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DRIVING GRI-BASED SUSTAINABILITY REPORTING THROUGH BOARD CHARACTERISTICS AND SKILLS IN INDONESIA'S NON-FINANCIAL SECTOR

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Abstract

This study examines the influence of board characteristics and skills on sustainability reporting (SR) in Indonesia's non-financial sector, focusing on companies listed on the Indonesia Stock Exchange (IDX) between 2021 and 2023. Using the Generalized Least Squares method, the study investigates how board size, independence, gender diversity, and specific skills impact the quality of sustainability reports, assessed using the Global Reporting Initiative (GRI) standards. Results show that board size negatively affects SR, indicating that smaller boards with the right composition are more effective in enhancing sustainability disclosures. Board independence was found to have no significant impact, suggesting that merely meeting regulatory requirements may undermine its intended purpose. Board gender diversity, however, positively influenced SR, as women on boards tend to be more engaged with sustainability and stakeholders. Additionally, board-specific skills were found to have no significant effect on SR. Among control variables, firm profitability and age positively influenced SR, while leverage negatively affected it, indicating that highly leveraged firms are motivated to enhance sustainability reporting to gain stakeholder trust. This study provides valuable insights into corporate governance and sustainability reporting, offering recommendations for future research and policy improvements in Indonesia's business ecosystem.

Keywords: Board characteristics, board skills, corporate governance, gender diversity, GRI standards, sustainability reporting

Introduction

The trend of sustainability reporting in Indonesia continues to grow, consistent with the Asia-Pacific region, where 92% of companies have set ESG targets. Significant improvements in board accountability disclosures were observed in Indonesia, New Zealand, and Thailand during the period 2021–2022 (Luh et al., 2024). Sustainability Reporting, in the past, was a report card that showed ESG performance. However, after the awareness of the sustainability topic has grown widely, sustainability reports are already more common than ESG performance reporting in general. It is a strategic tool and a communication platform between stakeholders and the company. Sustainability reporting reflects the board of directors and commissioners' accountability for sustainability, demonstrating the company's efforts to enhance skills and credibility with the public. Sustainability reporting must also align with global standards such as GRI to showcase the company's commitment to sustainability (Muhmad et al., 2023). The enhancement of sustainability skills among the board of directors and management remains at a low level. In 2022, 68% of companies in Indonesia involved their directors or management in sustainability training. Corporate leaders' skills must be improved to ensure effective oversight

of strategies, particularly in advancing long-term corporate sustainability governance (PwC, 2023).

Previous studies analyzing sustainability reporting have found inconsistent results. Alta'any (2024), divided the disclosure of sustainability into each dimension: economic, environmental, and social, and also total disclosure with a sample from 50 countries around the world, found board size positively affects sustainability reporting, board independence, and gender diversity no effects on sustainability reporting. Erin (2024) examined data from sub-Saharan Africa with a scale score to judge the quality of sustainability reporting and found that board size, independence of the board, and gender diversity of the board are related to higher-quality sustainability reporting. Furthermore, Githaiga (2023) analyzed the firms in East Africa, with the composite index of three performance disclosures, and found that board size has a negative effect on sustainability reporting, and board independence and board gender diversity have a positive influence on sustainability reporting. Lastly, Jiang (2023) Studies of European State-Owned Enterprises (SOEs) are more deeply implemented agency theory in which board members who have more specific skills can better contribute to the monitoring process and advice. The results indicate that board-specific skills increase the Sustainability information. Therefore, this research tries to fill the gap that is hardly found analysis of Indonesian firms' context about how board characteristics and skills affect sustainability reporting with GRI indexing. This study also tries to identify and analyze how board skills, particularly those with postgraduate education or professional certifications, affect the quality of a company's sustainability reports, not only considering financial expertise. This is crucial in providing additional insights for policymakers, practitioners, and academics regarding the role of advanced education in enhancing the effectiveness of sustainability oversight and management within organizations.

While numerous studies have explored the relationship between board characteristics and sustainability reporting globally, there remains a significant gap in scholarly literature specifically addressing the Indonesian context. Most existing research is predominantly focused on Western or developed economies, thereby neglecting the unique socio-economic and regulatory landscapes of emerging markets like Indonesia. The focus on the role of board characteristics and skills in influencing sustainability reporting in Indonesia's non-financial sector is particularly sparse, thus necessitating further investigation to provide tailored insights that are relevant to Indonesian firms. This study aims to bridge this gap by examining how these variables specifically affect sustainability reporting practices in Indonesia, using the GRI standards as a framework for assessment.

The urgency of this study is underscored by the increasing global emphasis on sustainability and corporate governance, exacerbated by the growing awareness of climate change and social responsibility. In Indonesia, where the government has mandated sustainability disclosures for publicly listed companies since 2020, the need for robust, informative, and transparent sustainability reporting is more pressing than ever. Corporations face mounting pressure from stakeholders to demonstrate accountability and sustainable practices. With the potential to enhance investor confidence and align with global sustainability goals, this research is timely and critical for guiding corporate governance strategies in the rapidly evolving business landscape of Indonesia (Oware et al., 2023).

This study presents a novel approach that integrates board characteristics and skills as critical determinants of sustainability reporting within Indonesia's non-financial sector for the first time. Unlike previous research that often treated these factors in isolation, this study offers a comprehensive analysis that considers the interplay of board size, independence, gender diversity, and specific skills in influencing reporting quality. Additionally, by utilizing the GRI standards as a benchmark for evaluation, the research provides empirical insights and contributes to developing a framework for enhancing sustainability disclosures tailored to the unique requirements of Indonesian firms. This innovative perspective enriches the existing literature and equips corporate leaders and policymakers with actionable recommendations for improving governance and sustainability practices.

This research aims to examine the effect of board characteristics and skills on sustainability reporting. Utilizing the Estimated Generalized Least Squares (EGLS) estimation method to address issues such as heteroskedasticity, this study incorporates control variables at the firm level, including firm size, leverage, profitability, and age, to mitigate biases. These factors are anticipated to influence a firm's ability to disclose sustainability information, with older firms likely to have greater familiarity with their societal and environmental responsibilities. Insights drawn from this research aim to enrich the literature on corporate governance and sustainability reporting, particularly in the context of Indonesia's regulatory framework mandating sustainability disclosures for listed companies starting in 2020, with a focus on data from 2021 to 2023.

The findings are expected to benefit both companies and government policymakers. For companies, understanding the impact of board characteristics, such as composition, skills, and diversity, can enhance the quality of sustainability reports and foster credibility with stakeholders. This knowledge will guide firms in recruiting board members with suitable qualifications and promoting transparency. For the government, these insights can inform the formulation of policies and regulations related to corporate governance and sustainability, encouraging increased transparency and accountability among firms. By leveraging the study's findings, policymakers can assess current regulations and consider enhancements that promote a more sustainable and responsible business ecosystem, aligning with national sustainable development goals.

Research Method

The research utilizes a purposive sampling method to select the sample of non-financial sector companies listed on the Indonesia Stock Exchange (IDX) during the period from 2021 to 2023. This sampling approach targets companies that have adopted the Global Reporting Initiative (GRI) index as the standard for their sustainability reporting (SR) and have reported their financial statements in Rupiah. A total of 88 companies were selected based on specific criteria, which were then categorized into 10 distinct sectors: Consumer Non-Cyclicals, Consumer Cyclicals, Infrastructure, Industrials, Basic Materials, Energy, Healthcare, Properties & Real Estate, Technology, and Transportation & Logistics. The study is characterized by a predominance of companies in the Consumer Non-Cyclicals sector, with 22 companies, while

the Technology sector has the fewest representatives with only one company, and there are no companies in the Healthcare sector.
The following is a detailed grouping of non-financial sectors in Table 1:

Table 1. Grouping of Industry Sectors

No	Industry Sectors	Total	Percentage
1	Consumer Non-Cyclicals	22	25.00%
2	Basic Materials	13	14.77%
3	Properties & Real Estate	13	14.77%
4	Infrastructures	12	13.64%
5	Consumer Cyclicals	10	11.36%
6	Industrials	10	11.36%
7	Transportation & Logistic	4	4.55%
8	Energy	3	3.41%
9	Technology	1	1.14%
10	Healthcare	0	0.00%
	Total	88	

This research uses the Estimated Generalized Least Squares. The research from Alta'any (2024) used Ordinary Least Squares (OLS) multiple regression, while R. Casciello, M. Maffei, and F. Meucci (2024) used a probit regression model. To solve correlation issues between variables, the Panel EGLS estimation method better addresses heteroskedasticity or serial correlation issues in panel data, resulting in more efficient estimates compared to the standard OLS method.

Result and Analysis

Descriptive Statistics

Table 2. Descriptive statistics

Variabel	Obs	Mean	Max	Min	Std. Deviasi
SR	264	10.5556	25.3333	2.3333	5.2896
BS	264	9.0076	20.0000	4.0000	3.2629
BI	264	0.2038	0.7143	0.0000	0.0826
BGD	264	0.1296	0.6667	0.0000	0.1337
BSS	264	0.4908	1.0000	0.0000	0.2342
FS	264	6.8079	8.6490	4.8926	0.7464
PRO	264	0.1023	0.8867	-0.1914	0.1333
LEV	264	0.4657	2.3119	-0.0960	0.3020
FA	264	1.1699	1.6667	0.1288	0.3416

Table 2 summarizes the descriptive statistics of this study Sustainability Reporting (SR) has an average value of 10.55, indicating the average disclosure of each firm is approximately 10 items, with a narrow range of 2.33 to 25.33, along with a variability standard deviation (SD) of 5.28. This shows significant variation in the sustainability reporting data. BS (Board Size) has an average of 9, showing that the average size of the board is nine people, which is above the minimum requirement. The minimum requirement is 2 for a director and 2 for a commissioner in Indonesia. BS narrow range is 4 to 20, as well as variability SD 3.26. This suggests that the size of the boards of directors and commissioners in the companies varies from small to large. Larger boards can provide a range of strategic perspectives, potentially improving the quality of sustainability reporting. However, their effectiveness depends on coordination and decision-making efficiency. BI (Board Independence) has an average of 0.20, it is indicated BI portion is to meet minimum requirement 1 in the board of commissioners. BI narrow rate is 0 to 0.71 while variability SD is 0.08. BGD (Board Gender Diversity) averages 0.12, showing that female board participation remains low. The narrow range of BGD is 0.00 to 0.67, and the variability SD is 0.13. BSS (Board Specific Skills) has an average of 0.49, which shows that nearly half of the board members possess relevant skills. This is crucial to ensure the board has adequate capabilities to address sustainability issues. The narrow range of BSS is 0.00 to 1, and the variability SD is 0.23.

Model Testing

The purpose of model testing is to choose the best model for this research. Three models are used in panel data regression analysis: the common effect model, the fixed effect model, and the random effect model. This study uses the Chow Test to choose between the common effect and fixed effect models, and the Hausman Test to decide between the fixed effect and random effect models.

Table 3. Chow Test

Dependent Variable	Chi-Square	Probability	Conclusion
SR	315.003116	0.0000	Ho Rejected, Fixed Effect Model is chosen.

The Chow test is carried out, and the result shows that the probability value of the cross-section chi-square for SR is 0.00 < 0.05. Ho is rejected, and the chosen model is the Fixed Effect. Since the Chow test selected the Fixed Effect model, the next step is to perform the Hausman test to compare the Fixed Effect model with the Random Effect model.

Hausman Test

Table 4. Hausman Test

Dependent Variable	Chi-Square Statistic	Probability	Conclusion
SR	16.896134	0.0312	Ho Rejected; Fixed Effect Model is chosen.

The Hausman test results show that the probability value for the test cross-section random (SR) is 0.03, which is less than $\alpha = 0.05$. Therefore, the null hypothesis (H_0) is rejected, and the chosen model is the fixed-effects model.

F-Test

Table 5. The Result of the F-test

Test Effect	P-Value	Hypothesis	Conclusion
SR	0.000000	Ho Rejected	Has a significant effect

The F-test is carried out to determine whether independent variables in a regression model collectively affect the dependent variable. The F-test's probability value (p-value) for the model is 0.00, which is less than $\alpha = 0.05$, which means that the hypothesis (Ho) is rejected. This means that at least one independent variable affects the dependent variable. It can be concluded that the regression equation is valid and suitable for use in this study.

Goodness of Fit Test

Table 6. The Result of the Goodness of Fit Test

Dependent Variable	Model	R-Squared	Adjusted R-Squared
SR	Prob (F-statistic)	0.991782	0.987135

The goodness of fit assesses how well observed data align with an expected distribution or model. The coefficient of determination for the dependent variable using SR shows an Adjusted R-squared value of 0.9871 or 98.71%. This means that 98.71% of the variation in the dependent variable can be explained by all the independent variables, while the remaining 1.29% is explained by other variables not included in this study.

Regression Results

Table 7. Regression Analysis Results

Variable	Coefficient	Std. Error	Prob.	Description
C	3.551256	6.369498	0.5779	-
BS	-0.663188	0.092466	0.0000	Negatively Significant
BI	1.119979	1.846171	0.5449	Not Significant
BGD	7.468498	2.343336	0.0017	Positively Significant
BSS	1.535632	0.821377	0.0633	Not Significant
FS	0.67035	0.933936	0.4739	Not Significant
PRO	3.508185	1.455436	0.0170	Positively Significant
LEV	-2.55198	0.83857	0.0027	Negatively Significant
FA	6.235047	1.402124	0.0000	Positively Significant

Based on Table 7, the regression results examine the effect of board characteristics and skills on Sustainability Reporting (SR) in the non-financial sector of companies in Indonesia. Board Size with a probability value of 0.0000 and a coefficient value of -0.6631 indicates a statistically negative and significant effect on sustainability reporting; H1 is accepted. This suggests that a smaller board size with appropriate composition is preferable when a larger board size does not guarantee increased attention to sustainability or an enhanced ability to

gather diverse inputs. The factor of control is important when there is too variety of members on the board, which will cause a decrease in the efficiency of decision making. The results align with previous studies that board size has a negative effect on Sustainability Reporting Githaiga, 2023; Kwarteng, 2023; Umar, ; by (W. Ho, N. Gultom, and S. Susela et al. 2024).

Board Independence with a probability value of 0.5449 and a coefficient value of 1.1199 mean H2 is rejected. Based on the average value of 0.2 in the statistics, it is merely to fulfill the requirement of BI from regulatory requirements, independent directors are generally expected to serve the interests of various stakeholders (Pradana et al., 2024). One possible explanation is the cost associated with disclosing sustainability-related information to the company's owners (Jibril et al., 2024). When a company discloses a large amount of sustainability-related information in reporting to engage with stakeholders, it may disadvantage shareholders (Nuhu & Alam, 2024). In this case, independent directors may prioritize their relationship with shareholders over other stakeholders. Their independence is not fully exercised due to shareholder influence, weakening their professional judgment on sustainability activities and information disclosure. The results align with previous studies that board independence does not affect Sustainability Reporting Alta'any (2024); P. Yadav (2023); (Disli et al., 2022).

Board Gender Diversity with a probability value of 0.0017 and a coefficient value of 7.4684 has a positive and significant effect on sustainability reporting, meaning H3 is accepted. The findings show that the presence of women on the R members with management education tends to focus more on short-term profitable projects, and often, environmental and ethical business-related projects are less emphasized as they do not provide immediate benefits. The varying levels of education among board members can lead to different perspectives on issues, resulting in more innovative problem-solving approaches. These results align with previous studies ' specific skills with no significant effect on Sustainability Reporting (W. Ho, N. Gultom, and S. Susela et al. 2024; Hamoudah (2024); (Andreas & Chang, 2024).

The control variable firm size has found no effect on SR, which aligns with previous studies (W.Ho, N. Gultom, S.Susela, et al. 2024; U. Umar, E. Firmansyah, M. Danlami, et al. 2024; Hoyos Giraldo (2024), profitability has a positive and significant effect on SR, as supported by previous studies, Qudah (2024); Umar, Umar Habibu Firmansyah, Egi Arvian Danlami, Muhammad Rabiu Al-Faryan, Mamdouh Abdulaziz Saleh 2024). Leverage resulted in a negative and significant effect on SR, which also aligns with previous research, Ho (2024); Singhania (2024); H. Abdelgawad, G. Liu 2024), and the last variable, firm age, was found positive and significant on SR, is also supported by previous research, Githaiga (2023); Kumar (2024); (Erin & Ackers, 2024).

Conclusion

This research provides crucial insights for companies and regulators aiming to enhance the quality of sustainability reporting. The significant negative effect of board size on sustainability reporting suggests that firms should optimize their board composition to ensure effective governance rather than merely increasing the number of board members. Regulators should reevaluate the requirements for board independence, considering that compliance alone may not bolster the quality of sustainability disclosures. The positive impact of board gender

diversity indicates that companies should prioritize gender-inclusive practices, recognizing that diverse perspectives contribute to better stakeholder engagement and transparency. Additionally, the findings highlight the need for companies to focus on the qualifications of board members beyond formal education, particularly in family-owned firms. Regulators and corporate leaders can utilize these findings to implement policies and strategies that promote more effective governance structures and improve stakeholder trust through enhanced sustainability reporting practices.

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