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Sustainability Reporting Score Explained by Corporate Governance and Firm Level (LQ45 Companies)

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A B S T R A C T
This study aims to analyze the importance of corporate governance and firm level impact on company sustainability reporting score. Samples are selected from LQ 45 listed company on the Indonesia Stock Exchange (BEI) for five years (2019-2023) using panel data approach. The result shows that governance, including board characteristics, board size and firm size value show insignificant impact on sustainability reporting. Yet, the firm level more specifically the firm age shows positive and significant impacts on sustainability reporting. It implies that firms focus more on operational maturity not formality. Internal firm dynamics are more relevant in this case that relies on experience from the long period the company is established.

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INTRODUCTION

In recent years, Sustainability Reporting has gained global momentum as a crucial tool for measuring corporate commitment to environmental, social, and governance (ESG) goals. Sustainability Reporting Score (SRS) refers to the level and quality of sustainability disclosures made by companies, often measured through frameworks like the Global Reporting Initiative (GRI). According to the (IFRS Foundation, 2023), the International Sustainability Standards Board (ISSB) has officially launched global sustainability disclosure standards IFRS S1 and S2 to improve the consistency, transparency, and accountability of sustainability reports across countries.

The growing emphasis on SRS stems from increased stakeholder demand for transparency. A global survey by (KPMG, 2022)covering over 5,800 companies revealed that 79% now include sustainability disclosures in their annual or standalone reports, but only 35% align closely with global standards like GRI or SASB. This shows the need to improve not only the presence of reports but also their depth and credibility.

Additionally, (PwC, 2023) found that even though many companies report ESG activities, only 16% have net-zero targets aligned with science-based metrics, and less than half disclose Scope 3 emissions, which often represent the largest share of total emissions. In Indonesia, 88% of listed companies submitted sustainability reports in 2022, yet only a small portion provided measurable disclosures aligned with GRI indicators (PwC Indonesia, 2023).

Strong SRS is not only a matter of compliance but is also linked to long-term firm value. (Al Natour et al., 2022) found that companies with higher sustainability reporting scores experienced improved stock performance and reduced information asymmetry with investors. Similarly, (Anyigbah et al., 2023a)noted that board governance factors such as gender diversity and board size significantly influence the comprehensiveness of sustainability disclosures in Chinese listed companies.

Moreover, sustainability reporting aligns directly with the United Nations Sustainable Development Goals (SDGs), particularly Goals 12 and 13, which emphasize responsible consumption and climate action. The role of companies in reporting their environmental and social impacts has thus become essential for sustainable finance and global climate accountability.

In Indonesia, the implementation of sustainability reporting is guided by Financial Services Authority (OJK) Regulation No. 51/POJK.03/2017, which mandates financial institutions and public companies to prepare and submit sustainability reports. These reports must include data on strategy, economic performance, social responsibility, and environmental impacts. Despite the legal obligation, many companies still produce reports that are either incomplete or inconsistent across years, limiting their usefulness in sustainability evaluation (Gunawan, 2022).

Sustainability reporting not only helps companies monitor and measure their performance in economic, social, and environmental aspects but also serves as a crucial tool for demonstrating their commitment to sustainability goals. It aligns business practices with the targets of the Paris Agreement and Sustainable

Development Goals (SDGs) by promoting transparency and accountability in sustainability initiatives.

A key distinction between CSR and Sustainability Reporting lies in their approach. CSR focuses on social activities, often temporary, such as donations or building community facilities, without structured reporting systems. In contrast, sustainability reporting emphasizes a more comprehensive and detailed approch, covering economic, social, and environmental impacts. By following global frameworks such as the Global Reporting Initiative (GRI), companies can provide clear and measurable information on their sustainability performance (Consolidated Set of the GRI Standards, 2024).

In recent years, the concept of sustainability has become a key focus in the global business landscape. Companies are expected not only to achieve good financial performance but also to contribute positively to the environment and society. Sustainability reporting plays a significant role in helping companies communicate their commitment and performance in environmental, social, and governance (ESG) aspects (PwC, 2020). Sustainability reporting is defined as the disclosure of non-financial information that specifically covers the environmental, social and governance (ESG) performance of a company, allowing stakeholders to assess a company's long-term sustainability strategy (Mini et al., 2024). It provides a structured framework for organizations to measure and communicate their sustainable practices, thereby enabling investors and regulatory bodies to evaluate a company's ethical and operational commitment to sustainability.

While regulations and standards have been established, sustainability reporting in Indonesia still faces challenges. Despite a positive trend, with 154 companies publishing sustainability reports in 2020 compared to only 54 in 2019 (Yani et al., 2024), the quality and level of disclosure still vary significantly among companies. A study by (PwC Indonesia, 2023) revealed that many companies face difficulties in improving transparency and meeting both international standards and local regulations.

The selection of the LQ45 index as the research sample is supported by previous studies highlighting its importance in company license applications. Companies in the LQ45 index are known for high liquidity, strong corporate governance, and better sustainability reporting practices due to stricter investor oversight and market demand for transparency (Weda & Sudana, 2021). They are also more likely to comply with regulatory requirements like the Financial Services Authority (OJK) Regulation No. 51/POJK.03/2017 (Kartini & Kusuma, 2019).

Financial performance also plays a key role in sustainability reporting. Companies with high profitability have more resources for ESG coverage and tend to provide more comprehensive reports, reducing information asymmetry and signaling positive company value to investors (Gd et al., 2021). Supporting this, research by (Laras, 2020) shows that LQ45 companies with strong performance attract more investors and positively impact stock performance.

Liquidity and high market capitalization are additional reasons for selecting LQ45 companies. These shares are investor favorites, reflecting good

reputation and stable financial performance. Research from the Journal of Diversification Management confirms LQ45 shares' high liquidity and market appeal (Terdaftar Di BEI et al., 2024).

To help explain what influences sustainability reporting, this study looks at several internal company factors that are often discussed in past research. These include board characteristics (like gender diversity), board size, firm age, and firm size. Many studies, both in Indonesia and internationally, show that these factors are related to how companies are managed, how transparent they are, and how well they report their activities.

Recent international studies have increasingly explored the relationship between internal company factors and the quality of sustainability reporting, particularly focusing on board characteristics, board size, and firm age. These variables are widely recognized as key corporate governance elements that influence disclosure behavior. For example, (Anyigbah et al., 2023) found that board size, CEO duality, and committee structure significantly impact sustainability reporting among Chinese listed companies. In their study, both firm age and firm size were used as control variables, indicating that older and larger firms tend to disclose more comprehensive sustainability information. However, as **novelty** in this study it proposes that firm age is an important factor that shows maturity of company on reporting disclosure. And this is the **gap** analyzed in this study.

Similarly, (Dohrmann et al., 2024) examined companies across Europe and revealed that while board size had positive effect on environmental and financial performance, firm age positively influenced financial outcomes. However, firm size was found to have an effect on both financial and environmental performance, suggesting that bigger companies may not always translate their capacity into effective sustainability outcomes. The influence of board governance variables on sustainability reporting also remains relevant in ESG-focused research. A study by (Anyigbah et al., 2023) showed that board composition, board size, and firm age had a positive effect on ESG performance in Chinese companies. While their study centered on ESG overall, the variables they used are also crucial in sustainability reporting, as it is a subset of the broader ESG framework.

LITERATURE REVIEW

Agency Theory

Agency Theory, introduced by (Jensen et al., 1976), explains the relationship between principals (shareholders) and agents (managers), where conflicts of interest may arise due to differing goals. This theory suggests that corporate governance mechanisms, such as board characteristics, play a crucial role in ensuring that managers act in the best interests of shareholders.

(Jensen et al., 1976) define Agency Theory as a contractual relationship in which principals (shareholders) delegate decision-making authority to agents (managers) to perform services on their behalf. However, conflicts often arise due to differences in interests between the two parties, leading to agency costs. These costs increase with the need for high-quality boards to ensure that financial and non-financial reports, including sustainability reports, meet high standards.

In the context of Sustainability Reporting Score (SRS), Agency Theory suggests that managers may not always voluntarily disclose sustainability-related information unless they are monitored effectively by the board of directors. Information asymmetry occurs when managers withhold sustainability-related disclosures to avoid scrutiny or protect their own interests. The presence of a larger, more independent board helps mitigate this problem by enforcing stricter corporate governance and ensuring transparent sustainability reporting.

Moreover, firms with strong governance structures and well-defined board roles are more likely to engage in sustainability reporting as a means to reduce agency conflicts and fulfill stakeholders' expectations (Jizi et al., 2014). As sustainability reporting becomes increasingly important to investors, board oversight is crucial in ensuring that managers disclose accurate and reliable non-financial information.

Legitimacy Theory

Legitimacy Theory explains that companies must align their activities with societal values and expectations to maintain trust and acceptance. When businesses operate in ways that society considers appropriate, they gain legitimacy, which strengthens their relationship with stakeholders (Suchman, 1995; Dowling & Pfeffer, 1975).

Gray et al. (1996) in Ahmad and Sulaiman (2014) define legitimacy as the framework that governs corporate interactions with society, government, individuals, and social groups. Companies use sustainability reporting to enhance transparency, accountability, and compliance with regulatory and societal demands.

Deegan (2002) highlights that sustainability reporting helps companies maintain legitimacy by demonstrating their commitment to responsible practices, especially in industries with high environmental impact. Companies with strong corporate governance, such as dedicated sustainability committees, tend to disclose more comprehensive sustainability reports to reinforce their legitimacy and fulfill stakeholder expectations.

Sustainability Reporting

Sustainability reporting is a company's practice of sharing information about economic, social, and environmental aspects to meet stakeholder expectations. Based on Legitimacy Theory (Suchman, 1995;), companies use sustainability reporting to gain public and regulatory approval. A study by (Raihan Gutama et al., 2024) found that the main challenges in sustainability reporting in Indonesia are low transparency and difficulties in applying global standards such as GRI.

Board Characteristics

Board characteristics include aspects of board independence, gender diversity, experience and competence of members of the board of directors and commissioners. Agency theory states that an effective steering board can reduce conflicts of interest between management and shareholders and increase

transparency in transaction clearance (Jensen et al., 1976). Gender diversity in the board of directors improves decision-making quality and transparency.

Board Size

The size of the board affects how well a company is monitored and how much information it shares. According to Agency Theory (Jensen & Meckling, 1976), a larger board improves oversight.

Firm Age

Firm age refers to the length of time a company has been in operation and is often associated with its experience, stability, and reputation. According to Organizational Life Cycle Theory, older firms tend to have more established processes, deeper market knowledge, and stronger relationships with stakeholders. They are usually better at managing risks and adapting to environmental changes. However, older companies may also face challenges like organizational inertia, making it harder for them to innovate and adopt new practices. Firm age is often seen as an indicator of a company's ability to sustain long-term performance and credibility.

Firm Size

A company's size affects its ability to implement sustainability reporting. Larger companies have more resources to meet sustainability standards (Jizi et al., 2014). Azeez (2015) found that bigger companies are more likely to have independent and diverse boards, improving sustainability reporting quality. (Weda & Sudana, 2021) also found that large companies in the LQ45 index have better sustainability reporting practices because they face stricter investor oversight.

Hypothesis Development

Influence of Board Characteristics on Sustainability Reporting Score

Gender diversity on the board means there is a mix of male and female directors. In this research, it is measured by the percentage of women on the board. But gender diversity is not only about "having more women" it is about having different views, experiences, and ways of thinking that come from having a mix of genders. This mix can help companies make better and fairer decisions, especially when reporting things related to the environment, society, and good governance (ESG). When a board has people from different gender backgrounds, it reduces the risk of "groupthink" (everyone thinking the same way). This can lead to more open discussion, better monitoring of management, and more honest and complete sustainability reports (Carter et al., 2003). According to resource dependence theory, having diverse board members also gives companies access to more ideas, networks, and ways to understand what stakeholders (like investors, employees, and communities) care This helps companies respond better to what society expects from them in terms of sustainability. (Khunkaew et al., 2023a) found that boards with gender diversity can report more clearly on ESG because they bring different views and care more about transparency. (Sururi & Gantyowati, 2023) also showed that companies in

LQ45 with diverse boards have better quality in their sustainability reports. Likewise, (Anyigbah et al., 2023a) explained that gender-diverse boards are more likely to share more non-financial information. Boards with a good gender mix tend to care more about all stakeholders, not just profits. This supports stakeholder theory, which says companies should think about the impact of their actions on everyone, not just shareholders. Gender-diverse boards help make sure that many sides and concerns are heard. So, gender diversity is not only about the number of women it is about having balance and variety that can lead to better, more trustworthy sustainability reporting.

H1: Board characteristics has a positive influence on the Sustainability Reporting Score.

Influence of Board Size on Sustainability Reporting Score

The size of the board of directors, which is determined by the number of board members, can influence the effectiveness of supervision and accountability in permit applications. Boards with a larger number of members tend to have a greater diversity of perspectives. (Safitri & Septiani, n.d.) found that board size has a positive impact on sustainability reporting in Indonesian manufacturing companies. Another study showed that companies with larger boards tend to disclose more information.

The number of people on the board affects how the company makes decisions. A larger board usually has more diversity in knowledge, experience, and opinions. This diversity can support better supervision and encourage the company to disclose more information in its sustainability report. More board members also mean more oversight, which leads to more complete and accurate reporting.

H2: The board size has a positive influence on Sustainability Reporting.

Influence of Firm Age on Sustainability Reporting Score

Firm age reflects the length of time a company has been in operation and is often associated with its experience, stability, and ability to meet stakeholder expectations. According to (Maryana & Carolina, 2021), firm age has a significant impact on sustainability reporting, as older firms tend to have more established practices and a better understanding of regulatory requirements. However, the study also found that older firms may sometimes face challenges in adapting to evolving sustainability standards, which can affect the quality and extent of their disclosures. This dual effect makes firm age a crucial factor in assessing sustainability report quality and transparency.

Older companies usually have more experience and have faced more business situations, including adapting to rules about sustainability. Because of that, they tend to understand how to meet stakeholder expectations and follow regulations. However, sometimes older companies are not fast in changing or updating their systems, so it's important to see how they balance experience with innovation in sustainability reporting.

H3: Firm Age has positive influence on Sustainability Reporting Score

The Influence of Company Size on Sustainability Reporting Score

Good reporting can improve a company's reputation and attract more investors, ultimately impacting the company's growth (Weda & Sudana, 2021). Research by (Nawawi et al., 2020) shows that companies with higher levels of desirability tend to have better financial performance and increase company size in the long term.

Large companies are more visible to the public and investors, so they care more about their reputation. To maintain a good image, they try to make high-quality sustainability reports. They also have more ability to follow international standards like GRI because they have enough funds, experts, and technology. This makes big companies tend to score higher in sustainability reporting.
H4: Firm size has positive influence on Sustainability Reporting Score.

METHODOLOGY

Secondary Data

Research Sampling

The population in this study are companies listed in the LQ45 index in the 2019–2023 period. This research uses a purposive sampling method for sampling, which allows selecting samples based on certain criteria that are relevant to the research objectives. This data collection technique uses secondary data, in the form of company financial reports from the OJK and the company's official website. The data taken will be in the form of panel data, namely time series and cross-sectional data. Therefore, the criteria used in sampling in this study were as follows:

- Companies included in the LQ45 index and listed on the Indonesia Stock Exchange in 2019 - 2023
- Companies included in the LQ45 index and publishing Sustainability Reports and Annual Reports consecutively during the 2019–2023 period.
- Companies with missing or incomplete financial data will be at risk from being excluded from the research sample.

According to Creswell (2023), quantitative research is an approach to test theories by measuring variables that are statistically analyzed and presented in numerical data form. This study uses a quantitative method aimed at examining the population with the goal of testing established hypotheses. In this research, the Sustainability Reporting Score (SRS) is measured for companies included in the LQ45 index listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period. This study uses secondary data in the form of company reports, analyzed using functional panel data and time series data methods.

Data

Data collection was carried out by reviewing annual reports selected as research samples. As a guideline, a research instrument in the form of a checklist was used, containing disclosure items related to social responsibility. This study was conducted using the content analysis method. Through this technique, social responsibility assessment is based on disclosures made in the company's publication media, primarily through annual reports and sustainability reports.

The data collection method used in this study is the documentation method. This involved gathering documents such as sustainability reports from 2019 to 2023 and financial reports from the same period, along with literature reviews from books, journals, articles, official websites, and other relevant data needed for the research.

This research data was collected by:

- Collect Sustainability Reports and Annual Financial Reports from each LQ45 company that meets the sampling criteria.
- Data obtained through the company's official website and the Indonesian Stock Exchange (BEI) and the respective company's official data website
- Each document is analyzed to obtain information regarding the Sustainability Reporting Score, Board Characteristics, and company size control variables.

Variables and Measurement

Dependent Variabel

The dependent variable in this study is the Sustainability Reporting Score (SRS) (%), which is measured based on the Global Reporting Initiative standards guidelines. Analysis of the SRS is important because it provides a clear picture of the extent to which companies disclose information related to their desires. In addition, the SRS reflects how companies adapt to global trends in the Environmental, Social, and Governance (ESG) environment. Comprehensive disclosure in local reports can increase corporate transparency and accountability, which in turn can attract investor interest. For example, research by (Gd et al., 2021) shows that the dissemination of good sustainability reports can reduce information asymmetry and provide positive signals to investors, which can ultimately increase the company's stock returns.

In this study, the Sustainability Reporting Score (SRS) is measured using 15 selected indicators from the Global Reporting Initiative (GRI) Standards, with five indicators each from the Economic, Environmental, and Social dimensions. These indicators were not chosen randomly. They were selected based on their high relevance to companies listed in the LQ45 index, their alignment with GRI standards, and their connection to the research variables, such as board characteristics, board size, firm age, and firm size. For example, GRI 201-1 (economic value generated and distributed) reflects financial strength, while GRI 405-1 (diversity in governance) relates directly to board characteristics. The chosen indicators also represent key issues in ESG (Environmental, Social, Governance) reporting and are often used in previous academic research, such as studies by (Insani, 2019), and (Susanti et al., 2020). These studies applied similar methods using GRI indicators to measure sustainability reporting. In addition, the selection follows the principle of materiality, ensuring that only the most significant and impactful disclosures are included. For instance, energy use, waste management, employee training, and community engagement are all essential aspects that reflect a company's sustainability practices. Therefore, using these 15 indicators helps provide a focused yet comprehensive view of a company’s sustainability performance and aligns with both academic standards and global best practices.

To measure the Sustainability Reporting Score (SRS) of a company, the first step is to identify relevant indicators from each sustainability dimension: Economic, Social, and Environmental, based on the GRI Standards. Each dimension will be represented by 5 key indicators that encompass critical aspects of the company's sustainability reporting.

Table 1. Dependent Variable

GRI Code	Definition	Explanation
Economic Indicators (GRI Series 200)		
GRI 201-1	Direct economic value generated and distributed, including revenue, operating costs, employee wages, and community investments.	Relevant as sustainability reporting is often linked to a company's financial performance.
GRI 201-2	Financial implications and other risks and opportunities due to climate change.	Important since investors and regulators consider sustainability as a financial risk factor.
GRI 202-1	Ratio of entry-level wage to local minimum wage by gender.	Measures employee welfare, which contributes to the Sustainability Reporting Score (SRS).
GRI 203-1	Investments in infrastructure and services provided for public benefit.	Assesses the indirect economic impact of the company on society.
GRI 205-1	Operations assessed for risks related to corruption.	Relevant as strong corporate governance enhances sustainability reporting scores.
Environmental Indicator (Series 300)		
GRI 301-1	Total weight or volume of materials used in production.	Evaluates resource efficiency, a crucial factor in sustainability reporting.
GRI 302-1	Total energy consumption within the organization.	Important since energy consumption is a major focus of sustainability reporting.
GRI 303-3	Total volume of water withdrawn from various sources.	Relevant for certain industries in LQ45, especially manufacturing sectors.
GRI 305-1	Direct greenhouse gas (GHG) emissions (Scope 1).	Critical as GHG emissions are a global concern in sustainability reporting.
GRI 306-3	Total amount of waste generated by the company.	Aligns with Indonesian regulations emphasizing proper waste management in sustainability reports.

	Social Indicator (Series 400)	
GRI 401-1	New employee hires and employee turnover rate.	Reflects employment aspects in sustainability reporting.
GRI 403-2	Identification of hazards, risk assessments, and incident investigations.	Important for high-risk industries in LQ45, ensuring workplace safety.
GRI 404-1	Average hours of training per year per employee.	Demonstrates corporate investment in human resource development.
GRI 405-1	Diversity of governance bodies and employees based on gender, age, and other factors.	Highly relevant as your research includes Board Characteristics, such as gender diversity.
GRI 413-1	Percentage of operations with local community engagement, impact assessments, and development programs.	Highlights corporate contributions to local communities.

Economic Performance

In the context of the GRI Standards, the economic dimension of sustainability relates to an organization's impact on the economic conditions of its stakeholders and the broader economic system at local, national, and global levels. This dimension covers the flow of capital among different stakeholders and the organization's overall economic impact on society. Key topics include economic performance, market presence, indirect economic impacts, procurement practices, anti-corruption, and anti-competitive behavior.

Environmental Performance

The environmental dimension of sustainability, based on the GRI Standards, addresses the organization's impact on living and non-living natural systems, including land, air, water, and ecosystems. It involves the use of renewable and non-renewable resources like minerals, metals, gas, and water, as well as the organization's efforts to mitigate its environmental impact.

Social Performance

The social dimension of sustainability focuses on an organization's impact on the social systems in which it operates. The GRI Standards identify key aspects of social performance, including labor practices, human rights, community engagement, and product responsibility.

The selection of indicators in this research is based on their relevance, alignment with sustainability reporting standards, and connection to key research variables. The indicators contribute to the Sustainability Reporting Score (SRS) by covering essential economic, environmental, and social aspects, ensuring a comprehensive assessment of corporate sustainability performance. Each indicator aligns with the research variables, such as Board Characteristics,

Board Size, Firm Age, and Firm Size. For example, GRI 405-1 (Diversity & Equal Opportunity) is relevant to Board Characteristics, while GRI 201-1 (Direct Economic Value Generated & Distributed) reflects the financial stability of firms based on their age and size. The selection also ensures coverage across Environmental, Social, and Governance (ESG) dimensions, addressing financial performance, energy use, emissions, workforce management, and community engagement.

Furthermore, the indicators comply with GRI Standards and global best practices, making them industry-relevant for companies in LQ45 that must adhere to sustainability regulations and investor expectations. The selection is also guided by materiality, ensuring that only significant and impactful sustainability issues are included. For instance, GRI 302-1 (Energy Consumption) is critical for industrial firms, while GRI 405-1 (Diversity & Inclusion) is important for governance-focused research.

The completeness criteria for disclosure in this research are measured using a dummy variable approach, which can be obtained through the following steps:

Assigning a dichotomous disclosure score, where a value of 1 is given if the company discloses a particular item and 0 if the item is not disclosed.

Summing the scores obtained by the company to get the total disclosure score.

Calculating the voluntary disclosure completeness index by dividing the company's total score by the total number of disclosure items that should be fulfilled.

The formula for calculating the Sustainability Reporting Score (SRS) is as follows: SRS = K/N

Where :

SRS = Sustainability Report Score

K = Number of items disclosed

N = The number of items expected to be disclosed

This approach aligns with methodologies used in previous studies that measure corporate sustainability, such as Hong Yuh Ching (2014) and (Insani, 2019), which also employed GRI indicators to assess corporate sustainability compliance in Brazil. This study, along with others like Susanti et al. (2020), utilized a similar method in calculating the Sustainability Reporting Score by evaluating the transparency and quality of sustainability reporting using the GRI framework.

Independen Variabel

The independent variables used in this study are the Characteristics of the Board of Directors, especially the Size of the Board of Directors (Board Size), which is measured by the number of board members (Anyigbah et al., 2023b). This selection variable is based on the significant influence that the board has on company policy, including in terms of the scope and management of biodiversity. A larger board of directors can have diverse perspectives and expertise, which has the potential to improve the quality and breadth of disseminating sustainability reports. However, several studies have shown

mixed results regarding the influence of the board of directors on permit reporting. For example, a study by (Safitri & Septiani, n.d.) found that the board of directors has a significant positive influence on the dissemination of sustainability reports, while a study by (Riset & Dan Bisnis, n.d.) showed different results. Therefore, this study aims to re-examine the effect of board size on sustainability report disclosure in the context of companies in Indonesia.

Thus, this study is expected to contribute to understanding how the direction of board characteristics affects the diversity of sustainability reports, as well as affecting investor interest and company performance.

Board Characteristic

In this study, the board characteristics variable focuses on gender diversity in the board of directors, which refers to the presence of women in company leadership. Gender diversity is important because it brings different perspectives, improves transparency, and helps in better decision-making. Previous studies (Khunkaew et al., 2023b)have shown that having women on the board can improve sustainability reporting quality and overall company performance.To measure gender diversity, this study uses the dummy variable approach, which is a simple and widely used method in corporate governance research. The steps in this approach are:

Companies are categorized based on whether they have at least one woman on the board of directors.

Assignment of Dummy Values:

Value of 1: Given if there is at least one woman on the board.

Value of 0: Given if there are no women on the board

This approach was also used by Mardahlia and Ghozali (2023) in their study on the relationship between board gender diversity and financial distress in companies. Using a dummy variable makes the analysis easier without complex calculations and provides a clear understanding of whether the presence of women on boards affects different aspects of corporate governance.

Board Size

The size of the board of directors is measured by counting the total number of board of Directors members in a company during a specific period. This data is usually obtained from the company's annual report. (Safitri & Septiani, n.d.) used this approach to analyze the impact of board size on sustainability reporting.

Firm Age

The measurement of firm age in this study is based on the number of years since the company's establishment, which reflects how long the company has been operating. This approach is commonly used (Maryana & Carolina, 2021)because older firms tend to have more experience, established systems, and stronger reputations compared to newer companies. Firm age is calculated by subtracting the year of establishment from the year of observation.

Firm Age = Year of Observation − Year of Establishment

Firm size

Firm size is often measured using total assets, which are then transformed using the natural logarithm (Ln) for statistical analysis. This transformation helps reduce skewness and address heteroscedasticity in the data. For example, if a company's total assets amount to Rp1,000,000,000, its firm size is calculated as Ln(1,000,000,000). This approach was used in the study by Riko & Panji (2019), which examined the impact of profitability and firm size on capital structure.

This study uses panel data regression because the dataset consists of multiple firms (LQ45 companies) observed over a five-year period (2019–2023). Panel data enables the integration of cross-sectional data (differences across companies) and time-series data (changes over time), allowing for more comprehensive analysis and better control of unobserved heterogeneity across firms and years.

To determine the most appropriate panel regression model, this study follows the standard procedure by conducting the Chow test and the Hausman test. The Chow test is conducted to decide whether to use Pooled OLS or Fixed Effects (FE). If the test result is significant, it indicates that the Fixed Effects model is more appropriate because it accounts for unobserved characteristics specific to each firm. After that, the Hausman test is used to choose between Fixed Effects and Random Effects (RE). A significant Hausman test result means the unobserved individual effects are correlated with the regressors, which makes Fixed Effects the better option. If not significant, the Random Effects model can be used because it assumes the firm-specific effects are random and uncorrelated with the explanatory variables.

This model not only tests the direct effects of the independent variables on sustainability reporting but also analyzes how firm size moderates these relationships. The interaction terms help assess whether larger firms strengthen or weaken the influence of governance and company characteristics on sustainability reporting.

Support for this method is found in previous research. Orazalin & Mahmood (2018) used a Fixed Effects model to analyze how board characteristics influence sustainability reporting, addressing potential bias from unobservable firm traits. In contrast, Gunawan (2022) adopted a Random Effects model when examining ESG disclosure in Indonesia, based on a Hausman test result showing no significant correlation between firm effects and the regressors. Additionally, Weda & Sudana (2021) applied panel data regression to analyze sustainability reporting practices in LQ45 companies, validating the approach for capital market research in the Indonesian context.

RESEARCH RESULT AND DISCUSSIONS

From 20 selected companies from LQ45 (100 firm year observation), and based on the model selection process using the Chow test and the Hausman test, the Fixed Effect Model (FEM) is selected as the most appropriate regression model for this study. Due to the limited observation of the sample (N=100), bootstrap is used to increase the robustness of the estimation using 500 times. All issues on the classical assumptions are then met (added with the non-correlation among the independent variables on average VIF= 1.89<5 smaller than 10).

. Table 1. Hypotheses test results

SRS	Obs Coef	Bootstrap SE	z	P>|z|
BCH	-.0387487	.0341759	-1.13	0.257
BSZ	-.0182027	.0141197	-1.29	0.197
FAE	.0775478	.0139046	5.58	0.000***
FSZ	.0369012	.120621	0.31	0.760
_cons	-4.471.307	3.444.306	-1.30	0.194

The FEM estimation results from this table indicate that Firm Age (FAE) shows a positive and statistically significant relationship with the Sustainability Reporting Score (SRS), with a coefficient of .0775478 and a p-value of 0.000***, which is significant at 1% level. This result suggests that the older a company is, the more likely it is to disclose sustainability-related information, possibly due to its experience, stronger internal systems, and long-standing stakeholder relationships. On firm level, firm size has positive insignificant impact on Sustainability Reporting Score (SRS). Surprisingly for the governance ones, such as Board Characteristics (BCH), Board Size (BSZ), show insignificant negative effects on SRS.

From a model performance perspective, the R-squared value is 0.5416, meaning that approximately 54.16% of the variation in Sustainability Reporting Score can be explained by the variables included in the model, which reflects a strong explanatory power. The Adjusted R-squared value of within value is 0.5416 also supports the model's reliability after accounting for the number of predictors used. Therefore, the FEM regression results not only validate the significance of firm age in sustainability reporting practices but also confirm that the chosen model effectively captures the variation in the data, despite the limited role of other structural variables and interaction effects.

From this result, the importance of experience through age is dominant for a company to report the necessary information that may serve the public practically. Size increases the importance of information disclosed but it is not significant. Large company cannot imply important information disclosed and so does the small one. Operational internal dynamics within the company is important (experience) that may lead to innovation and high adaptivity rather that the composition of the board.

CONCLUSIONS AND RECOMMENDATIONS

Firm level become important factor for sustainability reporting rather than the composition of board and its characteristics. Thus; functionality and operational are more important rather than the formal ones. The more the companies are established the more they can disclose important information to the public no matter how the board is composed with. Managers should focus, evaluate and recognize the potential of internal maturity and capability not on formality shaping the board. However, this study fail to incorporate some moderating or mediating factors that might be interesting to search for further studies.

ADVANCED RESEARCH

It is suggested to add more sample and other mediating or mediating variables.

REFERENCES

Aji, B. S., & Juliarto, A. (2018). Pengaruh pengungkapan sustainability report terhadap reaksi investor pada perusahaan sektor pertambangan dan manufaktur yang terdaftar di bei periode 2014 – 2015. *Diponegoro journal of accounting*, *7*(1), 1–7.

Al Natour, A. R., Meqbel, R., Kayed, S., & Zaidan, H. (2022). The Role of Sustainability Reporting in Reducing Information Asymmetry: The Case of Family-and Non-Family-Controlled Firms. *Sustainability (Switzerland)*, *14*(11). https://doi.org/10.3390/su14116644

Anyigbah, E., Kong, Y., Edziah, B. K., Ahoto, A. T., & Ahiaku, W. S. (2023a). Board Characteristics and Corporate Sustainability Reporting: Evidence from Chinese Listed Companies. *Sustainability (Switzerland)*, *15*(4). https://doi.org/10.3390/su15043553

Anyigbah, E., Kong, Y., Edziah, B. K., Ahoto, A. T., & Ahiaku, W. S. (2023b). Board Characteristics and Corporate Sustainability Reporting: Evidence from Chinese Listed Companies. *Sustainability (Switzerland)*, *15*(4). https://doi.org/10.3390/su15043553

Azeez, Dr. A. A. (2015). Corporate Governance and Firm Performance: Evidence from Sri Lanka. *Journal of Finance and Bank Management*, *3*(1). https://doi.org/10.15640/jfbm.v3n1a16

Dohrmann, M., Martinez-Blasco, M., Moring, A., & Margarit, J. C. (2024). Environmental performance and firm performance in Europe: The moderating role of board governance. *Corporate Social Responsibility and Environmental Management*. https://doi.org/10.1002/csr.2898

Gd, I., Hary Wiguna, N., Wulan, N. A., Dewi, T., Nyoman, I., & Yasa, P. (2021). *Financial Market Performance Affected by the Covid-19 Case: Study on Indonesian Composite Stock Index*.

Gunawan, V. (2022). Analisis pengaruh profitabilitas, leverage, dan ukuran perusahaan terhadap pengungkapan sustainability report . *Balance: Jurnal Akuntansi, Auditing Dan Keuangan*, *19*(1), 22–41.

Gusmiati, D. (2024). *RAMA_62201_01031282025109_0015118905_01_front_ref*.

IDX. (2025). *Perkuat Transparansi Data ESG, BEI Luncurkan ESG Reporting untuk Perusahaan Tercatat*.

IFAC. (2024). *Sustainability Reporting and Assurance Practices of Largest Global Companies Continue to Mature, IFAC, AICPA & CIMA Study Shows*. IFAC.

IFRS Foundation. (2023). *ISSB issues inaugural global sustainability disclosure standards*. IFRS Foundation.

InConsult. (2024). *Key Challenges for Sustainability Reporting*. InConsult.

Insani, N. (2019). *Analisis Pengungkapan Sustainability Report Terhadap Kinerja Keuangan Pada Seluruh Perusahaan Lq45 Yang Terdaftar Di Bursa Efek Indonesia (Bei)*. Universitas Muhammadiyah Makassar .

Jensen, M. C., Meckling, W. H., Benston, G., Canes, M., Henderson, D., Leffler, K., Long, J., Smith, C., Thompson, R., Watts, R., & Zimmerman, J. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. In *Journal of Financial Economics* (Issue 4). Harvard University Press. http://hupress.harvard.edu/catalog/JENTHF.html

Jizi, M. I., Salama, A., Dixon, R., & Stratling, R. (2014). Corporate Governance and Corporate Social Responsibility Disclosure: Evidence from the US Banking Sector. *Journal of Business Ethics*, *125*(4), 601–615. https://doi.org/10.1007/s10551-013-1929-2

Kartini, S., & Kusuma, I. W. (2019). Analisis Pengungkapan Sustainability Report Terhadap Kondisi Keuangan Pada Perusahaan Yang Terdaftar Dalam Indeks LQ45. *Accounting and Business Information System Journal*, *7*(2).

Khunkaew, R., Wichianrak, J., & Suttipun, M. (2023a). Sustainability reporting, gender diversity, firm value and corporate performance in ASEAN region. *Cogent Business & Management*, *10*(1). https://doi.org/10.1080/23311975.2023.2200608

Khunkaew, R., Wichianrak, J., & Suttipun, M. (2023b). Sustainability reporting, gender diversity, firm value and corporate performance in ASEAN region. *Cogent Business & Management*, *10*(1). https://doi.org/10.1080/23311975.2023.2200608

KPMG. (2022). Survey of Sustainability Reporting 2022. *KPMG International*.

Laras, D. M. (2020). *Pengaruh Kinerja Keuangan Dan Corporate Social Responsibility Terhadap Nilai Perusahaan Sektor Aneka Industri Yang Terdaftar Di Bei Tahun 2015 – 2018* . Muhammadiyah Surakarta.

Maryana, M., & Carolina, Y. (2021). The Impact of Firm Size, Leverage, Firm Age, Media Visibility and Profitability on Sustainability Report Disclosure. *Jurnal Keuangan Dan Perbankan*, *25*(1). https://doi.org/10.26905/jkdp.v25i1.4941

Mini, M., Wati, C., Budiadnyani, N. P., Sri, P., Kusuma, A. J., Kustina, K. T., Ekonomi, F., & Bisnis, D. (2024). Pengaruh Pengungkapan Sustainability Report dan Praktik Good Corporate Governance Terhadap Nilai Perusahaan. *Jurnal Akademi Akuntansi Indonesia Padang*, *4*(2). https://doi.org/10.31933/y80ptr16

Nawawi, A. H. T., Agustia, D., Lusnadi, G. M., & Fauzi, H. (2020). Disclosure of sustainability report mediating good corporate governance mechanism on stock performance. *Journal of Security and Sustainability Issues*, *9*(J), 151–170. https://doi.org/10.9770/jssi.2020.9.J(12)

Perangin-Angin, M., & Choiriah, S. (n.d.). *Studies Management and Finance Economics, of Journal Determinants on Sustainability Report Quality and Moderation of Company Size*. https://doi.org/10.47191/jefms/v7

Puspadini, M. (2024). *Banyak Perusahaan Belum Kumpulkan Laporan Keberlanjutan*. CNBC Indonesia.

PwC. (2023). Sustainability Counts II. *PwC Global*.

Raihan Gutama, M., Islam, U., Raden, N., Lampung, I., & Sisdianto, E. (2024). *Implementasi Gri Di Indonesia: Tantangan Dan Manfaat Bagi Perusahaan*. *2*(12), 324–338. https://doi.org/10.61722/jiem.v2i12.3167

Riset, J., & Dan Bisnis, E. (n.d.). *42 16 (2) (2023) 142-155*.

Roestanto, A., Vivianita, A., & Nurkomalasari, N. (2022). Pengaruh Ukuran Perusahaan, Umur Perusahaan, Jenis Industri, Dan Struktur Kepemilikan Terhadap Environmental, Social, And Governance (Esg) Disclosure (Studi Empiris Perusahaan Di Indonesia Yang Terdaftar Di Idx 2017-2020) . *Journal Stiem*, *8*(1), 1–18.

Safitri, E. D., & Septiani, A. (n.d.). Pengaruh karakteristik dewan direksi dan dewan komisaris perusahaan terhadap sustainability reporting (studi empiris pada perusahaan manufaktur yang terdaftar di bursa efek indonesia tahun 2018). *Diponegoro journal of accounting*, *11*(2), 1–12. http://ejournal-s1.undip.ac.id/index.php/accounting

Sururi, R. Y., & Gantyowati, E. (2023). 2 Nd mdp student conference (msc) 2023 universitas multi data palembang | 487 pengaruh keberagaman direksi terhadap kualitas sustainability report pada perusahaan terindeks lq45. *2 nd mdp student conference (msc)*.

Topak, M. S. (n.d.). *The Effect of Board Size on Firm Performance: Evidence from Turkey*. http://www.eurojournals.com/MEFE.htm

Weda, N., & Sudana, I. P. (2021). Sustainability Reporting dan Return Saham di Perusahaan Terindeks LQ45. *E-Jurnal Akuntansi*, *31*(6), 1356. https://doi.org/10.24843/eja.2021.v31.i06.p01

Wiguna, I. G. N. H., Dewi, N. A. W. T., & Yasa, I. N. P. (2021). Financial Market Performance Affected by the Covid 19 Case: Study on Indonesian Composite Stock Index . *Advances in Economics, Business and Management Research*, *197*, 165–172.