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The Effect of Sustainability Reporting on Corporate Financial Performance: Analyzing Trends in Different Industries

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ABSTRACT: This study investigates the relationship between Environmental, Social, and Governance (ESG) scores and corporate financial performance across three distinct sectors: Manufacturing, Information Technology (IT), and Fast-Moving Consumer Goods (FMCG). Using secondary data from Bloomberg spanning a ten-year longitudinal period, regression and correlation analyses were conducted on nine prominent companies — Ford Motors, General Motors, and Tesla (Manufacturing); Microsoft, Intel, and Oracle (IT); and Colgate-Palmolive, Procter & Gamble, and PepsiCo (FMCG). Financial performance was operationalized through Return on Assets (ROA), Return on Equity (ROE), and Net Profit. Results indicate that the ESG–financial performance nexus is highly heterogeneous: Tesla (Manufacturing) demonstrates a statistically significant positive relationship ($R^2 = 0.919$ for ROA; $p < 0.001$), while the majority of firms across all three sectors yield non-significant associations. These findings suggest that the financial impact of sustainability reporting is contingent upon the extent to which ESG is embedded within core business strategy rather than deployed as a compliance or reputational exercise. The study contributes to the growing body of cross-sectoral ESG research and highlights the need for industry-specific ESG benchmarking, longer-horizon measurement frameworks, and standardized reporting metrics.

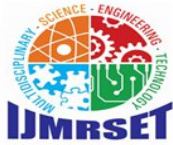
KEYWORDS: ESG Reporting; Corporate Financial Performance; Sustainability; Manufacturing; Information Technology; FMCG; ROA; ROE; Net Profit; Regression Analysis

I. INTRODUCTION

The global corporate landscape has undergone a profound transformation over the past two decades. Growing awareness of environmental degradation, social inequity, and governance failures has catalyzed a fundamental shift in how organizations are evaluated by investors, regulators, consumers, and civil society. This shift has found its institutional expression in the proliferation of Environmental, Social, and Governance (ESG) frameworks and sustainability reporting standards, which have transformed from voluntary disclosure instruments into near-mandatory components of modern corporate strategy.

Sustainability reporting refers to the structured disclosure of a firm's ESG strategy, activities, and outcomes. Standardized frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD) have enabled investors, regulators, and consumers to systematically evaluate firms' non-financial performance. ESG ratings, computed by agencies such as MSCI, Sustainalytics, and Bloomberg, aggregate this disclosure into composite scores that increasingly inform investment allocation decisions.

The central empirical question motivating this research is whether sustainability reporting translates into measurable financial performance improvements. Proponents argue that ESG initiatives generate financial value through multiple channels: enhanced stakeholder trust, reduced regulatory and legal risk, improved resource efficiency, and superior access to capital at lower cost. Detractors, however, contend that sustainability investments impose compliance costs



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and managerial distraction that erode short-term profitability without commensurate financial returns — particularly for capital-intensive sectors.

A further complication is that ESG's financial impact is unlikely to be uniform across industries. The manufacturing sector confronts material environmental obligations — carbon emissions, waste management, and energy consumption — that impose direct compliance costs. The information technology sector faces different ESG materiality, with governance, data privacy, and workforce diversity representing the dominant dimensions. The FMCG sector is primarily shaped by consumer-facing sustainability preferences, where brand reputation and packaging sustainability carry direct revenue implications.

This paper addresses these questions through a systematic quantitative analysis of nine major publicly listed corporations across the three aforementioned sectors over a ten-year period. The study contributes to the empirical literature by providing a comparative cross-industry analysis grounded in regression modeling, thereby addressing the gap in industry-level ESG–finance research identified by prior scholars.

II. REVIEW OF LITERATURE

2.1 ESG and Financial Performance: General Evidence

The relationship between ESG disclosure and financial performance has attracted substantial academic attention. Friede, Busch, and Bassen (2015) conducted a landmark meta-analysis aggregating evidence from more than 2,000 empirical studies and found that approximately 90% of studies report a non-negative relationship between ESG criteria and corporate financial performance. Similarly, Eccles, Ioannou, and Serafeim (2014) demonstrated in a matched-sample study of 180 US firms that companies with high sustainability scores significantly outperform their counterparts over an 18-year horizon on both market and accounting performance measures.

Oncioiu et al. (2020) examined Romanian firms and found that sustainability reporting generates real financial value beyond its ethical dimensions, with CSR metrics improving long-term profitability and stakeholder confidence. Chen, Song, and Gao (2023), analyzing 3,332 listed companies from 2011 to 2020, confirmed a positive association between ESG and financial outcomes, mediated through improved brand perception, lower financing costs, and enhanced investor confidence. Pham et al. (2021) similarly found strong correlations between sustainability practices and financial metrics including ROA, ROE, and ROCE among Swedish listed firms.

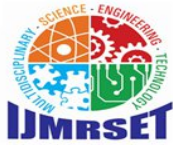
Conversely, a non-trivial body of evidence reports null or negative findings. Gold and Taib (2020) reviewed 35 studies and found conflicting results, with several reporting negligible or negative associations, particularly over short time horizons. De Silva (2019) found no significant relationship between sustainability reporting and financial performance in Sri Lanka's financial sector, highlighting the importance of institutional and regulatory context. Gray (2006) cautioned that voluntary sustainability reporting may support corporate reputational management rather than genuine sustainability commitments — the greenwashing problem.

2.2 Industry-Specific Effects

The manufacturing industry has received considerable attention given its direct environmental exposure. Ong et al. (2015) examined 120 Malaysian manufacturing companies and found positive correlations between environmental disclosures and financial performance, particularly for pollution abatement disclosures. Nurim and Asmara (2019) demonstrated that industry characteristics shape reporting patterns: manufacturers prioritize environmental performance in their ESG disclosures, reflecting regulatory pressure and stakeholder expectations around emissions and resource consumption.

In the technology sector, Jung et al. (2018) investigated the impact of corporate sustainability performance in Korea's ICT sector and found a positive relationship with financial success, with service-oriented ICT firms demonstrating a stronger effect than manufacturing-oriented counterparts. Governance and social dimensions — including data privacy, ethical AI, and workplace diversity — emerge as the dominant ESG materiality factors for technology firms, in contrast to the environmental primacy observed in manufacturing.

For FMCG firms, consumer preferences for sustainable products and ethical sourcing have transformed ESG from a compliance consideration into a competitive differentiator. Companies such as Hindustan Unilever and PepsiCo have embedded sustainability into product design and supply chain strategy in response to consumer demand. However,



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striking a balance between sustainability investment and affordability presents a persistent strategic challenge for FMCG operators.

2.3 Theoretical Perspectives

Four theoretical frameworks are most commonly invoked in the ESG–financial performance literature. Stakeholder Theory (Freeman, 1984) posits that firms accountable to multiple constituencies — including employees, customers, regulators, and communities — achieve superior long-term financial outcomes by effectively managing stakeholder relationships. Legitimacy Theory holds that organizations engage in ESG reporting to align their operations with societal norms and maintain their social license to operate. Signaling Theory suggests that ESG disclosure functions as a credible signal of firm quality to investors, reducing information asymmetry and lowering the cost of capital. The Resource-Based View (Barney, 1991) conceptualizes ESG capabilities as strategic resources that generate competitive advantage when integrated into core business operations.

Xie et al. (2019) applied data envelopment analysis to demonstrate that moderate ESG disclosure positively impacts firm efficiency, with governance transparency generating the strongest effects, followed by social and environmental disclosure. Awaysheh et al. (2020) found that best-in-class CSR firms consistently earn higher market valuations (Tobin's Q) than industry peers, though the direct link to operating performance weakens after controlling for endogeneity. These findings collectively suggest that ESG's financial impact is most pronounced when it functions as a credible strategic signal rather than a compliance exercise.

2.4 Research Gaps

Despite the substantial body of ESG literature, several critical gaps persist. First, the majority of studies focus on single-industry or aggregated multi-industry samples, without systematically comparing the differential ESG–finance relationship across sectors. Second, most research is conducted in developed markets, leaving the dynamics in emerging economies — including India — insufficiently explored. Third, the inconsistency of ESG rating methodologies across agencies introduces significant measurement error that complicates cross-study comparisons. Fourth, the literature inadequately distinguishes between the short-term financial costs and long-term financial benefits of ESG investments, creating an incomplete picture of the temporal dynamics of sustainability–performance linkages. Fifth, greenwashing — the decoupling of ESG disclosure from genuine sustainable practices — remains understudied despite its potential to confound empirical estimates.

III. RESEARCH METHODOLOGY

3.1 Research Design and Scope

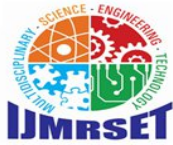
This study employs a quantitative, explanatory research design grounded in deductive reasoning. The research objective is to assess the causal relationship between ESG scores (independent variable) and corporate financial performance (dependent variables: ROA, ROE, and Net Profit) across three industries — Manufacturing, IT, and FMCG — over a ten-year longitudinal period.

The comparative design enables the identification of industry-level heterogeneity in the ESG–performance nexus, while the longitudinal structure captures temporal dynamics that cross-sectional studies cannot detect. The study draws on established theoretical frameworks — including Stakeholder Theory, Legitimacy Theory, Signaling Theory, and the Resource-Based View — to generate and test hypotheses about the direction and magnitude of the ESG–finance relationship.

3.2 Sample Selection

Nine publicly listed companies were selected across the three focal industries, with three companies per industry. Selection criteria required consistent ESG score data and audited financial statements across the full ten-year analytical window from Bloomberg. The selected companies are:

- Manufacturing: Ford Motor Company, General Motors Co., Tesla Inc.
- Information Technology: Microsoft Corporation, Intel Corporation, Oracle Corporation
- FMCG: Colgate-Palmolive Company, Procter & Gamble Co., PepsiCo Inc.



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These firms were selected for their prominence, data availability, and sectoral representativeness. Tesla was deliberately included in the manufacturing sample to capture the heterogeneous range of ESG integration strategies within the sector — from traditional industrial manufacturers to sustainability-integrated new entrants.

3.3 Variables

3.3.1 Independent Variable

The independent variable is the ESG Score, a composite measure encompassing: (a) Environmental dimension — carbon emissions, energy efficiency, waste management, and environmental compliance; (b) Social dimension — employee welfare, labor standards, diversity and inclusion, community engagement; (c) Governance dimension — board composition, executive accountability, transparency, and shareholder rights. ESG scores are treated as continuous variables and sourced from Bloomberg ESG Data Service.

3.3.2 Dependent Variables

Three financial performance indicators serve as dependent variables. Return on Assets (ROA) measures how efficiently a firm converts its asset base into profits (Net Income / Total Assets). Return on Equity (ROE) measures the return generated for shareholders (Net Income / Shareholders' Equity). Net Profit captures absolute profitability after all deductions. These metrics collectively reflect efficiency, shareholder returns, and overall profitability.

3.4 Hypotheses

Based on the theoretical framework and literature review, the study tests the following hypotheses:

- H_0 (Null Hypothesis): ESG scores have no statistically significant impact on corporate financial performance (ROA, ROE, Net Profit).
- H_1 (Alternative Hypothesis): ESG scores have a statistically significant positive impact on corporate financial performance (ROA, ROE, Net Profit).

Hypotheses are tested at the 5% significance level ($\alpha = 0.05$). The null hypothesis is rejected when the p-value for the ESG Score coefficient is below 0.05.

3.5 Analytical Methods

Three analytical techniques are applied. Descriptive statistics (mean, median, standard deviation) characterize the distribution of ESG scores and financial performance variables within and across industries. Correlation analysis (Pearson's r) assesses the bivariate direction and strength of ESG–financial performance relationships as a precursor to regression. Multiple regression analysis is the primary inferential technique, with ESG Score as the sole predictor in separate models for each dependent variable (ROA, ROE, Net Profit) for each company. Model quality is assessed through R^2 , Adjusted R^2 , F-statistic, and the p-value for the ESG Score coefficient. Analyses were conducted in Microsoft Excel.

IV. DATA ANALYSIS AND RESULTS

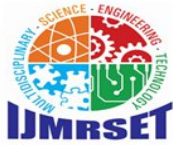
4.1 Manufacturing Industry

4.1.1 Ford Motor Company

Regression analysis for Ford Motors yielded uniformly non-significant results across all three financial performance indicators. For ROA, the model's R^2 of 0.001 indicates that ESG scores explain less than 0.1% of variation in ROA, with the F-statistic (0.007, $p = 0.934$) confirming no statistical significance. The ESG coefficient of +0.084 is positive but negligible. For ROE, the R^2 of 0.003 and p-value of 0.887 similarly confirm the absence of a significant relationship, with a negative coefficient of -1.01 suggesting a marginal inverse association. Net Profit yields an R^2 of 0.012 and $p = 0.762$, again non-significant. The consistent pattern across all three metrics indicates that ESG initiatives have not translated into measurable short-term financial gains for Ford, possibly reflecting the substantial compliance costs inherent in environmental regulatory adherence for legacy automakers.

4.1.2 General Motors

Results for General Motors mirror those of Ford. ROA exhibits an R^2 of 0.067 (Adjusted $R^2 = -0.065$) with a p-value of 0.50, indicating that the weak positive correlation observed (Multiple $R = 0.259$) is not statistically significant. The ESG coefficient of -0.40 implies a marginal negative association. ROE yields an R^2 of 0.058, $p = 0.53$, with a negative coefficient of -1.89. Net Profit shows the weakest association ($R^2 = 0.011$, $p = 0.78$). These results reinforce the finding that traditional manufacturing firms incur considerable ESG-related expenditures — particularly environmental



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compliance costs — that may suppress short-term financial returns without generating offsetting gains within the measurement window.

4.1.3 Tesla Inc. — The Notable Exception

Tesla's results contrast sharply with those of Ford and General Motors. For ROA, the model explains 91.9% of variation ($R^2 = 0.919$, Adjusted $R^2 = 0.907$), with an F-statistic of 79.50 ($p < 0.0001$) confirming high statistical significance. The ESG coefficient of +9.20 indicates a strong positive impact: each unit increase in ESG score is associated with a 9.20-unit increase in ROA. ROE demonstrates similar strength ($R^2 = 0.728$, $p = 0.003$; coefficient = +29.51). Net Profit confirms the pattern ($R^2 = 0.839$, $F = 36.58$, $p = 0.0002$; coefficient = +11.25). These results provide strong evidence that when ESG is embedded in the core value proposition of a business — as it is for Tesla, whose entire product and brand identity is sustainability-centered — it functions as a powerful driver of financial performance. Tesla's ESG commitment is not merely a reporting exercise; it is the foundation of its competitive strategy.

Table 1. Manufacturing Industry — Regression Summary

Company	Metric	R ²	Adj. R ²	F-Stat	Sig. F	ESG Coeff.	Sig.
Ford Motors	ROA	0.001	-0.14	0.007	0.934	+0.084	No
	ROE	0.003	-0.13	0.021	0.887	-1.010	No
	Net Profit	0.012	-0.13	0.091	0.762	+0.574	No
General Motors	ROA	0.067	-0.065	0.505	0.500	-0.400	No
	ROE	0.058	-0.076	0.434	0.530	-1.891	No
	Net Profit	0.011	-0.129	0.083	0.780	-0.254	No
Tesla Inc.	ROA	0.919	0.907	79.50	< 0.001	+9.205	YES***
	ROE	0.728	0.690	18.82	0.003	+29.51	YES**
	Net Profit	0.839	0.816	36.58	0.0002	+11.25	YES***

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ns = not significant at $\alpha = 0.05$

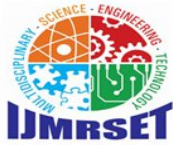
4.2 Information Technology Industry

4.2.1 Microsoft Corporation

Microsoft's regression results present a mixed picture. For ROA, the model achieves statistical significance ($F = 10.324$, $p = 0.0175$) with an ESG coefficient of +7.64, indicating that each unit increase in ESG score is associated with a 7.64% improvement in asset utilization. The R^2 of 0.577 demonstrates moderate explanatory power. For ROE, the model is marginally significant at the 10% level ($p = 0.0746$) with a positive coefficient of +14.41, suggesting a directionally positive but statistically borderline relationship. Net Profit yields a positive coefficient (+10.84) but falls short of statistical significance ($p = 0.065$). These results suggest that ESG contributes meaningfully to Microsoft's operational efficiency — reflected in ROA — potentially through enhanced governance practices that improve resource allocation and reduce operational risk.

4.2.2 Intel Corporation

Intel's results are uniformly non-significant. ROA exhibits $R^2 = 0.171$ ($p = 0.269$), with a negative ESG coefficient of -16.85, suggesting that any relationship is weakly inverse and statistically indeterminate. ROE follows a similar pattern ($R^2 = 0.169$, $p = 0.271$; coefficient = -29.52). Net Profit shows $R^2 = 0.144$ and $p = 0.314$. The negative coefficients across all metrics may reflect the substantial capital investments Intel has undertaken in sustainable semiconductor



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manufacturing — a cost that, while essential for long-term competitiveness, suppresses short-term returns. As Intel's ESG investments involve complex fab technology transitions, their financial payoff is likely to materialize over longer horizons than captured in this study.

4.2.3 Oracle Corporation

Oracle exhibits the weakest ESG–performance relationship among all nine companies analyzed. ROA yields $R^2 = 0.040$ ($p = 0.607$; coefficient = -1.89), Net Profit shows $R^2 = 0.006$ ($p = 0.845$; coefficient = +2,374), and ROE data is limited. The near-zero R^2 values confirm that ESG scores have essentially no explanatory power over Oracle's financial performance. Oracle's financial outcomes appear to be driven primarily by other strategic factors — notably its cloud infrastructure transition, licensing revenue dynamics, and acquisition activity — rather than ESG performance. This finding is consistent with the view that ESG materiality varies significantly even within the technology sector.

Table 2. IT Industry — Regression Summary

Company	Metric	R ²	Adj. R ²	F-Stat	Sig. F	ESG Coeff.	Sig.
Microsoft	ROA	0.577	0.517	10.32	0.018	+7.636	YES*
	ROE	0.385	0.297	4.366	0.075	+14.41	No†
	Net Profit	0.407	0.321	4.799	0.065	+10.84	No†
Intel	ROA	0.171	0.052	1.440	0.269	-16.85	No
	ROE	0.169	0.051	1.426	0.271	-29.52	No
	Net Profit	0.144	0.022	1.176	0.314	-25.89	No
Oracle	ROA	0.040	-0.097	0.289	0.607	-1.899	No
	ROE	N/A	N/A	N/A	N/A	N/A	No
	Net Profit	0.006	-0.136	0.041	0.845	+2374	No

Note: *** $p < 0.001$; * $p < 0.05$; † marginally significant at $\alpha = 0.10$

4.3 FMCG Industry

4.3.1 Colgate-Palmolive

Colgate-Palmolive's regression results indicate no statistically significant relationship between ESG scores and financial performance. ROA yields $R^2 = 0.092$ ($p = 0.426$; coefficient = -2.04), while Net Profit produces $R^2 = 0.035$ ($p = 0.628$; coefficient = -1.07). The negative coefficients suggest that ESG investments may impose short-term cost burdens that temporarily suppress returns, consistent with the pattern observed for traditional manufacturing firms. Given that Colgate-Palmolive operates with tight margins in a mature consumer goods market, the incremental cost of sustainability initiatives — sustainable packaging, water efficiency investments, and responsible sourcing — may not be immediately recoverable through pricing or volume effects.

4.3.2 Procter & Gamble

Procter & Gamble's results are similarly non-significant. ROA shows $R^2 = 0.040$ ($p = 0.592$; coefficient = +13.80), ROE exhibits $R^2 = 0.088$ ($p = 0.438$; coefficient = +22.42), and Net Profit yields $R^2 = 0.002$ ($p = 0.919$; coefficient = -6.82). Notably, the positive ROA and ROE coefficients suggest a directionally favorable association between ESG performance and financial metrics, even if this association does not achieve statistical significance at conventional levels. This pattern may reflect P&G's long-standing commitment to purpose-led sustainability — its Ambition 2030 program — which may be generating reputational and operational benefits not yet fully reflected in the regression outcomes.



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4.3.3 PepsiCo

PepsiCo's analysis reveals exclusively non-significant results. ROA yields $R^2 = 0.008$ ($p = 0.837$; coefficient = +0.417), ROE shows $R^2 = 0.014$ ($p = 0.750$; coefficient = +4.969), and Net Profit presents $R^2 = 0.002$ ($p = 0.919$; coefficient = +6.18). The positive but negligible coefficients across all metrics suggest the direction of association is favorable but the magnitude is insufficient to achieve statistical significance. As with Colgate-Palmolive, PepsiCo's FMCG competitive environment — characterized by intense price competition, high advertising expenditure, and commodity input price volatility — likely accounts for the dominant share of financial performance variation, leaving ESG as a secondary explanatory factor.

Table 3. FMCG Industry — Regression Summary

Company	Metric	R ²	Adj. R ²	F-Stat	Sig. F	ESG Coeff.	Sig.
Colgate-Palmolive	ROA	0.092	-0.037	0.713	0.426	-2.044	No
	Net Profit	0.035	-0.103	0.257	0.628	-1.069	No
Procter & Gamble	ROA	0.040	-0.093	0.315	0.592	+13.80	No
	ROE	0.088	-0.042	0.675	0.438	+22.42	No
	Net Profit	0.002	-0.141	0.011	0.919	-6.820	No
PepsiCo	ROA	0.008	-0.134	0.054	0.837	+0.417	No
	ROE	0.014	-0.126	0.101	0.750	+4.969	No
	Net Profit	0.002	-0.141	0.011	0.919	+6.180	No

V. FINDINGS AND DISCUSSION

5.1 Cross-Industry Synthesis

The aggregated findings reveal a nuanced and heterogeneous ESG–financial performance landscape across the three industries. The null hypothesis (H_0) cannot be rejected for the overwhelming majority of company-metric combinations: 25 of the 26 regression models for which complete data are available yield p-values exceeding 0.05. The sole exception is Tesla's relationship with all three performance metrics, and Microsoft's relationship with ROA.

This finding does not imply that ESG is financially irrelevant. Rather, it suggests that the financial impact of ESG is contingent upon a set of conditions that most firms in the sample do not fully satisfy: deep strategic integration of sustainability into the core business model, a sufficiently long measurement horizon to capture the delayed financial returns of ESG investment, and an industry context in which ESG performance constitutes a genuine competitive differentiator rather than a compliance floor.

5.2 The Tesla Anomaly and Its Implications

Tesla's exceptional results merit particular analytical attention. With R^2 values exceeding 0.83 across all three financial metrics and uniformly significant p-values, Tesla demonstrates that ESG performance can be an extraordinarily powerful predictor of financial success — when sustainability is not peripheral to, but constitutive of, the firm's competitive identity. For Tesla, ESG is not a reporting category; it is the product. The company's electric vehicle platform, battery technology, and clean energy ecosystem are simultaneously its core commercial offering and the embodiment of environmental sustainability. This alignment between commercial strategy and ESG performance creates a feedback loop in which ESG improvement directly translates into competitive advantage and financial gain.

The Tesla case provides proof-of-concept support for the Resource-Based View of ESG: when sustainability capabilities are embedded as strategic resources that are valuable, rare, and difficult to imitate, they generate superior



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financial returns. The contrast with Ford and General Motors — legacy automakers for whom ESG investment represents compliance cost rather than strategic differentiation — illustrates the crucial importance of strategic integration in determining ESG's financial impact.

5.3 Industry-Specific Patterns

The manufacturing sector exhibits the widest intra-industry variance in ESG–financial performance relationships, driven by the Tesla outlier. Traditional manufacturers (Ford, GM) face high environmental compliance costs without commensurate short-term financial returns, consistent with the short-term cost argument in the ESG literature. The IT sector shows mixed results, with Microsoft demonstrating operational efficiency gains from ESG (reflected in ROA) that are not observed for Intel or Oracle. This suggests that governance and social ESG dimensions — which dominate IT sector ESG materiality — may influence operational efficiency more reliably than they do overall profitability or shareholder returns. The FMCG sector consistently shows non-significant results, with positive but weak directional associations for most metrics. This pattern may reflect the consumer-brand mediation of ESG's financial impact in FMCG: ESG generates brand equity and customer loyalty rather than directly improving short-term financial metrics.

5.4 Theoretical Implications

The findings partially support each of the four theoretical perspectives applied in this study, though none provides a complete account. Stakeholder Theory receives partial support: firms that actively manage ESG stakeholder expectations (particularly Tesla and Microsoft) achieve better financial outcomes, but stakeholder engagement alone is insufficient — it must be coupled with strategic integration. Legitimacy Theory receives consistent support as a descriptor of behavior for most firms: the pattern of ESG reporting without significant financial impact suggests that legitimacy-based reporting is prevalent. However, legitimacy-seeking firms that do not embed ESG in strategy fail to convert disclosure into financial gain. Signaling Theory is supported only for Tesla: its high-quality, credible ESG signals generate investor confidence that materializes in financial performance. The Resource-Based View provides the most powerful explanatory framework: the Tesla results demonstrate that when ESG is built into strategic resources rather than compliance reporting, it generates the sustainable competitive advantage predicted by the theory.

VI. MANAGERIAL RECOMMENDATIONS AND LIMITATIONS

6.1 Managerial Recommendations

Based on the empirical findings and theoretical analysis, the following recommendations are advanced for managers, policymakers, and investors:

- Strategic integration over compliance: Managers should treat ESG not as a reporting obligation but as a strategic resource. The Tesla case demonstrates that ESG embedded in core business operations generates significant financial returns; ESG confined to disclosure generates legitimacy but limited financial gain.
- Industry-calibrated ESG materiality: Manufacturing firms should prioritize environmental ESG dimensions (emissions reduction, circular economy), IT firms should focus on governance and social ESG (data privacy, diversity), and FMCG firms should align ESG with consumer sustainability preferences and brand identity.
- Long-horizon measurement: Given that ESG investments typically generate financial returns over multi-year horizons, performance management systems should incorporate long-term ESG–finance metrics alongside short-term profitability measures. Annual reporting cycles are poorly suited to capturing ESG's financial dynamics.
- Enhanced disclosure quality: Managers should invest in standardized, transparent, and independently verified ESG reporting that builds investor confidence. High-quality ESG disclosure reduces information asymmetry and attracts long-term institutional capital.
- Emerging market adoption: Companies in emerging economies such as India should proactively build ESG capabilities to access international capital markets and satisfy the growing ESG expectations of global institutional investors.

6.2 Limitations

This study is subject to several important limitations. First, the sample size of nine companies limits the generalizability of findings; future research should employ larger, more representative samples across each industry. Second, the ten-year analytical window, while longitudinal, may be insufficient to capture the full financial maturation of long-term ESG investments. Third, ESG score inconsistency across rating agencies introduces measurement error that cannot be fully addressed through single-source data. Fourth, the regression models do not control for key financial confounders including firm size, leverage, innovation intensity, and macroeconomic conditions, which may explain a substantial



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portion of observed financial performance variation. Fifth, the possibility of greenwashing — wherein companies improve ESG disclosure without corresponding improvements in sustainability practice — cannot be excluded and represents a potential source of systematic measurement bias.

VII. CONCLUSION

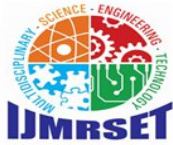
This study has examined the effect of ESG sustainability reporting on corporate financial performance across nine major companies in the Manufacturing, IT, and FMCG sectors over a ten-year period. The core finding is that the ESG–financial performance relationship is highly context-dependent: statistically significant positive effects are observed for Tesla (Manufacturing) and partially for Microsoft (IT), while the majority of firms across all three sectors yield non-significant associations at conventional significance levels.

These findings carry three principal implications. First, the financial impact of ESG is not universal but is mediated by the depth of ESG integration into corporate strategy. Companies that treat ESG as a core competitive differentiator — as Tesla does — achieve the financial benefits predicted by Stakeholder Theory, Signaling Theory, and the Resource-Based View. Companies that engage in ESG reporting primarily for legitimacy or compliance purposes do not. Second, ESG's financial impact is industry-specific: the relevant ESG dimensions, the cost structure of sustainability investment, and the channels through which ESG affects financial performance differ systematically across manufacturing, technology, and consumer goods firms. Third, short-term measurement horizons understate ESG's financial impact, as the benefits of sustainability investment typically materialize over multi-year time horizons that extend beyond annual reporting cycles.

This research adds to the growing body of comparative cross-industry ESG literature and provides actionable guidance for managers seeking to maximize the financial returns from sustainability investment. Future research should extend the sample size, incorporate time-lagged ESG–performance models, and examine ESG dynamics in emerging market contexts — particularly India, where sustainability reporting is gaining institutional momentum in alignment with regulatory priorities.

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