

Do Environmental Issues Matter to Investors?

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ABSTRACT

This study aims to analyze the effect of the ISO 14001 environmental management system, corporate environmental disclosure, and company performance. The research samples used were non-financial companies listed on the Indonesia Stock Exchange for 2018-2019. The sampling technique employed was purposive sampling with a total research sample of 230. The analytical tool utilized in this study was regression analysis using the SPSS Process. The study results indicate that ISO 14001 environmental management influenced corporate environmental disclosure, but corporate environmental disclosure did not affect company performance. In addition, the ISO 14001 environmental management system had a negative effect on performance. It signifies that corporate environmental disclosure did not mediate the relationship between the ISO 14001 environmental management system and performance.

Keywords: *Sustainable Development, Corporate Environmental Disclosure, ISO 14001, Performance*

1. INTRODUCTION

Environmental pollution is a crucial issue in maintaining a company's sustainability. However, environmental issues have not fully become a concern for companies in Indonesia, which is indicated by the increase in cases of environmental pollution each year. Based on Indonesia's 2018 environmental statistics, the quality of river water in Indonesia was heavily polluted. The Statistics Indonesia's (BPS) monitoring results of 82 rivers in Indonesia during 2016-2017 revealed that 50 rivers were relatively unchanged, 18 rivers were in better condition, and 14 rivers were in poor condition (Statistics Indonesia, 2018). Furthermore, in March 2020, there was environmental pollution in the Citarum watershed caused by PT. Kamarga Kurnia Textile Industri (KKTi) and PT. How Are You Indonesia (HAYI) with a claim for compensation of IDR 16.56 billion. Throughout 2018-2020, there have been 51 cases of environmental pollution in the Citarum watershed (Arumingtyas, 2020). The increase in cases of environmental pollution indicates that companies are still not paying serious attention to industrial waste management. In fact, the company's concern for the environment should not only be to comply with regulations but also be part of the strategy to gain a competitive advantage to increase the firm value. Thus, the issue of environmental concern is still very relevant in Indonesia. For this reason, this study aims to examine the relationship between the implementation of the ISO 14001 environmental management system, corporate environmental disclosure, and firm value.

The demand for the company's concern for the environment started two decades ago. The Brundtland Report published by the World Commission on Environment and Development (WCED) in 1987 reported that economic growth and globalization had negative consequences for the

environment (WCED, 1987), and then they introduced the concept of sustainable development. In 2015, the United Nations approved the 2030 agenda for sustainable growth based on five pillars, i.e., people, planet, prosperity, peace, and partnership, the achievement of which requires contributions from individuals, businesses, governments, and the state. At the company level, the implementation of sustainable development requires a management paradigm that does not only focus on profit but also considers environmental and human (social) sustainability, in which the company is located. In this regard, Elkington's triple bottom line concept in 1988 offers a measurement of the company's success in terms of these three aspects.

In its contribution to sustainable growth, companies are required to manage the company and design value creation strategies that integrate environmental and social aspects in achieving profits. Increasing corporate value and shareholder value requires multidimensional performance (Hart, Milstein & Caggiano, 2003). In this case, the adoption of a sustainable strategy will drive a cost advantage (Christmann, 2000; Walsh & Dodds, 2017), create a competitive advantage (Porter & Kramer, 2002; Cantele & Zardini, 2018), and increase competitiveness (Walsh & Dodds, 2017). The relationship of sustainable strategy with the company's competitive advantage according to the theory of Resource-Based View (RBV) (Barney, 1991), especially the Natural RBV theory (Hart and Hart, 1995), predicts that the company's competitive advantage will be rooted in the company's ability to integrate three strategies, i.e., pollution prevention strategies, product stewardship, and sustainable development.

The increasing attention of companies to sustainable strategies also requires an environmental control system to implement these strategies. One of the tools that help control

the environmental management system (EMS) is ISO 14001. ISO 14001 is an environmental management system designed to help businesses reduce their environmental impact through management controls. Bansal and Hunter (2003) provide two arguments for companies to adopt EMS ISO 14001, i.e., to reinforce existing strategies to achieve a competitive advantage and a strategy reorientation mechanism to signal the company's strategic positioning related to the environment, corporate social responsibility, quality, and internationalization. According to the predictions of the Natural RBV theory, the adoption of the ISO 14001 standard is expected to be a source of competitive advantage for the company (Hart & Hart, 1995; Porter & Linde, 1995) and encourage sustainable development and value creation (Sebhatu & Enquist, 2007). Several studies have found that the adoption of ISO 14001 positively affected performance (Soedjatmiko, Tjahjadi & Soewarno, 2021) and firm value (Soedjatmiko, Tjahjadi & Soewarno, 2021). However, several other studies have uncovered that ISO 14001 certification had a negative effect on stock performance (Paulraj & de Jong, 2011) and firm value (Riaz *et al.*, 2019; Riaz & Saeed, 2020).

The inconsistency of research results on the effect of ISO 14001 on firm value is explained by the company's motivation. The claim that ISO 14001 can result in competitive advantage is not achieved if the company's motivation to follow ISO 14001 is to gain legitimacy rather than for functional benefits (Jiang & Bansal, 2003). Response to pressure from the market is a form of mimetic isomorphism so that its application is only symbolic (Riaz *et al.*, 2019). Sebhatu and Enquist (2007), through a case study, concluded that ISO 14001 could be used as a driver of sustainability and value creation. It indicates that the implementation of ISO 14001 will provide an increased competitive advantage if the adoption of ISO 14001 is integrated into business processes that impact sustainability (environmental, social, and economic) and the quality of services or products produced.

Adoption of ISO 14001 focuses on process, not on the results (Bansal and Hunter, 2003). ISO 14001 can encourage substantive continuous improvement so that environmental performance is an indirect outcome of the adoption of ISO 14001 (Boiral & Henri, 2012). Thus, the adoption of ISO 14001 does not necessarily improve the company's environmental performance. The success of implementing the ISO 14001 standard in improving environmental performance is influenced by the variability of the implementation of the ISO 14001 standard (Yin & Schemidler, 2009). Yin and Schemidler (2009) found that companies that integrated ISO 14001 standards in their daily operations would improve environmental performance than those that did not. Based on this view, the researchers see that the integration of the ISO 14001 standard in operating decisions related to the environment is reflected in environmental disclosure. Several studies have unveiled a relationship between the adoption of ISO 14001 and the disclosure of social responsibility (Rahmawati & Budiwati, 2018); Rachmat & Manurung, 2019).

Based on the description above, the researchers suspect that the adoption of ISO 14001 can increase the company's value if the implementation of the ISO 14001 standard is integrated into the company's operating policies that impact the environment, which is surrogated by environmental disclosure. Thus, environmental disclosure mediates the effect of ISO 14001 adoption on firm value. This study contributes to testing the RBV theory and explains the mechanism for adopting ISO 14001 in increasing firm value. Soedjatmiko, Tjahjadi and Soewarno's (2021) study tested the influence of ISO 14001 on firm value by including financial performance as a mediating variable. However, this study used environmental disclosure as a mediating variable with the argument that environmental disclosure can be a surrogacy of integrating the ISO 14001 standard in the company's operating decisions.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Resource-Based View (RBV) Theory

RBV theory explains that companies will gain a competitive advantage by implementing strategies that exploit the company's internal strengths to respond to external opportunities (Barney, 1991). Barney (1991) proposed four attributes of a company's resources with the potential to have a sustainable competitive advantage, i.e., valuable, rareness, inimitability, and non-substitutability. Valuable means resources that enable companies to implement strategies that increase efficiency and effectiveness to be utilized to seize opportunities or neutralize threats. Rareness denotes that resources are rare or unique compared to competitors. Inimitability suggests that the resources owned by the company are not easily imitated or duplicated by competitors. Meanwhile, non-substitutability represents that resources are difficult to substitute or cannot be replaced by other resources.

Further, Hart (1995) put forward a theory of Natural-Resource-Based View—a theory of competitive advantage based on the company's relationship with the natural environment. This theory holds that competitive advantage can be achieved if the company can develop a strategy that connects the environmental challenge and the company's resources, which are operationalized through three interrelated strategies: pollution prevention, product stewardship, and sustainable development. In summary, according to the Natural RBV theory, a company's strategy and competitive advantage will be rooted in its ability to create environmentally sustainable economic activity.

Moreover, adopting ISO 14001 is a valuable resource as it helps companies operate more efficiently and effectively environmentally. The adoption of ISO 14001 does not in itself become a company's competitive advantage when all companies can adopt the standard. However, the company's success in exploiting these standards in strategy implementation requires complex social resources, such as social relations, culture, and traditions in its implementation. The complex social resources within the company are

difficult to imitate (Barney, 1991). It is what makes the impact of implementing ISO 14001 varies between companies.

2.2. Stakeholder Theory

Stakeholder theory explains that companies do not only operate to gain corporate profits but are also required to provide benefits to stakeholders, either shareholders, suppliers, customers, creditors, society, government, or others. Concerning stakeholder theory, society and the environment are the core stakeholders that companies must pay attention to (Ermaya & Mashuri, 2018). The implementation of corporate social responsibility in the form of environmental disclosure is considered one of the efforts to fulfill responsibilities to stakeholders. Social and environmental disclosures can also be used to respond to stakeholder needs for corporate social and environmental information. Stakeholders have the right to receive information from relevant agencies, regardless of whether the information will be used for the company's sustainability. The company's efforts to provide information on social responsibility are based on the company's consideration that stakeholders influence the company's sustainability. Thus, companies need to consider the influence of stakeholders on environmental disclosure (Rahmawati & Hutami, 2019). Nishitani (2010) found that environmental stakeholder pressure was the main driver of increasing ISO 14001 adoption in Japan. Thus, stakeholder theory explains the motivation of companies to adopt ISO 14001 and make environmental disclosures.

2.3. Signaling Theory

Signaling theory predicts how companies will take actions to signal the company's quality to reduce information asymmetry (Conneley et al., 2011). Signaling is the company's effort to intentionally communicate positive information about the company to convey the company's positive attributes to the public (Conneley et al., 2011). Conneley et al. (2011), in their review, summarized the important concepts of signaling theory so that the information communicated by the company becomes a signal. First, the information submitted must have a quality that allows the company to gain legitimacy from the signal recipient and will influence the signal recipient's actions or decisions. Second, information can distinguish between high-quality and low-quality companies. Third, the information submitted by the company is what it is and in line with the unobservable actual quality. Fourth, the frequency and consistency of the company in signaling information is a factor that determines the effectiveness of the signal. CSR standards provide an effective means of signaling by companies to reduce information asymmetry. According to signaling theory, environmental management standards can effectively signal by companies to reduce information asymmetry (Moratis, 2018). Companies also use environmental spending as a signal of the company's future performance (Lys, Naughton and Wang, 2015).

2.4. Hypotheses Development

The ISO 14001 environmental management system is an internationally accepted standard that provides companies and organizations with practical tools for managing environmental responsibility. Kumalasari (2016) revealed that ISO 14001 is the main management system standard specializing in requirements for formulating and maintaining environmental management systems. Companies certified to ISO 14001 tend to have a good environmental management system to affect the level of disclosure of environmental information. Disclosure of environmental information gives the company a good reputation among stakeholders. It can also reduce conflicts of interest and information asymmetry between managers and shareholders as principals.

In line with signaling theory, companies that adopt ISO 14001 will disclose environmental information and the impact of business activities on the environment to signal corporate responsibility (Yusoff, Kamaruddin & Ghani, 2018). The increasing ISO 14001 adoption due to stakeholder pressure (Nishitani, 2010) has also encouraged companies to disclose information on environmental-based business activities to gain their legitimacy. Companies that integrate the ISO 14001 standard in environmental operating decisions should be reflected in environmental disclosures. Previous studies have shown that companies with ISO 14001 certification disclosed environmental information (Bawono & Haryanto, 2015; Chaklader & Gulati, 2015; Kumalasari, 2016; Rahmawati dan Budiwati, 2018; Yusoff, Kamaruddin and Ghani, 2018; Rachmat & Manurung, 2019).

In addition, companies that already have ISO 14001 certification show a good environmental management system. A good environmental management system can encourage the improvement of the company's environmental performance. The improved environmental performance will support companies to disclose environmental information more broadly. Therefore, it can be said that ISO 14001 certified companies tend to disclose environmental information (environmental disclosure). Based on this description, the following hypothesis can be formulated:

H1: The ISO 14001 environmental management system has a positive effect on corporate environmental disclosure.

Cormier and Magnan (1999) argued that environmental, financial disclosure is reflected in monetary terms regarding environmental investment, costs, and provisions, while environmental non-financial disclosure refers to environmental objectives, management, and policies. Previous studies have examined the relationship between disclosure of environmental information and company performance, and the results showed that high disclosure of environmental information could benefit the company's financial performance (Neu, Warsame and Pedwell, 1998; Cormier and Magnan, 1999; Prencipe, 2004). Companies can incorporate environmental awareness into their operations to obtain the possible financial benefits (Zhang and Stern, 2011). Therefore, environmental policies will influence the actions of company managers and increase firm value.

H2: Corporate environmental disclosure has a positive effect on firm value

Natural RBV theory states that the company's ability to connect environmental challenges and company resources will create a competitive advantage. According to the predictions of the natural RBV theory, the adoption of the ISO 14001 standard is expected to be a source of competitive advantage for the company (Hart & Hart, 1995; Porter & Linde, 1995) and encourage sustainable development and value creation (Sebhatu & Enquist, 2007).

Sueb and Keraf (2013) asserted the ISO 14001 Environmental Management System (EMS) as an international standard supporting environmental protection and pollution prevention in balance with the socio-economic needs and economic benefits obtained from the ISO 14001 EMS. It includes improving overall environmental performance, producing a framework for preventing pollution, improving efficiency and potential cost savings, and improving corporate image.

Several studies have uncovered that companies that have obtained the ISO 14001 EMS certification got benefits such as improving corporate image (Clements, 1996), continuous improvement and manufacturing cost efficiency (Ratnasingam et al., 2009), and corporate image (Haslindan & Fuong, 2010). Besides, the company's strategic plan demonstrates its legitimacy for environmental performance and company competitiveness at the international level (Bansal & Hunter, 2003). Thus, adopting EMS ISO 14001 will enable companies to control processes, save costs, and increase profits (Nishitani, 2009).

Based on this explanation, consistent with the natural theory of RBV, the adoption of ISO 14001 is expected to be a source of competitive advantage to increase firm value. However, the adoption of ISO 14001 does not necessarily increase firm value unless the adoption of ISO 14001 has a substantive impact and is effectively integrated into the company's operations. Ferrón Vílchez (2017) found that the greater the symbolic environmental behavior in the form of a desire to gain legitimacy from stakeholders, the more likely the company to adopt ISO 14001. The findings of Ferrón Vílchez (2017) were claimed as an explanation that the adoption of ISO 14001 had no substantive impact on environmental performance. Boiral and Henri's (2012) research on firm value also found that the substantive motivation for ISO 14001 adoption would be able to improve performance. Thus, environmental disclosures that reflect environmental-based business activities mediate the impact of the ISO 14001 environmental management system on firm value.

H3: The ISO 14001 environmental management system has a positive effect on firm value.

H4: Corporate environmental disclosure mediates the relationship between the ISO 14001 environmental management system and firm value.

3. RESEARCH METHOD

This study used a quantitative approach. The type of data used was secondary data in the form of financial reports and annual reports of companies listed on the Indonesia Stock Exchange for the period 2018-2019, accessed through www.idx.co.id. The sampling technique was carried out using the purposive sampling method with the following criteria:

- a. Companies listed on the Indonesia Stock Exchange except for the financial and banking industry during 2018-2019.
- b. Non-financial companies that consistently reported annual reports and/or sustainability reports during the 2018-2019 period

The following is an explanation of the variables used in this study. The first variable is **corporate environmental disclosure**. Environmental disclosure is the disclosure of information related to the environment reported in the company's annual report. In this study, environmental disclosure was measured using the Global Reporting Initiative 4 (GRI G4) index. The GRI G4 index consists of three main components, i.e., economic (nine items), environmental (34 items), and social (47 items). However, in this study, the indicators used were only environmental category indicators. Based on the environmental category, the GRI index consists of 12 aspects and 34 items. The formula for calculating environmental disclosure is as follows:

$$ED = \frac{\text{Number of disclosed information item}}{\text{Number of information item in GRI 4}}$$

The second variable in this study is the ISO 14001 **environmental management system**. The ISO 14001 environmental management system is an internationally accepted standard that provides practical tools for companies and organizations regarding environmental responsibility management. Kumalasari (2016) revealed that ISO 14001 is the main management system standard specializing in requirements for formulating and maintaining environmental management systems. The measurement of the ISO 14001 environmental management system variable used a dummy variable. A value of 1 was given to companies that obtained ISO 14001 certification, and a value of 0 was given to companies that had not been certified to ISO 14001. Then, the third variable of this study is **firm value**. Firm value was proxied by PER.

The analytical method used to test the hypotheses in this study was regression analysis utilizing the SPSS Process. The following is the regression model used:

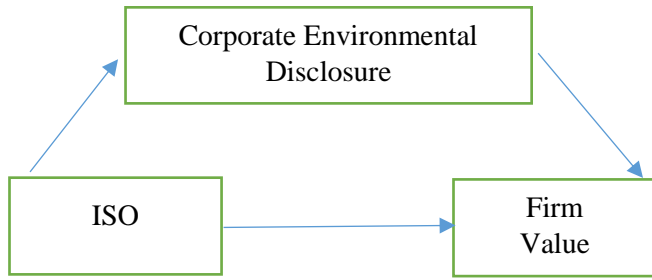


Figure 1. Regression analysis utilizing the SPSS Process

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Table 1. Descriptive statistics

Variable	N	Min	Max	Mean	SD
Disc	230	0.03	0.60	0.1961	0.1758
ISO	230	0	1	0.7300	0.4420
Firm Value	230	0.08	70.00	23.7515	21.1494

Table 1 shows the descriptive statistics. The number of research samples was 230 in the 2018-2019 period. Companies in Indonesia had a maximum environmental disclosure of 0.60, while the minimum disclosure was 0.03. The mean environmental disclosure was still low at 0.1961 or 19.61%. Besides, 73% of companies have implemented ISO. The mean firm value was 23.7515.

4.2. Hypothesis Testing

The hypothesis testing results using regression analysis are shown in the following table:

Table 2. Hypothesis Testing Results

Variable	Model 1		Model 2	
	Coeff	t-value	Coeff	t-value
Constanta	0.0926	4.3861***	28.2666	10.1230
ISO	0.1409	5.7252***	-8.5334	-2.5507**
Disc			8.9493	1.0635
Dependent	Disc		Performance	
R	0.3545		0.1673	
R-sq	0.1257		0.0280	
F-Stat	32.7782		3.2675	
n	230		230	

4.3. Discussion

The results uncovered that the positive effect of ISO 14001 on the disclosure of the environment was supported. It means that ISO 14001 management system positively influenced corporate environmental disclosure (H1 was supported). Nevertheless, corporate environmental disclosure did not influence firm value (H2 was not supported). Other findings indicated that the ISO 14001 management system negatively influenced firm value (H3 was not supported). In general, corporate environmental disclosure did not mediate

the relationship between the ISO 14001 management system and firm value (H4 was not supported).

The significant results between the ISO 14001 environmental management system and corporate environmental disclosure are supported by the argument that companies with ISO 14001 certification tend to have good environmental disclosure quality (Rahman et al., 2019). It is because companies with ISO 14001 certification represent their commitment to the environment by disclosing information related to the company's operational activities that impact environmental aspects (Rahmawati & Budiwati, 2018). According to Supatminingsih (2015), ISO 14001 certified companies are committed to continuous and sustainable improvement. The implementation of ISO 14001 also represents a good environmental management system, where the company is committed to monitoring, managing, controlling, and reporting related to operational activities related to environmental aspects (Iswati & Setiawan, 2020).

This finding aligns with signaling theory; companies that adopt ISO 14001 will disclose environmental information and the impact of business activities on the environment to signal corporate responsibility (Yusoff, Kamaruddin & Ghani, 2018). This finding is also under stakeholder theory; stakeholder pressure in adopting ISO 14001 encourages companies to disclose information on environmental-based business activities to gain their legitimacy (Nishitani, 2010). In addition, the results of this study support the findings of Rahman et al. (2019), Rahmawati and Budiwati (2018), Chaklader and Gulati (2015), Yusoff, Kamaruddin and Ghani (2018), and Supatminingsih (2015), which stated that ISO 14001 affected corporate environmental disclosure.

The claim of ISO 14001 that can result in competitive advantage is not achieved if the company's motivation to follow ISO 14001 is to gain legitimacy, and not to obtain functional benefits (Jiang and Bansal, 2003), or due to pressure from the market as a form of mimetic isomorphism so that its application is only symbolic (Riaz et al. 2019). Ferrón Vílchez (2017) found that the greater the symbolic environmental behavior in the form of a desire to gain legitimacy from stakeholders, the more likely the company to adopt ISO 14001. The findings of Ferrón Vílchez (2017) are claimed as an explanation that the adoption of ISO 14001 had no substantive impact on environmental performance. Boiral and Henri (2012) also unveiled that the symbolic motivation for adopting ISO 14001 had less impact on performance. If the motivation for adopting ISO 14001 is solely to gain surface appearance recognition, then the adoption of ISO 14001 is actually considered a cost that investors must bear and does not provide comparable benefits, thereby reducing firm value. This finding is also consistent with the institutional theory that adopting ISO 14001 is only a process of institutionalizing the EMS through a mimetic process but not fully implemented. Besides, the results of this study corroborate the findings of Paulraj and deJong (2011), Riaz et al. (2019), and Riaz and Saeed (2019).

5. CONCLUSION

This study aims to analyze the effect of the ISO 14001 environmental management system, corporate environmental disclosure, and company performance. The analysis results

revealed that the ISO 14001 environmental management system influenced corporate environmental disclosure, but corporate environmental disclosure did not influence firm value. In addition, the ISO 14001 environmental management system did not have any influence on firm value. It denotes that corporate environmental disclosure did not mediate the relationship between the ISO 14001 environmental management system and values.

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