



The Effect of Profitability, Leverage, Liquidity, and Company Size on Sustainability Report Disclosure with Corporate Governance as a Moderating Variable in Energy Sector Companies in 2019-2023

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Abstract

This research investigates the influence of financial performance, corporate governance, and green accounting on the disclosure of sustainability reports (SR) among companies listed on the Indonesia Stock Exchange (IDX). With growing global awareness and regulatory pressure surrounding sustainable business practices, understanding the factors that drive companies to disclose their sustainability performance has become increasingly vital. The study uses secondary data collected from 20 companies over the period 2018–2022. Key variables examined include profitability, leverage, liquidity, firm size, audit committee, board of commissioners, institutional ownership, and green accounting. Quantitative analysis was conducted using panel data regression to assess both the direct effects of these variables and their potential moderating roles. The results show that most financial variables such as profitability, leverage, liquidity, and firm size do not significantly influence sustainability reporting. Additionally, moderating variables—such as the audit committee, institutional ownership, and green accounting—did not show a significant interaction effect. Interestingly, only the board of commissioners demonstrated a significant and positive effect on sustainability report disclosure, suggesting that governance factors may be more influential than traditional financial metrics. These findings highlight the importance of strengthening governance structures to improve sustainability transparency. The study offers practical implications for corporate managers and policymakers by emphasizing the role of governance over purely financial considerations in promoting sustainability practices. It also opens avenues for further research into non-financial and qualitative determinants of sustainability reporting behavior in emerging markets.

Keywords:

Sustainability Reporting,
Corporate Governance,
Financial Performance,
Green Accounting,
Indonesia Stock Exchange.

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INTRODUCTION

In recent decades, the issue of climate change and sustainability has become an increasingly urgent global concern. The energy sector remains one of the largest contributors to carbon emissions due to the dominance of fossil fuel use—such as coal, oil, and natural gas—in industrial operations. According to the International Energy Agency (IEA, 2022), the energy sector accounts for over 73% of global carbon emissions, making it a critical focal point in efforts to achieve the Sustainable Development Goals (SDGs).

In Indonesia, the energy sector not only supports economic development but also serves as one of the primary contributors to greenhouse gas emissions. Therefore, non-financial transparency—particularly through the disclosure of Sustainability Reports (SR)—has become a vital instrument in demonstrating corporate commitment to environmental, social, and governance (ESG) issues. However, the practice of sustainability reporting in Indonesia remains inconsistent and varies significantly across companies.

According to a report by the Financial Services Authority (OJK, 2023), only about 42% of energy companies consistently publish Sustainability Reports. This reflects a limited level of corporate awareness and commitment to sustainability transparency, where reporting is often driven more by regulatory compliance than genuine accountability.

Indonesia faces a challenging energy landscape due to its heavy dependence on fossil fuels, which are projected to remain the country's primary energy source until 2050. Based on a "business as usual" scenario, where no significant policy changes or behavioral shifts occur, Indonesia's national energy demand is projected to increase by 3.5% annually from 2019 to 2050. The continued rise in fossil energy use will lead to higher greenhouse gas emissions, potentially resulting in climate instability, rising global temperatures, and sea-level rise (Novitasari, 2023; Setyono & Kiono, 2021).

Sustainability reporting is the practice of disclosing, measuring, and being accountable to internal and external stakeholders for an organization's performance in achieving sustainable development goals. A sustainability report reflects the company's openness and commitment to its environmental and social activities and enables stakeholders to assess the outcomes of these efforts. To ensure clarity and global relevance, companies are encouraged to apply structured and measurable frameworks—eventually formalized as sustainability reporting standards (Suryono & Prastiwi, 2011).

According to Law No. 40 of 2007 on Limited Liability Companies, businesses operating in natural resource-related sectors are required to carry out and report social and environmental responsibilities in their annual reports. Furthermore, the Financial Services Authority (OJK) has mandated sustainability disclosures under Regulation No. 29/POJK.04/2016, requiring companies to include information on their social and environmental responsibility efforts (IAI, 2021).

These regulations, along with growing environmental and social concerns, are expected to encourage companies to improve their awareness of sustainability issues and provide more accurate, transparent, and accountable information. The aim is to deliver material and verifiable data that reflect the company's efforts in creating long-term value, both financially and non-financially, for stakeholders (Saraswati & Alam, 2022).

Sustainability reports, one of the most common forms of non-financial reporting, are guided by the Global Reporting Initiative (GRI) standards. These standards enable companies to disclose both positive and negative impacts of their sustainability initiatives. While sustainability reporting is mandatory for businesses engaged in natural resource extraction, the specific items disclosed are often voluntary (HS & Anlia, 2021).

One of the greatest challenges faced by businesses today is sustainable development—defined as development that meets current needs without compromising the ability of future generations to meet theirs. In most countries, including Indonesia, sustainability reporting remains voluntary. Unlike financial reporting, it is not strictly regulated. However, companies are encouraged to prepare sustainability reports as a tool to assess their own performance and social responsibility.

This is particularly relevant for the real estate and property sectors, which often generate environmental controversies. Industrial development projects that replace green land with infrastructure can lead to water, air, and soil pollution, damaging ecosystems and altering natural conditions. Unsustainable land clearing can result in environmental problems such as flooding, landslides, water shortages, and other harmful effects (Adha & Irwan, 2021). Given the strong link between development and the environment, the environmental impact of such projects can be profound—either positively or negatively.

According to a publication titled "The State of Play: Sustainability Disclosure & Assurance" by IFAC, AICPA, and CIMA, the level of sustainability assurance in Indonesia has increased steadily from 2019 to 2022.

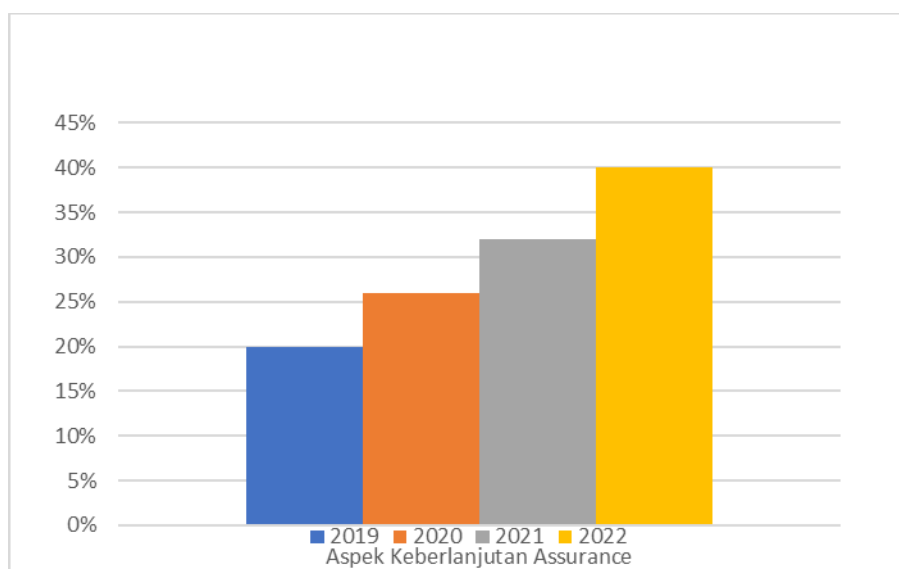


Figure 1. Level of Sustainability Assurance of Companies in Indonesia

Source: The State of Play Sustainability Disclosure and Assurance, 2024

The survey was conducted on the largest companies in Indonesia based on market capitalization. In 2019, 9 out of the 45 largest companies in Indonesia, or 20%, that disclosed sustainability aspects had undergone assurance. This number increased in subsequent years: in 2020, 13 out of 50 companies (26%) conducted assurance; in 2021, the number rose to 16 out of 50 (32%); and by 2022, 20 out of 50 companies (40%) had implemented assurance on their sustainability disclosures. However, this figure remains relatively low compared to other countries in the Asia-Pacific region, such as Australia, Hong Kong, Singapore, and South Korea.

The energy sector encompasses activities related to energy provision, including the exploration, conversion, transmission, and distribution of both renewable and non-renewable energy resources. It is the second-largest source of greenhouse gas emissions after the agriculture sector, both nationally and globally. Several efforts have

been made to reduce emissions in the energy sector, including the development of renewable energy (RE), reduction in coal consumption, and improvements in energy efficiency. According to the 2023 KCSI Rankings for the Energy Sector, the top position was held by PT Pertamina Geothermal Energy Tbk with a KCSI score of 74.57, while the lowest-ranked was PT Mitra Energi Persada Tbk with a score of 30.86.

Philips et al. (2019) state that stakeholders are individuals or groups who have an interest in the activities and outcomes of an organization and to whom the organization is accountable for achieving its objectives. Therefore, companies must manage their operations to benefit all stakeholders. They can adopt the 3P concept—People, Profit, and Planet—also known as the Triple Bottom Line. This concept emphasizes that in addition to generating profits, companies should consider human and community welfare and protect the environment in which they operate.

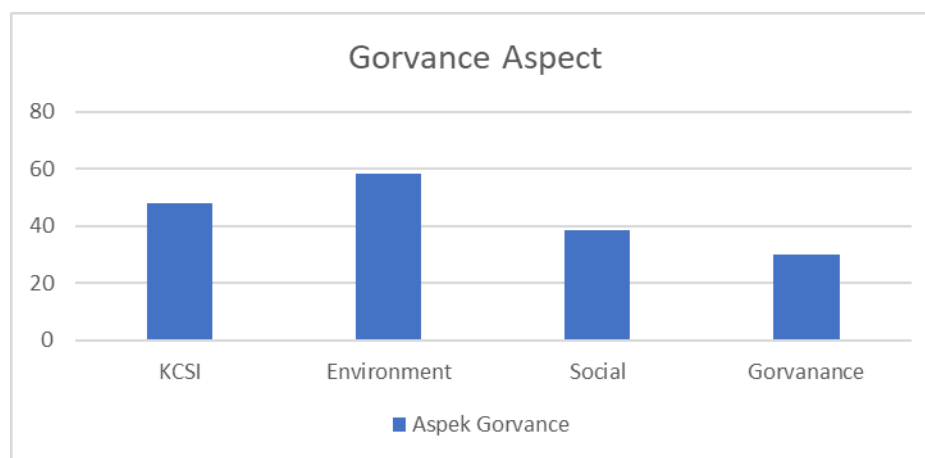


Figure 2. Median Energy Sector Scores by Aspect in 2023

Source KCSI, 2023

The KCSI 2023 Energy Sector assessment evaluated the sustainability performance of 15 companies that published sustainability reports for 2022 up to June 2023. Among the dimensions, the Environmental domain scored the highest (58.40 points), while Governance received the lowest score, highlighting the need for companies to improve in this area.

Previous studies (Amidjaya & Widagdo, 2020; Manase et al., 2022; Orazalin & Mahmood, 2020; Ruger & Maertens, 2023) have measured sustainability report disclosures using the Global Reporting Initiative (GRI) standards, which are globally recognized and used by around 80% of Indonesian companies (PwC Indonesia, 2023).

Despite efforts in CSR by energy companies, including in oil and gas, the number of firms publishing sustainability reports remains low, indicating poor reporting quality (Aljanadi & Alazzani, 2023). Many reports serve mainly to improve corporate image (Agung et al., 2023). However, PT Medco Energi Internasional Tbk received the 2021 Gold Proper Award from LACP for outstanding sustainability performance (Kwarto et al., 2021), showing the potential benefits of genuine sustainability commitments.

Mandatory reporting compliance remains the only reliable path to encouraging sustainable practices, as it influences investment decisions and corporate profitability (Ho et al., 2023; Evana, 2017). Profitability is a key factor affecting sustainability reporting. It reflects a firm's ability to generate profits, influencing investor trust and long-

term value (Kartika & Simbolon; Helly, in Saraswati & Alam, 2022). Companies with higher profitability are more likely to disclose sustainability practices to build stakeholder trust.

Leverage, the second factor, reflects a company's debt level and financial health. High leverage indicates risk and motivates firms to improve disclosures (Thomas, Aryusmar, & Indriaty, 2020). Liquidity also affects sustainability reporting, as it indicates a firm's capacity to meet short-term obligations (Kasmir, 2019). Firm size is another factor. Larger companies tend to be more transparent to maintain a positive image and stakeholder confidence (Tobing et al., 2019; Liana, 2019).

Corporate Governance (CG) mechanisms, such as audit committees, board structure, and institutional ownership, are believed to moderate financial performance's influence on sustainability disclosures (Khan et al., 2013; Rupley et al., 2012). However, empirical findings vary.

For instance, Liana (2019) found profitability positively affects sustainability reporting, while Madani & Gayatri (2020) reported no effect. Putri & Pramudiati (2019) found leverage to have a positive effect, but Meutia (2019) found no influence. Studies on firm size also show mixed results (Tobing et al., 2019; Liana, 2019).

Similarly, the role of CG remains debated: studies like Wahyudi (2021), Yusran et al. (2018), and Ardiani et al. (2022) show a positive effect, while others (Susanto & Joshua, 2018; Krisna & Suhardianto, 2016; Tobing et al., 2019) found no significant impact.

The primary objective of this study is to examine the influence of profitability, leverage, liquidity, and firm size on sustainability report disclosure, while also analyzing the moderating role of audit committees, independent commissioners, institutional ownership, and green accounting in these relationships. This research aims to provide both theoretical and practical contributions.

Theoretically, it enriches academic understanding in the field of economics, particularly in sustainability and corporate governance. Practically, the study benefits the author by deepening knowledge in sustainability disclosure; it provides valuable insights for companies to improve the credibility of their sustainability reports; offers guidance for policymakers in designing effective regulations; and serves as a useful empirical reference for future researchers exploring similar variables in the energy sector.

METHOD

This chapter presents a comprehensive overview of the research, including the methodological approach used to achieve its objectives. The study adopts a quantitative method, which focuses on numerical data to understand the examined phenomena. According to Sugiyono (2019b), quantitative research is based on the philosophy of positivism, which assumes that reality is observable, measurable, and that causal relationships exist between variables. This section outlines the research design, operational definitions, variable measurements, data collection procedures, and data analysis methods.

This study employs a quantitative research design, which systematically investigates phenomena through measurable data using statistical and computational methods. It focuses on testing hypotheses and identifying relationships between variables. The data were collected as time series from companies in the energy sector listed on the Indonesia Stock Exchange, covering the period from January 2019 to December 2025. The research was conducted in January 2025.

Data Collection Techniques

This study utilizes secondary data from previously collected and published sources. The secondary data for this study were obtained from the annual reports of the energy sector companies that served as the research subjects. These reports were downloaded from the official website of the Indonesia Stock Exchange (IDX) and from the official websites of each listed company.

Population and Sample

The population in this study consists of 83 energy sector companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023 (Ghozali, 2016). Using a non-probability sampling method (Sugiyono, 2016), a purposive sample of 40 companies was selected based on the following criteria: (1) conducted IPO before 2019, (2) did not report losses between 2019–2023, and (3) had complete financial data for the required variables. After applying these criteria, 40 companies were selected, resulting in a total of 200 firm-year observations over a 5-year period. These companies represent the energy sector and are used as the final research sample.

Data Analysis Method

This study employs a quantitative approach using descriptive statistics and multiple linear regression, analyzed via Microsoft Excel and EViews. Descriptive statistics summarize the dataset through metrics such as mean, standard deviation, minimum, and maximum values. Panel data regression model selection involves Chow, Hausman, and Lagrange Multiplier tests (Ghozali & Latan, 2021) to determine whether the Common Effect, Fixed Effect, or Random Effect model is appropriate.

Classical assumption tests—normality, heteroscedasticity, and multicollinearity—are conducted to validate model reliability. The normality test checks if residuals are normally distributed (Sholihin & Ghani, 2021). Heteroscedasticity is tested using the Breusch-Pagan test, while multicollinearity is examined through Pearson correlation and VIF, where a VIF > 10 indicates multicollinearity.

Hypothesis testing includes multiple linear regression to examine the impact of profitability, leverage, liquidity, and firm size on sustainability report (SR) disclosure, including moderating effects of audit committee, board of commissioners, institutional ownership, and green accounting. The model is as follows:

$$SR = \alpha + \beta_1 PR + \beta_2 LV + \beta_3 LK + \beta_4 UP + \beta_5 KA \times PR + \beta_6 DK \times LV + \beta_7 KI \times LK + \beta_8 GA \times UP + e$$

Where:

SR = Sustainability Report Disclosure

PR = Profitability, LV = Leverage, LK = Liquidity, UP = Firm Size

KA = Audit Committee, DK = Board of Commissioners, KI = Institutional Ownership, GA = Green Accounting

e = Error term

t-tests are used to assess the significance of individual variables, while the F-test evaluates the joint significance of all independent variables. Lastly, the coefficient of determination (R^2) measures how well the independent variables explain variations in the dependent variable (Priyatno, 2016).

RESULT AND DISCUSSION

The Effect of Profitability on the Level of Sustainability Report Disclosure

The first hypothesis, which states that profitability has a positive effect on the level of Sustainability Report disclosure, is an interesting and relevant proposition in the context of corporate sustainability. In today's business world, where environmental and social issues are gaining increased attention, it is important to understand how profitability may influence a company's transparency in reporting its sustainability activities. This analysis will further explore the relationship between profitability and Sustainability Report disclosure, as well as the implications of the results obtained.

First, let us examine the profitability variable itself. Profitability can be measured using various indicators, such as EBITDA to Assets, Return on Equity (ROE), and profit margin. These indicators provide insights into how efficiently a company generates profits from its assets and equity. In the context of Sustainability Report disclosure, highly profitable companies may feel more capable of investing in sustainability initiatives and reporting the outcomes to stakeholders. For example, companies that succeed in increasing their profit margins may allocate part of their profits to more transparent and measurable Corporate Social Responsibility (CSR) programs, thereby encouraging more in-depth disclosures in their sustainability reports.

However, the regression results show a profitability (PR) coefficient of 0.285009, which, despite indicating a positive relationship, must be interpreted cautiously. A p-value of 0.4001, which is greater than 0.05, suggests that the relationship is not statistically significant. This means that although there is an indication that profitability may affect Sustainability Report disclosure, the effect is not strong enough to be deemed reliable. Therefore, it is important to further investigate why profitability does not have a significant impact on sustainability report disclosure.

Alrazi, de Villiers, and van Staden (2015) conducted a study highlighting the positive relationship between profitability and the level of sustainability report disclosure. In their research on publicly listed companies in South Africa, they found that firms with higher profitability levels tended to be more proactive in disclosing sustainability-related information. This finding is supported by the argument that profitable companies possess greater financial resources to invest in sustainability initiatives, including the costs associated with data collection, verification, and the preparation of sustainability reports. Moreover, strong profitability may incentivize companies to demonstrate social responsibility to stakeholders—such as investors, customers, and the general public—which in turn can enhance their reputation and brand image. Their research suggests that profitability is not only a driver of available resources but also a strategic motivator for increasing sustainability transparency.

One possible reason for the lack of a significant effect may be that highly profitable companies do not always feel compelled to increase their disclosure levels. These companies might believe that strong financial performance alone is sufficient to attract stakeholder attention, without the need to provide additional sustainability information. For instance, a multinational corporation with high net income may assume its reputation is already well established, making detailed sustainability reporting seem unnecessary. This implies that other factors may have a greater influence on the level of Sustainability Report disclosure, such as stakeholder pressure, government regulation, or industry trends.

Additionally, the industry context in which a company operates should be considered. Certain sectors, such as energy and mining, may face stricter sustainability disclosure regulations regardless of profitability levels. In such industries, companies might be required to provide more comprehensive sustainability reports to meet stakeholder expectations, even if their profitability is low. Conversely, firms in less regulated industries may have more freedom in deciding how much sustainability information to disclose, which could influence the observed regression results.

Clarkson, Li, Richardson, and Vasvari (2008), in their comprehensive study, also provided strong evidence regarding the positive impact of profitability on environmental disclosure levels. Although their focus was on environmental disclosure, their findings are highly relevant to sustainability reports in general. They found that companies with superior financial performance (measured by various profitability indicators) tended to have higher-quality and more extensive environmental disclosures. They explained that more profitable firms often have better corporate governance and more resources to implement advanced environmental management systems. This enables them to collect and report environmental data more accurately and comprehensively. The implication is that profitability can serve as a catalyst for improving corporate accountability on sustainability issues, as financially healthy companies are more capable and willing to meet stakeholders' informational demands.

The transition from profitability to sustainability report disclosure can also be influenced by corporate culture and the values embraced by management. Companies with a strong sustainability culture are more likely to disclose information about the social and environmental impacts of their operations. For example, companies with a clear vision and mission related to sustainability may proactively report their initiatives, regardless of their profitability level. This indicates that non-financial elements also play an important role in determining sustainability report disclosure.

The Effect of Leverage on the Level of Sustainability Report Disclosure

The second hypothesis proposed in this study focuses on the effect of leverage on Sustainability Report disclosure. In this context, leverage refers to a company's use of debt to finance its assets, commonly measured by the debt-to-equity ratio. This hypothesis posits that the higher the company's leverage, the lower its level of Sustainability Report disclosure. However, the analysis results show a leverage (LV) coefficient of 0.001892 with a p-value of 0.6886, which exceeds the significance threshold of 0.05. This indicates that there is no statistically significant relationship between leverage and Sustainability Report disclosure.

It is important to understand why this hypothesis is not supported by the data. In many cases, companies with high leverage may focus on debt management and fulfilling financial obligations, which can shift their attention away from social and environmental responsibilities. However, the result showing a positive direction of influence suggests that highly leveraged companies might actually be more motivated to engage in transparent sustainability disclosures. This may be due to the need to enhance corporate image in the eyes of stakeholders, including creditors and investors, who increasingly value sustainability performance.

Research conducted by Gunawan and Sjarief (2022) on energy and basic materials companies listed on the Indonesia Stock Exchange during the 2016–2020 period provides interesting insights into the relationship between profitability and sustainability report disclosure. Their findings revealed that profitability did not have a significant effect on the level of sustainability disclosure, raising deeper questions about companies' motivations for engaging in such disclosures.

For example, large corporations operating in highly regulated industries, such as energy and mining, often carry high levels of debt. Nevertheless, they also attempt to demonstrate their commitment to sustainability through improved disclosure. For instance, a renewable energy company with considerable debt might feel the need to show that it is investing in environmentally friendly practices to attract sustainability-conscious investors. In this case, better disclosure can serve as a tool for building trust and credibility in the market.

Understanding the transition between leverage and Sustainability Report disclosure is essential for this analysis. A deeper look suggests the involvement of other influencing factors. For instance, companies with progressive management may be more inclined to adopt good disclosure practices, regardless of their debt levels.

This implies that corporate culture, the values upheld by management, and stakeholder pressure may play a more significant role than the debt-to-equity ratio alone in determining the extent of sustainability disclosure.

Moreover, examining external factors is equally important. In today's global environment, where sustainability issues dominate public discourse and investor attention, companies that fail to disclose relevant sustainability information may face substantial reputational risks. This is a reality for many firms, regardless of their leverage levels. Therefore, although Hypothesis H2 is not supported by the data, the findings open the door for broader discussions on how companies manage social and environmental responsibilities in complex financial contexts.

On the other hand, research by Galih Virgiawan Agung (2024), focusing on regional government-owned banking enterprises (BUMD) in Indonesia during the 2020–2022 period, presents a contrasting perspective. His study showed that profitability had a positive impact on sustainability report disclosure. This finding underscores the importance of financial performance in supporting sustainability initiatives. Highly profitable companies like Bank Mandiri and Bank BRI have more resources to invest in social and environmental programs.

Meanwhile, a study by Putri and Meli (2025) on Indonesian mining companies for the 2019–2023 period revealed that profitability actually had a negative effect on sustainability disclosure. This is a surprising result, given the common assumption that higher profitability is linked with stronger sustainability commitments. However, this finding suggests that highly profitable firms often feel confident in their established public image, which may reduce their incentive to enhance disclosure.

Conversely, companies with lower profitability may feel the need to improve disclosure as a strategy to enhance their reputation. They seek to show that despite not having strong financial performance, they remain committed to sustainability practices. This can be observed in small companies actively communicating their efforts in waste management, renewable energy use, and social programs. Through such initiatives, they hope to attract greater investor and stakeholder attention and build a positive market reputation.

In conclusion, the analysis shows that the second hypothesis—stating that leverage negatively affects Sustainability Report disclosure—is not supported by the data. In fact, there are indications that companies with higher leverage may be more inclined to provide better disclosure in response to stakeholder pressure and the need to build a positive image. This suggests that factors such as corporate culture, managerial values, and external context may have a greater influence than the debt-to-equity ratio alone. Further research is needed to explore this relationship more deeply and to better understand how companies can integrate sustainability practices into their overall business strategies.

The Effect of Company Liquidity on the Level of Sustainability Report Disclosure

The third hypothesis in this study proposes that liquidity has a positive effect on Sustainability Report disclosure. However, the regression analysis results show a liquidity (LK) coefficient of -0.012403 with a p-value of 0.7406. This figure indicates that the relationship is not statistically significant, and the negative direction of the coefficient contradicts the proposed hypothesis. Thus, Hypothesis H3 is not supported by the analysis results, implying that company liquidity does not significantly influence the level of Sustainability Report disclosure.

First, it is important to understand what is meant by liquidity in the context of corporate finance. Liquidity refers to a company's ability to meet its short-term obligations, typically measured by liquidity ratios such as the Current Ratio or Quick Ratio. Companies with high liquidity are considered better equipped to handle financial uncertainty and urgent obligations, and therefore are often expected to be more active in disclosing sustainability-

related information. However, this study's findings indicate that even when a company has good liquidity, this does not necessarily correspond to a stronger commitment to transparency in Sustainability Reporting.

Several previous studies have found that company liquidity, as measured by the current ratio, does not have a significant impact on the level of Sustainability Report disclosure. These findings suggest that a company's liquidity—whether high or low—does not influence the breadth of sustainability disclosure provided outside of the annual report. This result aligns with the findings of Idah (2013) and Sari & Marsono (2013), who concluded that liquidity is not a primary determining factor in Sustainability Report disclosure, although it may have an effect when considered together with other variables such as leverage and profitability.

One possible explanation for the lack of a positive relationship between liquidity and Sustainability Report disclosure is that highly liquid companies may not feel the need to provide additional information related to sustainability. They may assume that their financial stability is sufficient to attract investors and other stakeholders without the added burden of disclosing what may be perceived as non-essential information. For example, large, highly liquid companies such as Unilever or Nestlé may focus more on operational efficiency and short-term profitability, thus placing less priority on sustainability disclosures in their communication strategy.

In contrast to these findings, some studies have revealed a positive relationship between company liquidity and Sustainability Report disclosure. Companies with high liquidity are considered to have stronger financial capacity and therefore tend to provide broader disclosures to reassure stakeholders of their healthy financial standing. Studies by Lestari (2018), Rahmat (2022), and Tusiayati (2019) confirmed that the higher a company's liquidity, the more likely it is to produce comprehensive Sustainability Reports.

On the other hand, companies with lower liquidity may be more motivated to increase their Sustainability Report disclosure as a strategy to attract the attention of investors and stakeholders. By clearly and transparently reporting their sustainability efforts, these companies can demonstrate their commitment to social and environmental responsibility, which in turn can enhance their market reputation. For instance, a renewable energy startup with limited liquidity may be more active in disclosing sustainability initiatives to appeal to environmentally conscious investors.

Furthermore, it is essential to analyze how other external factors might influence the relationship between liquidity and Sustainability Report disclosure. For example, increasingly strict government regulations regarding corporate social responsibility can pressure all types of companies—regardless of their liquidity levels—to improve their disclosures. In many countries, there is growing regulatory demand for sustainability information to be included as part of legal compliance, which can shift the dynamics between liquidity and disclosure. In such contexts, companies that initially might not have felt compelled to disclose sustainability information may be forced to do so due to external legal obligations.

Additionally, public perception and stakeholder pressure can also play a role in driving Sustainability Report disclosure. Companies operating in industries heavily affected by environmental, social, and governance (ESG) issues may feel pressured to increase transparency regardless of their liquidity position. For example, companies in the mining or oil and gas sectors are often under intense scrutiny from the public and environmental activists, and as a result, must be more transparent in their sustainability reports to maintain public trust and reputation.

In this context, it is crucial to recognize that Sustainability Report disclosure is not solely driven by internal financial factors such as liquidity, but also by external forces that influence corporate communication strategies. Therefore, even though Hypothesis H3 is not supported by the analysis results, this does not mean that liquidity is irrelevant to sustainability disclosure. On the contrary, it suggests that the relationship between liquidity and disclosure is complex and shaped by a variety of contributing factors.

The Effect of Company Size on the Level of Sustainability Report Disclosure

The fourth hypothesis in this study proposes that company size has a positive effect on the disclosure of Sustainability Reports. Company size, often measured by total assets, revenue, or number of employees, can provide insight into a firm's capacity and resources to support sustainability-related disclosures. In this context, the coefficient for the company size variable (UP) is 0.064283, reflecting the expected positive influence. However, the p-value of 0.9527 indicates that this effect is not statistically significant. This suggests that although there is an indication that larger companies might contribute more positively to Sustainability Report disclosure, the effect is not strong enough to be considered relevant in this study.

To better understand the implications of this finding, it is important to revisit what a Sustainability Report entails. A Sustainability Report presents information related to the social, environmental, and economic impacts of a company's operations. In an era where awareness of sustainability issues continues to grow, companies are increasingly expected to be transparent in reporting their practices. However, not all companies—especially small and medium-sized enterprises—have adequate resources to prepare comprehensive reports. For instance, large corporations like Unilever or Nestlé have dedicated teams responsible for data collection, impact analysis, and producing reports that meet international standards. In contrast, smaller companies may only be able to produce simplified reports that do not cover all aspects of sustainability.

Research by Muhammad Raihan (2023) on mining manufacturing companies listed on the Indonesia Stock Exchange during the 2017–2021 period showed that company size had a positive impact on the breadth of sustainability reporting. In other words, the larger the company, the more extensive the Sustainability Report disclosure. This is attributed to larger companies having more available resources and facing greater pressure from stakeholders to be transparent in their reporting.

A deeper analysis shows that company size relates not only to financial capacity but also to organizational culture and commitment to sustainability. Larger companies are typically under greater scrutiny from stakeholders—including investors, customers, and regulators—regarding sustainability-related information. They are more often involved in broad sustainability initiatives and have better access to best practices in sustainability disclosure. Conversely, smaller companies may not experience the same level of pressure and might be more focused on short-term survival rather than long-term sustainability commitments.

The transition from company size to Sustainability Report disclosure also reveals that several other factors play a critical role. For example, the industry in which a company operates can influence the level of disclosure. Companies operating in heavily regulated sectors, such as energy or mining, may be required to disclose more detailed sustainability information compared to those in the service sector. This suggests that although company size may offer an indication, external factors also significantly influence the extent of information disclosed.

A study by Nofita, Yanti, and Puspitasari (2024) on manufacturing companies in the food and beverage sub-sector listed on the Indonesia Stock Exchange from 2019 to 2022 found that company size and social motivation significantly influenced sustainability reporting. Large-scale companies possess greater capacity to produce Sustainability Reports, whether in terms of workforce, sales volume, or total assets. The larger the company, the greater the economic, social, and environmental impact it generates, thus prompting more comprehensive and detailed sustainability disclosures.

In contrast, a study by Meidyana Savitri (2019) on non-financial companies listed on the Indonesia Stock Exchange during 2016–2018 showed different results. Company size and liquidity were found to have no significant effect on Sustainability Report disclosure. Instead, other variables such as company age, profitability, and leverage

had negative effects, while business activity positively influenced sustainability disclosure. These findings suggest that the influence of company size on sustainability reporting is not always consistent across sectors or research periods.

Furthermore, the very high p-value, far from the significance threshold, indicates that this result may reflect a broader trend in the business world rather than an isolated case within a single company or industry. It implies that many companies, regardless of size, may not have fully adopted good sustainability disclosure practices. There may be various underlying reasons for this, including a lack of awareness about the importance of sustainability disclosure, insufficient resources to compile comprehensive reports, or even resistance to change within the corporate culture.

The Moderating Effect of Audit Committee on the Relationship Between Profitability and Sustainability Report Disclosure

The fifth hypothesis proposes that the presence of an audit committee strengthens the influence of profitability on the disclosure of the Sustainability Report. In this context, it is important to understand the role of the audit committee within a company. An audit committee typically comprises board members with expertise in finance and accounting. They are responsible for overseeing the financial reporting process, ensuring that reports are prepared in accordance with applicable accounting standards, and guaranteeing that the information provided to stakeholders is accurate and transparent. An effective audit committee is expected to enhance the quality of information disclosure, including the Sustainability Report, which covers environmental, social, and governance (ESG) issues.

However, the regression results show that the audit committee variable (AC) has a p-value of 0.3375, indicating that there is no significant effect between the presence of an audit committee and Sustainability Report disclosure. This high p-value suggests that we cannot reject the null hypothesis—in this case, meaning that the presence of an audit committee does not meaningfully contribute to sustainability reporting. This may be due to various factors, including a lack of understanding or attention from audit committee members regarding sustainability issues, or perhaps because the audit committee tends to focus more on financial matters than on non-financial ones.

A study by Hersanty (2022) on Indonesia's banking sector for the period 2018–2020 found that the presence of an audit committee had a positive and significant effect on sustainability report disclosure. An effective audit committee can improve oversight and ensure the reliability of reporting, including sustainability disclosures. However, in the same study, profitability did not have a significant effect on sustainability disclosure, indicating that profitability's moderating role was not strongly supported in this context.

For example, a study on publicly listed companies in Indonesia found that although many firms have audit committees, not all of them possess sufficient knowledge about sustainability. In some cases, audit committee members are more experienced in accounting and finance, making them less sensitive to the importance of disclosing sustainability-related information. This suggests that the mere existence of an audit committee is not sufficient to improve the quality of sustainability reporting if its members are not equipped with the necessary knowledge.

A study by Kristiana (2025) on energy sector companies listed on the Indonesia Stock Exchange for the 2020–2023 period also showed that both the audit committee and company size significantly influenced sustainability report disclosure. However, the moderation test results revealed that profitability did not moderate the relationship between the audit committee and sustainability report disclosure. In other words, even with an effective audit committee, the company's level of profitability does not strengthen or weaken this relationship.

Furthermore, the interaction between profitability and the audit committee was not explicitly tested in the model—an important aspect that should be considered. In this context, profitability can be viewed as a performance indicator that may influence managerial decisions regarding information disclosure. More profitable companies may be more inclined to disclose sustainability information as part of their effort to enhance reputation and attract socially and environmentally conscious investors. However, if the audit committee does not play an active and effective role in encouraging such disclosure, the interaction between profitability and the audit committee may not yield the expected results.

Thus, Hypothesis H5 is not supported, as no evidence was found that the audit committee moderates the effect of profitability on the disclosure of the Sustainability Report. This indicates a need for further exploration of other factors that may influence sustainability reporting. For instance, elements such as corporate culture, stakeholder pressure, and government regulation may also play crucial roles in determining the extent to which companies are committed to disclosing sustainability-related information.

The Moderating Effect of Board of Commissioners on the Relationship Between Leverage and Sustainability Report Disclosure

The sixth hypothesis posits that the board of commissioners strengthens the influence of leverage on Sustainability Report disclosure—an interesting and relevant claim within the context of corporate governance and corporate social responsibility. The board of commissioners plays a crucial role in supervising and providing strategic direction to companies, and their influence on decisions related to transparency and information disclosure is highly significant.

The regression analysis revealed that the board of commissioners variable (BC) has a coefficient of 1.627791 with a p-value of 0.0023, indicating a statistically significant relationship between the presence of a board of commissioners and the level of Sustainability Report disclosure. This disclosure reflects the company's commitment to responsible and sustainable business practices. In this context, the role of the board of commissioners is not only numerical but also encompasses moral and ethical considerations.

A study by Irfan and Sarumpaet (2023) on mining companies listed on the Indonesia Stock Exchange during 2019–2021 found that the size of the board of commissioners has a positive and significant effect on the disclosure of sustainability reports. The greater the number of board members, the broader the sustainability disclosures. This finding supports stakeholder theory, which suggests that effective oversight from the board enhances corporate transparency and accountability in sustainability reporting. It also indicates that active monitoring by the board can reduce the likelihood of managers concealing important information from the public.

Although this study does not test the direct interaction between leverage and the board of commissioners, the significance of the BC variable strongly suggests that the board may strengthen the influence of leverage on sustainability disclosures. Leverage, typically measured by the debt-to-equity ratio, can influence disclosure decisions—firms with high debt levels may feel compelled to be more transparent in order to build trust with creditors and stakeholders. In this regard, the board of commissioners acts as a supervisory body ensuring such disclosures are appropriate and meet expected standards.

A deeper analysis suggests that the board of commissioners also functions as a change agent within the company. They can encourage management to adopt more transparent and sustainable practices. Boards composed of members with diverse backgrounds, particularly those with experience in sustainability, are likely to offer fresh and innovative perspectives in decision-making. Hence, diversity within the board can enhance the quality of sustainability disclosures.

However, it's important to note that not all boards exert the same level of influence. Factors such as board size, composition, and the degree of engagement in sustainability issues can affect their effectiveness in moderating the leverage-disclosure relationship. For instance, larger boards may struggle to reach consensus, whereas smaller boards might act more decisively. Therefore, companies should design an optimal board structure to ensure effective oversight.

A study published in the *Journal of Business Management and Innovation* (2023), analyzing companies across various sectors in Indonesia, found that leverage did not significantly affect sustainability report disclosure. Using secondary data from annual and sustainability reports and multiple linear regression analysis, the study found that while independent commissioners, audit committees, and profitability influenced sustainability disclosures, leverage did not act as a moderating factor. This implies that a company's debt level alone does not determine the extent of its sustainability reporting.

The presence of an active and experienced board of commissioners not only contributes to better oversight but also fosters greater transparency in sustainability disclosures. Thus, companies should pay close attention to the composition and function of their boards to ensure they fulfill their responsibilities to stakeholders and the public. Strengthening the effect of leverage through the board of commissioners can be a strategic step toward improving corporate reputation and performance in the era of sustainability.

The Moderating Effect of Institutional Ownership on the Relationship Between Liquidity and Sustainability Report Disclosure

The seventh hypothesis of this study focuses on the relationship between institutional ownership and the influence of liquidity on Sustainability Report disclosure. In this context, institutional ownership refers to shareholdings held by financial institutions or large organizations, such as pension funds, insurance companies, and investment managers. Liquidity, on the other hand, refers to the ease with which a company's assets or shares can be traded in the market without significantly affecting their price. Meanwhile, the Sustainability Report is a disclosure document prepared by a company to provide information on the social, environmental, and economic impact of its business activities.

A study by Sujatnika et al. (2023) on mining companies in Indonesia found that institutional ownership does not have a direct significant effect on sustainability report disclosure. However, indirectly, institutional ownership may enhance such disclosure through improved company profitability. In other words, the greater the proportion of institutional ownership, the more likely the company is to optimize its financial performance—as reflected in higher profitability—which enables it to bear the costs associated with sustainability disclosure. This finding highlights that the role of institutional ownership becomes more effective when supported by good profitability, thus leading to increased sustainability reporting.

The regression analysis in this study shows that the institutional ownership variable (IO) has a coefficient of -0.007467 with a p-value of 0.9469. These results indicate that there is no statistically significant influence of institutional ownership on sustainability disclosure. The negative coefficient may imply that increases in institutional ownership are associated with reduced disclosure, although this relationship is not statistically significant. In practice, this may reflect the fact that institutional shareholders do not always push for greater transparency in sustainability reporting.

Kurniawan et al. (2018), in their study on LQ45 companies listed on the Indonesia Stock Exchange, found that liquidity significantly affects corporate social responsibility (CSR) disclosure—which aligns with sustainability report disclosure in this context. Furthermore, institutional ownership was found to significantly moderate the effect

of liquidity on sustainability reporting. Companies with high liquidity and large institutional ownership tend to allocate more funds to sustainability activities and enhance the transparency of their disclosures. This is because institutional investors often demand greater transparency and accountability from the companies they invest in.

However, it's important to note that the interaction effect between liquidity and institutional ownership was not directly tested in this study. This is a crucial aspect, as such interaction could offer deeper insights into how institutional ownership moderates the impact of liquidity on sustainability disclosure. For instance, in a highly liquid company, management may feel more comfortable disclosing detailed sustainability information, but if institutional owners have conservative disclosure preferences, they might discourage riskier or more expansive disclosures. Therefore, although the data does not support Hypothesis H7, there is potential that an interaction effect between these variables may exist and could yield different results if explored further.

More broadly, the findings also reflect a common challenge faced by many companies in balancing shareholder interests with social responsibility. Often, companies feel pressure to prioritize short-term gains to satisfy shareholders, which can hinder their progress in sustainability disclosure. This is particularly relevant in the modern era, where consumers and stakeholders increasingly demand transparency and accountability in business practices.

The Positive Moderating Effect of Green Accounting on the Relationship Between Firm Size and Sustainability Report Disclosure

The eighth hypothesis proposed in this study focuses on the relationship between green accounting practices and firm size in the context of Sustainability Report disclosure. This analysis delves deeper into the meaning of green accounting, the significance of firm size, and the implications of the regression results indicating that green accounting does not have a significant impact on Sustainability Report disclosure.

Green accounting is an accounting approach that focuses on measuring and reporting the environmental impact of business activities. This concept emerged in response to growing awareness of environmental issues and the need to account for the social and ecological consequences of corporate operations. In practice, green accounting includes measuring costs and benefits related to the use of natural resources, greenhouse gas emissions, and other environmental impacts. For example, a company implementing green accounting might record expenses associated with carbon emission reductions or investments in environmentally friendly technology.

A study by Adrina (2024) examined the effects of Sustainability Report disclosure, green accounting, and firm size on the quality of financial reporting. The results indicated that both green accounting and Sustainability Report disclosure positively influenced the quality of financial reports. However, firm size was found to have a negative effect, suggesting that larger firms tend to be more cautious in their disclosures. Nonetheless, the implementation of green accounting continued to enhance transparency and accountability in sustainability reporting.

Firm size is typically measured using various indicators, such as total assets, revenues, or the number of employees. Firm size can affect both the capacity and the motivation to disclose sustainability-related information. Larger firms, for example, may have more resources to invest in sustainability practices and green accounting compared to smaller ones. They are also often under greater scrutiny from stakeholders—including investors, customers, and regulators—pressuring them to provide more transparent disclosures related to sustainability.

However, the regression analysis revealed a coefficient of -1.824692 with a p-value of 0.8273 , indicating that green accounting does not have a statistically significant effect on Sustainability Report disclosure. The high p-value suggests that there is insufficient evidence to support the claim that green accounting practices moderate the

relationship between firm size and sustainability disclosure. This raises an important question: why does green accounting not function as a moderator in this context?

Another study by Sari (2023) examined the effect of green accounting on sustainable development, with firm size as an intervening variable. The findings indicated that green accounting had a positive and significant effect on sustainable development, and that firm size also had a positive effect. However, when firm size was treated as an intervening variable, its effect on sustainable development was not significant. This implies that although larger companies are generally more capable of implementing green accounting, the moderating effect of firm size on sustainability disclosure does not always strengthen this relationship.

One possible explanation is that even though large firms have the capacity to implement green accounting practices, they may not do so effectively or consistently. For instance, a large corporation with many divisions may face challenges in integrating green accounting across all its business units. Moreover, such companies may focus more on compliance with regulations than on adopting a holistic approach to green accounting. As a result, while they may adopt some environmentally friendly practices, their disclosures may not fully reflect a genuine commitment to sustainability.

Furthermore, it is important to consider external factors that may influence Sustainability Report disclosure. Government regulations, stakeholder pressure, and market trends can all play a role in encouraging companies to disclose sustainability-related information. If companies perceive that they will not gain competitive advantage from such disclosure, they may choose not to invest in green accounting, even if their size allows them to do so.

A deeper analysis of these findings reveals that many interacting variables influence the extent of Sustainability Report disclosure. Therefore, it is crucial not to view firm size and green accounting practices in isolation but to consider the broader context, including industry-specific factors, regulatory frameworks, and market dynamics.

CONCLUSION

The study aimed to examine various factors presumed to influence the level of Sustainability Report (SR) disclosure among companies, both directly and through moderating roles. Out of the eight proposed hypotheses, the majority were not supported by empirical data, with only one partially confirmed.

The findings reveal that traditional financial indicators—such as profitability, leverage, liquidity, and firm size—do not significantly affect sustainability disclosure. Despite expectations, profitability did not show a statistically meaningful impact, indicating that higher earnings do not necessarily lead to greater transparency in sustainability reporting. Leverage, contrary to the original hypothesis suggesting a negative effect, displayed a positive but insignificant relationship with SR disclosure. Similarly, liquidity showed no significant influence, with an unexpected negative direction, suggesting that a company's cash availability is not strongly linked to its sustainability reporting practices. Firm size, often assumed to positively affect disclosure due to resource capacity, was also found to be statistically insignificant in this context.

Furthermore, several moderating roles proposed in the study failed to demonstrate any significant interaction effects. The audit committee was not found to enhance the effect of profitability on SR disclosure, and institutional ownership did not strengthen the relationship between liquidity and SR disclosure. Likewise, green accounting practices did not moderate the influence of firm size on sustainability disclosure.

Interestingly, the only variable that demonstrated a significant impact was the board of commissioners. Although its moderating role in the relationship between leverage and SR disclosure was not explicitly tested, its

overall positive significance highlights the importance of strong corporate governance in promoting transparency. These results suggest that financial metrics alone may not drive sustainability disclosure; instead, effective governance—particularly the oversight function of the board—plays a pivotal role in encouraging companies to be more transparent in their sustainability practices.

Recommendations

Based on this study's findings, several key recommendations can be made for corporate practitioners, regulators, and future researchers.

For corporate practitioners, especially those responsible for sustainability reporting, relying solely on traditional financial metrics such as profitability, leverage, or liquidity may not effectively enhance SR disclosure. The significant role of the board of commissioners highlights the importance of strengthening corporate governance. Companies should ensure that their board members are well-informed about sustainability issues, committed to integrating them into business strategies, and actively promoting transparency. This may involve targeted training or appointing members with sustainability expertise.

For regulators and policymakers, the findings suggest that improving SR disclosure may require shifting focus away from financial performance and toward enhancing board responsibilities related to sustainability. Stronger regulations on board composition, sustainability competence, and oversight guidelines could help institutionalize better disclosure practices.

For future researchers, the limited support for most hypotheses indicates the need to explore other influential variables. Future studies could examine qualitative or non-financial factors such as stakeholder pressure, organizational culture, or leadership. Additionally, the partially supported moderating role of the board warrants deeper analysis—particularly how specific board mechanisms (e.g., sustainability committees, meeting frequency, or independent directors) influence SR disclosure in interaction with financial factors.

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