

## **Board gender diversity and intellectual capital disclosure: perspective from resource-based view, upper echelon theory, and critical mass theory**

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### **Introduction**

In today's knowledge-driven economy, intellectual capital (IC) is key to value creation, enhancing firms' competitiveness and sustainability. Effective IC management and disclosure, influenced by corporate governance, particularly board gender diversity (BGD), are crucial for resilience and sustained growth in a dynamic business environment (Tiwari and Arora, 2024).

Upper echelon theory suggests that more diverse boards, shaped by the cognitive bases and values of top managers, are better positioned to exercise their monitoring and compliance roles, thereby reducing information asymmetry and improving the quality of IC disclosure (ICD) (Zhao and Abeysekera, 2023). Again, Kanter's (1977) critical mass theory suggests that gender diversity impacts corporate decisions meaningfully once a critical mass is reached. Moreover, more female directors improve ICD through their unique human capital and monitoring skills (Nadeem, 2019; Maji & Saha, 2024)

Further, the review of literature reveals certain issues. First, most of the studies used ICD framework with limited components such as (Human capital, structural capital, relational capital). Second, most of the studies considered the presence of female directors on the board neglecting the number of female directors. Transitioning from having a single female director to a critical mass of two or three can substantially strengthen their influence on board dynamics and decision-making. Third, many studies have ignored the possible endogeneity issue in the BGD and ICD relationship. Research conducted in Italy (Nicolo et al., 2021) and Tunisia (Loulou-Baklouti, 2023) primarily relied on fixed effects and OLS models, which may inadequately address these concerns. There is a need to employ more robust models such as the generalised method of moments (GMM) and 2 stage least-square (2SLS) models.

Given these backdrops the motivation of the study is to examine BGD and ICD quality relationship. Further, the study contributes the extant literature by addressing the critical mass theory in the relationship between BGD and ICD quality. The study addresses the following three research questions in the context of India.

The study raises the following research questions:

RQ1: What is the impact of BGD on the quality of ICD?

RQ2: Is there any association between BGD and the components of ICD?

RQ3: Does critical mass matter in the relationship between BGD and ICD quality?

To address these issues, the study employs a comprehensive ICD framework by Maji and Goswami (2018), analysing 100 firms randomly selected from the top 500 companies listed on the Bombay Stock Exchange as of March 31, 2023. Theoretically, resource-based theory, upper echelon theory and critical mass theory advocate for influence of gender diversity on ICD (Torchia et al., 2011, Wu et al., 2022). Empirical evidence also show a positive impact of BGD on ICD (Tejedo-Romero et al., 2017; Nadeem, 2019; Nicolo et al., 2021; Loulou-Baklouti, 2023). Based on these theoretical and empirical findings, we formulate the following research hypotheses.

$H_1$ : Board gender diversity positively influences the ICD quality.

$H_2$ : The presence of women on the board positively influences the quality of the components of ICD.

$H_3$ : A board with two or more women positively influences ICD and its components.

## Research Design

The response variable is ICD quality. The total disclosure score for IC is computed using the formula  $DSIC = \frac{\sum_{i=1}^n X_{ijt}}{N_j}$ . Where,  $N_j$  is the maximum score for firm, ‘j’ indicates the company, ‘i’ pertains to the items, and ‘t’ signifies the time.  $X_{ijt}$  indicates the disclosure score using a 0-3 scale, where 0 = not disclosed, 1 = partially disclosed, 2 = fully descriptive, and 3 fully quantitative or precise. Gender diversity, the independent variable, is measured using three proxies: the percentage of women on boards, the Blau index, and the number of female directors. The analysis incorporates firm-specific and governance-related variables following empirical literature.

Two-step system generalized method of moment GMM is employed to examine the impact of BGD on ICD quality and its components.

## Findings

Our study observes a significant positive impact of BGD on ICD quality. Specifically, a 1% increase in the share of female directors corresponds to a 0.743% improvement in ICD quality. Alternative measures of BGD, including the Blau index and the number of female directors, consistently support this positive relationship. The results indicate that the presence of female directors on corporate boards brings unique skills, perspectives and collaborative leadership (Liu et al., 2014), which contribute to better management of IC and help reduce information asymmetry and enhance transparency (Srinidhi et al., 2011), thereby improve in quality of ICD.

Again, the study observes a positive impact of BGD on human capital (HC), structural capital (SC), relational capital (RC), IT capital, and R&D and innovation capital.

### 1. Conclusion

This study examines the relationship between BGD and the ICD quality, using alternative measures of gender diversity. The presence of women on corporate boards plays a pivotal role in improving both the overall quality of ICD and its components. The findings support the theoretical perspective of

resource-based view, upper echelon theory and critical mass theory. Based on the findings, the study fails to reject research hypothesis-  $H_1$ ,  $H_2$ ,  $H_3$ .

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