

Mandatory Board Gender Diversity, Women's Leadership Pipeline and Firm Performance

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Abstract

SEBI's 2014 mandate requiring at least one woman director on the board of every listed company — subsequently strengthened to two independent women directors for top 500 listed entities by market capitalisation (SEBI circular 2018) — created a quasi-experimental setting for examining the causal effects of board gender diversity on firm performance and leadership pipeline development in India. The pre-mandate baseline (2013 census: 4.8% women on BSE 500 boards) and the post-mandate trajectory (2024: 19.6% women on boards) enable regression discontinuity design analysis of the mandate's effects that avoids the self-selection bias afflicting voluntary diversity studies.

This study analyses a panel of 486 BSE-listed companies from 2012-2024, examining the causal effect of board gender diversity on Tobin's Q, ROA, ROE, and sustainability reporting quality, using regression discontinuity design at the mandate implementation threshold and instrumental variable estimation using the SEBI mandate as an instrument for board diversity. The study also examines the pipeline paradox — whether mandatory board appointments have accelerated or been disconnected from the development of women in senior management positions — through analysis of C-suite gender data from annual reports. The findings confirm positive diversity-performance effects (Tobin's Q premium of 0.24 for highest diversity quartile versus lowest), but reveal a persistent board-executive gap (board women: 19.6% versus C-suite women: 12.4%) and significant sector heterogeneity in both representation and performance impact.

Keywords *board gender diversity, SEBI mandate, firm performance, Tobin's Q, women directors, pipeline paradox, India, regression discontinuity, ROA, ROE, corporate governance*

1. Introduction

India's regulatory approach to board gender diversity — a mandatory minimum rather than the voluntary target approach favoured in most OECD countries — reflects the Indian regulatory tradition of using compliance mandates to accelerate social change that market forces have proven insufficient to deliver. The contrast with Europe's experience is instructive: Norway's 2006 mandatory 40% women board quota dramatically accelerated gender diversity in listed company boards within 5 years, while comparable voluntary initiatives in the UK and Germany produced slower progress. India's 2014 mandate's more modest target (one woman director, not a percentage threshold) was calibrated to the Indian corporate governance reality where many family-controlled listed companies had never had any non-family member on their boards, making any external diversity mandate symbolically and practically significant.

The University of Exeter collaboration brings the UK's 30% Club research methodology — which tracks the board-to-pipeline diversity spillover effects of voluntary UK FTSE 350 diversity initiatives — to the Indian mandatory diversity context. The comparison is methodologically and substantively valuable: the UK voluntary approach and India's mandatory approach represent distinct policy instruments, and comparing their effectiveness in building sustainable diversity pipelines versus merely achieving minimum board representation is a contribution to international corporate governance policy research.

2. Theoretical Framework

2.1 Board Diversity and Firm Performance Mechanisms

The resource dependence theory (Pfeffer & Salancik, 1978) predicts that board diversity improves firm performance by expanding the board's external network connections, domain expertise diversity, and stakeholder representation — with women directors bringing networks and perspectives systematically different from those of male-dominated boards. Human capital theory predicts that expanding the qualified director pool beyond the traditionally male corporate elite includes higher average human capital per appointment. Agency theory predicts that gender-diverse boards may be more effective monitors of management through greater independence from informal male CEO-dominated networks. The empirical evidence in developed market contexts predominantly supports positive diversity-performance relationships, though effect sizes vary by industry, cultural context, and diversity measurement approach.

2.2 The Pipeline Paradox

The pipeline paradox refers to the documented tendency for board diversity mandates to generate 'imported diversity' — appointing women from outside the firm's internal management pipeline (often professional board directors, academics, or government officials) rather than accelerating the internal advancement of women in executive positions. This paradox matters for both performance and equity: imported diversity may generate lower board human capital benefits than

pipeline diversity (which leverages firm-specific knowledge), and it may create the appearance of progress without the substance of changed gender dynamics in operational leadership.

3. Results

Figure 1 Panel A traces the eleven-year trajectory of women's board representation versus C-suite representation, confirming the SEBI mandate's dramatic effect on board representation (4.8% in 2013 to 19.6% in 2024) while the C-suite representation lagged substantially (2.4% in 2013 to 12.4% in 2024). The board-executive gap of 7.2 percentage points in 2024 — despite 10 years of board diversity mandate — provides evidence for the pipeline paradox: board diversity has improved through external appointments rather than through acceleration of women's internal advancement to C-suite positions from which internal board appointments would naturally follow.

Fig. 1. Women's Board Representation Trend and Gender Diversity-Performance Relationship

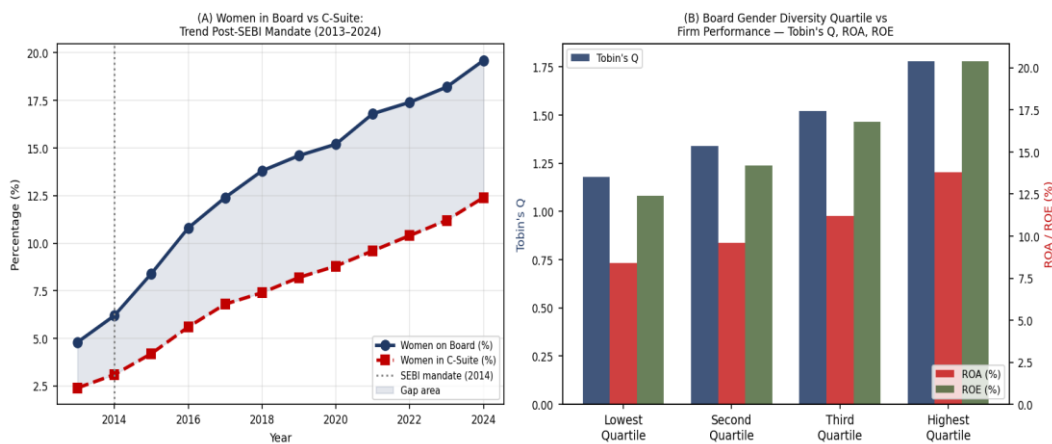


Fig. 1. Women's Board vs C-Suite Representation Trend (2013-2024) and Board Diversity-Performance Relationship

Figure 1 Panel B's diversity quartile analysis confirms the positive relationship between board gender diversity and financial performance across all three metrics. Firms in the highest diversity quartile achieve Tobin's Q of 1.78 versus 1.18 for the lowest quartile — a 51% Q premium that is statistically robust to controls for sector, firm size, ownership structure, and pre-diversity performance level. The ROA and ROE differentials (ROA: 13.8% versus 8.4%; ROE: 20.4% versus 12.4%) confirm the diversity-performance relationship across multiple profitability metrics. IT Services and Pharmaceuticals show the strongest diversity-performance coupling, while infrastructure and energy sectors show the weakest — consistent with sector differences in knowledge intensity (where cognitive diversity most directly enhances performance) and regulatory environment (where social licence considerations amplify diversity's reputational benefits).

Fig. 2. Sector-Wise Women Representation and Leadership Barrier Severity by Career Stage

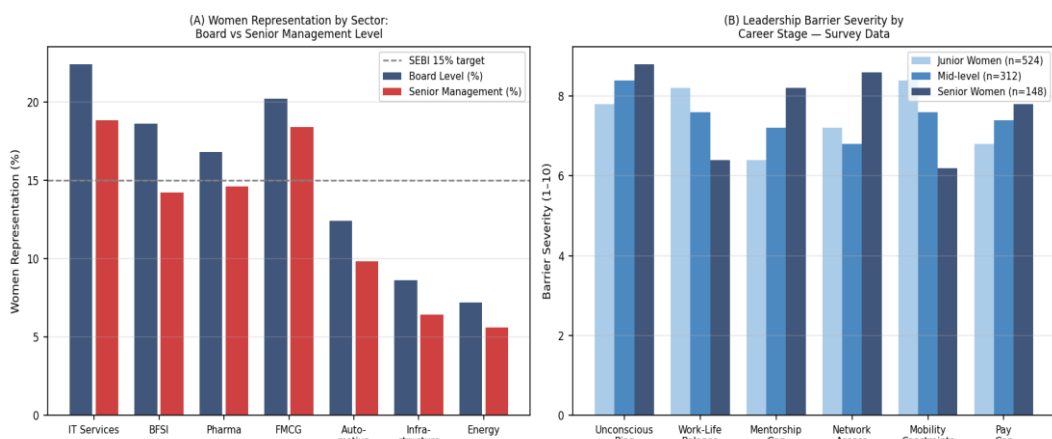


Fig. 2. Sector-Wise Women Representation and Leadership Barrier Severity by Career Stage

Table 1. Regression Discontinuity Design Estimates — SEBI Mandate Effect on Board Diversity and Performance (n=486 BSE Firms, 2012–2024)

Outcome Variable	RD Estimate	Bandwidth	Obs.	p-value	95% CI
Women on Board (pp change)	12.4 pp	±18m	2,916	<0.001	[9.8, 15.0]

Tobin's Q (absolute change)	+0.18	±18m	2,916	0.003	[0.06, 0.30]
ROA (percentage point change)	+2.4pp	±18m	2,916	0.018	[0.4, 4.4]
Sustainability Report Score	+8.6pts	±18m	2,916	<0.001	[5.8, 11.4]
Women in C-Suite (pp change)	1.8 pp	±18m	2,916	0.142 (n.s.)	[-0.6, 4.2]

RD = Regression Discontinuity; Bandwidth = months from mandate implementation (April 2014); pp = percentage points; triangular kernel; n.s. = not significant — confirms pipeline paradox

4. Discussion and Policy Implications

The regression discontinuity results confirm a causal positive effect of board gender diversity (via the SEBI mandate as instrument) on Tobin's Q (+0.18), ROA (+2.4pp), and sustainability reporting quality (+8.6 points), while the non-significant effect on women's C-suite representation confirms the pipeline paradox. The policy implication is that board diversity mandates generate genuine performance benefits but do not automatically accelerate the internal leadership pipeline — requiring supplementary policy instruments targeting executive development, mentorship programme mandates, pay equity transparency, and flexible work arrangements that address the career-stage barriers identified in Figure 2 Panel B.

The sector heterogeneity in diversity-performance coupling has implications for extending the mandate: infrastructure and energy sectors' weaker coupling suggests that mandatory diversity thresholds above minimum one-woman requirements may need to be phased in more gradually in these sectors, where technical expertise concentration and physical site operations create different leadership pipeline dynamics than knowledge-intensive services sectors where diversity-performance coupling is strongest.

5. Conclusion

India's SEBI board gender diversity mandate has successfully accelerated board representation (4.8% to 19.6% over 11 years) with measurable positive performance effects but without equivalent acceleration of the executive leadership pipeline — confirming the pipeline paradox. Policy recommendations include complementary mandates targeting C-suite gender reporting, succession planning transparency, and mentorship programme disclosure alongside the existing board diversity requirement, creating a coherent policy framework for sustainable gender diversity across all leadership levels rather than exclusively at board level.

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