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EXAMINING BOARD CHARACTERISTICS AND INTEGRATED REPORTING QUALITY: INSIGHT FROM ESG-FOCUSED FIRMS IN INDONESIA

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ABSTRACT

This research aims to look at Indonesian firms and see whether there's a connection between board traits and the quality of their integrated reporting. This study analyzes 52 listed firms from the environmental, social, and governance (ESG) index between 2019 and 2022 using linear regression with panel data to test its assumptions. The data was acquired from annual reports of Indonesian corporations. The acquired empirical data clearly shows that gender diversity appears to significantly improve the integrated reporting quality. Also noteworthy is that board size, independence, and CEO duality are not significantly related. This study has several practical implications in addition to its theoretical implications. Managers, shareholders, and policymakers should take note of these findings, as they are particularly relevant. Therefore, stakeholders should evaluate the precision of disclosure when deciding on the best reporting approach. A more accurate assessment of risk, less stock volatility, more long-term value for shareholders, and an improved company reputation are all outcomes of this. Corporate social responsibility and sustainability literature is lacking, which this article seeks to remedy. It fills a gap in the literature by providing more information about ESG company-specific integrated reporting and corporate governance. This study has important implications for professionals and practitioners who want to raise the bar on the quality of their integrated reports.

Keywords: *Board Characteristics, Integrated Reporting Quality, Gender Diversity, CEO Duality, Board Independence*

INTRODUCTION

More than just an accounting standard, Integrated reporting (IR) has emerged as a transformative approach to corporate reporting (Cooray et al., 2020; Hoque, 2017; Nishitani et al., 2021; Songini et al., 2023). Moving beyond traditional accounting standards to reflect a broader narrative about value creation over time (Dyczkowska et al., 2022; Sjödin et al., 2020). Integrated reporting incorporates various forms of capital, including financial, intellectual, human, relationship, social, natural, and manufactured capital, through the lens of integrated thinking. The goal is to improve the company's decision-making and resource allocation processes (Tiron-Tudor et al., 2020a). As a result of this change, reporting is now more complete and consolidated, rather than using the old disaggregated method. Improved knowledge of the business by shareholders is achieved by integrated reporting, which provides a single set of reports that incorporate both financial and non-financial information (Iredele, 2019).

Corporation boards play a more important role than ever before in today's world when ESG factors (environmental, social, and governance) are major factors in company and investment choices (Martiny et al., 2024; Truant et al., 2024). The integration of sustainability into corporate strategies and the quality of reporting on these initiatives have emerged as key drivers of corporate success and long-term value creation (Hristov et al., 2022; Nguyen & Kanbach, 2024). Indonesian firms are no exception, as they align with global trends to embed ESG principles into their operations and reporting.. This study explores the complex interplay between ESG-focused board traits and the efficacy of integrated reporting in Indonesian businesses. A key avenue for organizations to communicate their ESG commitments and outcomes to stakeholders is integrated reporting, which includes financial and non-financial performance data. Departing from these conditions, this research is considered important to do.

Theoretical and practical knowledge are both anticipated to be enhanced by this research. The results of an empirical study on how different board qualities affect integrated reporting quality will be presented in this study. Agency theory, which explains why managers should voluntarily provide information, is the foundational theory utilized in this study. The split between management and ownership introduces agency costs and conflicts caused by agents' self-serving behaviors (Fayad et al., 2022a). The findings of this research are expected to benefit multiple stakeholders, including policymakers, regulators, corporate managers, analysts, and academics in Indonesia. A more grounded knowledge of the factors and reasoning behind the switch to Integrated Reporting (IR) from more conventional yearly reporting would be beneficial for these categories, according to a realistic viewpoint. Within the context of Indonesian listed enterprises and their stakeholders, the study delves into the elements that impact the amount of IR. Additionally, the study's insights may inform regulatory changes in financial reporting in Indonesia, as (Lynch, 2010) has demonstrated a strong correlation between regulatory pressures and improvements in sustainability reporting. Finally, managers may find the study useful in enhancing their comprehension of the circumstances in which IR is most appropriate (Omran M et al., 2021).

According to (Masulis et al., 2012), the main roles of the board of directors are to provide advice and oversee operations. Hiring, firing, and rewarding managers are all part of the monitoring job, while offering advice on major strategic choices is the advising role. Creating wealth for shareholders and easing corporate decision-making processes depend on the directors' ability to effectively carry out their tasks. As a result, senior management's financial reporting practices may be affected by certain board characteristics. So, we're going to look at the features of a board that are essential for producing a high IRQ. Accordingly, we will investigate how factors like board independence, gender diversity, board size, and CEO duality affect IRQ. (Fayad et al., 2022b)

Table 1 Operational Definitions of Variables

Variable	Abbreviation	Definition	Measurement
Dependent Variable			
Integrated Reporting Quality	IRQ	Integrated reporting quality examined the overall quality of the integrated report by consulting the Integrated Reporting Scoreboard (IRS) developed by (Songini et al., 2022) That has eight elements (organizational overview and external environment, business model, risks and opportunities, strategy and resource allocation, governance, performance, outlook, and basis of presentation) as well as two fundamental concepts (Capitals and Value creation process)	Using a binary scoring system based on a scale of values between 0 and 5 for each element dan concept.
Independent Variable			
Board Size	BOA_SIZE	Board size calculating the overall count of directors who are actively serving on the board of directors. (Butar-Butar & Indrianto, 2024; Itan et al., 2024; Vitolla et al., 2020)	Total board of directors

CEO Duality	CEO_DUA	CEO duality serves as an indicator for whether the CEO holds the position of board chair. (Chouaibi et al., 2022; Tiron-Tudor et al., 2020b)	Dummy variable 1 if the CEO performs both roles (such as being a president and general manager) and 0 if the roles are separate.
Gender Diversity	GEN_DIV	Gender diversity measure by the proportion of women on the board (Butar-Butar et al., 2024; Gresia & Itan, n.d.)	Total female board of directors
Board Independence	BOA_IND	The board independence of a company is primarily determined by the number of directors who are independent and not affiliated with the company. (Qaderi et al., 2022)	Total independent board of directors

Source: Author

The nexus between board size and integrated reporting quality

One definition of board size is the sum of the board's executive and non-executive members (Itan et al., 2024) Being the primary organ of a company, the board exerts significant influence over management to carry out IRD due to its authority (Karina, 2021).The integration of different reports, whether required or optional, is positively impacted by board size, which also influences IR's voluntary adoption and integrated CSR's dissemination. Larger boards can handle integrated report preparation because they are composed of directors with greater experience and expertise, and they are essential to the integrated reporting process (Tiron-Tudor et al., 2020b). From an alternative perspective, a board with an excessive number of directors may be less effective in carrying out its responsibilities. The effectiveness of decision-making, coordination, and communication is hampered by a larger number of people seated at the board, making it more difficult for management to keep an eye on and regulate outcomes. As a result, disclosure may be of lower quality. (Ramadana et al., 2024) Assuming that the size of the board affects its efficacy, we consequently suggest that a larger board is associated with better integrated reporting.
H1: Board size is positively associated with the quality of integrated reporting.

The nexus between CEO duality and integrated reporting quality

One example of CEO duality in corporate governance is when a single person holds the twin roles of chairman of the board and chief executive officer (CEO). In a CEO duality structure, the chief executive officer also serves as the chairman of the board of directors (Voinea et al., 2022). Implications for sustainability reporting and corporate governance may be substantial when considering the correlation between double-role chief executive officers and the quality of integrated reports. In many cases, companies that avoid CEO duality and implement good governance practices tend to produce higher-quality and more informative integrated reports. This can enhance stakeholders' trust and support the company's reputation regarding sustainability and good governance (Cooray et al., 2020b). The second assumption will be articulated as follows, based on the discussion thus far, which suggests a relationship between CEO duality and integrated reporting quality:
H2: There is a significant relationship between CEO duality and integrated reporting quality

The nexus between board gender diversity and integrated reporting quality

The term "board gender diversity" refers to variations in the traits of board members. According to Maccoby and Jacklin (1978), there is a greater presence of gender diversity on the board when it comes to verbal skill and aggression. It is their contention that the female-dominated board will be unable to persuade the male-dominated board to increase the frequency of disclosures (Butar-Butar & Indrianto, 2024). There is a common belief that men and women use distinct moral reasoning while making decisions, with women displaying more protective attitudes and caring reasoning. Still, a minority group

needs at least three members to have an impact on the organization's actions; this rule of thumb applies to women's representation on the board (Tiron-Tudor et al., 2020b). The third assumption is that this hypothesis is supported by research showing that board gender diversity or cognitive diversity has a favorable and substantial impact on the degree of integrated reporting quality:
H3: Board gender diversity is positively associated with the quality of integrated reporting.

The nexus between board independence and integrated reporting quality

The number of independent directors, or those who do not have any financial or other ties to the corporation, is the primary indicator of the board's independence. The company's management choices are supervised and advised by these directors (Umar, 2022). More independent directors on boards improves the quality of board oversight and reduces agency expenses, according to agency theorists. By achieving their objectives, independent directors are more concerned about ensuring that the company runs as efficiently as possible (Omran M et al., 2021). Boards may be able to exert pressure on management to enhance the quality of company disclosures due to the growing number of independent boards or their prevalence (Machmuddah et al., 2023). The positive link between board independence and integrated reporting quality is stronger in ESG businesses with higher degrees of corporate social responsibility. Our research also shows that independent directors can improve integrated reporting and lessen information asymmetry. (Butar-Butar et al., 2024) therefore we hypothesis that:
H4: Board independence is positively associated with the quality of integrated reporting.

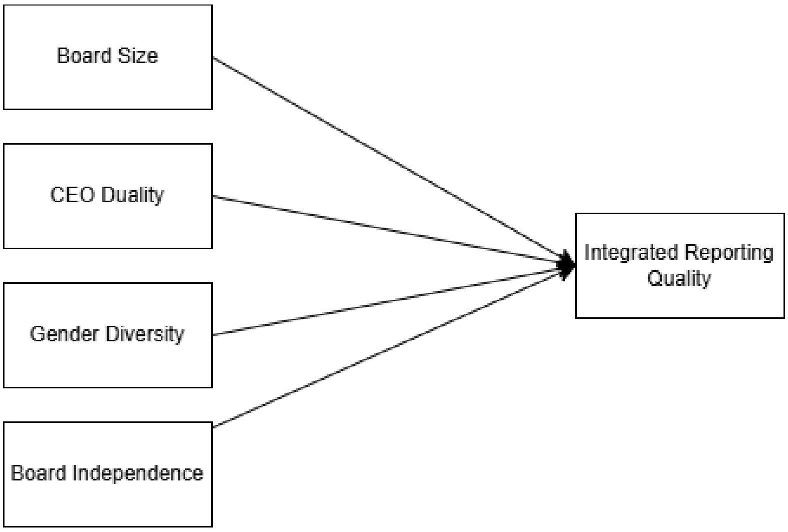

Figure 1 Research Framework

METHODS

In this part, the proposed techniques of empirical research, including the sample selection and reasoning behind it, are described in depth. This section also covers the procedure for estimating the model, variables, and the empirical model definition. A company's level of commitment and involvement with the ESG process impacted the sample selection. Our information was sourced consulting the Integrated Reporting Scoreboard (IRS) developed by (Songini et al., 2022) and other relevant data repositories, including annual reports. The time frame of 2019 to 2022 was opted for as it represents the latest available data, and prior to 2019, there were limited integrated reports. Observed from 2019 to 2022, the final sample consists of 52 Indonesian companies affiliated with ESG indices. Companies without complete data were removed from the sample after our data filtering process (27). As a result, 52 firms and 208 observations spanning 2019–2022, make up the final sample. Selected samples are summarized in Table 2.

Table 2 Sample Selection

Sample	Firms	Observations
Initial Sample	79	316
Less firms with incomplete data	(27)	(108)
Final Data	52	208

Source: Author

We chose to use linear regression as the proposed statistical analysis method to test the hypotheses. Therefore, our research model is as follows:

$$IRQ_t = \alpha + \beta_1 BOA\_SIZE + \beta_2 CEO\_DUA + \beta_3 GEN\_DIV + \beta_4 BOA\_IND + \varepsilon$$

ANALYSIS

Descriptive statistics of all research variables in this study can be found in Table 3.

Table 3 Descriptive Analysis

	N	Min	Max	Mean	Std. Dev
IRQ	208	0.7000	4.1000	2.4178	0.9091
BOA_SIZE	208	3.0000	13.0000	6.5288	2.5308
CEO_DUA	208	0.0000	1.0000	0.0913	0.2888
GEN_DIV	208	0.0000	0.6667	0.1915	0.1994
BOA_IND	208	0.0000	1.0000	0.1490	3.5699

Source: Author

According to the descriptive statistics provided above, the research sample consisted of 208 samples for each variable that was examined. The mean value of the Integrated Reporting Quality (IRQ) variable is 2.4178, with a standard deviation of 0.9091, and the maximum value is 4.100. Meanwhile, the lowest value is 0.7000. The Board Size variable (BOA_SIZE) has a mean of 6.5288, a standard deviation of 2.5308, and a range of values of 3.000 to 13.0000. The CEO Duality variable (CEO_DUA) has a mean of 0.0913, a standard deviation of 0.2888, and a range of values of 0.000 to 1.000. In terms of the Gender Diversity variable (GEN_DIV), the lowest value is 0.0000, the highest value is 0.6667, and the mean is 0.1915 with a standard deviation of 0.1994. The Board Independence variable (BOA_IND) has a mean of 0.1490, a standard deviation of 3.5699, a maximum value of 1.0000, and the minimal value of 0.0000.

Additionally, testing was conducted to determine the most suitable model for the investigation. The outcome of Hausman's test determines the distinction between a fixed and stochastic effect. The GLS estimator's consistency in a static model with aggregated cross-section time-series data has typically been assessed using a Hausman test.

Table 4 Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.057626	4	0.3983

Source: Author

As the probability value is less than 0.05, which is 0.3983, it can be inferred that the optimal model is REM. Therefore, this test yielded a substantial result for the data of the current study, thereby validating the application of random effect regression analysis. Thus, the random effect was implemented in accordance with the findings of Hausman's test.

Table 5 Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.4047	0.2223	10.8158	0.0000
BOA_SIZE	-0.0184	0.0260	-0.7068	0.4805
CEO_DUA	-0.1064	0.1636	-0.6504	0.5162
GEN_DIV	0.7978	0.2735	2.9165	0.0039
BOA_IND	0.0674	0.0752	0.8952	0.3718

Source: Author

Based on the table above, the regression equation obtained is IRQ = 2.4047 - 0.0184BOASIZE + 0.7978GENDIV + 0.067352BOAIND - 0.1064CEODUA + e
From the existing regression equation, the regression equation can be interpreted as follows:

1. The magnitude of the constant is 2.4047. This shows that if all independent variables are constant, the amount of integrated reporting quality is 2,404.
2. The board size variable is -0.0184 with a negative sign, which means that BOA_SIZE has an opposite relationship to IRQ or every increase in BOA_SIZE by 1 unit will cause a decrease in IRQ by 1.8% if other factors are constant.
3. CEO duality variable of -0.1064 is negative, which means that CEO_DUA has an opposite relationship to IRQ or every increase in CEO_DUA by 1 unit will cause a decrease in IRQ by 10.6% if other factors are constant.
4. The gender diversity variable of 0.7978 is positive, which means that gender diversity has a unidirectional relationship to IRQ or every increase of 1 unit will cause an increase in IRQ by 79.8% if other factors are constant.
5. The board independence variable of -0.0674 is negative, which means that BOA_IND has an opposite relationship to IRQ or every increase in BOA_IND by 1 unit will cause a decrease in IRQ by 6.7% if other factors are constant.

Table 6 Weighted Statistics

Root MSE	0.217793	R-squared	0.048034
Mean dependent var	0.301957	Adjusted R-squared	0.029276
S.D. dependent var	0.223758	S.E. of regression	0.220459
Sum squared resid	9.866217	F-Statistic	2.560705
Durbin-Watson stat	1.369551	Prob (F-statistic)	0.039731

Source: Author

According to the results of the coefficient of determination test, the Adjusted R Square value is 0.029276. This indicates that the integrated reporting quality variable can account for 0.3% of the variance in the board size, gender diversity, board independence, and CEO duality variables, while 99.97% of the variance is accounted for by independent variables that are not included in the research model.

The Prob (F-statistic) value of 0.39731, which is greater than 0.05, indicates that the integrated reporting quality variable cannot have a significant effect on the board size, gender diversity, board independence, and CEO duality variables simultaneously. This information is obtained from Table 6.

The t-test is a statistical test that determines the extent to which an independent variable contributes to the explanation of the variation in the dependent variable (Ghozali, 2016). If the t-test's significance value is less than 0.05, it indicates that the independent variable partially influences the dependent variable. Conversely, if the t-test's significance value exceeds 0.05, it indicates that the dependent variable is not significantly influenced by any of the independent variables examined. The hypothesis testing in this study can be described as follows, based on the output results in table 5 above:

1. The probability value of board size is 0.4805, which is > 0.05. Consequently, it can be inferred that board size does not have a significant impact on the quality of integrated reporting. Consequently, H1 is not substantiated. A larger board may not necessarily lead to better integrated reporting if

the members lack the specific expertise or commitment to sustainability and integrated thinking. A study by (Gerwanski et al., 2019) found that the quality of integrated reporting was more influenced by the presence of board members with sustainability expertise than by board size itself.

2. Since the probability value of CEO duality is 0.5162, which is greater than 0.05, it can be inferred that CEO duality does not have a significant impact on the quality of integrated reporting. Therefore, H2 is not proven. In some cases, CEO duality can result in the CEO having a greater focus on short-term business performance and operational strategies, rather than prioritizing integrated reporting, which focuses on long-term aspects, including sustainability and social responsibility. Research by (Voinea et al., 2022) states that CEO duality can adversely influence the firm. It can ruin the board's checking work as the control is escalation centralized. The CEO will keep up control, so responsibility will be set a hazard, causing a confinement of great corporate governance.
3. The probability value of gender diversity is 0.0039, which is less than the threshold of 0.05. Consequently, it can be inferred that gender diversity has a substantial impact on the quality of integrated reporting. Subsequently, H3 has been validated. The quality and supervision of governance are enhanced by the inclusion of women on corporate boards, as women are frequently perceived as being more diligent in monitoring management and ensuring that the company's reporting practices are in accordance with regulatory and ethical standards. Studies, including one by (Karina, 2021) that women in leadership roles within a company can enchance the impact if independent board members and firm size on the management of earnings.
4. Board independence has no substantial impact on the quality of integrated reporting, as evidenced by the probability value of 0.3718, which is greater than 0.05. Consequently, the validity of H4 is currently unproven. The presence of independent board members is generally regarded as a sound governance practice; however, independence alone does not ensure more comprehensive reporting outcomes. Independent directors may lack the necessary expertise or focus on sustainability and non-financial reporting that is crucial for integrated reporting. Research by (Halid et al., 2021) found that independent directors are very important in monitoring managerial activies or prioritize financial oversight and protecting the interest of stockholders over integrated reporting components.

CONCLUSION

This study examines the influence of board characteristics; board size, gender diversity, board independence, and CEO duality on the quality of integrated reporting in companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2022. The findings reveal that gender diversity has a positive and significant effect on integrated reporting quality, suggesting that diverse perspectives on boards enhance the comprehensiveness and transparency of corporate disclosures. In contrast, board size, CEO duality, and board independence exhibit negative but statistically insignificant effects on integrated reporting quality, indicating that these attributes do not substantially influence disclosure quality during the study period.

However, the study faces notable limitations. The sample size is restricted to 52 firms, which may not fully capture trends or ensure consistency in the assessment of integrated reporting quality across IDX-listed companies. Additionally, the model's R-Square value of 0.3% highlights that the examined variables explain only a minimal portion of the variance, suggesting the potential influence of other unexamined factors.

To address these limitations, future research should consider expanding the sample size to include a broader and more diverse set of firms, ensuring findings are more representative and generalizable. Incorporating additional variables, such as firm type, ownership concentration, and governance practices, may also provide deeper insights into the factors affecting integrated reporting quality. Moreover, extending the study period and utilizing more recent data could help identify trends and better reflect the evolving practices of integrated reporting. By addressing these areas, future studies can contribute to a more comprehensive understanding of integrated reporting determinants in the Indonesian context.

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