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Identifying leverage points which impact firm value - The ESG lens on Nifty 100 firms

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PURPOSE / OBJECTIVES

To identify ESG–financial performance archetypes in NIFTY 100 firms and explore how sustainability disclosure and firm value co-evolve under India's BRSR-driven ESG environment.

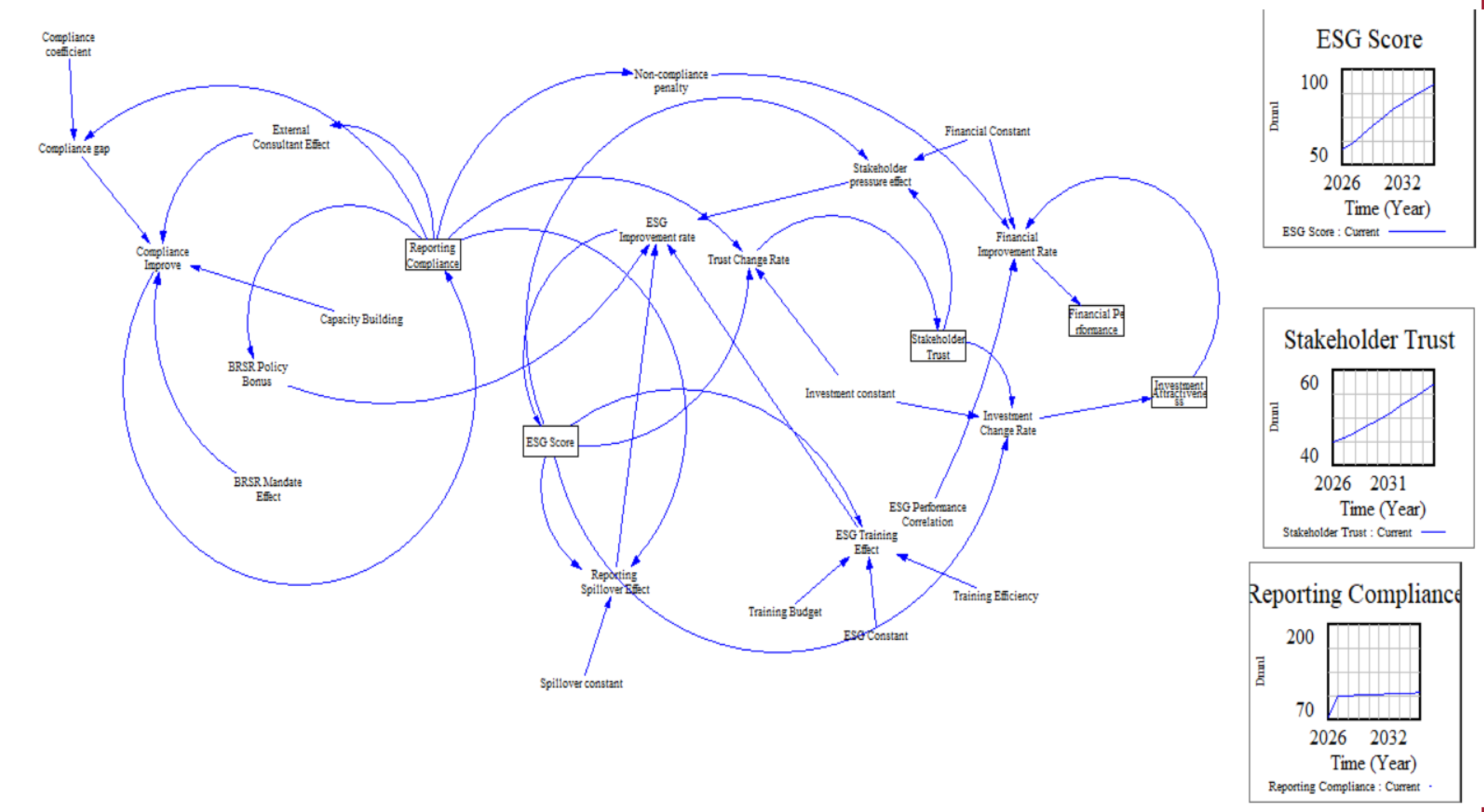
The study has novel contributions of clustering the 5 year Nifty 100 into 4 archetypes and validate them. The basis of clustering are ESG and firm value indicators.

MATERIAL & METHODS

Using five years of NIFTY 100 panel data, ESG and firm-value indicators were standardized, clustered into four archetypes, and validated through robustness checks, silhouette analysis, and comparative interpretation..

RESULTS

The findings support the hypothesis that NIFTY 100 firms do not follow a single ESG–financial path. Instead, they form four distinct archetypes with different combinations of disclosure intensity, ESG performance, and firm value. This suggests that sustainability disclosure alone does not guarantee value creation; rather, firms evolve through heterogeneous and dynamically different performance trajectories.

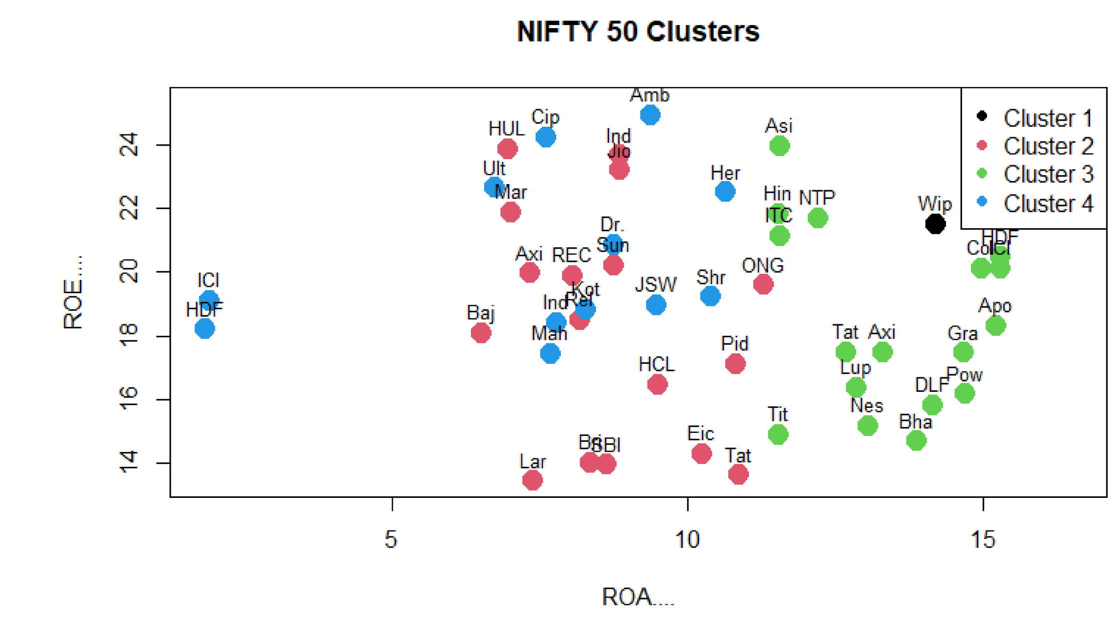


Four scenarios were tested (Vensim Sensitivity tool):
1. BASE CASE: BRSR=0, Training=3.5Cr
2. BRSR POLICY: BRSR=1.8, Training=3.5Cr
3. TRAINING PUSH: BRSR=0.5, Training=6Cr
4. COMBINED: BRSR=1.8, Training=6Cr

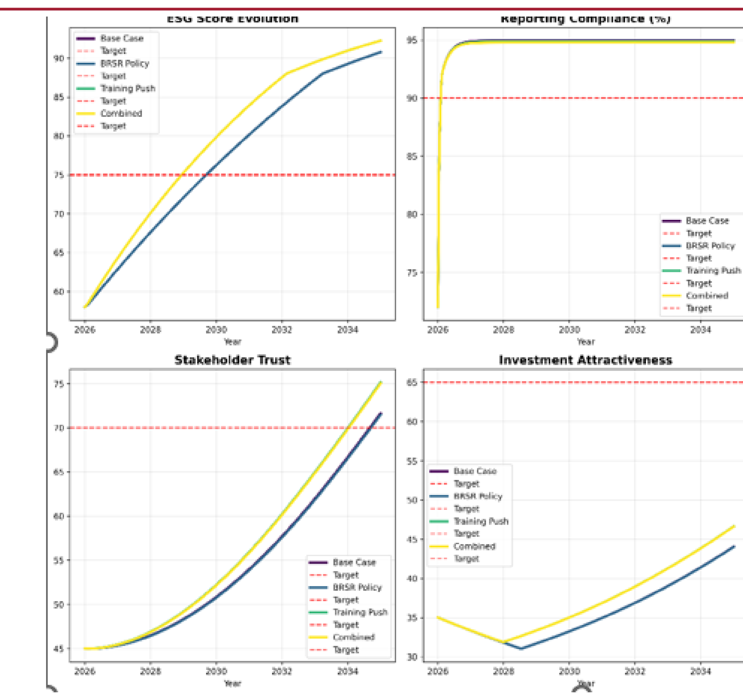
Metrics: ESG gain, Reporting %, Financial %, Trust %, Investment % at T=2035.

RESULTS

Figure 1



Sensitivity Analysis



CONCLUSION

This study makes three core contributions to ESG transformation research in emerging markets.

1.NIFTY 100 Archetype Framework: K-means clustering disaggregates NIFTY 100 into four actionable segments—

Forerunners (ROA=15.5%, ESG=73),

Resource Guzzlers (ESG=67),

Migrators (ROA=13.5%), and

Trailers (ROA=7.5%, ESG=76)—revealing **24%** of the market cap trapped in disclosure- performance decoupling.

2. Trailers Transformation Pathway: System Dynamics modelling quantifies BRSR policy leverage, transforming (ESG=58) Laggards into (ESG=78) Transitioners within 7 years via combined reporting & capacity building.

3. Policy Calibration: Training & BRSR intensity yields financial performance (ROA 17.4 to 23.5%), confirming regulatory nudge & internal capability as optimal intervention.

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