

## The Quality of Sustainability Reporting by Infrastructure Sector Companies Listed on the Indonesia Stock Exchange for the 2020–2024 Period

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### ABSTRACT

This study aims to investigate the quality of sustainability reporting of infrastructure sector companies listed on the Indonesia Stock Exchange for the period 2020-2024. The sample consisted of 6 companies from the infrastructure sector (out of 70 companies) chosen by purposive sampling, based on consistency and availability of sustainability reports during the observation period. The degree of compliance with disclosure requirements was quantified using dichotomous scoring. The findings indicate a steady improvement in the quality of sustainability reporting, with the total ESG compliance score reaching 54.31%. The average compliance score rose from 39.35% in 2020 to 67.44% in 2024. The main results show that environmental disclosure significantly improved after the adoption of GRI Standards 2021, while governance reached the highest level of compliance, indicating a change in corporate transparency and responsibility.

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## **INTRODUCTION**

Sustainability has become a key driver of transformation in international business practices, as stakeholders increasingly demand corporate responsibility for the economic, social, and environmental impacts of its operations. The company is no longer only oriented towards achieving profits, but is also required to maintain a balance of the triple bottom line, namely financial, ecological, and social aspects. In this context, sustainability reports are an important instrument to transparently communicate environmental, social, and governance (ESG) commitments, strategies, and achievements to stakeholders. Manurung et al. (2025) emphasized that sustainability reporting has a strategic function as a corporate communication medium in demonstrating sustainability accountability, while global trends also show that sustainability reporting continues to move towards more formal and standardized practices.

Comprehensive ESG disclosure reflects a company's commitment to responsible and sustainable economic growth. Wulandari and Istiqomah (2024) explained that ESG disclosure shows the seriousness of companies in carrying out their responsibilities to the environment and society, while Sany et al. (2024) found that ESG disclosure can increase transparency and investor trust so as to contribute to increasing company value. However, Astari et al. (2023) emphasized that ESG implementation can also incur additional operational costs that are not always in line with the goal of maximizing company value in the short term. Therefore, the effectiveness of ESG is determined not only by the existence of sustainability reports, but also by the quality of disclosures that companies produce.

In an empirical context, the results of previous research still show inconsistencies. Xaviera and Rahman (2023) found that ESG has a negative effect on company value, while Sany et al. (2024) obtained evidence that ESG has a positive effect. Meanwhile, Wulandari and Istiqomah (2024) show that ESG does not have a significant effect on company value. In the infrastructure sector, Anief, Purnomo, and Prawira (2025) also found that ESG disclosure in infrastructure sector companies listed on the Indonesia Stock Exchange for the 2020–2023 period did not show a consistent positive influence on company value. On the other hand, Valdi (2024) shows that the quality of material topic disclosure in infrastructure sector companies' sustainability reports for the 2019–2022 period is uneven, although there has been improvement after 2020. These inconsistencies and findings suggest that the more important issue to examine is not just the impact of ESG, but how the quality of ESG disclosure itself develops in practice

In Indonesia, the urgency of this research is getting stronger because sustainability reporting has obtained a regulatory basis through POJK No. 51/POJK.03/2017 which requires issuers and public companies to prepare sustainability reports. The implementation of the GRI Standards 2021 effective from 2023 further emphasizes the need for more material, measurable, and impact-based disclosure. This is very relevant for the infrastructure sector, considering that this sector has a great contribution to national economic development as well as being closely related to energy issues, resource use, emissions, and social impacts. In the draft article, it is stated that the infrastructure sector contributes around 10–15% to GDP and accounts for around 20% of the emissions of the non-transport sector, so the quality of sustainability reporting in this sector needs serious attention from regulators, investors, and company management

Based on this description, this study aims to analyze the level of compliance with ESG disclosures based on GRI Standards 2021 in the sustainability reports of infrastructure sector companies listed on the Indonesia Stock Exchange during the 2020–2024 period. This study seeks to fill the gap in previous research that still focuses more on the relationship between ESG and corporate value, while longitudinal studies on the quality of ESG disclosure based on the latest standards in the infrastructure sector are still limited. By using a quantitative approach through content analysis, this study is expected to produce a longitudinal map of ESG compliance in the infrastructure sector in Indonesia that can be used as a reference for regulators in evaluating the effectiveness of policies, for investors in assessing the quality of company transparency, and for companies in strengthening more substantive sustainability reporting practices.

## LITERATURE REVIEW

### *Stakeholder Theory*

The stakeholder theory was first proposed by R. Edward Freeman in 1984 in his work *Strategic Management: A Stakeholder Approach*. This theory states that companies have responsibilities not only to shareholders, but also to all stakeholders involved or affected by the company's activities, including investors, employees, customers, suppliers, governments, and the surrounding community (Freeman, 1984).

In the context of sustainability reporting, stakeholder theory asserts that all stakeholders have the right to receive information about how the company's organizational activities contribute to the environment and the surrounding community (Dahlia et al., 2024). The efforts made by the company to maintain relationships with stakeholders are manifested through the issuance of sustainability reports. If a company ignores the interests of its stakeholders, it can damage the company's public image and ultimately negatively affect the company's value (Astari et al., 2023). Therefore, high-quality sustainability reporting is an essential strategy in building harmonious relationships with all stakeholders.

### ***Environmental, Social, and Governance Theory***

Environmental, Social, and Governance (ESG) is a non-financial performance framework that includes three main aspects: environmental, social, and governance. This framework helps investors and potential stakeholders to assess the company's contribution to their concerns in the external environment (Sany et al., 2024). ESG has broader implications than Corporate Social Responsibility (CSR) because it includes environmental and governance aspects in a more structured manner.

Environmental performance measures how a company manages its impact on the natural environment, including efforts to reduce carbon emissions, water use, waste management, energy consumption, and its role in addressing climate change. Social performance evaluates a company's relationships with employees, customers, suppliers, and communities, including employment practices, diversity and inclusion, customer satisfaction, community engagement, and human rights. Meanwhile, governance performance focuses on the company's internal systems and structures, such as the diversity of the board of directors, executive compensation, transparency, business ethics, and shareholder rights (Kumar, 2025).

Investors looking for long-term prospects compare companies based on their responses to ESG considerations as important non-financial factors (Lunawat & Lunawat, 2022). Empirical research shows that high ESG performance is positively correlated with lower capital costs, easier access to financing, and corporate resilience in the face of systemic risks (Friede et al., 2015 in Lasmana et al., 2023).

### ***Legitimacy Theory***

The legitimacy theory explains that a company seeks to gain and maintain legitimacy from society by ensuring that its operational activities are in line with applicable social norms, values, and expectations. Legitimacy is seen as a vital strategic resource for organizational survival (Suchman, 1995 in Lasmana et al., 2023).

Companies in the infrastructure sector are often in the public spotlight due to the environmental impact their major projects cause, such as construction emissions, land conversion, and disruption to local communities. Therefore, the disclosure of sustainability information through GRI Standards-based reports is a company's strategy to demonstrate compliance with regulations and social-environmental responsibility. The implementation of GRI Standards 300 (environmental aspects), especially the disclosure of emissions, energy, and waste, is a form of the company's efforts to maintain legitimacy in the eyes of the public and regulators.

### ***Sustainability Reporting Theory***

Sustainability reporting is a form of corporate reporting that presents information about the economic, social, and environmental impacts of an organization's operational activities as a form of accountability to stakeholders. This reporting is growing in line with the increasing demands for transparency and corporate social responsibility in supporting sustainable development (Hidayat & Afifah, 2022). Various studies state that sustainability reports function as a means of strategic communication that is able to reduce information asymmetry, increase investor confidence, and strengthen the company's legitimacy in the eyes of the public. In practice, sustainability reporting is not only oriented towards regulatory compliance, but also part of a company's strategy in managing long-term sustainability risks and opportunities (Hidayat & Afifah, 2022).

The most widely used reporting framework is the Global Reporting Initiative (GRI) Standards, as it provides comprehensive and structured guidance for the disclosure of sustainability aspects. GRI enables companies to identify material issues and reveal significant impacts through Universal Standards and Topic-Specific Standards, including environmental, social, and economic aspects (Ayu et al., 2024). However, the quality of disclosure still varies, depending on management commitments, internal measurement systems, and the capacity of the company's resources.

From a theoretical perspective, sustainability reporting is widely studied using legitimacy theory, stakeholder theory, and institutional theory. Empirical research reveals that although the adoption of sustainability reporting is becoming more widespread, there are still challenges in the form of symbolic disclosures (greenwashing), data inconsistencies, and limitations in measuring real sustainability impacts (Lasmana et al., 2023). This shows that the success of sustainability reporting is not only determined by the use of reporting standards, but also by the quality of implementation and integration of sustainability in the company's overall strategy.

### ***Global Reporting Initiative (GRI) Theory***

The Global Reporting Initiative (GRI) Standards are widely used international standards in the preparation of sustainability reports, designed to help organizations disclose economic, social, and environmental impacts in a transparent and structured manner. The GRI Standards 2021, which came into effect on January 1, 2023, bring significant changes in the form of an emphasis on a more tangible and measurable concept of impact, replacing the previous approach that was more performance-oriented (Farah et al., 2024).

GRI Standards are designed to apply across sectors and organizational sizes, with the goal of improving the quality, consistency, and comparability of sustainability information across companies. This standard emphasizes the principles of materiality, stakeholder involvement, and a balance between positive and negative information so that sustainability reports can objectively reflect the company's performance (Farah et al., 2024). GRI 2021 consists of three main series: GRI Universal Standards (GRI 1, 2, 3), GRI Sector Standards

(industry only), and GRI Topic Standards which cover environmental (GRI 300-series), social (GRI 400-series), and economic (GRI 200-series) aspects.

The implementation of GRI Standards in sustainability reporting plays an important role in encouraging accountability and sustainable business practices. However, various studies show that the level of GRI implementation still varies, both in terms of completeness of disclosure and information quality. Some companies tend to implement GRI formally without being supported by substantial impact management, so the resulting reports are more symbolic (Barus et al., 2024). The effectiveness of the GRI Standards is highly dependent on management commitment, reliable measurement systems, and the integration of sustainability into the company's overall operational strategy.

### ***Improving the Quality of Sustainability Reporting for the 2020–2024 Period***

The quality of sustainability reporting is the level of completeness and consistency of ESG information disclosure presented by companies based on applicable international standards, in this case the GRI Standards 2021. According to the theory of legitimacy, companies seek to gain and maintain social acceptance by demonstrating that their operational activities are in line with societal norms, values, and expectations (Suchman, 1995 in Lasmana et al., 2023). One of the main mechanisms to maintain legitimacy is through the issuance of quality sustainability reports, especially in sectors that have a major impact on the environment and society such as infrastructure. POJK Regulation No. 51/POJK.03/2017 which requires issuers to prepare sustainability reports, combined with the effective enactment of the GRI Standards 2021 in 2023, strengthens regulatory and institutional pressure for companies to improve the quality of ESG disclosures over time.

Previous research supports this argument. Barus et al. (2024) show that the adoption of the GRI standard update drives a significant increase in the sustainability disclosure of public companies, while Farah et al. (2024) find that the transition to the GRI Standards 2021 emphasizes the obligation of more measurable impact-based disclosure. On the other hand, Lasmana et al. (2023) emphasized that the higher the pressure from stakeholders and regulators, the more consistent the company will be in improving the quality of its sustainability reporting. Therefore, a company's opportunity to improve its ESG disclosure compliance score correlates positively with the strength of regulatory pressures and the need for public legitimacy. Based on this description, the following hypotheses are proposed in this study:

H1: *The quality of sustainability reporting of infrastructure sector companies listed on the Indonesia Stock Exchange has improved during the 2020–2024 period.*

### ***Improving the Quality of Sustainability Reporting for the 2020–2024 Period***

The environmental, social, and governance (ESG) dimension has different disclosure characteristics, both in terms of measurement complexity, standard maturity, and the level of regulatory pressure received by the company. The governance dimension tends to be easier to quantify because the indicators relate to the company's formal structure and mechanisms, such as board composition and disclosure policies (Kumar, 2025). In contrast, the environmental and social dimensions require more complex measurement systems, deeper operational commitments, and greater internal capacity to produce reliable and verified data (Ayu et al., 2024). According to stakeholder theory, companies tend to prioritize disclosures that are considered most important and easiest to respond to by their key stakeholders, so that the development of disclosure quality per dimension does not take place evenly (Freeman, 1984 in Dahlia et al., 2024).

Previous research corroborates this argument. Farah et al. (2024) found that the governance aspect develops faster in GRI compliance than environmental and social, because it is more closely related to capital market regulations and corporate governance that are already running. Meanwhile, Valdi (2024) shows that the quality of disclosure of material topics in infrastructure sector sustainability reports is not evenly distributed across the spectrum, with the social dimension still lagging behind. Barus et al. (2024) also confirmed that the transition to GRI 2021 has driven the largest increase in environmental aspects, but the social dimension still shows slower growth. As a result, there were significant differences in the level of compliance of disclosures between ESG dimensions during the study period. Based on this description, the following hypotheses are proposed in this study:

H2: *There is a difference in the level of disclosure compliance on the environmental, social, and governance dimensions in the sustainability reports of infrastructure sector companies listed on the Indonesia Stock Exchange for the period 2020–2024.*

### **METHODOLOGY**

This study uses a descriptive quantitative approach with a content analysis method. Content analysis is a research technique used to convert qualitative information in documents into quantitative data through a coding system based on a predetermined instrument (Krippendorff, 2018). In this study, content analysis was applied to the sustainability report of the sample company using the GRI Standards 2021 instrument as a disclosure checklist.

### ***Population and Sample***

The population in this study is all infrastructure sector companies listed on the Indonesia Stock Exchange (IDX) for the 2020-2024 period, totaling 70 companies. The sampling technique uses the purposive sampling method with the following criteria: (1) Infrastructure sector companies listed on the Indonesia Stock Exchange during the 2020–2024 period; and (2) The Company consistently publishes a Sustainability Report for the period 2020–2024 which can be accessed through the company's official website or the Indonesia Stock Exchange website. Based on these two criteria, a sample of 6 companies was obtained, namely: ADHI (Adhi Karya), BALI (Bali Towerindo Sentra), JSMR (Jasa Marga), PTPP (PP Persero), TBIG (Tower Bersama Infrastructure), and WSKT (Waskita Karya). The total analysis unit is 30 sustainability reports (6 companies × 5 years).

### ***Variables and Measurements***

The single variable in this study is Sustainability Reporting Quality. Measurements were made using the disclosure index adopted from the GRI Standards 2021. The scoring process is carried out in a dichotomous manner: A score of 1 is given if the company discloses the indicators required by GRI 2021 and a score of 0 is given if the company does not disclose these indicators. The formula for calculating the Sustainability Reporting Index is as follows:

$$SRI = \frac{\sum X_i}{N}$$

Where:

- SRI: Sustainability Reporting Index
- $\sum x$ : Number of items disclosed by the company
- N: Total expected disclosure items according to the 2021 GRI Standard

Score categorization is carried out based on the level of compliance:  $\geq 75\%$  is categorized as Low Risk; 50%-74% are categorized as Medium Risk; and  $< 50\%$  are categorized as High Risk. This categorization framework is adopted from ESG rating practices commonly used in academic literature and industry practices (Barus et al., 2024).

### ***Data Analysis Techniques***

Data analysis was conducted in a longitudinal descriptive manner to identify patterns and trends of ESG compliance during the study period. The coding process is carried out by two independent coders to ensure inter-rater reliability. The coding results are then quantitatively analyzed to produce ESG index scores per company, per dimension (E, S, G), and per year.

**RESEARCH RESULT AND DISCUSSION**

***Sustainability Report Compliance Rate***

Based on the results of data processing on 6 infrastructure sector issuers, this study found that there was a strong adaptation trend of GRI Standards 2021 in a sample of infrastructure companies on the Indonesia Stock Exchange, with an increase in ESG compliance of 72% (39.35%→67.44%), but an average of 54.31% is still medium risk implication of the POJK 51/2017 regulatory gap.

**Table 1. Infrastructure Sector Composite ESG Calculation (GRI Standard 2021)**

| Combined ESG Calculation - Infrastructure Sector (Gri Standard 2021) |            |            |            |            |            |            |            |            |            |            |            |            |            |            |             |            |            |            |             |            |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|-------------|------------|
| Comp any   | 2020       |            |            |            | 2021       |            |            |            | 2022       |            |            |            | 2023       |            |             |            | 2024       |            |             |            |
| Cod e  | E          | S          | G          | ESG        | E          | S          | G          | ESG        | E          | S          | G          | ESG        | E          | S          | G           | ESG        | E          | S          | G           | ESG        |
| 1 ADHI   | 19%        | 28%        | 50%        | 32%        | 19%        | 28%        | 50%        | 32%        | 45%        | 42%        | 70%        | 52%        | 81%        | 58%        | 100%        | 80%        | 81%        | 58%        | 100%        | 80%        |
| 2 BALI   | 19%        | 19%        | 87%        | 42%        | 19%        | 19%        | 87%        | 42%        | 32%        | 39%        | 100%       | 57%        | 35%        | 39%        | 100%        | 58%        | 71%        | 52%        | 100%        | 74%        |
| 3 JSMR   | 3%         | 28%        | 70%        | 34%        | 3%         | 28%        | 77%        | 36%        | 48%        | 28%        | 100%       | 59%        | 52%        | 39%        | 100%        | 64%        | 19%        | 64%        | 100%        | 61%        |
| 4 PTPP   | 19%        | 58%        | 60%        | 46%        | 19%        | 58%        | 60%        | 46%        | 81%        | 44%        | 100%       | 75%        | 81%        | 44%        | 100%        | 75%        | 81%        | 44%        | 100%        | 75%        |
| 5 TBIG   | 16%        | 31%        | 60%        | 36%        | 45%        | 31%        | 60%        | 45%        | 45%        | 47%        | 100%       | 64%        | 45%        | 47%        | 100%        | 64%        | 45%        | 47%        | 100%        | 64%        |
| 6 WSKT   | 32%        | 36%        | 73%        | 47%        | 42%        | 36%        | 70%        | 49%        | 23%        | 11%        | 100%       | 45%        | 10%        | 28%        | 100%        | 46%        | 16%        | 36%        | 100%        | 51%        |
| <b>AVERAGE</b>   | <b>18%</b> | <b>33%</b> | <b>67%</b> | <b>39%</b> | <b>25%</b> | <b>33%</b> | <b>67%</b> | <b>42%</b> | <b>46%</b> | <b>35%</b> | <b>95%</b> | <b>59%</b> | <b>51%</b> | <b>43%</b> | <b>100%</b> | <b>64%</b> | <b>52%</b> | <b>50%</b> | <b>100%</b> | <b>67%</b> |

***Combined ESG Score per Company***

Table 2 presents the results of the calculation of the combined ESG score (environmental + social + governance) per company for the period 2020–2024 based on the GRI Standards 2021.

**Table 2. Infrastructure Sector Composite ESG Calculation (GRI Standard 2021)**

| Compliance Level Table Per Company |        |        |        |        |        |                         |                      |
|------------------------------------|--------|--------|--------|--------|--------|-------------------------|----------------------|
| No. Company                        | 2020   | 2021   | 2022   | 2023   | 2024   | Average ESG Score Rasio | Category             |
| 1 ADHI                             | 32,43% | 32,43% | 32,33% | 79,67% | 79,67% | 35,51%                  | MEDIUM (Medium Risk) |
| 2 BALI                             | 41,67% | 41,67% | 57,00% | 58,00% | 74,33% | 54,53%                  | MEDIUM (Medium Risk) |
| 3 JSMR                             | 33,67% | 36,00% | 58,67% | 63,67% | 61,00% | 50,60%                  | MEDIUM (Medium Risk) |
| 4 PTPP                             | 45,67% | 45,67% | 75,00% | 75,00% | 75,00% | 65,27%                  | MEDIUM (Medium Risk) |
| 5 TBIG                             | 35,67% | 45,33% | 64,00% | 64,00% | 64,00% | 54,60%                  | MEDIUM (Medium Risk) |

The overall trend shows a consistent increase, with the sector average increasing from 39.35% in 2020 to 67.44% in 2024.

### Analysis of ESG Trends by Dimension

During the period 2020 to 2024, the infrastructure sector represented by six large companies showed quite clear developments in the application of ESG principles based on the GRI Standards 2021. Trend analysis per dimension reveals different patterns.

The governance aspect is the dimension that reaches maturity the fastest. In 2020, the governance score was already relatively high (67%), and in the next four years it increased to close to 100%. This shows that companies in the infrastructure sector are increasingly compliant with regulations, transparent, and implementing good governance practices (GCG). Governance is a solid foundation so that investors and stakeholders can have more confidence in the company's credibility. This finding is in line with the research of Farah et al (2024) which states that governance aspects tend to be easier to quantify and verify, so that companies can achieve compliance faster in this dimension.

The environmental aspect has increased significantly. From an average figure of only 18% in 2020, the environmental score will increase to 52% in 2024. This surge signals greater awareness of sustainability, energy efficiency, waste management, and environmental impacts of infrastructure projects. However, the new increase is significant after 2022 coinciding with the commencement of the 2021 GRI Standards so it can be said that attention to the environment is still relatively new compared to governance. This is consistent with the findings of Barus et al. (2024) which show that the transition to GRI 2021 encourages a significant increase in the disclosure of environmental aspects, especially GHG emissions and energy efficiency.

The social aspect is the slowest developing dimension. From an average of 33% in 2020, the social score will only rise to 50% in 2024. This means that despite improvements, companies still face challenges in terms of community relations, workforce welfare, diversity and inclusion, and measurable social responsibility programs. Some companies even show sharp fluctuations, for example WSKT which had achieved a high social score in 2022, but dropped drastically in 2024. This indicates that social commitment is not consistent and is still influenced by external factors (ongoing projects, public issues) and internal factors (limited social reporting capacity).

### Analysis per Company

**Table 3. Company Analysis per Year**

| TABEL COMPLIANCE LEVEL PER PERUSAHAAN |            |       |       |        |       |       |                     |                        |
|---------------------------------------|------------|-------|-------|--------|-------|-------|---------------------|------------------------|
| No                                    | Perusahaan | 2020  | 2021  | 2022   | 2023  | 2024  | Rata-rata ESG Score | Kategori Risiko        |
| 1                                     | ADHI       | 32,4% | 32,4% | 52,3%  | 79,6% | 79,6% | 55,31%              | MEDIUM (Risiko Sedang) |
| 2                                     | BALI       | 41,6% | 41,6% | 57,0%  | 58,0% | 74,3% | 54,53%              | MEDIUM (Risiko Sedang) |
| 3                                     | JSMR       | 33,6% | 36,0% | 58,6%  | 63,6% | 61,0% | 50,60%              | MEDIUM (Risiko Sedang) |
| 4                                     | PIPP       | 45,6% | 45,6% | 75,0%  | 75,0% | 75,0% | 63,27%              | MEDIUM (Risiko Sedang) |
| 5                                     | TBIG       | 35,6% | 45,3% | 64,0%  | 64,0% | 64,0% | 54,60%              | MEDIUM (Risiko Sedang) |
| 6                                     | WSKT       | 47,0% | 49,3% | 44,6%  | 46,0% | 50,6% | 47,53%              | HIGH (Risiko Tinggi)   |
| RATA-RATA                             |            | 39,3% | 41,7% | 58,61% | 64,3% | 67,4% | 54,31%              | MEDIUM (Risiko Sedang) |

ADHI started with a low score, only 32.45% in 2020 and 2021. However, the company experienced a huge surge after 2022, reaching 79.67% in 2023 and surviving in 2024. With an average of 55.31%, ADHI is in the medium risk category. ADHI's journey has shown a drastic transformation, especially in terms of governance and the environment, so that it is an example of a company that has succeeded in improving ESG compliance in a relatively short time.

BALI shows a more stable pattern. The initial score was 41.67% in 2020–2021, then gradually increased to reach 74.33% in 2024. The average is 54.53% with a medium risk category. The company has shown consistent improvement, especially in the social aspect, so that even though it did not jump dramatically like ADHI, BALI still showed a positive and planned development direction.

JSMR had an initial score of 33.67% in 2020, rising to 63.67% in 2023, but dropping slightly to 61% in 2024. An average of 50.60%, medium risk category. The company is quite strong in governance, but the environmental aspect—especially the disclosure of toll road operational emissions—is still a weakness. Score fluctuations indicate that JSMR is not yet fully stable in ESG implementation.

PTPP is the company with the most consistent and high scores. The initial score was 45.67% in 2020, then jumped to 75% since 2022 and lasted until 2024. The average is 63.27%, medium risk category. PTPP became the company with the best ESG compliance among the six sample companies, showing a good balance between environmental, social, and governance aspects. This reflects management's consistent commitment to sustainability reporting as conveyed in the 2023 PTPP Sustainability Report.

TBIG started with a score of 35.67% in 2020, rose to 64% in 2022, and stagnated until 2024. The average is 54.60%, medium risk category. The company showed a good improvement in the early period, but stopped growing after 2022. This indicates that there are limitations in developing further ESG programs, so additional encouragement is needed so as not to lag behind other infrastructure companies.

WSKT had a fairly high initial score, 47% in 2020, but it declined to 44.67% in 2022 and only rose slightly to 50.67% in 2024. With an average of 47.53%, WSKT is the only company with a High risk category. Major fluctuations mainly occurred in the social aspect, which was greatly influenced by corporate financial issues and internal restructuring. WSKT needs to make serious improvements in its ESG data collection system, reporting team capacity, and top management commitment in order to get out of the high-risk category.

## **CONCLUSIONS AND RECOMMENDATIONS**

This study evaluates the quality of sustainability reporting of six infrastructure sector companies listed on the Indonesia Stock Exchange (ADHI, BALI, JSMR, PTPP, TBIG, and WSKT) during the 2020–2024 period based on the GRI Standards 2021. Based on the results of content analysis with a dichotomous scoring system, there are several main conclusions:

- a. First, there is a significant and consistent trend of increasing ESG compliance during the study period. The average ESG score of the sector increased from 39.35% in 2020 to 67.44% in 2024, with an average overall score of 54.31% (Medium Risk category). This improvement shows that the POJK 51/2017 regulation and the adoption of the GRI Standards 2021 are effectively encouraging infrastructure companies to improve the quality of their ESG reporting.
- b. Second, the governance aspect is the most mature and fastest developing dimension, reaching a compliance level close to 100% by the end of the research period. This reflects the strong regulatory pressures and market mechanisms in encouraging transparency in the governance of Indonesian infrastructure companies.
- c. Third, the environmental aspect showed the most dramatic improvement after the implementation of the GRI Standards 2021, with the average environmental score more than tripling from 2020 to 2024. This indicates that the adoption of the new standard directly encourages an improvement in the quality of environmental disclosure.
- d. Fourth, the social aspect remains the weak point of the infrastructure sector, with the lowest average score and the slowest growth. The social dimension requires special attention from company management, especially related to the disclosure of workforce welfare, diversity, and community impact.
- e. Fifth, there is a significant gap between companies. PTPP and ADHI are the companies with the highest and most consistent ESG compliance, while WSKT is the only company in the High Risk category (average 47.53%), indicating that management commitment and organizational capacity are the main determinants of the quality of ESG reporting.
- f. Overall, Indonesia's infrastructure sector is in a positive transition phase towards sustainable business practices, but it still requires substantial efforts especially in the social dimension—to achieve truly balanced and meaningful ESG reporting for all stakeholders.

## **ADVANCED RESEARCH**

Based on the findings and limitations of this study, several suggestions are put forward for further research. First, future research could expand the sample to all infrastructure sector companies listed on the Indonesia Stock Exchange or compare the quality of ESG reporting across industry sectors (e.g., energy, banking, and manufacturing) to get a more comprehensive picture of the sustainability reporting landscape in Indonesia.

Second, the use of a more nuanced scoring system, such as a continuous scale (0-3) that differentiates the depth of disclosure, will result in more accurate reporting quality measurements. Further research can also integrate text quality analysis to assess the substance, specificity, and verifiability of the information disclosed.

Third, further research can examine factors that affect the quality of ESG reporting, such as company size, profitability, institutional ownership, quality of the board of directors, and pressure from external stakeholders. This analysis will help identify the main drivers of the quality of sustainability reporting in Indonesia.

Fourth, comparative research between state-owned companies and private companies in terms of the quality of ESG reporting will provide valuable insights, considering that most of the sample companies in this study are SOEs that have additional obligations and pressures related to sustainability reporting.

Fifth, further research can explore the impact of ESG reporting quality on financial and non-financial variables, such as capital costs, access to green financing, company reputation, and market value, to provide empirical evidence on the real benefits of sustainability reporting for infrastructure companies in Indonesia.

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