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Board characteristics and integrated reporting in an emerging market: evidence from India

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Abstract

Purpose – This paper aims to examine the influence of board characteristics on the integrated reporting quality (IRQ) of Indian-listed companies.

Design/methodology/approach – The study uses a sample of 197 firms from the BSE 500 for the years 2017–2018 to 2019–2020. The proposed hypotheses are tested using two-stage least squares regression.

Findings – The study documents a positive influence of board size, board independence and gender diversity on IRQ. The study also finds that board activity and role duality are insignificant with IRQ. Among the firm-specific characteristics, variables such as firm size, profitability and capital intensity positively influence IRQ.

Originality/value – The current study presents the first investigation in the context of India on the various board characteristics influencing IRQ. The study reiterates the role that gender-diverse boards have in improving information transparency. Policymakers can therefore drive adoption by recommending changes in board characteristics and increasing the quota for women on boards.

Keywords Integrated reporting, Board characteristics, India

Paper type Research paper

1. Introduction

Integrated reporting (IR) has emerged as a new form of reporting that addresses the limitations of traditional financial and sustainability reporting. Traditional reporting has been criticized for focusing too much on short-term performance and historical data. Further, it is overly complex and compliance-driven (Adams, 2015). To address these issues, the International Integrated Reporting Council (IIRC) introduced IR as a concise communication about an organization's strategy, governance, performance and prospects, highlighting the creation of value in the short, medium and long term. Therefore, intrinsic to IR is the idea of "shared value" (Flower, 2015), which, in a simpler expression, is the balance between economic progress, social advances and environmental protection. The growth of IR globally has raised questions about its antecedents (Kılıç and Kuzey, 2018a, b). Corporate governance and, within it, board characteristics are deemed to have a very significant influence over companies' choice of disclosure and its quality thereof. Efficient boards maintain transparency through financial as well as nonfinancial information, which signals a commitment to stakeholders' needs. This is in line with stakeholder theory which postulates that engaging stakeholders' interests through disclosure is a two-way street, benefiting both the organization and parties having a "stake" or a "claim" in the business

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(Freeman and Reed, 1983). However, empirical evidence on the relationship between board characteristics and IR is inconclusive, with mixed results in previous studies (Chouaibi *et al.*, 2022; Fayad *et al.*, 2022; Hichri, 2022). Such contrasting evidence could be due to contextual variations creating a disparity in disclosure quality and regulation-dependent board characteristics (Gunarathne and Senaratne, 2017). Previous studies on IR have primarily focused on developed nations (Frias-Aceituno *et al.*, 2013; Zhou *et al.*, 2017), where corporate governance codes emphasize economic goals with limited consideration for gender or minority inclusivity. Hence, exploring IR in emerging economies like India assumes greater significance. India has a large industrial base and a significant manufacturing sector, making it distinct from other emerging economies like Malaysia and Nigeria. Moreover, the corporate governance structure in India is unique in that it is dominated by patriarchal family-owned businesses, which has underscored the importance of board composition in promoting sustainability. Although recent efforts have been made to increase board diversity, progress has been limited. Embracing IR practices and enhancing board diversity can contribute to India's sustainability and broader social and economic development goals. Further, to improve reporting in India, regulatory bodies like the Securities Exchange Board of India (SEBI) and the Institute of Chartered Accountants of India (ICAI) have recommended and endorsed IR adoption. Given these developments, it is essential to understand the board characteristics that lead to quality IR so that regulations and policies may be improved. These factors highlight the significance of the present study.

The evidence in the current paper provides important contributions. It constructs an IR index to study integrated reporting quality (IRQ) and improves on existing literature that focuses on IR adoption. It also employs an instrumental variable estimation method to tackle potential endogeneity issues. To enrich the model estimation, the study uses the Shannon Index as a proxy for gender diversity. The study also considers recently introduced board characteristics in India, such as role duality, and examines their impact on IRQ. By including a broad variety of variables, including audit committee independence, role duality and director ownership, the study provides a more comprehensive understanding of the relationship between board characteristics and IRQ in the context of an emerging economy. Contrary to the predictions of agency theory, the study finds an insignificant relationship between audit committee independence and IRQ, suggesting that outside auditors do not significantly contribute to the quality of reporting in India. Role duality, although discouraged by SEBI, has a weak role in reducing disclosure quality. Adding to the theoretical perspective on the topic, the study supports stakeholder theory and resource dependency theory by documenting a significant association between board size, board independence and gender diversity with IRQ.

The remainder of the paper proceeds as follows: Section 2 details the theoretical support, Section 3 presents the review of literature and hypotheses development, Section 4 discusses the data and methodology, Section 5 discusses the empirical models and measurement of variables, Section 6 presents the results and discussions and Section 7 concludes the paper.

2. Theoretical underpinnings

According to Jensen and Meckling (1976), an agency relationship is a contract between a company's owners and its managers in which decision-making power is delegated to management. This brings to light the agency conflict, in which shareholders' and management's interests diverge, resulting in monitoring costs, bonding costs and residual losses. Board characteristics can be used to reduce agency problems by persuading management to make decisions and take actions that benefit shareholders and other stakeholders. As a result, agency theory has been used primarily to explain the relationship between various corporate governance characteristics such as board size, board activity, board independence, audit committee independence, role duality and voluntary reporting such as IR. Stewardship theory, an alternative to agency theory, denies the existence of agency problems while acknowledging the principal–agent relationship. As a result, there is no innate lack of executive motivation (Muth and Donaldson, 1998). Due to the convergence of interests between the principal and agent, boards are more likely to make information available so that shareholders can evaluate their stewardship performance. Resource dependency theory asserts that organizations' behavior is influenced by their reliance on critical and important resources (Dowling and Pfeffer, 1975). According to Daily *et al.* (2002), resource dependency theory provides more support for the relationship between board characteristics and IR than agency theory. Stakeholder theory (Freeman and Reed, 1983) argues that the management should consider the interests of all parties that have an interest or claim in the business. In this regard, IR through the value creation concept entails both organizations profits and relationships with stakeholders.

3. Literature review and hypotheses development

Although IR is a new reporting phenomenon, extensive research has been conducted on the topic, encompassing various aspects. Studies have explored the IR concept (Abeysekera, 2013; Adams, 2015), adoption momentum (Gunarathne and Senaratne, 2017), positive appraisals and criticisms (Flower, 2015). They have also investigated the determinants of IR, considering both firm-specific and external factors (Buitendag *et al.*, 2017; Vitolla *et al.*, 2020). Additionally, impact studies have examined the economic implications of IR, including its role in attracting long-term investors, reducing the cost of capital and enhancing financial performance (Zhou *et al.*, 2017; Dey, 2020). However, research specifically examining the relationship between board characteristics and IR is limited. Most of these studies have utilized agency theory, with fewer applications of socio-political theories. Vitolla *et al.* (2020) and Cooray *et al.* (2020) found a reduction in agency problems through board characteristics such as size, independence, diversity and activity. Songini *et al.* (2022) found a positive association between IR quality and the education level of board members. Confirming these findings, Frias-Aceituno *et al.* (2013a) highlighted the importance of these board characteristics in integrated information dissemination through IR, drawing from stakeholder theory. Contrary to the aforementioned studies, Ahmed Haji and Anifowose (2016) found an insignificant association between audit committee size and IR practice, without support from economic or socio-political theories. Additionally, studies by Dilling and Caykoylu (2019), Girella *et al.* (2019) and Songini *et al.* (2022) did not find a significant contribution of women on boards to IR. Further variations in results were observed by Omran *et al.* (2021), who found a negative and insignificant relationship between board characteristics and IR in Australian companies, and Hichri (2022), who found a positive association with board independence but a negative relationship with board activity. These contrasting results may be attributed to disparities in legal, economic and social contexts, which create variance in board characteristics, ultimately affecting disclosure practices. While valuable insights can be gleaned from existing literature, it is still challenging to draw clear-cut conclusions. Moreover, the majority of IR research has focused on South Africa and developed countries, limiting its representativeness for emerging economies like India. To address these gaps, the present study aims to identify the board characteristics that influence the IRQ among BSE 500 firms in the following hypotheses section.

3.1 Board size (BS)

According to resource dependency theory, a larger board augments the likelihood of members having resourcefulness and supervisory competencies in voluntary disclosures such as IR. The expertise of experienced directors is required to ensure the accuracy and alignment of reports with reporting norms such as the IR framework. Likewise, stakeholder theory advocates that a larger board represent the interests of diverse stakeholders, thereby improving transparency

(Muth and Donaldson, 1998). However, the benefits of a larger board may be offset by the hindrance of quick decision-making because of divergent opinions, poor communication and a lack of cohesiveness in working toward a common goal. Ergo, this may render the board ineffective and also impede monitoring processes. Previous studies by Kılıç and Kuzey (2018a, b) found a negative relationship between board size with IR, while Frias-Aceituno *et al.* (2013a) and Vitolla *et al.* (2020) reported a positive relationship. Based on the arguments and the contradicting empirical evidence above, the study formulates two hypotheses:

H1a. Board size positively influences IRQ.

H1b. Board size negatively influences IRQ.

3.2 Board activity (BA)

The activity of the board, or the frequency of board meetings, serves as a platform for directors and managers to discuss strategic matters, review policies and performances and address major problems. There are differing viewpoints on the association between board activity and IRQ. Some argue that frequent board meetings, in line with agency theory, help mitigate agency conflicts, enhance board effectiveness and promote good corporate governance by prioritizing stakeholder interests (Lipton and Lorsch, 1992; Vitolla *et al.*, 2020). It is believed that increased oversight through more meetings reduces earnings manipulation, facilitates information sharing and decreases agency costs. However, others (Charitou *et al.*, 2007) contend that excessive board activity indicates inefficacy and poor performance. With these perspectives in mind, the study proposes two hypotheses:

H2a. Board activity positively influences IRQ.

H2b. Board activity negatively influences IRQ.

3.3 Board independence (BIND)

Drawing from agency theory, stakeholder theory and resource dependency theory, independent directors are recognized for their unbiased judgments, representation of stakeholder interests and provision of valuable external links. Their presence enables effective management monitoring without personal or economic ties, reducing opportunistic behavior (Donaldson and Davis, 1991). These directors also enhance their professional reputation through increased disclosures, such as IR. Previous studies highlight a positive association between board independence and disclosure, including in the context of IR (Barros *et al.*, 2013; Vitolla *et al.*, 2020). Therefore, the study proposes the hypothesis:

H3. Board independence positively influences IRQ.

3.4 Gender diversity (GD)

Resource dependency theory (Dowling and Pfeffer, 1975) suggests that a diverse board brings varied resources and skills that can lead to improved business outcomes. Women directors, in particular, possess traits like empathy and social responsiveness and demonstrate better attendance in monitoring committees. They also contribute nontraditional professional experiences, introducing fresh perspectives to the board (García-Sánchez *et al.*, 2019). Women on boards, conforming to female stereotypes, show a stronger inclination toward addressing stakeholder needs, promoting information and engaging in corporate social responsibility initiatives. Previous studies (Frias-Aceituno *et al.*, 2013a; Kılıç and Kuzey, 2018a, b) have found a significant influence of women on boards on voluntary information disclosure, including investor relations (IR). Accordingly, the study formulates the following hypothesis:

H4. Gender diversity significantly influences IRQ.

3.5 Role duality (RD)
Agency theory suggests that an independent board separate from management promotes decision control and avoids autocratic leadership (Eisenhardt, 1989). Granting dual powers to one individual may lead to opportunistic behavior that is challenging to detect. In contrast, resource dependency theory advocates for a single individual holding both the CEO and chairman positions for unity of command. However, this practice limits board independence and impartial oversight, potentially impacting the quality of disclosure, especially voluntary disclosure (Wang and Hussainey, 2013). SEBI recommends separate appointments for the CEO and chairman positions. Empirical evidence shows a negative relationship between a single individual holding both roles and IR, as observed by Wang and Hussainey (2013) and Zhou *et al.* (2017). However, other studies (Huafang and Jianguo, 1986; Cheng and Courtenay, 2006) find no relationship between this practice and disclosure. Considering existing regulations, the study proposes the following hypothesis:

H5. Role duality negatively influences IRQ.

3.6 Director ownership (DO)
As per Jensen and Meckling (1976), directors who hold a significant portion of a company's shares, bear the consequences of managerial actions and have reduced incentives for opportunistic behaviors. Consequently, the need for disclosure, such as IR, is diminished. This is particularly applicable to closely held companies, where lesser public scrutiny results in a lower inclination for voluntary disclosures. In director-owned companies, the costs of preparing and publishing disclosure outweigh the perceived benefits, given the lesser liability for public disclosure (Ghazali, 2007). Conversely, companies with a higher proportion of outside shareholders face increased requirements for public accountability and monitoring through disclosures. Previous studies (Ghazali, 2007; Leung and Horwitz, 2004) have found a negative association between director ownership and voluntary disclosure. Therefore, the study proposes the following hypothesis:

H6. Director ownership negatively influences IRQ.

3.7 Audit committee independence (ACI)
An audit committee (AC) plays a crucial role in corporate governance by aiding the board in overseeing management and maintaining independence in the audit process, as per agency theory. The presence of a majority of independent members in the AC is important to ensure work independence, objectivity, and effective oversight of disclosure practices (Nekhili *et al.*, 2016). The requirement for listed companies in India to form an AC with two-thirds of independent directors is aimed at safeguarding investor interests. However, empirical studies have shown mixed findings regarding the relationship between AC independence (ACI) and disclosure (Nekhili *et al.*, 2016; Barros *et al.*, 2013). Considering the prevailing regulations in India, the study formulates the following hypothesis:

H7. ACI is positively associated with IRQ.

4. Data and methodology

4.1 Sample selection and study period
The population of the study is the top 500 firms by market capitalization on the Bombay Stock Exchange. The population and base year of 2017–2018 are used because SEBI

recommended IR to top 500 companies mandatorily producing BRR for the financial year 2017–2018. To draw a sample, the study considered the top 200 firms out of the 500 companies. The rationale for selecting the top 200 firms lies in their contribution (94%) to the overall market capitalization of the BSE. IR and corporate governance regulations have always been recommended to top-listed firms because they have access to resources and are therefore more receptive to adoption. The industrial composition of the sample is based on the National Industrial Classification (NIC), 2008. Three companies were excluded from the sample as they went through significant mergers during the period. So, the study's final sample resulted in 197 firms for the period 2017–2018 to 2019–2020. The data were collected from the company's websites, annual reports and the Capitaline database. See Table 1 (available online at: https://docs.google.com/document/d/1nhF4c8Ex0SPQKvWdpgi1tjeCOGi1jmoR/edit?usp=sharing&ouid=117717069907051660628&rtpof=true&sd=true).

5. Empirical models and measurement of variables

To investigate the effect of board characteristics and firms' specific characteristics on the quality of IR, the study employs two-stage least squares (2SLS) regression:

$$\begin{aligned}\mathrm{IRQ_{it}} &= \beta_0 + \beta_1\mathrm{LnBS_{it}} + \beta_2\mathrm{LnBA_{it}} + \beta_3\mathrm{BIND_{it}} + \beta_4\mathrm{GD_{it}} + \beta_5\mathrm{RD_{it}} \\ &\quad + \beta_6\mathrm{DIRWON_{it}} + \beta_7\mathrm{ACI_{it}} + \beta_8\mathrm{LnTA_{it}} + \beta_9\mathrm{RoA_{it}} + \beta_{10}\mathrm{DE_{it}} \\ &\quad + \beta_{11}\mathrm{CAPIN_{it}} + \beta_{12}\mathrm{RDIN_{it}} + \mathrm{Year-effect} + \mathrm{Industry\ Effect} + \varepsilon_{\mathrm{it}}\end{aligned} \tag{1}$$

The study has utilized the NIC 2008 to classify and generate industry dummies, while also incorporating year dummies in the analysis to account for unobserved heterogeneity in IRQ across different years and industries.

Table 2 (available online at: https://docs.google.com/document/d/1J3W8lQNbADGN2Wk-8dtUl_0Dzz_sxPit/edit?usp=sharing&ouid=117717069907051660628&rtpof=true&sd=true) presents the measurements of variables in the study. The endogenous variable is board gender diversity (GD), while foreign investor ownership, firm size and board size are considered exogenous variables. Stakeholder theory suggests that foreign investor ownership may influence the appointment of female directors, as they can contribute to informed decision-making and social and environmental responsibility. Firm size is expected to affect the number of women on the board, as larger firms have the resources to respond to diverse stakeholder needs. Board size is also likely to influence the presence of female directors (Ben-Amar *et al.*, 2017). LnBS represents board size measured as the natural logarithm of the total number of directors, while LnBA represents board activity measured as the natural logarithm of the total number of board meetings held in a year. BIND is the proportion of independent directors to the total number of board members. GD indicates gender diversity and is measured as the proportion of female directors to the total number of directors. RD is measured as "1" if the same person serves as both CEO and chairman of the board, and "0" otherwise. DIROWN measures the percentage of shares held by directors. ACI is "1" if less than two-thirds of the audit committee consists of independent and non-executive directors and "0" otherwise. The independent variable, IRQ, is measured using the IIRC Framework through content analysis. The study utilizes a checklist adapted from the 2013 version of the IIRC Framework, consisting of 50 items across several dimensions (Appendix (available online at: https://docs.google.com/document/d/1Z4b0rEWZrFUmChRdbXRSc6sqU3gW5X-3/edit?usp=drive_link&ouid=117717069907051660628&rtpof=true&sd=true)). Each item is assigned a score: "0" if absent, "1" if poorly disclosed, "2" if specific but not quantitative and "3" if comprehensively disclosed with supporting quantitative figures and/or pictorial representations. The study also controls for various firm-specific variables as given in Table 2.

6. Results and discussion

6.1 Descriptive statistics

Table 3 (available online at: https://docs.google.com/document/d/1luOncqF6QNAFmYgcCye3KmCFX2Nc8zqU/edit?usp=sharing&ouid=117717069907051660628&rtpof=true&sd=true) presents the descriptive statistics of the study's variables. The dependent variable IRQ also shows that there are firms with high-quality disclosure as well as with low disclosure levels. On average, Indian firms disclose about 50% of the IR items qualitatively. Board size has a mean of 10.648 ranging from a minimum of 4 to a maximum of 22, indicating that board size varies widely among different firms. Board activity has a mean of 7.181 and ranges from 4 to 22. The mean for BIND is 0.502 indicating that the proportion of independent directors represents 50.2% of the total directors in the sample firms. GD has a mean of 0.151 indicating that the proportion of women directors represents 15% of the total directors in the sample firm. The mean of RD (0.288) and ACI (0.699) indicates that roughly 28 and 70% of the sample firms have role duality and have at least one independent director in the audit committee, respectively.

6.2 Correlation analysis

Table 4 (available online at: https://docs.google.com/document/d/1HUS7RNzM911G8hNMByaOxrN7v9d66DoP/edit?usp=sharing&ouid=117717069907051660628&rtpof=true&sd=true) presents the correlation coefficients among the study's variables. A look at the table shows that IR is statistically significant and positive for LnBS, LnBA, BIND, ACI, LnTA and RDIN. The highest obtained coefficient among the explanatory variables is 0.54 between LnBA and LnTA, which is relatively low, indicating that the issue of multicollinearity does not pose a problem in our analysis. An additional test of variance inflation factor is conducted to check for multicollinearity issues, and the results are favorable as the highest obtained value is much below the critical value of 10 (results not tabulated for brevity).

6.3 Regression result

Table 5 (available online at: https://docs.google.com/document/d/1C0raVEFlYKW-Rb3MxQRYVUYwzKNncOty/edit?usp=drive_link&ouid=117717069907051660628&rtpof=true&sd=true) presents the result of the 2SLS where IRQ is the dependent variable. The significant Wald χ^2 indicates the goodness-of-fit of the model employed. The Durbin–Wu–Hausman test is also significant, which indicates the appropriateness of employing 2SLS due to the presence of endogeneity in the model. A cursory look into the table reveals that the coefficient of LnBS is positive, with the response variable at a 10% level of significance. The coefficients of BIND and GD are also seen to be highly significant and positive at the 1 and 5% levels, respectively. Among the control variables, LnTA and RoA are observed to have a positive impact on IRQ.

The study excludes all the financial companies from the sample to ensure the robustness of the results. Non-financial companies in India are primarily governed by SEBI. On the other hand, financial companies are governed by the Banking Regulation Act of 1949 and are therefore subject to additional disclosure requirements as part of their regulatory compliance. The regression results are presented in Table 6 (available online at: https://docs.google.com/document/d/1nrsgZK8shzJcdoqyos9sGrEtseYW25Px/edit?usp=sharing&ouid=117717069907051660628&rtpof=true&sd=true). As observed, regarding the output of IRQ, only GD is seen to be positively affecting the response variable at a 10% level of significance. Among the control variables, LnTA and RoA are seen to be positively influencing IRQ.

Second, the study employed Shannon's Diversity Index as a proxy for board gender diversity, and the regression results are exhibited in Table 7 (available online at: https://docs.google.com/document/d/1O6ZJ4izFjPjJWyz3uggv5-nvBJQDQjxJ/edit?usp=sharing&ouid=117717069907051660628&rtpof=true&sd=true). The Shannon Index is calculated as the $-\sum_{i=1}^{n} P_i InP_i$ n, where Pi is the percentage of board members in each category and n is the total number of board members. Regarding the effect on IRQ, LnBS, BIND and GD are positively related with the response variable. Similarly, the coefficients of SIZE and RoA are also positive with the dependent variable.

6.4 Discussion of results

The findings of the study indicate significant impacts of board characteristics on IRQ. *First*, board size shows a positive association with IRQ, confirming H1a and supporting resource dependency theory. The results also corroborate previous findings (Frías-Aceituno *et al.*, 2013b; Vitolla *et al.*, 2020) that a larger board brings diverse expertise, facilitating better responses to innovative disclosure like IR. *Second*, there is an insignificant relationship between IRQ and board activity, rejecting H2a and H2b. Confirming previous studies (Omair Alotaibi and Hussainey, 2016; Girella *et al.*, 2019), excess frequency of board meetings may be an unnecessary expending of time and company resources, creating no significant effect on disclosure quality. *Third*, board independence has a significant positive association with IRQ, supporting H3 and aligning with stakeholder theory as well as previous studies (Vitolla *et al.*, 2020; Lim *et al.*, 2007). External directors' objectivity curbs opportunistic behavior and motivates managers to enhance reporting quality. *Fourth*, gender diversity represented by women on boards has a significant positive association with IRQ, supporting H4. Women directors bring inclusive stakeholder perspectives and synergies that contribute to competitive advantages in reporting practices. This finding is consistent with previous studies such as those of Barako and Brown (2008); Frias-Aceituno *et al.* (2013a), and Vitolla *et al.* (2020). *Fifth*, role duality (combining chairman and CEO roles) does not adversely affect IRQ, rejecting H5. RD a common practice among Indian companies, need not be done away with to improve information quality. Similar results have been found in other contexts (Cheng and Courtenay, 2006; Babío Arcay and Muiño Vázquez, 2005). *Sixth*, director ownership shows an insignificant relationship with IRQ, potentially due to limited director ownership among the sample companies in India. Therefore, the study rejects the prediction of a negative association by H6. *Last*, the positive relationship between audit committee independence and IRQ is insignificant, suggesting a ceremonial role rather than substantial influence, in line with the findings of Ahmed Haji and Anifowose (2016). These findings contribute to understanding the influence of board characteristics on IRQ and align with previous research, providing insights for improving information quality in IR.

7. Concluding remarks

The present study is a modest attempt to investigate the influence of board characteristics on the adoption of IR in the Indian context. To this end, the paper employed a sample of 197 companies over three years (2017–2018 to 2019–2020). The findings reveal that while only a few Indian firms currently adopt IR practices, there is a growing trend in IR adoption. Utilizing panel probit regression, the results support the resource dependency perspective, highlighting the positive influence of women on boards in enhancing disclosure quality. This study makes several important contributions. To the best of the author's knowledge, it is among the first empirical examinations of how board and firm-specific characteristics affect the choice to publish IR in India. It should also be noted that firms in India voluntarily undertake IR in the absence of mandatory disclosure requirements, and the concept of IR is relatively new in the Indian context. Additionally, the empirical evidence validates agency theory, stakeholder theory and resource dependency theory.

The study also provides some useful implications. From a practical standpoint, companies engaging in IR should aim for an optimal board size to enhance efficiency and communication among board members. Likewise, finding the right balance of board meetings is crucial for effective monitoring through IR as excessive meetings may not contribute to disclosure quality. Increasing female representation on boards is recommended for successful IR implementation, enhancing firm legitimacy and investor confidence. Compliance with minimum requirements for the independence of audit committees is not enough; companies should appoint independent directors with professionalism and expertise to promote IR and improve informational transparency. In terms of policy implications, this study provides valuable insights for constructing a legal framework in India, particularly as SEBI plans to increase IR implementation by companies. However, the study has limitations. It focuses solely on the influence of board characteristics, neglecting other external corporate governance variables that could impact voluntary disclosure. Additionally, the data are limited to publicly listed Indian companies, and future research should expand to include companies from other emerging economies to gain a broader understanding of how different contexts and board structures influence voluntary disclosure.

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