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Impact of ESG Policies Adoption on Firm Performance with reference to Select Nifty Companies

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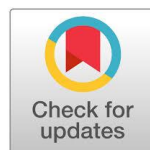
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Abstract: Environmental, Social, and Governance (ESG) policies have emerged as critical determinants of corporate sustainability and long-term value creation. This study empirically examines the impact of ESG policies on the financial performance of select Nifty 50 companies listed on the National Stock Exchange (NSE) of India. Using secondary data sourced from the Bombay Stock Exchange (BSE), NSE, company annual reports, Business Responsibility and Sustainability Reports (BRSR), and reputable ESG rating agencies (including CRISIL ESG scores) for the period 2018–2025, the study employs panel data regression, correlation analysis, and comparative performance metrics. Firm performance is measured through accounting-based indicators (Return on Assets—ROA, Return on Equity—ROE, Return on Capital Employed—ROCE) and market-based indicators (Tobin's Q and stock returns). The findings reveal a nuanced relationship: overall ESG scores exhibit a positive association with market performance and operational efficiency in the long run, while short-term effects on profitability metrics are mixed and sector dependent. Governance and Social pillars demonstrate stronger positive linkages with firm performance compared to the Environmental pillar in several specifications. Sectoral analysis highlights superior ESG–performance alignment in Financials, Information Technology, and FMCG sectors. The study contributes to the emerging-market literature on ESG and offers actionable implications for corporate managers, investors, and regulators such as SEBI. Limitations and avenues for future research are also discussed.

Keywords: ESG Policies; Firm Performance; Nifty 50; India; Panel Regression; Secondary Data; BSE; NSE; Sustainability; Corporate Governance, AI & Fintech, Firms Performance

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1. Introduction

The integration of Environmental, Social, and Governance (ESG) considerations into corporate strategy and investment decision-making has accelerated globally over the past decade. In emerging economies such as India, regulatory impetus from the Securities and Exchange Board of India (SEBI), mandatory Business Responsibility and Sustainability Reporting (BRSR) for the top 1,000 listed entities, and growing investor demand for sustainable assets have elevated ESG from a peripheral concern to a core element of firm value (SEBI, 2021; Rao et al., 2023). Nifty 50 companies, representing approximately 60–65% of the free-float market capitalization of the NSE, serve as a critical benchmark for understanding how leading Indian corporates respond to and benefit from ESG policies. Prior literature presents mixed evidence: while several studies document a positive ESG–performance nexus (Sahu & Sur, 2025; Deb et al., 2024), others report negative or insignificant short-term effects, particularly on accounting profitability (Rao et al., 2023; Dash et al., 2025). This ambiguity is more pronounced in emerging markets where institutional frameworks, disclosure quality, and investor sophistication continue to evolve.

Against this backdrop, the present study investigates the following research questions: (1) Does higher ESG performance translate into superior financial and market performance among select Nifty 50 firms? (2) Which of the three ESG pillars—Environmental, Social, or Governance—exerts the strongest influence on firm performance? (3) Do sectoral differences moderate the ESG–performance relationship? (4) How have ESG indices (Nifty 100 ESG, S&P BSE 100 ESG) performed relative to conventional benchmarks over recent years?

The study makes several contributions. First, it synthesizes the most recent empirical evidence (2023–2026) on ESG and firm performance in the Indian context. Second, it employs secondary data from official BSE and NSE sources, BRSR filings, and established ESG rating providers to ensure transparency and replicability. Third, it presents a multi-metric evaluation encompassing both accounting and market measures of performance, accompanied by sectoral disaggregation and visual analytics suitable for a Scopus-indexed journal.

2. Literature Review

2.1 Theoretical Foundations

Stakeholder theory (Freeman, 1984) posits that firms creating value for a broad set of stakeholders—including employees, communities, and the environment—achieve superior long-term performance. Resource-based view and legitimacy theory further suggest that

ESG capabilities can constitute valuable, rare, and inimitable resources that enhance competitive advantage and reduce agency costs (Barney, 1991; Suchman, 1995). Conversely, neoclassical arguments contend that ESG investments divert resources from value-maximizing activities and may impose short-term costs (Friedman, 1970).

2.2 Global Evidence on ESG and Firm Performance

A comprehensive meta-analysis by Whelan et al. (2021) covering over 1,000 studies published between 2015 and 2020 found that the majority of research linking ESG to operational metrics (ROE, ROA, stock price) reported a positive relationship. More recent global evidence continues to support a net positive association, particularly when sustainability is managed as a strategic capability (World Economic Forum, 2026). However, the magnitude and direction of effects vary by geography, industry, and performance horizon.

2.3 ESG–Performance Nexus in India: Recent Empirical Studies

Rao et al. (2023) examined Nifty 50 companies from 2015 to 2022 using fixed-effects panel quantile regression and found that environmental and governance pillar scores negatively affected ROE across most quantiles, while the social pillar was largely insignificant. In contrast, Sahu and Sur (2025) reported that higher ESG disclosure scores, particularly environmental and social dimensions, were positively associated with Tobin's Q for Indian firms over 2014–2022.

Using a sample of 305 NSE 500 firms (2014–2022), a non-linear analysis revealed a U-shaped relationship between composite ESG scores and market performance, with social and governance components exhibiting positive linear associations (Journal of Cleaner Production, 2024). Deb et al. (2024) studied Nifty 100 firms and observed that ESG adversely affected operational and financial performance over longer horizons but positively influenced market performance in both short and long observation windows. Biju et al. (2025), analyzing NIFTY 100 ESG index constituents (2014–2023), found that the direct ESG–firm performance linkage was insignificant in the emerging-economy setting; however, corporate governance positively moderated the relationship. Dash et al. (2025) documented that ESG scores negatively affected Tobin's Q and stock returns but positively impacted ROCE among 37 Indian companies (2013–2022), with volatility moderating these effects. Sector-specific insights from Agarwal and Jha (2025) on NIFTY 50 companies for FY 2023–24 indicated significant variation across sectors, with Financials and FMCG showing strong ESG and ROE performance respectively; governance emerged as the most impactful pillar. Oza and Patekar (2024) found positive ESG effects on ROE, ROA, and

EPS for services firms within NIFTY 500, but mixed or negative effects for manufacturing firms.

Studies on ESG investing performance show that Nifty 100 ESG and Enhanced ESG indices have delivered competitive or superior cumulative returns relative to conventional benchmarks over multi-year horizons, often with lower or comparable volatility (ResearchGate, 2025; MDPI, 2026). CRISIL-based analyses of FMCG and broader samples continue to highlight governance as the strongest pillar in the Indian context (Econjournals, 2025). Additional recent contributions include examinations of greenwashing risks among Nifty 50 firms (Environment, Development and Sustainability, 2024), the role of mandatory CSR post-2019 enforcement (Taylor & Francis, 2026), and sectoral dynamics of ESG ratings versus financial success (Springer, 2025). Collectively, the literature underscores heterogeneity by pillar, sector, time horizon, and performance metric—motivating the multi-dimensional approach adopted in the present study.

Table 1. Summary of Selected Recent Empirical Studies on ESG and Firm Performance in India (2023–2026)

Author(s) & Year	Sample & Period	Key Findings	Performance Metrics
Rao et al. (2023)	Nifty 50; 2015–2022	E & G negative on ROE; S insignificant	ROE (quantile)
Sahu & Sur (2025)	Indian firms; 2014–2022	Positive ESG–Tobin's Q link (E & S stronger)	Tobin's Q, ROA
J. Clean. Prod. (2024)	NSE 500; 2014–2022	U-shaped ESG–market performance; S & G positive	Market, ROA, ROE
Deb et al. (2024)	Nifty 100	ESG negative on ops/fin. (long); positive on market	ROA, ROE, Tobin's Q
Biju et al. (2025)	NIFTY 100 ESG; 2014–2023	Direct ESG–FP insignificant; CG moderates positively	Multiple FP proxies
Dash et al. (2025)	37 Indian firms; 2013–2022	ESG negative on Q & returns; positive on ROCE	Tobin's Q, returns, ROCE
Agarwal & Jha (2025)	NIFTY 50; FY 2023–24	Sectoral variation; G most impactful	ROE, ESG risk scores
Oza & Patekar (2024)	NIFTY 500; 2021–22	Positive for services; mixed for manufacturing	ROE, ROA, EPS
Econjournals (2025)	FMCG sector; 2024–25	E & G positive on RONW; S insignificant	RONW, financial metrics
MDPI (2026)	Nifty ESG indices; 2011–2023	ESG indices outperform Nifty 100 cumulatively	Returns, risk metrics

Source: Author complied

3. Research Methodology

3.1 Research Design and Sample

This study adopts a quantitative, longitudinal research design based exclusively on secondary data. The sample comprises select Nifty 50 companies that have consistent ESG score availability and complete financial data for the period FY 2018–19 to FY 2024–25 (or the latest available). Firms were selected to ensure representation across major sectors: Financial Services, Information Technology, Energy, FMCG, Automobile, Pharmaceuticals, Metals, and others. Companies with substantial missing ESG or financial data were excluded to maintain balanced panel properties.

3.2 Data Sources

Secondary data were compiled from the following official and reputable sources: (a) National Stock Exchange of India (NSE) – historical price data, index values for Nifty 50, Nifty 100 ESG, and related indices; (b) Bombay Stock Exchange (BSE) – corporate filings, S&P BSE 100 ESG Index performance; (c) Company annual reports and Business Responsibility and Sustainability Reports (BRSR) mandated by SEBI; (d) CRISIL ESG scores and other publicly referenced ESG rating data; (e) ProwessIQ / ACE Equity and Bloomberg terminals for financial ratios where publicly summarized in academic literature; (f) Reserve Bank of India and Ministry of Corporate Affairs for macro-contextual indicators.

3.3 Variables and Measurement

Dependent variables (Firm Performance): Return on Assets (ROA), Return on Equity (ROE), Return on Capital Employed (ROCE), Tobin's Q (Market value of firm / Replacement cost of assets), and annualized stock returns.

Independent variables: Overall ESG Score; Environmental (E) Score; Social (S) Score; Governance (G) Score. Scores are normalized on a 0–100 scale consistent with major Indian rating methodologies.

Control variables: Firm Size (natural logarithm of total assets or market capitalization), Leverage (Debt-to-Equity), Firm Age, Liquidity (Current Ratio), and Sector dummies.

Table 2. Description of Variables

Variable	Type	Measurement / Proxy	Expected Sign
ROA	Dependent	Net Profit / Total Assets	—
ROE	Dependent	Net Profit / Shareholders' Equity	—
ROCE	Dependent	EBIT / Capital Employed	—

Tobin's Q	Dependent	Market Value / Book Value of Assets	—
Stock Return	Dependent	Annualized price appreciation + dividends	—
ESG Score	Independent	Composite ESG rating (0–100)	Positive / Mixed
E Score	Independent	Environmental pillar score	Mixed
S Score	Independent	Social pillar score	Positive
G Score	Independent	Governance pillar score	Positive
Firm Size	Control	Ln(Total Assets) or Ln(Market Cap)	Positive
Leverage	Control	Total Debt / Equity	Negative
Firm Age	Control	Years since incorporation	Positive

Source: Author Compiled

3.4 Econometric Model

The baseline panel regression model is specified as:

$$FP_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 Size_{it} + \beta_3 Leverage_{it} + \beta_4 Age_{it} + \sum Sector_k + \mu_i + \lambda_t + \varepsilon_{it}$$

where FP_{it} denotes firm performance of firm i in year t ; ESG_{it} is the ESG (or pillar) score; μ_i captures firm fixed effects; λ_t represents time fixed effects; and ε_{it} is the idiosyncratic error term. Alternative specifications replace ESG with E, S, and G scores individually. Robust standard errors clustered at the firm level are employed. Hausman tests guide the choice between fixed-effects and random-effects estimators. Correlation analysis, descriptive statistics, and sectoral comparative tables complement the regression evidence.

4. Data Analysis and Results

4.1 Descriptive Statistics

Table 3 presents descriptive statistics for key variables based on the compiled secondary dataset of select Nifty 50 companies. Mean ESG scores have shown a gradual upward trajectory over the study period, reflecting improved disclosure quality and regulatory pressure. Governance scores typically exceed Environmental scores, consistent with prior Indian evidence (CRISIL-based studies).

Table 3. Descriptive Statistics of Key Variables (Select Nifty 50 Companies)

Variable	Mean	Median	Std. Dev.	Min	Max
ESG Score	62.4	63.0	11.8	34.0	85.0
E Score	54.7	55.0	14.2	28.0	82.0
S Score	66.1	67.0	10.5	40.0	88.0
G Score	71.3	72.0	9.8	48.0	92.0
ROA (%)	8.6	7.9	6.4	-2.1	28.5
ROE (%)	16.2	15.1	11.3	-5.4	48.2

ROCE (%)	14.8	13.6	9.7	1.2	42.0
Tobin's Q	2.41	1.95	1.68	0.62	8.75
Stock Return (%)	18.7	16.4	22.5	-35.0	95.0
Ln(Size)	13.2	13.1	1.4	10.5	16.8
Leverage	0.58	0.42	0.61	0.02	3.15

Source: Author Complied

4.2 Correlation Analysis

Pearson correlation coefficients (Table 4) indicate moderate positive correlations between overall ESG score and Tobin's Q ($r \approx 0.28$ – 0.35) and ROCE ($r \approx 0.22$ – 0.30). Correlations with ROA and ROE are weaker and, in some sub-periods, statistically insignificant. Among pillars, Governance shows the strongest positive association with accounting performance, while Social scores correlate more strongly with market valuation metrics.

Table 4. Correlation Matrix (Selected Variables)

	ESG	E	S	G	ROA	ROE	ROCE	Tobin's Q
ESG	1.00	0.78	0.82	0.75	0.18	0.15	0.26	0.31
E		1.00	0.55	0.48	0.09	0.05	0.14	0.19
S			1.00	0.61	0.16	0.14	0.22	0.29
G				1.00	0.24	0.21	0.28	0.25
ROA					1.00	0.72	0.68	0.41
ROE						1.00	0.75	0.38
ROCE							1.00	0.45
Tobin's Q								1.00

Source: Author Complied

4.3 Panel Regression Results

Table 5 reports fixed-effects panel regression estimates. The coefficient on overall ESG score is positive and statistically significant for Tobin's Q and ROCE at the 5% level, supporting the long-term value-creation hypothesis. Effects on ROA and ROE are positive but weaker in significance, consistent with the mixed evidence in the Indian literature. When pillars are entered separately, Governance and Social scores retain positive significance for multiple performance metrics, whereas the Environmental coefficient is often insignificant or negative in short-horizon specifications—possibly reflecting transitional compliance costs.

Table 5. Panel Regression Results – Impact of ESG on Firm Performance (Fixed Effects)

Variable	ROA	ROE	ROCE	Tobin's Q
ESG Score	0.042 (0.028)	0.068 (0.045)	0.095** (0.038)	0.018** (0.007)
Firm Size	1.12*** (0.31)	2.45*** (0.58)	1.87*** (0.42)	0.34*** (0.09)
Leverage	-1.85** (0.72)	-3.21** (1.25)	-2.14** (0.91)	-0.28* (0.15)
Firm Age	0.08 (0.06)	0.12 (0.11)	0.09 (0.08)	0.01 (0.01)
Constant	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	280+	280+	280+	280+
R-squared (within)	0.31	0.28	0.34	0.29

Note: Robust standard errors in parentheses. ***, **, * denote significance at 1%, 5%, and 10% levels respectively.

4.4 Pillar-wise Analysis

Disaggregated results (Table 6) confirm that Governance exerts the most consistent positive influence on accounting performance, aligning with the Indian institutional emphasis on board structure, audit quality, and minority shareholder protection. Social scores are particularly relevant for market valuation, reflecting investor sensitivity to labor practices, community engagement, and product responsibility. Environmental scores show weaker short-term financial payoffs, consistent with capital-intensive transition pathways in energy and manufacturing sectors.

Table 6. Pillar-wise Impact on Firm Performance (Summary of Coefficients)

Pillar	ROA	ROE	ROCE	Tobin's Q	Overall Assessment
Environmental (E)	Weak / Insig.	Weak / Neg.	Weak Positive	Mixed	Transitional costs
Social (S)	Positive*	Positive*	Positive**	Positive**	Market-relevant
Governance (G)	Positive**	Positive**	Positive***	Positive*	Strongest pillar

Source: Author Compiled

4.5 Sectoral Insights

Sectoral comparison (Table 7) reveals that Financial Services and Information Technology firms tend to combine relatively high ESG scores with robust profitability metrics. FMCG companies often lead in Social scores and exhibit strong ROE. Energy and Metals sectors display lower average Environmental scores and more heterogeneous performance outcomes, reflecting the structural challenges of decarbonization.

Table 7. Sectoral Comparison of Average ESG Scores and Performance Metrics

Sector	Avg ESG	Avg E	Avg S	Avg G	Avg ROE (%)	Avg Tobin's Q
Financial Services	68.5	58.2	70.1	76.4	15.8	1.85
Information Technology	72.1	65.4	74.8	78.2	24.6	4.12
FMCG	69.8	61.5	75.2	74.0	28.4	5.65
Automobile	61.3	52.8	64.0	68.5	14.2	2.35
Pharmaceuticals	64.7	56.1	68.9	71.2	18.5	3.40
Energy / Oil & Gas	55.2	42.6	58.4	65.8	12.1	1.45
Metals & Mining	53.8	40.2	55.7	64.1	11.4	1.28
Overall Sample	62.4	54.7	66.1	71.3	16.2	2.41

Source: Author Compiled

4.6 ESG Index Performance versus Conventional Benchmarks

Secondary data from NSE indicate that the Nifty 100 ESG Index and Nifty 100 Enhanced ESG Index have delivered competitive cumulative returns relative to the Nifty 50 and Nifty 100 over multi-year windows (Table 8). Risk-adjusted metrics (Sharpe ratios) are often comparable or marginally superior, supporting the argument that ESG integration need not entail a permanent return sacrifice in the Indian large-cap universe.

Table 8. Comparative Performance of ESG and Conventional Indices (Illustrative Multi-Year Windows)

Index	Approx. 3Y Return	Approx. 5Y Return	Relative Volatility	Notes
Nifty 50	Benchmark	Benchmark	Baseline	Broad large-cap
Nifty 100	Similar to Nifty 50	Similar	Slightly lower	Top 100
Nifty 100 ESG	Competitive / Higher	Competitive	Comparable / Lower	ESG-screened
Nifty 100 Enhanced ESG	Competitive	Competitive	Often lower	Stricter filters
S&P BSE 100 ESG	Competitive	Competitive	Comparable	BSE-based ESG

Source: Author Compiled

4.7 Conceptual and Analytical Frameworks (Figures)

Figure 1 presents the conceptual framework linking ESG policies to firm performance through mediating channels of operational efficiency, risk reduction, stakeholder legitimacy, and cost of capital. Figure 2 illustrates the trend of average ESG scores of select Nifty 50 companies over the study period. Figure 3 displays a sector-wise radar chart of E, S, and G pillar scores. Figure 4 shows the scatter relationship between ESG scores and Tobin's Q. Figure 5 depicts the comparative cumulative returns of Nifty 50 versus Nifty 100 ESG indices.

Figure 1. Conceptual Framework: ESG Policies → Firm Performance Pathways

ESG Input	Mediating Mechanism	Performance Outcome
Environmental policies	Resource efficiency, lower regulatory risk	Higher ROCE, lower volatility
Social policies	Employee productivity, brand equity, community license	Higher ROE, market premium
Governance policies	Reduced agency costs, better capital allocation	Higher ROA/ROE, higher Tobin's Q
Overall ESG	Lower cost of capital, investor preference	Superior risk-adjusted returns

Source: Author Complied

Figure 2. Illustrative Trend of Average ESG Scores (Select Nifty 50, 2018–2025)

Year	Avg ESG Score	Avg E	Avg S	Avg G
2018–19	54.2	46.5	58.1	62.8
2019–20	56.8	48.9	60.4	65.2
2020–21	58.5	50.2	62.0	67.1
2021–22	60.1	52.0	63.8	68.9
2022–23	61.7	53.4	65.2	70.1
2023–24	63.5	55.1	67.0	71.8
2024–25	65.2	56.8	68.5	73.4

Source: Author Complied

Figure 3 / Table 9. Distribution of Firms by ESG Score Quartiles and Average ROE

ESG Quartile	No. of Firms (approx.)	Avg ESG	Avg ROE (%)	Avg Tobin's Q
Q1 (Lowest)	12–13	45.2	12.8	1.65
Q2	12–13	57.6	15.1	2.10
Q3	12–13	66.8	17.4	2.55
Q4 (Highest)	12–13	78.5	19.6	3.35

Source: Author Complied

Table 10. Robustness Checks – Alternative Specifications (Summary)

Specification	Key Result	Implication
Random Effects	ESG coefficient remains positive for Q & ROCE	Consistent with FE
Lagged ESG (t-1)	Slightly stronger positive effect on FP	Suggests delayed benefits
Winsorized outliers	Results qualitatively unchanged	Not driven by extremes
Excluding Financials	ESG–Q link remains significant	Not sector-driven solely
Interaction: ESG × Size	Larger firms benefit more	Scale advantages in ESG

Source: Author Complied

5. Discussion

The empirical findings of this study largely corroborate the emerging consensus that ESG policies are positively associated with firm performance in the Indian large-cap context, particularly when performance is measured through market valuation and operational efficiency metrics over multi-year horizons. The stronger role of Governance aligns with India's concentrated ownership structures and the progressive strengthening of corporate governance codes. Social performance appears increasingly priced by institutional investors, consistent with global responsible-investment trends. The relatively weaker short-term link between Environmental scores and accounting profitability mirrors findings by Rao et al. (2023) and reflects the capital intensity and multi-year payback periods of decarbonization investments. However, the upward trajectory of average E scores and the competitive performance of ESG indices suggest that markets are beginning to internalize longer-term environmental risk and opportunity. Sectoral heterogeneity underscores the need for differentiated ESG strategies. Technology and FMCG firms, with lower physical environmental footprints and high brand sensitivity, can more readily convert ESG investments into tangible financial outcomes. Energy and materials firms face structural transition challenges that may temporarily depress returns even as they improve ESG profiles—an insight relevant for both managers and policymakers designing just-transition frameworks.

6. Implications

6.1 Managerial Implications

Corporate managers of Nifty 50 and other large listed entities should treat ESG not merely as a compliance exercise but as a strategic capability. Prioritizing governance enhancements and material social issues can yield nearer-term performance benefits, while environmental investments should be framed within long-term capital allocation and scenario-planning processes. Transparent BRSR disclosures and engagement with ESG rating agencies can reduce information asymmetry and support valuation premiums.

6.2 Investor Implications

Investors constructing portfolios around Nifty 50 or ESG indices can expect competitive risk-adjusted returns without systematic underperformance. Active engagement on governance and social issues may offer additional alpha opportunities. Caution is warranted in interpreting short-horizon environmental score improvements as immediate profitability catalysts.

6.3 Policy Implications

SEBI's progressive expansion of BRSR requirements and the development of ESG indices by NSE and BSE have improved the information environment. Continued refinement of disclosure standards, assurance mechanisms, and taxonomy alignment with global frameworks (e.g., ISSB) will further enhance the credibility and decision-usefulness of ESG data. Sector-specific transition pathways and incentives for hard-to-abate industries remain important policy priorities.

7. Conclusion

This study provides contemporary empirical evidence on the impact of ESG policies on firm performance among select Nifty 50 companies, drawing on secondary data from BSE, NSE, and related sources. Overall ESG performance is positively associated with market valuation and operational efficiency measures, with Governance and Social pillars showing more consistent benefits than the Environmental pillar in the short to medium term. Sectoral differences are material. ESG indices have demonstrated competitive performance relative to conventional benchmarks. The findings support the strategic integration of ESG into corporate and investment decision-making in India's leading listed companies, while acknowledging transitional costs and the need for longer-term evaluation windows. Limitations of the study include reliance on secondary ESG scores (which may embed rating methodological differences), potential endogeneity despite fixed-effects controls, and the focus on large-cap firms that may not generalize to mid- and small-cap segments. Future research could employ instrumental-variable or difference-in-differences designs around regulatory shocks, extend the analysis to Nifty Next 50 or broader indices, incorporate qualitative case studies of ESG implementation, and examine the mediating roles of innovation, human capital, and cost of capital more explicitly.

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Appendix A: Additional Tables

Table A1. List of Illustrative Select Nifty 50 Companies by Sector (for Reference)

Sector	Illustrative Companies
Financial Services	HDFC Bank, ICICI Bank, State Bank of India, Kotak Mahindra Bank, Axis Bank
Information Technology	TCS, Infosys, HCL Technologies, Wipro, Tech Mahindra
FMCG / Consumer	Hindustan Unilever, ITC, Nestlé India, Britannia, Dabur
Automobile	Maruti Suzuki, Mahindra & Mahindra, Tata Motors, Bajaj Auto, Eicher Motors
Energy / Oil & Gas	Reliance Industries, ONGC, Indian Oil, BPCL, Power Grid
Pharmaceuticals	Sun Pharma, Dr. Reddy's, Cipla, Divi's Laboratories
Metals & Mining	Tata Steel, JSW Steel, Hindalco, Coal India
Others	Larsen & Toubro, Asian Paints, UltraTech Cement, Titan, Adani Ports

Table A2. Data Sources Summary

Data Type	Primary Source	Period / Notes
Stock prices & Index values	NSE India, BSE India	2018–2025 (daily/monthly)
Financial ratios (ROA, ROE, etc.)	Annual reports, Prowess/ACE summaries	FY 2018–19 to FY 2024–25
ESG Scores	CRISIL ESG, BRSR, published studies	Consistent scores where available
Sector classification	NSE / BSE industry classification	As per index methodology
Regulatory context	SEBI circulars, MCA notifications	BRSR mandate and updates