Environmental management and firm performance on firm value moderated by good corporate governance

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ABSTRACT

This research aims to analyze the influence of environmental management and firm performance on firm value, which is moderated by good corporate governance, which is proxied by board size and independent commissioners. The research design is quantitative research with the title "Environmental management and firm performance on firm value moderated by good corporate governance". The data source is secondary data collected from the IDX (Indonesian Stock Exchange) website to access financial report data of mining sector manufacturing companies, for the period 2017 - 2022. The population of this research is mining sector companies listed on the IDX for the 2017-2022 period. The sampling technique used in this research was purposive sampling. The results show that there is no direct influence from ISO certification on ROA (Return on Assets). There is a significant positive effect of firm value from the environmental management and firm performance variable, moderated by board size. However, the presence of independent commissioners does not moderate the effect of ISO and ROA on firm value. This means that the existence of directors can moderate the implementation of ISO 14001 on company value.

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INTRODUCTION (10 PT)

Investors’ perceptions of a company are seen from the company value reflected in the financial reports. Through financial reports, investors will get an overview of the company's condition and a signal about the company's situation (Wahyuniyasanti & Mertha, 2022). The first thing investors do is analyze financial reports, look at performance, and measure it using financial ratios. Of course, investors will be interested in positive company performance (Sudirgo, Yuniarwati & Bangun, 2019). According to Ayuningtyas & Mawardi (2022), financial performance is a measure of whether or not a company is effectively managing and maximizing its resources to maximize profits.

Meanwhile, according to the Indonesian Accountants Association (2013), PSAK 1 defines financial reports as a basis for internal or external users to make decisions, because financial reports contain company performance, including profit information. Suripto, Hermawan, Sari & Rifai (2022) explain that potential investors' investment decisions will consider information on a company's profits. This is in line with the signal theory put forward by Jensen & Meckling (1976), good performance and positive profits are signals of investor interest.

The most common way to evaluate financial performance is through profitability ratios, therefore financial performance is proxied by Return on Equity (ROE), which is a situation where a company can generate profits (Ayuningtyas & Mawardi, 2022; Irma, 2019; Iswajuni et al., 2018). The higher profits generated will be a positive signal to investors that the company can achieve satisfactory performance and increase investor confidence (Hirdinis, 2019; Iswajuni et al., 2018). According to Wulandari & Widyaawati (2019), ROE is the company's ability to generate returns on capital invested by parties who have invested capital (investors). If the return value is high, it shows that the company has been effective in using, utilizing, and managing investment funds. So it can be said that the main focus of shareholders is financial performance because it is closely related to shareholder prosperity and is the basis for decision-making by investors (Devi
Based on signal theory, profits are a positive signal to investors regarding the company's management capabilities in managing resources so that they can generate profits (Gustaman, 2022). Several previous studies have stated that there is a positive influence of profitability on company value. The higher profit generated by a company becomes a signal for investors to increase demand for the company's shares so that the value of the company will be influenced (Fajaria & Isnalita, 2018; Jihadi et al., 2021; Patricia et al., 2018; Wijaya & Sedana, 2015).

Sinaga & Mustafa (2019) stated that the higher the company value, the higher the level of prosperity of the owners and shareholders. Safitri & Nani (2021) state that company value is a display of the performance of companies listed on the Indonesia Stock Exchange. Company value as defined in research by Damas et al. (2021) is a measure of the quality of a company and a measure of the welfare of its shareholders. Meanwhile, according to Iswajuni et al. (2018), company value is the price that potential investors are willing to pay. This is in line with the Efficient Market Hypothesis (EMH) which states that stock prices reflect the information contained therein (Fama & Jensen, 1983). So it can be said that the main focus of shareholders is company value because it is closely related to shareholder prosperity and is the basis for decision-making by investors (Devi & Manuari, 2021).

The ratio that is generally used to measure company value is the TobinsQ ratio. The TobinsQ ratio is considered better in measuring company value because it takes into account the value of debt and asset value, apart from the value of equity (Wulandari & Widyawati, 2019).

One form of regulation in question is ISO 14001 which was developed in 1996 by the International Organization for Standardization (Wu et al., 2020). Research conducted by Wu et al. (2020) also stated that Asia is the most dominant region implementing ISO 14001 certification, especially China, Japan, and South Korea. Meanwhile in Indonesia, according to data compiled by BPS (2019), the number of companies implementing ISO 14001 certification in 2013 was recorded at 1,558 companies, then the number continued to increase to 2,125 companies in 2019.

ISO 14001 is proof that environmental management is increasingly standardized (Johnstone, 2022). Implementing ISO 14001 can reduce the impact on the environment so that it can provide a positive and good image of the company to interested parties (Panggau & Septiani, 2017). The implementation of environmental management in companies as stated by (Soedjatmiko et al., 2021), can increase productivity and customer satisfaction. Research by (Machmuddah et al., 2020; Sudiyatno et al., 2020), explains that environmental management can increase company value. These results are also supported by research conducted by Song et al. (2017) that environmental management positively influences company value. According to Verenikina & Finley (2018) research, if a company implements environmental management properly and correctly, the company will be able to manage its resources more efficiently so that the company's performance increases. This is in line with research conducted by Hardiyansah et al. (2021) that ISO 14001 is proof of a company's real commitment to caring for the environment and can be a positive signal to stakeholders and potential investors.

However, there is a research gap regarding the influence of ISO 14001 environmental management. Research conducted by Aprilasani (2017) and Evita & Syafruddin (2019) shows results that contradict previous research. ISO 14001 does not affect financial performance and company value. In Aprilasani (2017) research results show that ISO 14001 certification requires quite a lot of investment costs. Theoretically, Wang et al. (2022) suggest that company activities that seek to reduce the impact of environmental damage can increase company costs and reduce company performance and value.

The implications of adopting ISO 14001 by companies can cause reactions from stakeholders who are not yet familiar with ISO and can cause quite large costs in the short term. This can affect financial performance (Aulia & Hadinata, 2019). However, in the long term, the benefits that can be felt include achieving a company's competitive advantage such as increasing revenue and improving the company's good name (Kabir & Thai, 2017).

In this research, Good Corporate Governance (GCG) is used as a moderating variable. GCG is an important issue for a company to improve and tighten regulations within a company so that it can improve performance (Triana & Pangestutti, 2021). The main thing in implementing GCG is supervision by management to improve company performance, as well as ensuring management accountability and openness to stakeholders by applicable regulations (Kaihatu, 2006; Noval et al., 2021).

Corporate governance or GCG is proxied by board size and the proportion of independent commissioners. Directors are responsible for achieving company goals by managing existing resources well and maximally performance (Triana & Pangestutti, 2021). The greater the number of members of the board of directors, the higher the effectiveness in managing operational activity resources (Irina, 2019; Maharani & Mawardi, 2022).

Independent commissioners have an independent nature, are not tied to the company issuer, come from outside the company, have high integrity, and understand good corporate governance guidelines well (Tanisa & Manuari, 2021).
Independent commissioners can provide input to the board of commissioners in terms of decision-making so that they can improve company performance (Irma, 2019; Maharani & Mawardhi, 2022). Several previous studies related to GCG as a moderating variable have been conducted. Among them is research by (Noval et al., 2021) who found that GCG as proxied by an independent board of commissioners was able to moderate the relationship between financial performance and company value. Maharani & Soewarno (2018) research shows that the existence of directors can monitor management performance so that company performance can improve. Research by Noviani et al., (2019) proxies GCG with independent commissioners, managerial ownership, and institutional ownership can moderate the increase in financial performance and increase company value. However, research conducted by Iswati & Setiawan (2020) suggests that GCG as proxied by independent commissioners does not show an influence on company value, whereas regarding environmental management, GCG can tighten the implementation of ISO 14001. Research gaps also occur in the research results of Safitri & Nani (2021) where the implementation of GCG does not support company performance to increase company value.

Based on the background and research gaps described above, this research aims to analyze the influence of environmental management and firm performance on firm value, which is moderated by good corporate governance.

METHOD

Research design is a plan to collect, analyze, and measure data (Bougie & Sekaran, 2019). The research design that will be used is quantitative research with the title: "The Influence of Environmental Management and Firm Performance on Firm Value Moderated by Good Corporate Governance". In this research, the data source is secondary data collected from the IDX (Indonesian Stock Exchange) website to access financial report data of mining sector manufacturing companies, for the period 2017 – 2022.

Population is a group of people, events, or interesting things investigated by researchers (Bougie & Sekaran, 2019). The population of this research is mining sector companies listed on the IDX for the 2017-2022 period.

The sample is part of the population consisting of several members selected by the researcher (Bougie & Sekaran, 2019). The sampling technique used in this research was purposive sampling. Purposive sampling is a technique for determining samples with certain considerations (Sugiyono, 2019).

The criteria for determining the sample in this study that have been determined are as follows:

1) Mining sector manufacturing companies registered on the IDX for the 2017-2022 period and publishing their annual and financial reports successively;

2) Companies that did not experience delisting during the research period: Delisting is the process of temporarily removing shares from the Indonesian Stock Exchange and these shares cannot be traded. The causes include the company going bankrupt, operational activities being stopped, and not reporting its annual or sustainability reports to the IDX (OCBCNISP, 2022). Of course, companies that experienced delisting were not included in the sample because they did not have data to support the variables in this research.

3) Companies that did not experience losses during the research period: This is because companies that have negative profits do not accurately represent the selected research population. Eliminating companies with negative profits allows for more accurate results regarding the relationships between variables.

4) Companies that publish a complete annual financial report related to research variables.

There are two types of data, namely primary and secondary data. Primary data is obtained directly from the source, for example, data from questionnaires, while secondary data is obtained from book sources and literary journals (Bougie & Sekaran, 2019). The type of data used by researchers in the research is secondary data in the form of annual reports downloaded from the site www.idx.co.id.

There are two sampling techniques: probability sampling and non-probability sampling. To collect data, researchers used a non-probability sampling technique with purposive sampling. Through this technique, sampling is based on predetermined criteria (Bougie & Sekaran, 2019), and there are no deviations (outliers) that are too far from the data series (Duli, 2019).

RESULTS AND DISCUSSION (10 PT)

The Influence of Environmental Management on Firm Value

According to (Arocena et al., 2023) the existence of ISO can help companies design their business activities so that they do not hurt the environment. However, from the results of the partial environmental management test, it is known that environmental management does not affect company value. The ISO
coefficient is 1.914 and the significance value is 0.060, which is greater than 0.05, this means that ISO certification has no significant effect on company value. Thus the first hypothesis (H1) in this study is rejected.

The results of this research are in line with research conducted by (Aprilasani et al., 2017; Aulia & Hadinata, 2019; Budiharjo, 2019; Evita & Syafrudin, 2019; Safitri & Gamayuni, 2019) that environmental management through the proxy of ISO 14001 certification does not affect company value. Research conducted by Aprilasani et al. (2017) revealed that ISO 14001 certification incurs significant costs and leads to reduced profits for companies. So the research results show that there is no influence from ISO certification on ROA (Return on Assets).

In line with the results of research by Aulia & Hadinata (2019) society has not felt the economic benefits of implementing ISO and requires expensive costs for implementing ISO 14001. Also, according to Arocena et al. (2023) the implementation of ISO is still voluntary, there are no prizes for those who implement it and there are no strict sanctions if the company does not implement it. Apart from that, (Aulia & Hadinata, 2019) stated that a fairly long period is needed to experience the optimal benefits of implementing ISO 14001.

The results of this research are supported by legitimacy theory where the adoption of ISO 14001 by the company will strengthen the company's social legitimacy in the eyes of society rather than improving the company's internal performance (Heras-Saizarbitoria et al., 2020). However, this result contradicts the signal theory. Environmental disclosure should be a positive signal to investors that the company is generating profits from its performance so that it can disclose more information (Iginovia & Agbadua, 2023) and information asymmetry can be minimized (Yu et al., 2018). However, in reality, investors are not sure whether environmental disclosure can increase company value more than the costs incurred (Soleha & Insalad, 2022).

Law Number 40 of 2007 concerning Limited Liability Companies states, “Companies have the right to use existing resources and human resources around them, but companies also must be responsible for all the consequences obtained from their operational processes.” Based on these regulations, it is clear that even though companies carry out environmental disclosures, one of which is ISO 14001 and can provide a good image, it is important to remember that the allocation of environmental costs is the company's responsibility with a nominal amount which is certainly not small (Nastia, 2019).

**Influence of Firm Performance on Firm Value**

Testing H2 can be seen in Table 4.10 containing the t-test results. The coefficient value of the firm performance variable which is proxied by ROE is 6.111 and the significance is 0.000 (<0.05) indicating that firm performance has a significant effect. A positive coefficient value means that ROE has a significant positive effect. Thus, the second hypothesis in this study is accepted.

The results of this research are in line with the research results of (Devi & Manuari, 2021; Selly et al., 2022; Sudiyatno et al., 2020), that companies that generate profits will attract investors to buy company shares and the company value will increase. According to Noval et al. (2021), the better the company's performance, the company value will increase. This can be seen from the higher ROE value, which will be accompanied by the higher TobinsQ value (Jihadi et al., 2021; Wahyu & Mahfud, 2018).

In the Efficient Market Hypothesis (EMH) according to Leonardo et al. (2022), stock prices reflect the information in them, and equilibrium occurs when the stock market price and the intrinsic price are the same. The balance is at number 1 (one), which means the stock market price is equal to the replacement cost, return on investment is the same as the return on capital. A company value that is above number 1 means that there is additional investment value from ROE, thereby encouraging investors’ investment decisions. The research results of (Suzulia et al., 2020) revealed that because the proxy for company performance is ROE, which is the ratio of returns on funds invested by shareholders, investors tend to view the positive profits generated by the company as triggering high demand for the company's shares.

For companies that are listed on the Stock Exchange, the share value is reflected in the share price. Meanwhile, ROE is a profitability ratio that divides net profit by equity, where the results will show how much return on investment investors will get for the funds they have invested. A high ROE value will cause share prices to increase as a form of market response. This was accompanied by an increase in the TobinsQ value as a proxy for measuring company value (Suzulia et al., 2020).

The research results of Selly et al. (2022) show that the profits generated by the company can attract investor interest because (1) the presence of profits can create opportunities for the distribution of results in the form of dividends; (2) demonstrate the quality of management in managing company funds; and (3) there are efforts to meet shareholder expectations. The influence of company performance on company value is in line with Stakeholder Theory in the research of Firdausya et al. (2020) stated that company performance is an indicator of success in meeting stakeholder expectations. Not only that but the results of this research are also supported by signal theory, where positive profits are a signal to investors that the company has a good future (Windaputri & Muhamar, 2022), as well as a signal that the company has managed its resources effectively and efficient and can produce quality financial reports (Ristiyana & Erwindiawan, 2021).
The Influence of Environmental Management on Firm Value which is moderated by the size of the board of directors

The significance value of the influence of environmental management moderated by the size of the board of directors on company value is 0.009 (< 0.05) so it can be said that environmental management moderated by the size of the board of directors has a significant effect. The regression coefficient shows a negative direction, namely -2.707, which means it has a negative effect. Thus, the third hypothesis in this study is accepted.

The results of this research are in line with (Husted & Filho, 2019) that the larger the size of the board of directors in a company, the more effective the implementation of the company's operational activities will be, making decision-making easier. Research in Africa conducted by Asare et al. (2022) also found the same results, the influence of board size can maximize value for shareholders and stakeholders. Research conducted by (Riaz et al., 2022) revealed that the ISO 14001 system needs to be implemented in all organizational systems to achieve sustainable environmental performance. This requires the support of directors who are responsible for operations so that the process of achieving maximum performance runs. According to (Almaqtari et al., 2023), a large board size will create diversity and allocation of responsibilities and workload, thereby increasing effectiveness and maximizing environmental information disclosure (Agyemang et al., 2020).

In line with stakeholder theory, disclosing information related to the environment can attract the attention of stakeholders so that it can become a means of company promotion and brand benefits (Chen & Dagestani, 2023). According to Anyigbah et al. (2023), a large board size will encourage environmental information disclosure as a company strategy to meet stakeholder expectations.

According to Ramadhani & Maresti (2021), the role of directors in a company is to determine strategy and make policies to determine the direction of the company, both long and short-term. In line with what (Bosun-Fakunle et al., 2023) stated, the duties of the board of directors are as the party responsible for daily operational activities and making strategic decisions both in terms of operations and related to impacts on the environment.

In research conducted by Romadhona & Prasetiono (2022), a large board size can maximize transparency, minimize information asymmetry, and increase the company's voluntary disclosure. In this case, the voluntary disclosure referred to is the voluntary disclosure of ISO 14001 certification. According to Chams & García (2019) research, the presence of directors can become a leading role for companies to transform towards sustainability and adopt things related to environmental preservation. Based on the general corporate guidelines released by KNKG (2021), the appointed directors have a role in managing sustainability strategies, including those related to the environment, ensuring that all business process flows are based on sustainable values. So we can conclude that the interaction between environmental management and board size has a significant effect on company value.

The Influence of Environmental Management on Firm Value which is moderated by the proportion of independent commissioners

The environmental management variable on firm value which is moderated by the proportion of independent commissioners shows a coefficient of 0.137 and significance > 0.05, namely 0.892. These results show that there is no significant impact of environmental management on firm value which is moderated by the proportion of independent commissioners. Thus the fourth hypothesis in this research is rejected.

The results of this study are in line with Asare et al. (2022) who conducted research in Africa and found no influence from the proportion of independent commissioners. The weakness in the implementation of corporate governance in Africa is the reason why the existence of independent commissioners has no effect. Similar to research by Sethi et al. (2022) India also found that the existence of independent commissioners had no effect and caused conflict in decision-making.

The presence of independent commissioners also did not affect the research results (Yu et al., 2018). These results indicate that independent commissioners who act as external parties to the company are less interested in the disclosure of environmental information disclosed by the company than internal parties. Research conducted by (Werastuti, 2022) revealed that disclosure of environmental information that does not provide benefits for the company receives little attention and priority from independent commissioners so the presence of independent commissioners does not moderate the influence of environmental management on firm value.

Influence of Firm Performance on Firm Value Moderated Size of Board of Directors

The results of the influence of ROE have a significance value of 0.033. This significant value is <0.05 so it can be said that firm performance has a significant effect on firm value which is moderated by the size of the board of directors. The coefficient of -2.174 has a negative direction, indicating a significant negative
influence. Thus, firm performance on firm value which is moderated by the size of the board of directors has a significant negative effect, and the fifth hypothesis in this research is accepted.

The results of this research are supported by Werastuti (2022) who states that the larger size of the board of directors will encourage management to improve company performance. This is in line with the stakeholder theory that good performance and generating profits are to meet the expectations of stakeholders. The research results are also in line with Chams & García (2019), a large board size can provide a broader view of the economic prospects so that ideas can be developed to maximize profits.

Research conducted by Orozco et al. (2018) provides results, that a large size of directors, each of whom has a different educational background, experience, and reputation, can guide company management in improving company performance. The research results are also in line with those conducted by Singh et al. (2018), that the size of the board of directors, which is the total number of directors in the company, is an important dimension in the company’s leadership structure which has duties and responsibilities about company performance. Research conducted by Ayuningtyas & Mawardi (2022) suggests that directors as an implementation of good governance can create harmonious relationships between shareholders, company management, creditors, government, and other stakeholders.

Research by Asare et al. (2022) on banking in African countries found that the size of the board of directors had a significant negative influence. Companies with a large board of directors will focus on increasing effectiveness and ignore the importance of communications and communication, resulting in a significant negative effect on company performance and value.

The role of directors as stated in research conducted by Jasmine & Shofawati (2020) states that directors have the role of managing the company on behalf of shareholders. A large board of directors as in the results of research proposed by Sethi et al. (2022) describes the existence of good leadership in the company so that it can increase the level of effectiveness and productivity. The quality of qualified directors can push the company's performance in an even better direction. This is the same as the research results of Birindelli et al. (2018) that a large board will bring together different skills, attitudes, and cultures so that management will have a broader vision in implementing strategic goals.

The Influence of Firm Performance on Firm Value Moderated Proportion of Independent Commissioners

The results of the t-test for the independent commissioner moderation firm performance variable show a coefficient of 1.794 and a significance value of 0.077, where this figure is > 0.05. These results mean that there is no influence from the environmental management variable on firm value which is moderated by the proportion of independent commissioners. Thus the sixth hypothesis in this study is rejected.

These results are similar to the results of research conducted by (Devitha & Pangestuti, 2022; and Winarta et al., 2021) the existence of an independent commissioner in the company has not been able to strengthen company management in generating profits. Procurement of independent commissioners is considered an obligation that must be carried out by existing regulations. Based on Regulation 33/POJK.04/2014 concerning Limited Liability Companies which must have a commissioner institution in the form of at least 2 independent commissioners to achieve good governance. In line with agency theory where in a company there is a possibility of agency conflicts arising, this minimum figure is considered not high enough to minimize conflicts that occur between agents and principals to generate profits. The regulatory formality regarding the existence of independent commissioners is also visible in the research results of Aryanto & Setyorini (2019) so the monitoring function that should be carried out by independent commissioners does not run optimally and the company value is not maximized.

The number of independent commissioners in a company cannot be a benchmark for effective management performance. These results are shown by research conducted by (Amaliyah & Heriyanti, 2019; Bagaswara & Wati, 2020). The proportion of independent commissioners in mining companies that is not too large can trigger opportunistic actions and agency conflicts (Amaliyah & Heriyanti, 2019; Dahayani et al., 2017) so the function of independent commissioners in monitoring manager behavior is not optimal (Devitha & Pangestuti, 2022). Lack of independence on the part of independent commissioners can weaken the monitoring of managers’ performance, thereby affecting profitability (Anjani & Yadnya, 2017).

This is in line with agency theory where there is an agency conflict between managers and independent commissioners. Managers who own little or no company shares tend to use company resources for personal gain. Meanwhile, independent commissioners act to protect the interests of shareholders by carrying out supervisory functions. This can trigger a conflict of interest between managers and independent commissioners (Suhadak et al., 2019).

Support from research results can also be seen in the results of Subiyanti & Zannati (2019) that the presence of independent commissioners does not have a significant effect. Independent commissioners who act as supervisors and advisors in independent companies can be at odds with managers. In this condition,
independent commissioners cannot guarantee that governance principles run optimally and can moderate performance towards firm value.

CONCLUSION
The research results for the first hypothesis are that the environmental management variable does not affect firm value. This means that the implementation of environmental management in the form of ISO 14001 certification does not affect company value. This means that the implementation of ISO 14001 does not have a direct impact on environmental values, because a long period is needed to see the impact of ISO on company value.

The research results for the second hypothesis are that the firm performance variable has a significant positive effect on firm value. This means that if firm performance is improved, the value of the company will also increase. The research results for the third hypothesis are that the environmental management variable which is moderated by the size of the board of directors has a significant negative effect on company value. This means that the existence of directors can moderate the implementation of environmental management in the form of ISO 14001 on company value.

The research results for the fourth hypothesis are that the environmental management variable which is moderated by the proportion of independent commissioners does not affect company value. This shows that the proportion of independent commissioners is unable to moderate the influence of environmental management on company value. It is indicated that independent commissioners who are external parties to the company are less interested in information disclosure in the form of environmental information.

The research results for the fifth hypothesis are that the firm performance variable moderated by board size has a significant negative effect on firm value. This means that board size can moderate the influence of firm performance on firm value. The directors’ diverse backgrounds, both in terms of knowledge and experience, can contribute to views regarding better economic prospects in the future.

The research results for the sixth hypothesis are that the firm performance variable which is moderated by the independent commissioner does not affect firm value. This shows that the existence of an independent commissioner is unable to moderate the influence of firm performance on company value. The existence of independent commissioners is considered an obligation to fulfill Regulation 33/POJK.04/2014 that the independent commissioner cannot guarantee that governance principles run optimally and can moderate conflicts that may occur between agents and principals.

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