

# THE IMPACT OF BOARD AND AUDIT COMMITTEE CHARACTERISTICS ON INTEGRATED REPORTING DISCLOSURE: EVIDENCE FROM ASEAN

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## Abstract

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This study examines the influence of board and audit committee characteristics on integrated reporting disclosure among publicly listed firms in five Association of Southeast Asian Nations (ASEAN) countries during 2020–2024. The study is motivated by the growing importance of integrated reporting in voluntary disclosure environments, where internal governance mechanisms may play a more decisive role in shaping reporting practices (M. Ali et al., 2024). Using purposive sampling, the study analyzes 142 firm-year observations from 46 firms and measures integrated reporting disclosure through content analysis based on the Pistoni et al. (2018) Integrated Reporting Scoreboard. The data are analyzed using panel regression with firm fixed effects and clustered standard errors, supported by alternative model specifications for robustness. The findings show that board independence and audit committee independence have positive and significant effects on integrated reporting disclosure, indicating that independence-based governance mechanisms are more effective in promoting transparency and accountability in integrated reporting. In contrast, board size, board diversity, and board activity do not significantly affect integrated reporting disclosure. The study contributes to the governance-disclosure literature by showing that, in the ASEAN context where integrated reporting remains largely voluntary, independence-related governance mechanisms appear more influential than structural board characteristics in encouraging integrated reporting disclosure.

**Keywords:** Integrated Reporting Disclosure, Corporate Governance, Board Characteristics, Audit Committee Independence, Voluntary Disclosure, ASEAN

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## 1. INTRODUCTION

The contemporary business environment is becoming increasingly complex, requiring companies to move beyond traditional financial reporting toward more comprehensive disclosure practices (Hamad et al., 2020). Growing awareness of environmental, social, and governance (ESG) matters has intensified stakeholder expectations for information that reflects not only financial performance but also sustainability-related impacts (Angganararas et al., 2023; Cakti & Aryani, 2023; Sihombing & Nurhaliza, 2025). In response, many firms have issued sustainability or corporate social responsibility (CSR) reports alongside annual reports (Sebrina et al., 2023). However, these parallel reporting structures often remain fragmented and backward-looking, which may limit stakeholders' ability to obtain a coherent and forward-oriented understanding of corporate strategy and prospects (Yanto et al., 2024).

To address these limitations, the concept of integrated reporting has developed as a unified reporting method that integrates financial and non-financial information into a cohesive narrative of corporate performance, societal impact, and the creation of long-term value (M. Ali et al., 2024). By providing a complete perspective on how organizations generate value over time, integrated reporting is expected to improve transparency and diminish information asymmetry between the firm and all stakeholders (Sun et al., 2022). Prior research suggests that enhanced disclosure through integrated reporting may improve investors' ability to assess firms' long-term prospects and potentially strengthen firm value and capital market outcomes (Pratama et al., 2021).

Despite the increasing global acknowledgment of integrated reporting and its potential benefits, the adoption varies considerably across countries. While certain jurisdictions, such as South Africa, have mandated integrated reporting through stock exchange requirements, many other regions continue to treat integrated reporting as a voluntary reporting framework (Amirrudin et al., 2021). In voluntary environments, firms are not legally compelled to adopt integrated reporting, resulting in substantial variation in disclosure practices and the quality of reporting (Eccles et al., 2019; Shanmugam et al., 2025). This disparity between mandatory and voluntary regimes raises an important question regarding the mechanisms that drive disclosure decisions when regulatory enforcement is limited (Mansour et al., 2025; Lee et al., 2025).

Internal governance mechanisms can significantly influence disclosure behavior in these contexts (M. Ali et al., 2024). Various studies have shown that board characteristics, such as size, independence, diversity, and activity, are important factors in governance mechanisms that reflect the effectiveness of corporate oversight and strategic decision-making (Tiron-Tudor et al., 2022; Mai et al., 2026). According to agency theory, the presence of independent directors improves monitoring and reduces managerial opportunism, thereby promoting greater transparency (Vitolla et al., 2020; Ahmed, 2023; del Carmen Briano Turrent et al., 2023). Stakeholder theory emphasizes that governance structures help firms respond to

broader stakeholder expectations (Almagtome et al., 2020). Institutional theory further proposes that governance effectiveness may vary across regulatory and enforcement environments (Arslan & Alqatan, 2020; Kallisia et al., 2025). Although several studies have explored integrated reporting practices across different countries, many of them focus on contexts where integrated reporting adoption is either mandatory or relatively advanced (Erin & Adegbeye, 2022; S. Chouaibi et al., 2022; Ahmed & Hassan, 2025). Moreover, some prior studies acknowledge limitations related to relatively small samples and shorter observation periods, suggesting the need for further empirical investigation using broader datasets (Qaderi et al., 2022; Theresia & Rusmanto, 2024). Consequently, there is still limited empirical evidence on how governance mechanisms influence integrated reporting disclosure in regions where integrated reporting adoption remains largely voluntary.

The Association of Southeast Asian Nations (ASEAN) region provides a particularly relevant context for examining this issue, as it includes both developed and emerging markets such as Singapore, Malaysia, Indonesia, Thailand, and the Philippines, all operating within a largely non-mandatory integrated reporting framework. Regulatory enforcement intensity, governance traditions, and market maturity vary across these countries, creating a heterogeneous institutional environment. In such settings, internal governance mechanisms may function as substitutes for formal regulatory enforcement in influencing disclosure outcomes (Nguyen et al., 2025). Yet, empirical evidence remains limited regarding which specific governance characteristics are most effective in promoting integrated reporting disclosure in this context.

Empirical findings on individual governance attributes also remain inconclusive. Prior studies report mixed results regarding board size, with some suggesting that larger boards enhance disclosure through broader expertise (Cakti & Aryani, 2023; Said et al., 2023; Erin, 2025), while others indicate that increased size may hinder effective monitoring due to coordination challenges (Theresia & Rusmanto, 2024). Similarly, board independence is often associated with stronger transparency and improved reporting practices (S. Chouaibi et al., 2022; Tambunan et al., 2022; Ahmed, 2023; Vig, 2024; Erin, 2025), yet several studies report insignificant effects, suggesting that independent directors may sometimes be appointed primarily to comply with regulations rather than to enhance monitoring effectiveness (Fayad et al., 2022; Said et al., 2023; Yanto et al., 2024; Theresia & Rusmanto, 2024). Evidence regarding board cultural diversity also remains mixed. While the presence of foreign directors may introduce broader perspectives and governance practices that enhance reporting transparency (Vitolla et al., 2019; Maturro et al., 2019; Munisi, 2023), cultural differences may also complicate coordination and consensus in decision-making (Anazonwu et al., 2018). In addition, board activity in meetings may reflect active oversight in some settings (Fayad et al., 2022; Girella et al., 2022; Theresia & Rusmanto, 2024), but merely formal compliance in others (Ahmed, 2023). Beyond board characteristics, the role of audit committee independence has also been highlighted as a mechanism that may improve the credibility and

quality of corporate disclosures (Erin, 2025; Raimo et al., 2020), yet other studies suggest that an independent audit committee may reduce integrated reporting practices, as they tend to focus more on financial reporting (Yulyan et al., 2021; Ahmed, 2023). These inconsistencies suggest that governance mechanisms may not operate uniformly, reinforcing the need to assess their effectiveness within clearly defined institutional contexts such as voluntary integrated reporting regimes.

Drawing on agency, stakeholder, and institutional theory, this study investigates the influence of board size, board independence, board cultural diversity, board activity, and audit committee independence on integrated reporting disclosure among publicly listed firms in five ASEAN countries during 2020–2024. Accordingly, the research question addressed is:

*RQ: Which governance mechanisms are most effective in promoting integrated reporting disclosure in heterogeneous and largely voluntary institutional environments?*

To address this question, the study employs a quantitative research design using panel data regression to analyze publicly listed firms in five ASEAN countries over the period 2020–2024. Governance variables are obtained from the Refinitiv database, while integrated reporting disclosure is measured through content analysis of corporate reports based on the Integrated Reporting Scoreboard developed by Pistoni et al. (2018). The empirical analysis applies a fixed-effect panel regression model to control for unobserved firm-specific characteristics. The findings indicate that governance mechanisms related to independence, particularly board independence and audit committee independence, have a significant positive influence on integrated reporting disclosure, while structural board attributes such as board size, board diversity, and board activity do not show significant effects.

This study contributes to the literature in three primary ways. First, it refines governance-disclosure theory by distinguishing between structural board characteristics and independence mechanisms, highlighting which governance dimensions are more influential in discretionary disclosure settings. Second, it extends the predominantly single-country integrated reporting literature by providing multi-country evidence from the ASEAN region. Third, it offers policy implications for voluntary reporting regimes by identifying governance attributes that may strengthen transparency without relying on mandatory regulation.

The remainder of this study is organized as follows. Section 2 outlines the theoretical framework and hypothesis development. Section 3 details the research methodology, including data samples, variables, and regression models. Section 4 reports and discusses the empirical results. Section 5 draws conclusions, acknowledges limitations, and offers recommendations.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This section reviews foundational theories and prior studies relevant to the present research. It examines the anticipated influence of corporate governance mechanisms on integrated reporting disclosure and

utilizes these insights to formulate a research hypothesis for each variable.

### 2.1. Theoretical framework

Agency theory describes the separation of ownership and control, where principals appoint agents to perform services on their behalf (Jensen & Meckling, 1976). This separation often results in conflicts of interest, misalignment, and information asymmetry between two parties (Habib et al., 2025). Numerous studies indicate that a significant information gap between principals and agents persists, despite companies' efforts to provide additional performance data (Dong et al., 2021; Zhang et al., 2020). Addressing this issue requires enhanced transparency in company activities (Silitonga et al., 2020; Zhang & Yang, 2021), specifically by ensuring that information accessible to third parties enables effective evaluation of company operations and performance (Raimo, Vitolla, et al., 2021).

The relationship between governance and disclosure has been extensively examined in corporate literature, where governance mechanisms such as board monitoring and oversight are expected to reduce information asymmetry and encourage greater transparency in corporate reporting. Within this broader disclosure framework, integrated reporting becomes a useful mechanism that enables firms to communicate both financial and non-financial information comprehensively (Buallay & Al-Ajmi, 2020). By integrating multiple dimensions of corporate performance, integrated reporting can further enhance transparency and mitigate information asymmetry between managers and stakeholders (Erin & Adegbeye, 2022).

Stakeholder theory, on the other hand, asserts that companies are responsible for creating value for a broad range of stakeholders, including shareholders, customers, suppliers, governments, employees, and communities (Freeman, 1994; Vig, 2024). Accordingly, stakeholders require transparency for both financial and non-financial information, such as ESG and sustainability data (Santamaria et al., 2021; Pratami et al., 2022). Integrated reporting is regarded as the most effective tool for firms to communicate how they generate value over time to meet these diverse stakeholder needs (Erin, 2025). Higher quality and more comprehensive disclosure can strengthen stakeholder trust, enhance corporate legitimacy, and improve a firm's long-term reputation (Tambunan et al., 2022).

Meanwhile, institutional theory explains that organizational practices are influenced by normative pressures embedded within the institutional environment. Firms tend to adopt structures, rules, and procedures that are socially legitimized to achieve legitimacy and enhance their probability of survival (Zucker, 1987). These institutional pressures may influence how firms implement disclosure practices, including voluntary reporting frameworks such as integrated reporting. In developed economies, substantive disclosures are promoted with strong regulatory frameworks, which align reporting practices with actual performance (Mason, 2020). In contrast, in emerging markets, gaps in regulation and enforcement may encourage symbolic

compliance, where disclosures are used primarily to signal legitimacy rather than to represent genuine transparency practices (Nor Ahmad et al., 2022). In such environments, internal governance mechanisms may play a critical role in shaping disclosure practices, particularly when frameworks such as integrated reporting remain largely voluntary.

## 2.2. Hypotheses development

Corporate governance mechanisms are widely recognized as key determinants of corporate disclosure and transparency. Prior research suggests that effective governance structures enhance the quality and extent of corporate reporting by strengthening monitoring functions and reducing information asymmetry between managers and stakeholders. In recent years, the relationship between governance and disclosure has been explored within the context of integrated reporting, which obliges firms to disclose both financial and non-financial information in a comprehensive and forward-looking manner. Therefore, governance mechanisms such as board characteristics and audit committee structures are expected to influence the level of integrated reporting disclosure.

### 2.2.1. Board size and integrated reporting disclosure

Board size is a critical factor influencing board effectiveness. Arumona et al. (2019) define board size as the total number of directors on the board. The diversity of knowledge, expertise, and abilities among board members, particularly regarding financial and non-financial information, can affect the extent of integrated information disclosure by companies (R. Ali et al., 2022; Cakti & Aryani, 2023; Said et al., 2023). Larger boards are generally considered more effective due to their broader capabilities and knowledge base (Alabdullah & Mohamed, 2023; Erin, 2025). However, Ahmed (2023) argues that board size should be tailored to the company's size and nature, as excessively large or small boards may hinder effectiveness. An optimal board size enables directors to perform their duties efficiently and enhances the board's monitoring function.

From the perspective of agency theory, a larger board may strengthen oversight of management and mitigate conflicts of interest between managers and shareholders (Ananzeh et al., 2024). The diversity of expertise, backgrounds, and experience among board members further strengthens oversight and increases the transparency of corporate information disclosure (Tambunan et al., 2022). Such diversity also facilitates the integration of financial and non-financial information in line with International Integrated Reporting Council (IIRC) principles, providing stakeholders with more comprehensive reports (Marrone, 2020). Boards that possess broader expertise are expected to better respond to increasing stakeholder expectations regarding corporate transparency and sustainability disclosure. In environments where transparency expectations are increasing, firms may adopt broader governance structures to reinforce the legitimacy of their disclosure practices (Cakti & Aryani, 2023).

Consistent with these perspectives, multiple studies have demonstrated a positive relationship between board size and integrated reporting disclosure. Mawardani and Harymawan (2021) and Tambunan et al. (2022) report that companies with larger boards tend to provide more extensive and higher-quality integrated reporting disclosures. These results align with other research indicating a positive influence of board size on integrated reporting disclosure quality (Erin, 2025; Ahmed, 2023; Yulyan et al., 2021; Said et al., 2023). Furthermore, S. Chouaibi et al. (2022) find that larger boards can enhance governance by reducing chief executive officer (CEO) dominance and information asymmetry. Based on these findings, the following hypothesis is proposed:

*H1: Board size has a significant positive effect on integrated reporting disclosure.*

### 2.2.2. Board independence and integrated reporting disclosure

Board independence is a key characteristic of effective corporate governance, as independent directors are primarily responsible for overseeing the actions of executive directors (Fama & Jensen, 1983). Board members are considered independent when they are not involved in, nor have any financial interest in, the company's business (Mawardani & Harymawan, 2021). The inclusion of independent board members enables companies to align their activities with stakeholder interests (Tambunan et al., 2022), reduce information asymmetry, and enhance the quality of integrated reporting (J. Chouaibi et al., 2022).

Agency theory suggests that independent board members can mitigate conflicts of interest between management and shareholders and promote transparency through voluntary information disclosure. A higher proportion of independent board members enhances oversight, thereby reducing information asymmetry and improving report quality (Ahmed, 2023). The objectivity of independent directors can limit opportunistic behaviors, such as withholding information from stakeholders (Vitolla et al., 2020; Makri et al., 2024). In emerging markets, where governance structures and regulatory enforcement may not always be as strong as in developed economies, independent boards can have a particularly positive impact, especially regarding CSR disclosure (Rashid & Hossain, 2022).

Tambunan et al. (2022) provide evidence that independent boards positively influence the quality of integrated reporting. Similarly, Mawardani and Harymawan (2021) argue that independent board members enhance disclosure in reporting, particularly for forward-looking information, due to their lack of involvement in company management. An increased proportion of independent board members facilitates more effective implementation of transparency principles in corporate governance (Yulyan et al., 2021). Based on these findings, the following hypothesis is proposed:

*H2: Board independence has a significant positive effect on integrated reporting disclosure.*

### 2.2.3. Board diversity and integrated reporting disclosure

Cultural diversity on the board of directors refers to the presence of members with varied national or cultural backgrounds (Maturo et al., 2019). This diversity enhances decision-making by allowing directors from different countries to contribute unique values, experiences, and governance practices (Alfiero et al., 2018). Stakeholder theory suggests that including foreign directors expands global networks and improves access to cross-border strategic information, which promotes more comprehensive and sustainability-oriented information disclosure (Vitolla et al., 2019). Consequently, cultural diversity at the board level demonstrates inclusiveness and indicates the organization's ability to meet global stakeholder expectations through transparent and integrated reporting.

Empirical studies indicate that cultural diversity positively influences the quality of corporate reporting. Alfiero et al. (2018) found that foreign directors from countries with egalitarian, sustainability-oriented cultures tend to promote improved reporting practices. Maturo et al. (2019) argue that national diversity on corporate boards enhances companies' legitimacy and credibility in international markets and strengthens alignment among strategy, performance, and reporting. The inclusion of foreign directors in emerging market environments can introduce governance norms and reporting practices from countries with more advanced transparency and sustainability disclosure standards (Liao et al., 2022). Furthermore, the presence of board members from diverse cultural backgrounds encourages more inclusive and socially responsible corporate practices (Yousef et al., 2026).

Cultural diversity within the board of directors enhances governance effectiveness and reporting quality by expanding the collective knowledge base and fostering greater awareness of global sustainability practices. Multicultural boards demonstrate greater capacity to address cross-border challenges and meet international transparency requirements, thereby encouraging companies to provide more comprehensive, strategically oriented disclosures (Saeed et al., 2025). Accordingly, the following hypothesis is proposed:

*H3: Board diversity has a significant positive effect on integrated reporting disclosure.*

### 2.2.4. Board activity and integrated reporting disclosure

Board activity is typically measured by board meeting attendance, which indicates the board's involvement in oversight and decision-making. Board meetings enhance oversight of managerial actions (Fayad et al., 2022), including the financial reporting process (Ahmed, 2023). Regular meetings allow board members to address strategic issues and monitor management performance (Makri et al., 2024), ensuring that reporting aligns with stakeholders' interests. In emerging markets, such engagement becomes particularly relevant as firms face increasing pressure from stakeholders to demonstrate accountability in reporting practices (Saeed et al., 2025).

Within the context of integrated reporting, increased meeting frequency can enhance oversight of information disclosure (Vitolla et al., 2020). Theresia and Rusmanto (2024) further demonstrate that a higher number of board meetings correlates with improved quality of integrated reports. Board meetings serve as a critical mechanism for reinforcing good governance through democratic processes and transparency. Additionally, Raimo et al. (2022) identify meeting frequency as a factor that can enhance information disclosure in integrated reporting, particularly regarding risk. Although meeting frequency is often used to capture board activity, the effectiveness of board meetings also depends on the level of director participation in these discussions. Based on these findings, the following hypothesis is proposed:

*H4: Board activity has a significant positive effect on integrated reporting disclosure.*

### 2.2.5. Audit committee independence and integrated reporting disclosure

The audit committee is a fundamental element of corporate governance, providing effective oversight and maintaining the integrity of organizational reporting. According to agency theory, the audit committee mitigates conflicts of interest between management and shareholders by supervising both financial and non-financial reporting processes (Raimo et al., 2020). The independence of audit committee members reflects the objectivity of their supervisory role, as it is free from managerial influence. An independent audit committee enhances the transparency and credibility of reporting, thereby safeguarding the interests of shareholders and external stakeholders (Vitolla et al., 2020; Salin et al., 2025).

Empirical studies demonstrate that independent audit committees have a positive impact on the quality of integrated reporting. Raimo et al. (2020) report that both the independence and size of audit committees significantly enhance integrated reporting quality, as independent committees are more effective in ensuring accurate, balanced, and IIRC-compliant disclosures. Ahmed (2023) corroborates these findings, indicating that independent audit committees strengthen integrated reporting practices in South Africa. Therefore, audit committee independence contributes to achieving not only formal compliance but also the accountability and transparency demanded by investors and regulators.

The presence of an independent audit committee strengthens overall corporate governance and enhances stakeholder confidence in integrated reports. As its members are not affiliated with management, the committee is able to objectively oversee the integration of financial and non-financial information, thereby ensuring accuracy and balance (Sihombing & Nurhaliza, 2025). A greater proportion of independent members correlates with higher-quality, more comprehensive integrated report disclosures. From this perspective, the following hypothesis is proposed:

*H5: Audit committee independence has a significant positive effect on integrated reporting disclosure.*

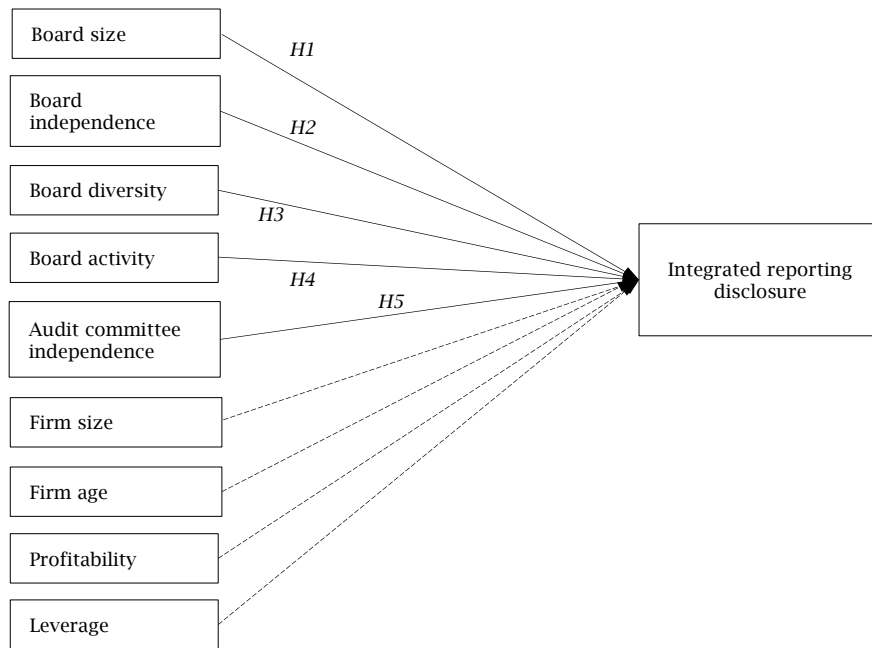
These governance mechanisms may become particularly relevant in the ASEAN region, where integrated reporting adoption remains largely voluntary and institutional environments differ across countries.

### 3. RESEARCH METHODOLOGY

This study uses a quantitative research design to assess how corporate governance mechanisms affect

integrated reporting disclosure. The conceptual framework in Figure 1 identifies board size, board independence, board cultural diversity, board activity, and audit committee independence as key governance factors influencing integrated reporting disclosure, with firm-level control variables included. The following sections outline the sampling procedures, variable measurement, and empirical model used to test the hypotheses.

Figure 1. Conceptual framework



#### 3.1. Sample and data

This study examines the influence of governance mechanisms, specifically board and audit committee characteristics, on integrated reporting disclosure among publicly listed companies in ASEAN from 2020 to 2024. This period corresponds to the years following the COVID-19 shock, which significantly increased uncertainty in the business environment and intensified stakeholder demands for transparency, sustainability information, and long-term value creation. As integrated reporting aims to communicate how organizations create value over time, this period provides a relevant context to examine the determinants of integrated reporting disclosure. During the pandemic, firms were increasingly expected to disclose how the crisis affected their governance, operations, and value creation process. In this context, integrated reporting has been considered a useful reporting framework to communicate the broader impacts of external shocks such as COVID-19 (García-Sánchez et al., 2020). Consequently, the post-pandemic period offers a pertinent context for investigating the determinants of integrated reporting disclosure.

The sample was selected through purposive sampling, targeting companies that had published integrated reports or annual reports incorporating the content elements and principles of integrated reporting as outlined by the IIRC framework. Data collection involved content analysis of integrated

reports and extraction from the Refinitiv Eikon database. Refinitiv was chosen due to its reputation as a reliable international source and its status as one of the most comprehensive ESG databases, particularly for corporate governance data (Basile et al., 2026).

Applying the selection criteria and considering Refinitiv’s governance data availability, the final sample comprised 92 companies from five countries: Indonesia, Malaysia, the Philippines, Singapore, and Thailand, as presented in Table 1. This study uses an unbalanced panel dataset comprising all companies that issued integrated reports or disclosed integrated reporting elements, regardless of whether they reported consistently throughout the observation period.

Table 1. Sample selection

Description	Frequency
Companies listed on the stock exchanges of selected ASEAN countries	4571
Companies whose independent variable data is not available	3628
Companies that did not publish integrated reports during the research period	851
Final sample	92

Although the initial sample consists of 92 firms, the number of observations used in the regression analysis is smaller due to missing values in several governance variables obtained from

the Refinitiv database. As a result, only firm-year observations with complete data for all regression variables are retained, resulting in a final estimation sample of 142 firm-year observations for the main regression model.

### 3.2. Dependent variable

This study examines integrated reporting disclosure as the dependent variable. Integrated reporting disclosure is assessed through content analysis of company reports, utilizing the Integrated Reporting

Scoreboard developed by Pistoni et al. (2018), as shown in Table 2. The scoreboard encompasses four primary areas: background, assurance and reliability, content, and form, with a total of 23 indicators and a maximum score of 75 points. Certain indicators are evaluated on a binary scale (0 = not disclosed, 1 = disclosed), while others are rated on an ordinal scale (0-5) based on disclosure quality. This framework facilitates a comprehensive assessment of integrated reporting disclosure consistent with IIRC principles.

**Table 2.** Integrated Reporting Scoreboard

<i>Area</i>	<i>Variables</i>	<i>Attributes of quality assessment</i>
Background	<ol style="list-style-type: none"> <li>1. Motivations underlying the choice of adopting integrated reporting.</li> <li>2. Objectives pursued by the integrated reporting.</li> <li>3. Beneficiaries of the document.</li> <li>4. Manager in charge of the integrated reporting process.</li> <li>5. CEO's commitment.</li> <li>6. Title of the report.</li> <li>7. Consistency of integrated reporting with generally applied disclosure standards.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adoption of reporting guidelines and standards.</li> <li>2. Clear statement of vision from the CEO.</li> </ol>
Assurance and reliability	<ol style="list-style-type: none"> <li>1. Internal audit.</li> <li>2. Third-party verification.</li> <li>3. Acknowledgements and awards for integrated reporting.</li> </ol>	<ol style="list-style-type: none"> <li>3. Third-party verification.</li> <li>4. Achievement of awards/accolades.</li> </ol>
Content	<ol style="list-style-type: none"> <li>1. Organizational overview and external environment.</li> <li>2. Business model.</li> <li>3. Risks and opportunities.</li> <li>4. Strategy and resource allocation.</li> <li>5. Governance.</li> <li>6. Performance.</li> <li>7. Outlook.</li> <li>8. Basis of presentation.</li> <li>9. Capitals.</li> <li>10. Value creation process.</li> </ol>	<ol style="list-style-type: none"> <li>5. Quantitative disclosure.</li> <li>6. Establishment of, and reporting against (appropriate) targets.</li> <li>7. 'Warts and all' reporting.</li> <li>8. Ability to accurately assess performance from disclosure.</li> <li>9. Good coverage of significant issues.</li> <li>10. Reporting of normalized data.</li> </ol>
Form	<ol style="list-style-type: none"> <li>1. Readability and clarity.</li> <li>2. Conciseness.</li> <li>3. Accessibility.</li> </ol>	<ol style="list-style-type: none"> <li>11. Wide access to the document.</li> </ol>

Source: Pistoni et al. (2018).

### 3.3. Independent variables

This study examines how governance mechanisms affect integrated reporting disclosure. Specifically, it analyzes board and audit committee characteristics, including size, independence, diversity, and board activity. Board size is defined as the number of board members at the end of the fiscal year. Board independence is calculated as the ratio of non-executive board members to total board members (Fuji et al., 2016). Board diversity is measured by the percentage of board members whose cultural backgrounds differ from the company's headquarters location (Wan Ismail et al., 2025). Board activity is assessed by board member attendance at meetings (Raimo et al., 2022). Audit committee independence is measured by the proportion of independent members to total audit committee members (Songini et al., 2022).

### 3.4. Control variables

To assess the impact of governance mechanisms on integrated reporting disclosure, several control variables that may influence a company's disclosure level were included. These controls encompass company attributes and financial structure. Company size was determined using the natural logarithm of total assets (Yanto et al., 2024), and company age was measured by the number of years since listing on the stock exchange (Erin, 2025). Meanwhile, profitability was assessed using the net income-to-total equity ratio, while leverage was calculated as total debt divided by total assets (Yanto et al., 2024; Songini et al., 2022; Qaderi et al., 2022).

Table 3 summarizes the operational definitions, codes, and measurement methods for the dependent, independent, and control variables used in this study.

**Table 3.** Variable operationalization

Variable	Code	Measurement
<b>Dependent variable</b>		
Integrated reporting disclosure	IRD	The company's integrated reporting disclosure score is divided by the maximum total score on the Integrated Reporting Scoreboard.
<b>Independent variables</b>		
Board size	BS	Natural logarithm of the total number of board members at the end of the fiscal year.
Board independence	BI	Proportion of non-executive board members to total board members at the end of the fiscal year.
Board diversity	BD	The proportion of board members with cultural backgrounds different from the location of the headquarters relative to the total number of board members at the end of the fiscal year.
Board activity	BA	Percentage of council members present at council meetings.
Audit committee independence	ACI	The proportion of independent audit committee members to the total number of audit committee members at the end of the fiscal year.
<b>Control variables</b>		
Firm size	FS	Natural logarithm of total assets at the end of the fiscal year.
Firm age	FA	The natural logarithm of the company's age since its listing on the stock exchange.
Profitability	PROF	Ratio of net profit to total equity at the end of the fiscal year.
Leverage	LEV	Total debt to total assets ratio at the end of the fiscal year.

### 3.5. Regression model

Quantitative methods and panel data regression are applied to examine the influence of board characteristics on integrated reporting disclosure among companies in Indonesia, Malaysia,

the Philippines, Singapore, and Thailand from 2020 to 2024. Data analysis is conducted using STATA software.

The following models are employed to test the hypotheses:

$$IRD_{it} = \beta_0 + \beta_1 BS + \beta_2 BI + \beta_3 BD + \beta_4 BA + \beta_5 ACI + \beta_6 FA + \beta_7 FS + \beta_8 PROF + \beta_9 LEV + \gamma_t + \mu_i + \varepsilon_{it} \quad (1)$$

Equation (1) examines the influence of board characteristics, specifically board size (*BS*), board independence (*BI*), board diversity (*BD*), and board activity (*BA*), on integrated reporting disclosure (*IRD*). Control variables, including firm age (*FA*), firm size (*FS*), profitability (*PROF*), and leverage (*LEV*), are incorporated to mitigate bias from confounding factors. Table 3 provides definitions and measurements for all variables. The model applies firm fixed effects ( $\mu_i$ ) to control for unobserved, time-invariant firm attributes such as organizational culture, governance traditions, or internal reporting policies. Year fixed effects ( $\gamma_t$ ) are included to account for time-specific shocks affecting all firms, such as regulatory changes, macroeconomic events, or shifts in reporting practices during the observation period. By controlling for both firm and time effects, the model provides a more reliable estimation of the relationship between governance mechanisms and integrated reporting disclosure.

Prior to conducting panel data regression, several classical assumption tests were performed to confirm data suitability and minimize the risk of misleading results. The variance inflation factor (VIF) test assessed multicollinearity, the Breusch-Pagan test evaluated heteroscedasticity, and the Durbin-Watson test examined autocorrelation within the model. Additionally, the Hausman test was used to determine the appropriate regression model, which identified the fixed-effect model as the most suitable for this study.

Although the fixed-effect panel regression model is considered the most appropriate specification based on the Hausman test results, alternative econometric approaches could also be applied in future research to further explore the governance-disclosure relationship. For instance, random-effects models may be employed when unobserved firm-specific effects are assumed to be uncorrelated with explanatory variables. In addition, the generalized method of moments estimation could be used to address potential endogeneity issues that may arise between governance mechanisms and disclosure practices. These alternative approaches may provide further robustness and yield deeper insights into the dynamics of corporate governance and integrated reporting disclosure.

## 4. RESULTS AND DISCUSSION

### 4.1. Descriptive statistics

Table 4 presents descriptive statistics for all research variables from 2020 to 2024, including the number of observations, mean, standard deviation, and minimum and maximum values. The number of observations varies by variable because some companies lack complete Refinitiv data for each indicator during the study period. However, this variation does not affect the validity of the results, as the fixed-effect panel data model accommodates unbalanced data structures.

**Table 4.** Descriptive statistics summary

Variable	Obs.	Mean	Std. dev.	Min	Max
IRD	320	0.7922917	0.092189	0.4666667	0.92
BS	394	2.191637	0.2913218	0.6931472	2.833213
BI	193	0.4511677	15.29393	0.08333333	0.8333333
BD	168	0.2352558	16.68486	0.06666667	1
BA	391	0.9791703	3.31557	0.5833	1
ACI	394	0.9007342	0.4935623	0.25	1
FS	456	21.88565	1.706868	17.6811	27.13003
FA	454	2.993419	0.7291995	0.6931472	4.127134
PROF	434	0.1197624	0.2893347	-3.32082	1.95307
LEV	453	0.2562358	0.181586	0.0000324	0.9030018

In general, the integrated reporting disclosure ratio has an average value of 0.792 with a standard deviation of 0.092, reflecting a high and consistent level of disclosure across companies. The minimum and maximum values, 0.467 and 0.92, suggest limited variation in reporting practices, with most companies adequately adopting integrated reporting principles.

The board size variable has a natural logarithm average of 2.19 and a standard deviation of 0.29, indicating moderate and consistent board sizes across companies. Meanwhile, board independence shows an average of 45.12 percent, indicating that nearly half of the board members in the sample are independent directors. However, the range of values between 8.33 percent and 83.33 percent shows significant variation in independent director representation. Furthermore, board diversity averages 23.53 percent with a minimum of 6.67 percent, showing that most boards remain relatively homogeneous. On the other hand, board activity, which is measured by attendance, measured by attendance, averages 97.91 percent with a standard deviation of 3.32, demonstrating consistently high participation at board meetings.

Meanwhile, audit committee independence averages 90.07 percent, indicating that most firms' audit committees are primarily composed of independent members. The minimum value of 25 percent suggests that only a few firms have a lower proportion of independent members.

For control variables, the average firm size is 21.89, and the average firm age is 2.99, based on logarithmic values. These figures suggest that most companies are large and well-established, contributing to organizational stability. Profitability averages 0.119, indicating a positive profit margin on total equity. Leverage averages 0.256, meaning companies finance 25.6 percent of their assets with debt.

#### 4.2. Classical assumption tests

Before conducting panel regression analysis, correlation tests were performed to assess linear relationships among the independent variables and detect potential multicollinearity. Subsequently, assumption tests, including the VIF for multicollinearity and the modified Wald test for heteroscedasticity, were conducted to validate the regression model. The Hausman test was then used to determine the appropriate panel regression model, selecting between fixed- and random-effects models.

Table 5 displays the correlation results for all research variables. Correlation coefficients range from -1 to +1, with -1 indicating an inverse relationship and +1 a direct one. The findings show no evidence of multicollinearity among the independent variables, as none of the correlation coefficients exceed 0.80 (Tambunan et al., 2022).

**Table 5.** Pearson correlation test

Variable	IRD	BS	BI	BD	BA	ACI	FS	FA	PROF	LEV
IRD	1.000									
BS	0.366*	1.000								
BI	0.153*	-0.023	1.000							
BD	-0.129	-0.444*	0.034	1.000						
BA	0.047	0.103*	0.028	0.093	1.000					
ACI	0.159*	-0.107*	0.171*	-0.200	0.048	1.000				
FS	0.209*	0.379*	0.200*	-0.176	0.093	-0.143*	1.000			
FA	-0.002	0.125*	0.001	-0.104	0.014	-0.062	0.158*	1.000		
PROF	0.030	-0.028	0.018	0.249*	-0.008	-0.100	-0.125*	0.066	1.000	
LEV	0.126*	0.044	-0.095	0.190	0.027	-0.104*	0.024	-0.066	-0.019	1.000

Note: \* Statistical significance at the 95% confidence level.

The results demonstrate that board size, board independence, and audit committee independence are positively correlated with integrated reporting disclosure. Enhanced governance in these areas corresponds with increased disclosure. Conversely, board diversity is negatively correlated with integrated reporting disclosure, suggesting that

greater cultural diversity on the board does not lead to higher disclosure levels. The control variables, firm size and leverage, also exhibit positive correlations with integrated reporting disclosure, indicating that larger and more leveraged companies tend to provide more comprehensive reporting.

**Table 6.** Classical assumption tests

Test	Statistics	p-value	Conclusion
Multicollinearity (VIF)	Mean VIF = 1.28	-	There's no multicollinearity
Heteroscedasticity (Modified Wald test)	$\chi^2(46) = 6890.39$	0.0000	There's heteroscedasticity
Autocorrelation (Wooldridge test)	$F(1,26) = 20.526$	0.0001	There's autocorrelation

Next, classical assumptions were evaluated to verify that the panel regression model satisfied statistical requirements. The average VIF reported in Table 6 shows an average VIF value of 1.28 (< 10), suggesting no significant multicollinearity among the independent variables and corroborating the earlier Pearson correlation findings. The modified Wald test shows a probability value of 0.0000

(< 0.05), indicating heteroscedasticity. Meanwhile, the Wooldridge test shows a probability value of 0.0001 (< 0.05), indicating autocorrelation. These concerns can be mitigated by employing robust standard errors clustered by firm identifier (firm\_id), thereby enhancing the validity and interpretability of the estimation results.

### 4.3. Regression results and discussion

Before regression was performed, the Hausman test was used to determine whether the fixed-effects model or the random-effects model was more appropriate for the analysis.

**Table 7.** Hausman test

Chi-squared statistic	Chi-squared d.f.	p-value
28.32	9	0.0008

The Hausman test results presented in Table 7 indicate a Chi-squared value of 28.32 with a p-value of 0.0008 ( $< 0.05$ ). These results lead to the rejection of the null hypothesis that the random-effects model is more efficient, thereby supporting the fixed-effects model as more appropriate for this study.

**Table 8.** Fixed effect model regression

Variable	Model 1 (Main: FE, <i>i</i> year)	Model 2 (FE without <i>i</i> year)	Model 3 (Alt. proxy BI)	Model 4 (Pooled OLS, <i>i</i> country)
_cons	0.2470513 (0.795)	-0.6923755 (-0.74)	-1.665243 (-1.29)	0.8060312 (2.93)
BS	-0.0402544 (-0.88)	-0.0612005 (-1.11)	-0.041331 (-0.82)	-0.0670452 (-1.49)
BI	0.0031134** (2.20)	0.0015801** (2.61)	0.0019134** (2.28)	0.0021115** (2.71)
BD	0.0009608 (1.31)	0.000661 (1.62)	0.000255 (0.35)	-0.0012095 (-1.31)
BA	-0.0025723 (-1.60)	-0.0024193* (-1.82)	-0.0000781 (-0.15)	-0.0056524** (-2.03)
ACI	0.0019143*** (2.78)	0.0008959 (1.63)	0.000793** (2.20)	-0.0012297 (-1.14)
FS	0.0137793 (0.38)	0.0382154 (0.98)	0.0767184 (1.48)	0.024801*** (4.28)
FA	0.0320442 (0.42)	0.1747628** (2.58)	0.2408455** (2.59)	0.0087193 (0.45)
PROF	0.057917** (2.09)	0.0508394 (1.43)	-0.0329173*** (-3.65)	0.0256508** (2.34)
LEV	-0.1912513** (-2.10)	-0.1880796* (-1.90)	-0.2945479** (-2.11)	0.163355* (1.69)
Observations	142	142	59	142
Firms	46	46	29	46
R-squared	0.5378	0.4271	0.6769	0.4069

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table 8 presents the results of the regression analysis investigating the association between corporate governance mechanisms and integrated reporting disclosure. Four model specifications are employed to assess the robustness of the findings. Model 1 represents the main specification using a fixed-effect panel regression with year fixed effects and clustered standard errors. Model 2 excludes the year fixed effects to evaluate the sensitivity of results to time controls. Model 3 serves as an alternative specification by replacing the proxy of board independence with the proportion of strictly independent directors. Finally, Model 4 estimates a pooled ordinary least square (OLS) regression including country dummy variables in order to explicitly account for cross-country institutional differences.

The use of firm fixed effects allows the model to control for unobserved firm-specific characteristics that remain constant over time. Because each firm in the sample operates within a specific country, this specification also helps account for institutional characteristics that tend to remain relatively stable over time, such as differences in legal frameworks, governance systems, and regulatory environments across ASEAN countries. Nevertheless, given the substantial heterogeneity in institutional settings within the ASEAN region, an additional robustness model including country dummy variables is estimated to explicitly control for cross-country differences that may influence integrated reporting disclosure.

The model demonstrates substantial explanatory power. The R-squared value of the main specification (Model 1) is 0.5378, indicating that 53.78% of the variation in integrated reporting disclosure is explained by the governance and control variables in the model. The robustness specifications show comparable explanatory power, with R-squared values of 0.4271 for Model 2, 0.6769 for Model 3, and 0.4069 for Model 4. These values suggest that the models provide a reasonable explanation of the determinants of integrated reporting disclosure within the ASEAN institutional context.

The robustness tests also indicate that the main findings are generally stable across alternative model specifications. Model 2, which excludes year fixed effects, and Model 3, which uses an alternative proxy for board independence, produce broadly similar results for the key governance variables. However, Model 4, which includes country dummy variables, shows some variation in coefficient direction for several variables, likely reflecting institutional heterogeneity across ASEAN countries. Despite these variations, the main conclusions remain consistent, particularly regarding the significant role of board independence in promoting integrated reporting disclosure.

Overall, the results suggest that governance mechanisms associated with independence and monitoring play more important role in influencing integrated reporting disclosure compared to structural board characteristics.

#### 4.3.1. Board size and integrated reporting disclosure

These regression results indicate that board size does not exert a statistically significant effect on integrated reporting disclosure. Board size was found to have a coefficient of -0.0403 with a p-value of 0.383, indicating that the number of board members does not significantly influence the extent of integrated reporting disclosure. Therefore, hypothesis *H1* is not supported. The negative direction indicates that a larger board does not necessarily lead to greater integrated reporting disclosure.

This finding aligns with Halid et al. (2021), who argue that larger boards are more susceptible to communication and coordination challenges, as well as conflicts and inflexibility in decision-making. Consequently, the size of the board alone may not guarantee stronger oversight or improved disclosure practices. Within the ASEAN institutional context, this result may also reflect differences in governance structures across countries. Board size may represent a formal governance structure rather than an effective monitoring mechanism that actively encourages integrated reporting disclosure.

#### 4.3.2. Board independence and integrated reporting disclosure

The results indicate that board independence has a positive, statistically significant effect on integrated reporting disclosure with a coefficient of 0.0031 and a p-value of 0.033. This suggests that a higher proportion of independent board members is associated with increased levels of integrated reporting disclosure. Therefore, hypothesis *H2* is supported. This finding highlights the important role of independent directors in enhancing corporate transparency and accountability through more effective oversight mechanisms. Independent board members are expected to provide objective oversight over managerial decisions and reduce opportunistic behavior, thereby encouraging greater disclosure.

These findings align with previous research indicating that the presence of independent board members can reduce information asymmetry and help ensure that stakeholder needs are addressed (J. Chouaibi et al., 2022; Tambunan et al., 2022; Rashid & Hossain, 2022; Ahmed, 2023). Independent directors may also encourage organizations to provide more comprehensive information to satisfy the expectations of investors and other stakeholders. This is supported by Vig (2024), who reported that a larger proportion of independent directors can enhance oversight and guide management toward value creation. In the context of ASEAN countries, where integrated reporting adoption remains largely voluntary and regulatory enforcement may vary across jurisdictions, the role of independent directors may serve as key governance actors that promote accountability and transparency in corporate reporting.

#### 4.3.3. Board diversity and integrated reporting disclosure

The regression results indicate that board diversity does not have a statistically significant effect on integrated reporting disclosure, with a coefficient of

0.00096 and a p-value of 0.197. Therefore, hypothesis *H3* is not supported. While board cultural diversity may introduce broader perspectives and international governance practices, its influence on disclosure decisions may depend on how diverse viewpoints are integrated into board discussions and strategic decision-making.

This finding is consistent with previous studies suggesting that board diversity does not always significantly influence corporate disclosure practices (Anazonwu et al., 2018; Cakti & Aryani, 2023). Cultural diversity may contribute to a broader perspective, but may not directly affect reporting decisions. Within the ASEAN context, the limited effect of board diversity may also reflect institutional differences across countries. Although foreign directors may introduce international governance practices, their influence on disclosure decisions may remain limited if firms operate in institutional environments where integrated reporting practices are still developing.

#### 4.3.4. Board activity and integrated reporting disclosure

The results indicate that board activity does not have a significant influence on integrated reporting disclosure. Board activity shows a negative coefficient of -0.0026 with a p-value of 0.117. Therefore, hypothesis *H4* is not supported. In this study, board activity is measured by the attendance of board members in board meetings, which reflects the extent to which directors participate in board oversight processes. Although higher attendance rates may indicate greater engagement in governance activities, attendance alone does not necessarily guarantee effective monitoring or meaningful participation in strategic discussions. Board members may attend meetings but contribute limited input in decision-making processes, particularly regarding complex reporting practices such as integrated reporting. As a result, high attendance levels do not always translate into stronger governance outcomes or more extensive disclosure.

This finding is consistent with previous research suggesting that board activities do not always have a significant impact on corporate disclosure practices (Ahmed, 2023; Halid et al., 2021). Board meetings are frequently regarded as ineffective in influencing management policies and are therefore not considered responsible for internal corporate governance oversight (Yulyan et al., 2021). Within the context of voluntary integrated reporting adoption in ASEAN, the effectiveness of board activity may depend more on the quality of deliberations and strategic engagement than on board member attendance rates.

#### 4.3.5. Audit committee independence and integrated reporting disclosure

The regression results show that audit committee independence has a positive and statistically significant effect on integrated reporting disclosure, with a coefficient of 0.0019143 and a p-value of 0.008, indicating that firms with more independent audit committee members tend to disclose more information in their integrated reports. Therefore,

hypothesis *H5* is supported. This result highlights the important monitoring role of audit committees in ensuring the credibility and transparency of corporate reporting.

These findings align with previous research indicating that independent audit committees enhance oversight of reporting processes and improve disclosure quality (Raimo, Vitolla et al., 2021; El-Deeb & Mohamed, 2024; Belhouchet & Chouaibi, 2024). Independent audit committees actively engage in business operations discussions, including corporate reporting (Erin, 2025), and are more likely to ensure that both financial and non-financial information is disclosed accurately and transparently (Salin et al., 2025; Sihombing & Nurhaliza, 2025). Within the ASEAN institutional setting, where integrated reporting remains largely voluntary, the presence of independent audit committee members may provide additional assurance that firms adopt more transparent reporting practices.

Among the control variables, firm size and firm age have positive but statistically insignificant coefficients, indicating that company size and organizational maturity do not significantly influence integrated reporting disclosure in this study (*FS*:  $\beta = 0.0138$ ,  $p = 0.704$ ; *FA*:  $\beta = 0.032$ ,  $p = 0.679$ ). In contrast, profitability shows a positive and significant relationship with integrated reporting disclosure ( $\beta = 0.0579$ ,  $p = 0.042$ ), suggesting that firms with stronger financial performance tend to disclose more comprehensive information. Meanwhile, leverage exhibits a negative and significant effect ( $\beta = -0.1913$ ,  $p = 0.042$ ), indicating that highly leveraged firms may be more cautious in providing voluntary disclosures such as integrated reporting. These results suggest that financial performance and capital structure may play a more relevant role in explaining integrated reporting disclosure than firm characteristics such as size and organizational maturity within the ASEAN context.

Overall, the findings indicate that independence-related governance mechanisms, particularly board independence and audit committee independence, are the most consistent factors influencing integrated reporting disclosure. These results suggest that governance effectiveness in promoting transparency does not necessarily depend on structural characteristics such as board size or meeting frequency. Instead, governance mechanisms that enhance monitoring independence appear to play a more important role in encouraging disclosure.

Importantly, these findings should be interpreted within the institutional context of ASEAN countries, where integrated reporting adoption remains largely voluntary and regulatory environments differ across jurisdictions. In such institutional settings, internal governance mechanisms may serve as key drivers of corporate transparency. Therefore, this study contributes by providing context-specific evidence on how governance mechanisms influence integrated reporting disclosure within the heterogeneous institutional environment of ASEAN countries.

## 5. CONCLUSION

This study contributes to the corporate governance and disclosure literature by examining how board characteristics and audit committee independence influence integrated reporting disclosure in the ASEAN region. Focusing on publicly listed firms in Indonesia, Malaysia, Singapore, Thailand, and the Philippines during the period 2020–2024, which includes the years following the COVID-19 shock, this study provides empirical evidence on governance effectiveness in an environment characterized by heterogeneous institutional settings and largely voluntary integrated reporting adoption. By integrating multiple governance attributes, this study offers a comprehensive framework for understanding how internal governance mechanisms shape corporate transparency in emerging and developing market contexts.

The empirical findings reveal that governance mechanisms emphasizing independence and monitoring functions play a more prominent role in promoting integrated reporting disclosure compared to structural board characteristics. Specifically, board independence and audit committee independence demonstrate a positive and statistically significant relationship with integrated reporting disclosure, indicating that independent oversight structures can enhance transparency and accountability in corporate reporting. In contrast, board size, board diversity, and board activity do not show significant associations with integrated reporting disclosure. These results suggest that the presence of governance structures alone does not necessarily guarantee more comprehensive disclosure practices; rather, the effectiveness of monitoring mechanisms appears to depend on the independence of governance bodies responsible for overseeing reporting processes.

Several practical implications arise from these findings. First, strengthening board independence and audit committee independence may serve as an effective governance mechanism to improve corporate transparency in voluntary reporting environments. Regulators and policymakers in ASEAN countries may therefore consider reinforcing governance guidelines that promote independent oversight within corporate boards and audit committees. Second, investors and other stakeholders may view independence-based governance structures as important indicators of reporting credibility, particularly when evaluating firms operating in emerging markets with varying regulatory enforcement. Finally, companies seeking to enhance the quality of their integrated reporting practices may benefit from strengthening internal governance monitoring mechanisms rather than focusing solely on structural board attributes.

Despite its contributions, this study has several limitations that open opportunities for future research. The sample is limited to firms that publish integrated reports or disclose integrated reporting elements, which may restrict the generalizability of the findings to firms that have not yet adopted integrated reporting practices. In addition, this study focuses on selected governance attributes and

may not capture other governance mechanisms that could influence disclosure decisions. Future research may expand this analysis by incorporating additional governance variables, such as ownership structure, board expertise, or institutional investor participation. Moreover, alternative econometric approaches such as dynamic panel estimation or instrumental variable techniques may be employed to address potential endogeneity issues between governance mechanisms and disclosure practices.

Overall, the findings of this study highlight the importance of governance mechanisms that strengthen monitoring independence in shaping integrated reporting disclosure within heterogeneous institutional environments. In regions such as ASEAN, where integrated reporting adoption remains largely voluntary and regulatory enforcement varies across countries, internal governance structures play a crucial role in promoting transparency and accountability in corporate reporting practices.

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