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SUSTAINABILITY PAYS OFF: EXPLORING THE IMPACT OF ESG PERFORMANCE ON FINANACIAL PERFORMANCE

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Abstract
The growing importance of Environmental, Social, and Governance (ESG) performance in influencing firm dynamics, particularly by enhancing financial performance serves as the motivation for this research. This study explores the link between environmental, social, and governance (ESG) performance and financial performance in Indian using unbalance panel date of non financial firms listed on the National Stock Exchange (NSE) from 2011 to 2023. Grounded in stakeholder theory and the resource-based perspective, this study hypothesizes a positive relationship between ESG performance and financial performance. Using a fixed effects regression model, the study controls for unobserved heterogeneity across firms, and time periods. To address potential endogeneity issues and confirm the robustness of results, two-stage least squares (2SLS) method, is employed as alternative estimation method along with alternative measurement of financial performance. Additionally, heterogeneity analyses explore variations based on firm size. The findings indicate a significant positive relationship between ESG performance and financial performance, with stronger effects observed in larger firms. This suggests that ESG performance enhances firm financial performance. The study contributes to the literature by providing empirical evidence from an emerging market, highlighting the financial benefits of ESG performance. These insights have practical implications for corporate leaders, investors, and policymakers promoting sustainability while enhancing firm value.

INTRODUCTION

In recent years, the connection between Environmental, Social, and Governance (ESG) performance and corporate financial performance (FP) has emerged as a focal point in academic studies and business strategy discussions. Once considered peripheral to core financial decisions, ESG factors are now recognized as crucial for long-term financial stability and value creation. However, the ESG-FP relationship remains complex, with variations across sectors, regions, and the specific ESG initiatives implemented by organizations. Initial theories based on neoclassical economics posited that ESG activities might negatively impact a firm's profitability, viewing resources allocated to social and environmental efforts as expenditures that did not directly enhance shareholder value(Friedman, 1970; Vance, 1975). This perspective limited corporate responsibility to profit maximization, with minimal emphasis on broader stakeholder interests. Empirical research from this period, such asWright and Ferris (1997)

often found negative correlations between corporate social initiatives and financial returns, reinforcing the notion that ESG activities could be detrimental to firm financial performance. In contrast to this traditional view, contemporary research grounded in stakeholder theory and the resource-based view (RBV) suggests that ESG investments can enhance firm performance.

Stakeholder theory posits that companies addressing the needs of various stakeholders (i.e. customers, employees, regulators, and investors) can foster trust, enhance relationships, and lower transaction costs, ultimately improving financial outcomes. The RBV complements this by arguing that ESG initiatives can serve as valuable, rare, and inimitable resources, providing firms with sustained competitive advantages. From a strategic management perspective, Porter and Kramer (2006)contend that well-integrated ESG strategies can spur innovation, boost efficiency, and create new market opportunities, transforming sustainability efforts from mere expenses into sources of long-term value. Substantial empirical evidence supports the positive ESG-FP relationship. Research has demonstrated that companies with robust ESG practices often benefit from improved operational efficiency, lower material costs, higher employee engagement, and increased customer loyalty(Aras & Crowther, 2008; Russo & Fouts, 1997).

Moreover, firms with higher ESG scores tend to face lower capital costs, as investors perceive them as less risky and more future-oriented (Eccles et al., 2014; Edmans, 2011). This positive association is particularly evident in markets with developing institutional frameworks, where ESG initiatives can help mitigate governance weaknesses and market inefficiencies(Ghoul et al., 2015). Meta-analyses, such as that conducted byMargolis et al. (2009) have further confirmed that the overall trend in empirical research indicates a positive correlation between ESG activities and financial performance.

Although a growing consensus exists, some research continues to yield mixed outcomes. Inconsistencies in measurement, diverse ESG reporting standards, and varying stakeholder expectations contribute to this uncertainty. Certain organizations may engage in ESG activities primarily for compliance or image purposes, without fully incorporating these practices into their core operations, resulting in weaker financial effects. (Berg et al., 2022; Christensen et al., 2021). Furthermore, smaller enterprises with constrained resources may find it challenging to realize immediate financial gains from ESG investments, unlike larger corporations that can more readily absorb these costs and utilize sustainability as a competitive advantage. This research enhances the current body of knowledge by offering new insights into the ESG-financial performance relationship within India's context, employing an unbalanced panel dataset of firms listed on
the National Stock Exchange (NSE) from 2011 to 2023. (Fatemi et al., 2018; Kotsantonis et al., 2016). India offers a unique setting, characterized by rapid economic growth, evolving regulatory frameworks, and increasing investor awareness of sustainability issues. (Richards, 2023).

The significance of research on the topic *"Sustainability Pays Off: Exploring the Impact of ESG Performance on Financial Performance"* lies in its relevance to both corporate strategy and investor decision-making in a rapidly evolving global market. The study's findings reveal a substantial and positive relationship between ESG performance and financial performance, with larger firms experiencing a more pronounced effect. This outcome aligns with stakeholder theory and the resource-based view, emphasizing that companies capable of effectively integrating ESG practices into their operations can achieve superior financial results. (Eccles et al., 2014; Friede et al., 2015). As environmental, social, and governance (ESG) factors become central to stakeholder expectations, firms with strong ESG performance are increasingly perceived as lower risk and more resilient, ultimately enhancing long-term financial outcomes (Khan & Liu, 2023). This research is vital in bridging the gap between sustainability practices and financial performance, offering insights for policymakers, investors, and corporate leaders seeking sustainable value creation in a stakeholder-driven economy.

2. Literature Review and Hypothesis Development

2.1 The Relationship between ESG Performance and Firm Financial Performance

In recent times, the relationship between Environmental, Social, and Governance (ESG) performance and corporate financial outcomes has attracted increasing attention from scholars and industry professionals. In contrast to earlier research that focused on Corporate Social Responsibility (CSR), contemporary studies emphasize the comprehensive nature of ESG, indicating a more structured and quantifiable approach to sustainability. Corporate performance, typically evaluated through accounting-based measures such as Return on Assets (ROA), market-oriented indicators, or operational efficiency, encompasses various aspects of business success (Friede et al., 2015). Multiple theoretical frameworks support the positive correlation between ESG performance and company operational outcomes. The stakeholder theory posits that businesses addressing the environmental and social concerns of stakeholders cultivate trust, enhance relationships, and ultimately improve financial performance (Freeman, 1984). The resource-based view (RBV) suggests that ESG initiatives function as valuable, scarce, and difficult-to-replicate resources, providing firms with a competitive advantage and leading to enhanced operational efficiency. (Albitar et al., 2020). Legitimacy theory further reinforces this connection by asserting that companies engaging in sustainable practices are more likely to maintain their social license to operate, thereby minimizing reputational risks and improving market performance. Empirical research largely corroborates the positive link between ESG performance and financial outcomes. Companies with higher ESG ratings consistently outperformed the market, with all three ESG dimensions (i.e. environmental, social, and governance) showing positive correlations with financial metrics. Environmental initiatives, such as improved eco-efficiency and resource management, have been associated with cost reductions, while robust governance practices minimize agency conflicts and operational risks (Fatemi et al., 2018). Similarly, Deng et al. (2013)found that firms with superior ESG performance experience more favorable merger outcomes and improved operational efficiency. Studies focusing on specific ESG components have echoed these findings, emphasizing environmental performance as a significant contributor to operational improvements and governance quality as a key driver of profitability (Harjoto et al., 2015). Nevertheless, some studies present contrasting viewpoints, suggesting that the expenses associated with implementing ESG practices may outweigh the immediate financial advantages, particularly in certain markets or industries(Auer & Schuhmacher, 2016). Despite this, the majority of literature underscores the long-term value creation linked to ESG integration, including improved access to capital, enhanced brand reputation, customer loyalty, and resilience to regulatory changes(Bolton et al., 2013; Tommaso & Thornton, 2020). In accordance with these theoretical perspectives and empirical findings, ESG practices are expected to enhance operational efficiency by reducing costs, mitigating risks, and promoting sustainable growth. Companies with strong ESG performance are better positioned to capitalize on emerging market trends, meet stakeholder expectations, and ensure long-term profitability. Based on this reasoning, the study proposes the following hypothesis:

H1: There is a positive relationship between ESG performance and firm performance.

3. Research design

3.1 Sample and data

The study utilizes unbalanced dataset of 2100 observations of Number of Firms non-financial firms from the Thomson Reuters ASSET4 database ranging from 2011 to 2023. In this study dependent variable is financial performance measure through, return on assets (ROA). While ESG performance score as independent variable obtained from Refinitiv, which is widely acknowledged in academic research for their comprehensive and long-standing dataset, available since 2002 (Naeem et al., 2022; Velte, 2017).

Control variables include firm size measured by log of total assets, financial leverage measured by liabilities-to-assets ratio, Cash Ratio is measured by dividing cash and cash equivalents by current liabilities, firm age determined by the difference between sample year and listing year, firm growth

calculated by operating income growth rate, number of directors is used as proxy for Board Size , and CEO Duality is measured by a dummy variable equal to one if the CEO also serves as board chair.

3.2 Econometric models

The regression model shown below evaluates the proposed relationship between ESG performance and firm financial performance.

$$FP_{i,t} = \beta_0 + \beta_1 ESG_{it} + \beta_2 FSD_{i,t} + \beta_i X_{i,t} + \sum_{i=1}^{n} \beta_i Firm_Dummies_{i,t} + \sum_{i=1}^{n} \beta_i Year_Dummies_{i,t} + \mu_i + e_{i,t} \dots\dots\dots\dots\dots\dots (1)$$

Where, $FP_{i,t}$ and ESG_{it} represent firm financial performance and ESG performance, respectively. Furthermore, $X_{i,t}$ denotes the collection of control variables encompassing firm size, financial, cash ratio, firm, firm, board size , and CEO Duality .β is a coefficient, μ_i signifies the entity-specific error term, and $\varepsilon_{i,t}$ indicates overall error term for company i over time.

Our initial analysis employed a fixed-effects regression model to address unobserved heterogeneities, controlling for factors specific to each firm and year that could potentially bias the results. To augment the robustness of our investigation, we utilized two-stage least squares with instrumental variables (IV2SLS) to address potential endogeneity in model, and included Tobin Q as alternative metric for evaluating firm financial performance. Furthermore, we utilize firm size in heterogeneity analysis to unleash the varying impact of ESG performance on financial performance. These methods collectively ensured reliability and validity of findings.

4. Empirical results

4.1 Descriptive statistics

The table-4.1 presents summary statistics of the variables utilized in this study. ROA exhibits a mean of 4.054 with a standard deviation 3.531, indicating moderate variability in companies' operational efficiency. The ROA values range from -22.290 to 24.320, demonstrating the presence of highly unprofitable and profitable firms within the sample. The ESG score demonstrates a mean of 52.876 and a standard deviation of 18.823, revealing substantial heterogeneity in companies' environmental, social, and governance practices. ESG scores range from 13.120 to 89.960, illustrating diverse levels of ESG commitment among Indian companies listed on the National Stock Exchange from 2011 to 2023.

Table-4.1. Descriptive statistics for the variables studied (n=2160).

Variable Name	Mean	Std. Dev.	Min	Max
ROA	4.054	3.531	-22.290	24.320
ESG	52.876	18.823	13.120	89.960
FS	19.462	1.252	16.905	22.335
Cash Ratio	0.621	0.632	0.268	6.432
LEV	0.758	1.346	0.024	4.717
GROWTH	16.474	1.632	11.514	20.224
AGE	39.050	24.445	9.000	125.00
BS	10.12	6.975	4.000	21.000
CEO DUA	0.299	0.458	0.000	1.000

4.2 The impact of ESG performance on financial performance using fixed-effects regression

Table presents the regression results examining the effect of ESG performance on firms' financial performance, proxied by Return on Assets (ROA). The results indicate a positive and statistically significant relationship between ESG scores and ROA (coefficient = 0.004, t = 3.23, p< 0.01), suggesting that firms with higher ESG performance tend to achieve better operational efficiency. This finding aligns with previous studies (Fatemi et al., 2018; Friede et al., 2015), which highlight the value-enhancing role of ESG practices through improved stakeholder relationships, operational efficiencies, and risk mitigation. Additionally, the model demonstrates a substantial explanatory power with

an R-squared value of 0.534, indicating that approximately 53.4% of the variation in financial performance is explained by the model. Firm-specific, industry-specific, and year-fixed effects were incorporated to control for unobserved heterogeneity, ensuring the robustness of the results. These findings underscore the strategic importance of ESG integration in enhancing firm value and sustaining long-term profitability, consistent with stakeholder and resource-based theoretical perspectives.

Table-4.2 Results of ESG performance impact financial performance using country and year fixed-effects regression model.

Variables	ROA
ESG	0.004***
	(3.23)
FIRM SIZE	0.002***
	(2.22)
FINANCIAL LEVERAGE	-0.020*
	(1.95)
CASH RATIO	1.246***
	(2.85)
GROWTH	0.004***
	(5.22)
BOARD SIZE	0.003***
	(4.09)
CEO DUA	0.001
	(0.56)
AGE	-0.005**
	(-2.16)
CONSTANT	6.472***
	(0.859)
INDUSTRY FIXED EFFECTS	Yes
YEAR FIXED EFFECTS	Yes
OBSERVATIONS	2160
ADJUSTED R^2	0.534

*Parentheses indicate t-statistics. Significance level *p<0.10, **p<0.05, and ***p<0.01*

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4.2 Robustness Testing

The benchmark regression results indicated that ESG performance significantly enhances financial performance. Two validation procedures were employed to confirm the robustness of these results. The initial approach entailed employing alternative estimating techniques, including IV2SLS, to mitigate potential endogeneity issues. The second validation method utilized alternative measurements (i.e. Tobin Q) of financial performance as the dependent variable.

4.2.1 Alternative estimation model (IV2SLS) results

The IV2SLS regression results in Table-4.3 provide strong evidence for the association between ESG performance and financial performance. Following the methodologies of Benlemlih and Bitar (2018), Ellili (2022) and Agliardi et al. (2023), we utilizing two instrumental variables: the industry-year average ESG score (ESG Industry) and the firm's initial ESG score (ESG Initial). The first stage results reveal a positive and statistically significant association between ESG Industry mean and the ESG performance (coefficient = 0.002, t = 4.59, p < 0.01), confirming its relevance as an instrument. In the second stage, ESG performance maintains a positive and significant relationship with financial performance (coefficient = 0.012, t = 2.54, p < 0.01), suggesting that enhanced ESG engagement contributes to improved firm outcomes, even after accounting for endogeneity concerns. The Kleibergen-Paap LM (K-P LM) test statistic of 115.24

with a p-value of 0.000 confirms the absence of under identification of instrument. Furthermore, the Cragg-Donald Wald F-statistic of 110.25 exceeds conventional thresholds, indicating that instrument is not weak.

Table-4.3 IV2SLS regression results for robustness checks

Variables Name	1ST Stage	2nd Stage
ESG IND	0.002***	
	(4.59)	
ESG		0.012***
		(2.54)
FS	0.006*	0.010
	(1.89)	(0.32)
FL	-0.106	-0.001*
	(-9.10)	(-2.01)
Cash Ratio	0.019*	0.039***
	(1.76)	(2.69)
GROWTH	0.015***	0.138***
	(3.14)	(4.1)
BS	0.077***	0.008***
	(8.91)	(2.41)
CEO DUA	0.004**	0.006***
	(2.10)	(2.85)
AGE	-0.000	0.021
	(-0.57)	(0.02)
Constant	1.825***	3.334***
	(16.43)	(0.435)
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	2160	2160
Adjusted R^2	0.660	0.660
Panel-A:Under identification test		
K-P LM Statistics		115.24
p-value		0.000
Panel-B:Weak instrument test		
Cragg-Donald Wald F statistic		110.25

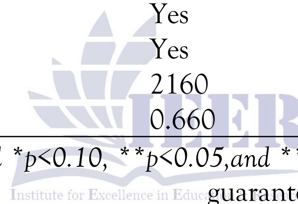
*Parentheses indicate t-statistics. Significance level *p<0.10, **p<0.05,and ***p<0.01*

4.2.2 Alternative measures of stock liquidity

The robustness check results utilizing Tobin's Q as an alternative firm performance metric are presented in Table 4.4. The findings indicate a statistically significant and positive association between ESG performance and Tobin's Q (coefficient = 0.023, t = 2.06, $p < 0.05$), suggesting that firms with superior ESG ratings tend to exhibit higher market valuations.

Table-4.4 Alternative measure of firm performance Tobin Q

Variables	Tobin Q
ESG	0.023***
	(2.06)
FS	0.003
	(1.06)
FL	-1.25***
	(2.35)
Cash Ratio	0.510***
	(3.48)
GROWTH	0.683
	(0.81)
BS	0.790***
	(4.10)
CEO DUA	0.008**
	(2.01)
AGE	0.085
	(0.003)
Constant	92.326***
	(11.65)
Industry fixed effects	Yes
Year fixed effects	Yes
Observations	2160
Adjusted R^2	0.660



Parentheses indicate t-statistics. Significance level *$p<0.10$, **$p<0.05$,*and* ***$p<0.01$

4.3 Additional Analysis

Table-4.5 presents an analysis of heterogeneity, examining the relationship between ESG performance and financial performance (FP) among firms of varying sizes. The study categorizes the sample into two groups: small-scale and large-scale enterprises. The natural logarithm of total assets is used in this study to calculate business size, and the sample's median asset value is used to divide firms into small and large groups. Businesses are categorized as small if they are below the median and as large if they are above it. The idea that larger companies often have more organizational and financial resources to implement successful ESG strategies, leading to higher financial outcomes, is reflected in this classification, which is in line with earlier research. The study may determine whether the relationship between ESG and financial performance differs by firm size in the Indian market setting by using the median-split method, which guarantees balanced groupings. For larger firms, a statistically significant positive correlation exists between ESG performance and financial performance (coefficient = 0.029, t = 3.22, p < 0.01). This finding suggests that larger corporations derive greater financial benefits from their ESG initiatives. These results imply that such firms may possess more substantial resources to implement effective ESG strategies, which stakeholders' value and which are reflected in enhanced financial outcomes. In contrast, smaller firms demonstrate a positive but statistically insignificant relationship between ESG and financial performance (coefficient = 0.004, t = 0.59). This indicates that smaller enterprises may not experience immediate financial gains from their ESG efforts, potentially due to limited resources or reduced market visibility. In conclusion, the analysis elucidates the critical role of firm size in influencing the ESG–financial performance relationship, with larger enterprises accruing more substantial financial benefits from their ESG investments.

Table 4.5 ESG and FP – Analysis based on Firm Size

Variables	LOW Size	Large Size
ESG	0.004	0.029***
	(0.59)	(3.22)
Control	Yes	Yes
Constant	2.825*	0.334***
	(1.83)	(2.45)
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
No. of obs	866	1274
R-squared	0.002	0.451

5. Conclusion

The study reveals a positive correlation between Environmental, Social, and Governance (ESG) performance and corporate financial performance in Indian non-financial firms listed on the National Stock Exchange (NSE) from 2011 to 2023. Firms with superior ESG performance experience enhanced operational efficiency and higher market valuations. The results are robust across various estimation techniques, addressing concerns of endogeneity. However, the study also reveals significant heterogeneity in the ESG-financial performance relationship based on firm size. Larger firms may benefit more from ESG investments due to better resource allocation, stakeholder engagement, and institutional visibility, while smaller firms may face limitations in fully capitalizing on ESG initiatives. The findings underscore the strategic value of integrating ESG considerations into core operations for long-term financial success. ESG metrics can serve as credible indicators of firm quality and resilience. Policymakers and regulators may find the results useful in incentivizing sustainability adoption, particularly in emerging markets. The study contributes novel insights from an emerging economy, reinforcing the notion that sustainable business practices are ethically and socially desirable and financially advantageous.

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