view, a company adopts environmental accounting when other companies in the same industry do so.

While coercive isomorphism arises from observable laws and regulation, normative isomorphism is related to the social beliefs and values between organizations to adopt specific practices or so-called professionalization (Fernando & Lawrence, 2014; DiMaggio & Powell, 1983). Professionalization is a collective process to determine how members must act in certain jobs (Zeng et al., 2012). Professionals such as managers and accountants must compromise with regulations and standards as a form of their professionalism (DiMaggio & Powell, 1983). Accountants, in particular, will comply with accounting standards,

including environmental reporting as a normative form for organizations where they produce reports that have been set by the standards (Nikolaeva & Bicho, 2011). In this view, companies consider environmental accounting because of its interests, and it feels obliged to do so (Qian et al., 2018).

Based on the theory that has been studied, NIS has a close relationship with company motives in implementing environmental accounting. NIS relates organizational practices to the values and norms of the environment in which the organization operates (DiMaggio & Powell, 1983; Scott, 2004). This relationship encourages organizations to adopt environmental accounting to maintain its existence (Laskar & Maji, 2018). The NIS also connects organizations with stakeholder expectations. A number of cases of environmental damage make stakeholders demand that organizations care about the environment, thus making it to adopt environmental accounting practices to match the expectations and values held by stakeholders (Fernando & Lawrence, 2014; Zeng et al., 2012). The NIS describes an organization's efforts to gain a competitive advantage by imitating environmental accounting practices that have been implemented by other organizations to avoid losing values.

However, there is another dimension of NIS; decoupling. Decoupling relates to the separation between a company's external image and its actual practices to gain social legitimacy (Fernando & Lawrence, 2014). This decoupling exists because an organization tries to please external stakeholders by accommodating and reconciling their demands, but internally, organization activities are in different structures (Scott, 2004). Concerning environmental accounting, a company considers it to construct an image that might be different from the actual accounting practices (Deegan, 2009), placing environmental accounting as a window dressing (Meyer & Rowan, 1977; Graafland & Smid, 2019).

From 2009 to 2013 period, Indonesia had encountered deforestation of 1.13 million hectares

per year (Purba et al., 2014). The burning of forests Sumatra Island in 2015, for instance, resulted in air pollution at dangerous levels, reducing public health (Minnemeyer, 2015). This continued with the opening of palm oil plantation by burning the forest in Riau in 2019. For this reason, the community and government highlighted the company as the party responsible for environmental damage (Iqbal et al., 2013). Pressure from various stakeholders encourages companies to care more about the environment, especially to maintain their survival and legitimacy (Jones, 2010). One way is by adopting accounting practices called environmental accounting or green accounting.

Environmental accounting tries to classify the financing activities carried out by companies and governments in preserving the environment through environmental costing posts and corporate business practices (Suartana, 2010). Environmental accounting measures identify, evaluates, and discloses costs associated with corporate environmental activities (Kusumaningtias, 2013). The final product of environmental accounting is environmental reporting, which provides information related to environmental implications caused by company operations (Rao et al., 2012). Environmental accounting focuses on the presentation of financial and non-financial data related to the environment; this practice consists of information about operations, aspirations, and the public reputation of the company from the environmental lens (Haladu & Salim, 2016). In Indonesia, environmental disclosure is voluntary (Kusumaningtias, 2013; Burhany, 2014), in which companies closely related to environmental activities such as the mining sector are required to report their environmental activities (Kusumaningtias, 2013).

There are four factors encouraging companies to implement environmental accounting (Suartana, 2010). First, regulatory demands related to government regulations require companies to manage their environmental activities. If it is not obeyed, sanctions will be posed to the company.

Second, cost factors related to the efforts to minimize environmental costs. The costs allocated to manage polluted environments are greater than the costs of prevention. This has made companies switch to use clean and green technology to minimize environmental recovery costs. Third, stakeholder pressures and criticisms that force companies to meet their demands to maintain trust and reputation. Fourth, competitive requirements related to corporate efforts to adopt environmentally friendly practices in order to compete with other companies.

In addition to demands from external parties, environmental accounting practices in the company brings several benefits. The process of building good relations between companies and stakeholders is not instant but requires a relatively long and consistent time. If good relations have been formed, the company reputation will improve. The public will increase their trust and loyalty to the company whatever the products they produce, and hence in the long term, economic benefits arise (Ghani, 2016). Companies adopting environmental accounting also have social benefits, which serve to protect and help companies minimize the adverse effects resulting from a crisis. For example, when the company is hit by slanted news, the public with previous positive knowledge has a better understanding that the information is not necessarily accurate (Hamdani, 2016). This practice also increases corporate value because reputation as an environmentally friendly corporate can build harmonious and mutually beneficial relationships between companies and employees, suppliers, customers, or society (Ghani, 2016; Hamdani, 2016). With a good image and reputation, business continuity is guaranteed. A harmonious relationship between a company and stakeholders makes each of the parties concerned to maintain the existence and common interests; companies grow together with the environment and society, and this is the guarantee for long-term business continuity (Ghani, 2016).

Public ownership and environmental accounting

One important factor driving the implementation of environmental accounting is public ownership. A more publicly owned company disclose environmental accounting because the public held the responsibility to participate in formulating and controlling corporate policy (Haladu & Salim, 2016). Increased awareness of the community towards the environment encourages shareholders to demand companies to implement environmental policies. To meet the shareholders and public demands, a company commits to implement green accounting practices (Lu & Abeysekera, 2014). The power that drives companies to care about the environment is also explained in the perspective of coercive isomorphism in the NIS. Coercive isomorphism explains that the criticism and demands of stakeholders encourage companies to change organizational practices to meet stakeholder expectations (Scott, 2004). A company cannot ignore claims from public shareholders, so the company tries to implement good practices through environmental accounting.

The NIS states that organizations are formed through norms, rules, and beliefs that are spread around the organization (Fernando & Lawrence, 2014). Beliefs and norms around the corporate guide the corporate to conduct responsible business, which is reflected in the application of environmental accounting, so that the sustainability of its business can be maintained. Furthermore, research shows that public ownership has a positive effect on environmental accounting (Adnantara, 2013; Haladu & Salim, 2016; Henri & Journeault, 2008).

This is due to strong environmental management results in positive stock market performance (Klassen & McLaughlin 1996). Hence, it is expected that a high level of public ownership encourages stronger financial performance, improves firms' value, and attracts new stakeholders (Melnik et al., 2003). Therefore,

the hypothesis of this study can be formulated as follows:

H₁: Public ownership has a significant positive effect on environmental accounting.

Corporate reputation and environmental accounting

Another factor influencing the implementation of environmental accounting is the company's image (Welbeck et al., 2017). Company's focuses on environmental accounting to avoid negative brand image and keep a good reputation (Blombäck & Scandeliuss, 2013). Corporate reputation is used by stakeholders to measure the value of an organization (Kansal et al., 2014). A good reputation is believed to increase financial return through the intangible assets (Branco & Lúcia, 2008), because reputable companies disclose more environmental information (Branco & Lúcia, 2008; Zeng et al., 2012; Hasan & Yun, 2017; Kansal et al., 2014). The importance of this corporate reputation encourages companies to implement practices and strategies that can maintain their good reputation (Devine & Halpern, 2001).

One motive for implementing environmental accounting is awareness of businesspeople (Ghani, 2016). The corporate is aware that its good reputation is a part of the stakeholders' trust. When stakeholders have placed their trust, the corporate will do its best to maintain that trust through good accounting practices, which are reflected in environmental accounting. In addition to maintaining stakeholder confidence, the motives for environmental accounting are also explained in the perspective of mimetic isomorphism. The mimetic isomorphism perspective in the NIS states that companies that do not implement acceptable practices by other companies risk losing their existence (Fernando & Lawrence, 2014). This encourages companies to implement good environmental practices as other companies in the same industry do. Mimicking the practices of other companies is also done by the corporate to

maintain its competitive advantage. Hence, to maintain a competitive advantage and existence, the corporate will strive to implement best practices through environmental accounting. Prior research shows that corporate reputation has a positive effect on environmental accounting (Branco & Lúcia, 2008; Hasan & Yun, 2017; Kansal et al., 2014; Zeng et al., 2012). Therefore, the hypothesis can be formulated as follows:

H₂: Corporate reputation significantly affects environmental accounting.

Research gap

There are mixed results of previous studies on public ownership and environmental accounting. Studies on public ownership relationship with environmental accounting show a positive effect (Adnantara, 2013; Haladu & Salim, 2016), negative effect (Chang & Zhang, 2015), and no effect (Li & Zhang, 2010; Rainsbury et al., 2016). Differences in these studies can be caused by the differences in the research sample, i.e. differences in companies in each country. Another difference is due to different control variables used. Furthermore, several previous studies on corporate reputation and environmental accounting also revealed multi-facet results. Several works indicated positive results (Branco & Lúcia, 2008; Hasan & Yun, 2017; Kansal et al., 2014; Zeng et al., 2012), and some were negative (Vanhamme & Grobbsen, 2009; Welbeck et al., 2017). These differences occur due to differences in the sample; manufacturing sector and all corporate sectors.

Another study with a sample of manufacturing companies showed a positive effect (Zeng et al., 2012) because operating activities of this sector have little impact on the environment (Haladu, 2016). Thus, reputation tends to be good. However, another study in all corporate sectors showed a negative influence (Welbeck et al., 2017) since there were companies whose

operational activities have a major impact on the environment, for example, the mining sector, and hence these companies tend to have a bad reputation related to the environment.

Given the aforementioned literature above, this present study brings several different perspectives. First, no previous studies that combine public ownership variables and corporate reputation in examining their effects on environmental accounting. Second, no study has examined the corporate reputation of environmental accounting in Indonesia. Third, there is no research on public ownership of environmental accounting in Indonesia that uses institutional sociology theory. Fourth, in terms of measuring corporate reputation variables, there is only one study using awards in the corporate (Kansal et al., 2014), so the measurement of corporate reputation in this study has never been explored, especially in the context of Indonesia.

3. Research method

This explanatory quantitative research examined the relationship between independent variables, public ownership, and corporate reputation, and the dependent variable, environmental accounting. The environmental accounting referred to in this study was accounting that discloses the activities of companies related to the environment. Environmental accounting was measured through items disclosed in the companies; annual reports (Akrouf & Othman, 2016; Chang & Zhang, 2015; Haladu & Salim, 2016; Welbeck et al., 2017). Items for disclosing environmental information were obtained based on the Global Reporting Initiatives (GRI) G4 Guidelines Index¹. The GRI indicator consisted of 12 item subjects with 34 items² in detail. The twelve items of disclosure were: (1) material, (2) energy, (3) water, (4) biodiversity, (5) emissions, (6) effluents and waste, (7) products and services,

¹ GRI G4 was launched and officially used in 2013 (Satya, 2014).

² GRI indicators details can be accessed in <https://www.globalreporting.org/resourcelibrary/GRIG4-Part1-Reporting-Principles-and-Standard-Disclosures.pdf>

(8) compliance, (9) transportation, (10) others, (11) supplier assessment of the environment, and (12) mechanism for complaints on environmental problems. Each of the 12 items was given a value of one (1) if disclosed or a zero (0) if not disclosed, and hence, the maximum value for the environmental accounting variable was 12. The use of the GRI indicator disclosures consisted of only 12 items (subjects), excluding the elaboration of the item points because disclosures in the annual reports were based solely on the subjects, and not all companies' sustainability reports containing a more detailed item.

The independent variable in this study, public ownership, is the number of shares owned by the public, which are less than five percent (Adnantara, 2013). Public ownership was measured by the percentage of shares owned by the public (Adnantara, 2013; Rainsbury et al., 2016). Data on public ownership were collected from each company's annual report. Another independent variable is the corporate reputation that was measured through a dummy variable, a value of one (1) if the corporate has an award in the environmental field, for example, the PROPER award for gold and green, and green business awards, or zero value (0) if not (Kansal et al., 2014).

This study controlled for five variables. The first is company size. Some studies reveal that company size is related to the adoption of environmental accounting (Branco & Lúcia, 2008; Kansal et al., 2014; Rainsbury et al., 2016; Rao et al., 2012; Welbeck et al., 2017; Zeng et al., 2012). The larger the size of the corporate, the more widespread adoption and disclosure of environmental accounting. Corporate size is measured using the logarithm natural (ln) of total assets (Branco & Lúcia, 2008; Kansal et al., 2014; Rainsbury et al., 2016; Rao et al., 2012; Welbeck et al., 2017; Zeng et al., 2012). We also controlled for profitability that was found to be related to the application of environmental accounting (Bewley & Li, 2000; Branco & Lúcia, 2008; Kansal et al.,

2014; Rainsbury et al., 2016; Rao et al., 2012; Welbeck et al., 2017; Zeng et al., 2012).

Companies with high profitability will disclose more environmental information. Profitability is measured using Return on Assets (ROA), which is the percentage of profit after tax divided by total assets (Bewley & Li, 2000; Branco & Lúcia, 2008; Rainsbury et al., 2016; Rao et al., 2012; Welbeck et al., 2017). The third control variable is leverage. Research shows that companies that have high business risk or leverage apply a high level of environmental accounting (Branco & Lúcia, 2008; Kansal et al., 2014; Rainsbury et al., 2016), so leverage can be a characteristic of companies that influence the application of environmental accounting. Leverage is measured using Debt to Asset Ratio (DAR), which is the percentage of total liabilities divided by total assets (Branco & Lúcia, 2008; Rainsbury et al., 2016).

Age was also controlled because of company age impacts on the application of environmental accounting (Kansal et al., 2014; Welbeck et al., 2017; Zeng et al., 2012). The longer the corporate is established, the disclosure of environmental information will be more extensive (Zeng et al., 2012). The age of a corporate is measured using the number of years or years since the corporate was founded (Kansal et al., 2014; Welbeck et al., 2017; Zeng et al., 2012). Lastly, we controlled for environmental sensitivity. Companies whose operations are closely related to the environment and have an enormous impact on environmental pollution will apply a high level of environmental accounting (Branco & Lúcia, 2008; Rainsbury et al., 2016; Rao et al., 2012; Welbeck et al., 2017; Zeng et al., 2012).

Environmental sensitivity is measured using a dummy value; a value of one (1) is included in the category of companies with a high level of environmental sensitivity and a value of zero (0) if not (Branco & Lúcia, 2008; Rainsbury et al., 2016; Rao et al., 2012; Welbeck et al., 2017; Zeng et al., 2012). Companies included in the category of a

high level of environmental sensitivity were the food and beverage industry, clothing, paper, chemicals, plastics, metals, and medicines. Secondary data used in this study come from manufacturing companies' corporate sustainability reports and annual reports from 2010 to 2017³. A purposive sampling technique was used to select companies. First, we selected manufacturing companies because this industry operations have a medium impact on the environment after the mining sector (Lin et al., 2015; Haladu, 2016).

Secondly, as data were collected manually, we chose manufacturing companies listed on the IDX that publish sustainability reports and/or annual reports from 2010 to 2017. The reason for selecting the 2010 to 2017 period is because the application of environmental accounting is related to long-term corporate sustainability (Welbeck et al., 2017; Akrouf & Othman, 2016; Jones, 2010). To obtain accurate results, a longer study period of eight years was chosen. Third, we selected companies with the availability of the public share ownership data. Lastly, we considered the

disclosure of environmental awards. Table 1 shows the sampling results.

The data was analysed by using multiple linear regression techniques because the number of independent variables was more than one, with the following equations:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$$

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + Z_1 + Z_2 + Z_3 + Z_4 + Z_5 + e$$

Where:

Y = Environmental Accounting

α = A constant

β_1, β_2 = Coefficient of independent variable regression

X_1 = Public Share Ownership

X_2 = Corporate reputation

Z_1 = Corporate Size

Z_2 = Profitability

Z_3 = Leverage

Z_4 = Corporate Age

Z_5 = Environmental Sensitivity

e = Error

Table 1 Research sampling

No	Notes	Count
1	Manufacturing companies listed on the IDX from 2010 to 2017	122
2	Publish annual reports from 2010 to 2017	43
3	Public share ownership data available	43
4	Obtain PROPER awards	43
Final sample		43

Before testing the hypothesis, it is necessary to fulfil the classical assumption tests consisting of normality tests, multicollinearity tests, heteroscedasticity tests, and autocorrelation tests. After the classic assumption test was performed, the hypotheses were tested consisted of simultaneous test (F test) and partial test (t test) (Hair et al., 2010).

³ Environmental accounting data from the sustainability report were 7 companies with total number of 48 data.

4. Results and discussion

Table 2 shows the descriptive statistics of the dependent variable, the independent variable, and the control variable. Several intriguing parts of these descriptive statistics are identified. First, the mean value of environmental accounting by companies is 3.31, which indicates the disclosure of

Meanwhile, data from the annual report were 36 companies with total data of 296.

environmental accounting in Indonesia is still low⁴. We also found that some companies disclose nothing about environmental accounting. Standard deviation values indicate that there are relatively large differences in the disclosure of environmental accounting between companies. Second, corporate reputation measured using dummy values has a mean value of 0.48, which indicates that more companies do not have environmental awards. Third, environmental sensitivity, which has a mean value of 0.62, indicates that more manufacturing companies whose operations have a major impact on the environment.

Table 3 shows the Pearson correlation analysis between dependent variables, independent variables, and control variables. The results show that corporate reputation is positively related to

environmental accounting, while public ownership is not. Control variables related to environmental accounting are corporate size, profitability, leverage, and environmental sensitivity, while corporate age is not related to environmental accounting.

After the data meets the classical assumption tests, the regression models are shown in Table 4. In model 1, when each X_1 (public ownership) and X_2 (corporate reputation) value is 0, the value of environmental accounting is 0.544. When the value of public ownership increases by 1%, environmental accounting will increase by 3.9%. When a company has a good reputation in the environmental field, there is a 7.23 chance for the adoption of environmental accounting.

Table 2 Descriptive statistics

Variables	Max	Min	Mean	Std. Dev
Y Environmental acc.	10.00	0.00	3.31	2.38
X_1 Public share own.	67.07	0.25	24.50	15.73
X_2 Cor. Reputation	1.00	0.00	0.48	0.50
Z_1 Size	26.00	18.00	21.85	1.71
Z_2 Profitability	67.00	-42.00	6.24	11.91
Z_3 Leverage	321.00	3.72	53.72	43.01
Z_4 Age	100.00	15.00	39.00	17.02
Z_5 Environmental sensitivity	1.00	0.00	0.62	0.48

There is a difference in the value of the constant (α) of the regression equation of model I and model II, which was originally positive (0.544) to negative (-1.670). This is because the corporate size control variable changes the constant value. Corporate size changes the value of a constant because it is caused by two things. First, because of significant differences in corporate size (Dougherty, 2016), with the highest value reaching Rp295 Trillion and the lowest value of 100 Billion IDR. Second, there is a large difference in value between Environmental Accounting, which has an average value of 1.05, and Size, which has an average value of 21.79 (Dougherty, 2016). This

makes the constant value in the regression equation negative. However, a negative constant value basically does not affect the results of the regression equation because the value of the slope (β) Size is positive (Allen & Stone, 2005).

The next step is to test the hypothesis. The first hypothesis test is the F test. Table 4 shows the results of the F test regression between the variables of public ownership and the corporate reputation of the environmental accounting variable. The F test value is significant, which means that public ownership and corporate reputation together influence environmental accounting. However, these results must be tested again by a t-test to

⁴ The study revealed that among the four countries in Asia, namely, Japan, India, South Korea, and Indonesia, the

disclosure of Sustainability Reports in Indonesia was the lowest one (Laskar & Maji, 2018).

determine the effect of each independent variable individually on the dependent variable.

The t-test results in Table 4 show that the significance of the variable X_1 (public ownership) is 0.443 (> 0.05). This means that public ownership does not affect environmental accounting. Thus, H_1 , which states that public ownership has a significant positive effect on environmental accounting, is rejected. R Square value of public ownership of 0.003 indicates that variations in public ownership in environmental accounting disclosures are very weak. The significance of the variable X_2 (corporate reputation) in t testing is 0.000 ($p < 0.05$), which means the corporate reputation influences environmental accounting. Thus, H_2 , which states that the corporate reputation has a positive effect on environmental accounting, cannot be rejected. R Square value of corporate reputation is 0.270, which means that 27% of the variation or variability in environmental accounting is explained by the corporate reputation.

Effect of public ownership on environmental accounting

The test results show that public ownership does not affect environmental accounting. The results of this study are not consistent with research by Haladu & Salim (2016) and Adnantara (2013). However, it is consistent with studies conducted by Rainsbury et al., (2016) and Li & Zhang (2010). These results indicate that the application of environmental accounting in Indonesia is not based on responsibility and awareness. This finding is not in accordance with the coercive isomorphism, which states that a company will try to adjust its policies with norms and values that exist in its environment. These norms and values relate to public awareness for companies to adopt environmentally friendly practices (Zeng et al., 2012; Fernando & Lawrence, 2014).

The insignificant influence of public ownership on environmental accounting is likely caused by managers' ignorance that reporting on environmental activities is important to be shared

with the public. This study also shows that public ownership fails to influence companies' policy, especially in regards to environmental accounting (Li & Zhang, 2010). This is against the view of coercive isomorphism, which states that community pressure and strength will encourage companies to implement policies that are in line with community expectations (DiMaggio & Powell, 1983; Fernando & Lawrence 2014).

Another possibility that causes public ownership does not affect environmental accounting is that companies apply environmental accounting solely to meet government regulations. In this case, companies ignore public ownership and their voices (Chang & Zhang, 2015; Li & Zhang, 2010). Companies fulfil the government regulations to avoid sanctions and penalties but maintain their existence. An excellent environmental practice should not only obey the regulations but also be based on the awareness of the importance of environmental accounting and considering the wants of the public.

Effect of corporate reputation on environmental accounting

The test results show that corporate reputation has a significant positive effect on environmental accounting. This result is in line with the findings of Branco & Rodrigues (2008), (Hasan & Yun, 2017; Kansal et al., 2014; Zeng et al., 2012). These results indicate that companies that have a good reputation and have an appreciation in the environmental field will reveal more environmental accounting. The corporate reputation in the environmental field is imperative for stakeholders in assessing companies' practices when caring for the environment (Zeng et al., 2012). The corporate responded by trying to maintain that good reputation. This is consistent with the view of mimetic isomorphism, which states that organizations will apply the practices of other organizations to maintain their reputation, existence and increase their competitive advantage (Fernando & Lawrence, 2014).

This result is also in accordance with the NIS, contending that the organization will respond to the environment by imitating good practices by other companies in the same field in the face of uncertainty (Nikolaeva & Bicho, 2011; Fernando & Lawrence, 2014; Scott, 2004). The uncertainty faced by companies related to loss of existence can be minimized by imitating policies adopted by other companies. However, the evidence that public ownership is not significant implies that decoupling may exist whereby companies issue environmental reporting only to maintain its reputation, but in practice, it is questionable.

This result can be a concern for government agencies, especially the Ministry of Environment, to continue promoting the Corporate Performance Rating Assessment Program in Environmental Management (PROPER) and other institutions that give environmental awards to companies so that more companies are motivated to participate in caring programs environment.

5. Conclusions

Environmental accounting practices become one of the solutions for companies on the pressure put on by stakeholders so that the corporate operations are concerned about the environment. Stakeholders encourage companies to adopt responsible and awareness-based practices in implementing environmental accounting. This study examines the relationship between the influence of public ownership variables and corporate reputation on environmental accounting in Indonesia using the new institutional sociology theory. Based on this theory, it is formed from the norms and beliefs that exist in the corporate environment, so the corporate will attempt to implement practices and policies that are in accordance with the values in society.

This study found that public ownership had no effect on environmental accounting. Whatever shares are owned by the public is not the concern of the corporate in disclosing environmental information. In the application of environmental

accounting, companies are more focused on fulfilling government regulations, so they are not seen as bad and accepted. This result can be a concern of the government that the best factor to encourage companies to care for the environment is to tighten regulations. This study also found that corporate reputation influences environmental accounting. Companies that do not expect loss and existence will tend to disclose environmental information. Emulating good practices by other companies is a solution for companies to avoid losing competitive advantage.

The findings in this study can be a reference for the government to tighten regulations related to companies' operations to care for the environment. In addition, the government may promote green industry award programs to motivate companies to participate in environmentally friendly programs. The findings in this study also reinforce the mimetic isomorphism view in the new institutional sociology theory whereby companies imitate others to have similar good practices to avoid losing their reputation.

A limitation of this study is the collection of environmental accounting data from the annual report because only a few companies compile sustainability reports. Suggestions for further research are to involve all corporate sectors with environmental accounting data taken from the sustainability report so that the data are more complex. Besides, in order to enlarge the sample, the research data should encounter an easy process of collection. Future research should use comparative studies in examining environmental accounting to enrich the literature. Furthermore, qualitative research related to awareness and responsibility motives in implementing environmental accounting is also encouraged.

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