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Bridging Business and Sustainability: An Empirical Study of CSR–SDG Synergies in Indian IT Companies

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ABSTRACT

The concept of sustainable development has been highly noticeable in the past decades and affected the global economic policy and human development plans. Countries all over the world are focusing more on the long-term viability goals to achieve sustainable and inclusive growth of their people and societies. This change is being propelled by the urgency to address the social inequalities and environmental damages caused by the excessive exploitation of natural resources by human beings. In their turn, the United Nations proposed Sustainable Development Goals (SDGs), an overarching model of 17 goals, which are integrated, aimed at fostering economic, social, and environmental welfare.

Since industrial and corporate operations in major sectors like energy, manufacturing, and technology have played a significant role in economic development in the past and at the same time they have had negative effects on the environment, the essence of businesses in improving sustainability has been of paramount importance. The original idea of social contract between business and society, which was initially advanced by Frederick Goff, developed into the present-day definition of Corporate Social Responsibility (CSR). This model highlights the fact that companies must work beyond profit motifs, they must participate in activities that contribute to the well-being of the society and the environment. This has led to the integration of CSR and SDG as a key strategy of aligning business goals with sustainable development as a growing realization that the long-term success of a corporation is ensured through the well-being of the community.

INTRODUCTION AND LITERATURE REVIEW

Sustainability is an essential aspect of business strategies in the current age, and it influences both daily activities of the companies and the measurement scales applied by the stakeholders to determine the sustainability of the firms. With the growing pressure on several companies to incorporate sustainability concepts into their operation and decision-making, the growing global issues related to environmental degradation, inequality, and ethical governance continue to pose

a pressure on the corporations. In 2015, the United Nations Sustainable Development Goals (SDGs) gave the world a roadmap toward creating a global inclusion and responsible development by the year 2030. In this context, Corporate Social Responsibility (CSR) has come out as an operation tool that helps companies to balance profit-making operations with the social and environmental goals.

The sustainability practices in the Indian context are dynamic with the passage of the Companies Act (2013), responsible for instituting CSR as an obligatory mandate. Companies with a net worth of 500 crore or more and a turnover of 1000 crore or more are covered in Section 135 of the Act, or net profits of above 5 crores will be required to distribute a minimum of 2% of their average net profits during the last 3 years of prior year on CSR activities. Not only did these historic reforms responsibilities put India in the select few countries that required their corporate social expenditure, but it also increased the opportunities of the private sector to contribute to national development.

The 2% CSR rule was introduced, and it created opportunities and challenges. One positive effect is that it prompted businesses to think about socially responsible initiatives in the areas of education and health that align with the SDGs, healthcare, poverty eradication, and environmental sustainability. Conversely, it brought up the issue of compliance-based behaviour and not commitment. Major companies, including Tata, Infosys, and Wipro, have shown a long-term business-model of integrating CSR, although minor business ventures tend to consider CSR as a legal cost with little strategic importance. The fact that CSR takes divergent direction raises an important question, is CSR, whether they are required or not, resulted in measurable gains for the company in terms of enhanced financial performance and competitiveness?

CSR, SDGs and Performance of The Firm.

Corporate Social Responsibility is the emerging point of ethics and economics. According to Porter and Kramer (2011), strategic CSR places competitiveness and the welfare of the community together through the creation of shared value. It is estimated that companies that incorporate social and environmental interests into their practices reinforce the reputation, draw in investors and increase profitability. Empirical evidence indicates that effectively implemented CSR initiatives can strengthen a firm's financial outcomes by improving brand reputation, employee morale, and operational efficiency. For instance, studies by **Margolis and Walsh (2003)** and **Orlitzky et al. (2003)** demonstrated a **positive association between corporate social responsibility and overall firm performance** across various industries.

This relationship is, however, not conclusive. Opponents believe that CSR can create extra expenses which dilute short term profitability particularly in the developing economies where capital is a major constraint. The most famous claim made by Friedman (1970) is that a company's primary responsibility is to increase the wealth of its shareholders, meaning that CSR investments take away resources out of the main economic operations of the business. In the

same manner, McWilliams and Siegel (2001) opined that the impact of CSR on profitability varies according to strategy and industry of the firm as opposed to being generally positive.

In studies which are more recent, a neutral or contingent point of view has been taken, where it is argued that the CSR profitability relationship is contingent on factors like firm size, sectoral forces, and the quality of governance. According to Barnett and Salomon (2012), companies can only benefit financially from CSR if they effectively involve stakeholders and have processes in place to measure the impact of their efforts. This mixed evidence is enough to highlight why there is need of sector-specific research that looks at how CSR affects financial performance, especially in highly dynamic sectors such as information technology.

CSR-SDG Interconnection and the Indian Company environment.

The sustainability movement across the globe has made companies match their CSR strategies with the UN SDGs, which establishes a quantifiable connection between corporate responsibility and the global developmental objectives. To demonstrating their compliance with global standards, a number of major Indian firms have begun to align their corporate social responsibility (CSR) initiatives with certain SDGs, such as SDG 4 (Quality Education), SDG 3 (Good Health and Well-being), and SDG 13 (Climate Action). The shift represents a change of the more traditional philanthropic-based CSR to the impact-based CSR where performance evaluation happens not only in financial context but also in the context of the creation of social value.

Nevertheless, there are still a few challenges. According to reports provided by the Indian Institute of Corporate Affairs (IICA, 2020), approximately one-third of Indian businesses continue to treat CSR as a regulatory obligation. Poor allocation of resources and low levels of transparency are some of the negative outcomes of the absence of standardized evaluation mechanisms. In addition, there is still a lack of focus on environmental and technological sustainability, and most corporate social responsibility (CSR) funds go toward education and rural development.

Irrespective of such concerns, the overlap between CSR and SDGs is slowly growing. Companies are turning to sustainability frameworks like the Business Responsibility and Sustainability Report (BRSR) that was launched by the Securities and Exchange Board of India (SEBI) in 2021 that requires the disclosure of non-financial performance indicators. The trend has increased corporate responsibility and compelled companies to value their social and environmental inputs. Consequently, the Indian business environment is gradually shifting away towards compulsory CSR to strategic, SDG-based sustainability.

Nonetheless, there is a lack of empirical studies on the topic of CSR and SDG-level performance in the IT industry of India in comparison with traditional industries, like energy or manufacturing. Majority of previous studies are carried out with the correlation between CSR and profitability on an aggregate or cross-sectoral basis, which is not very useful in providing information on sectoral differences. Further, research tends to use cross-sectional data, which does not consider a long-term impact on sustainability efforts on firm performance. Due to the

dynamic nature of the IT sector, there is a great reason of adopting panel data analysis to capture longitudinal effects and determine new trends

RESEARCH GAPS AND HYPOTHESIS DEVELOPMENT

Although much literature exists to support the integration of CSR and SDGs, there are various gaps that are yet to be closed particularly in the case of the IT industry in India. This paper fills these gaps using longitudinal data of 2014-2024.

1. **Sectoral Gap**

Most studies mainly focus on manufacturing and energy industries while neglecting the IT sector. However, IT spends about 23 percent of CSR money in India (Ministry of Corporate Affairs, 2023). They have a different role as it has low pollution and mainly focuses more on skills (like digital education under SDG 4) and therefore it needs its own study to understand how knowledge-based companies can match CSR-SDG objectives with profits.

2. **Geographic Gap**

Existing studies are mainly based on western companies, not countries like India where CSR legally required. IT companies such as Infosys and Wipro use CSR in R&D and digital innovation (SDG 9). However, there is little evidence of how these rules and culture affect the performance of the firm.

3. **Temporal Gap**

Most of the studies uses data before COVID-19 as after 2020, the companies have changed their sustainability priorities and increased ESG investments. Moreover, the new reporting rules (BRSR, 2022) launched by SEBI also made companies share sustainability data, which is why newer analysis is needed.

4. **Methodological Gap**

Earlier studies usually don't differentiate simple charity from strategic CSR linked to SDGs and they also don't confirm whether companies apply SDGs or just report them. The gap is addressed by this research by using long-term data and a special index to measure how strongly CSR is correlated to SDGs and financial outcomes.

Hypothesis Development

Research in the field of traditional sectors does not pay much attention to SDG-related frameworks, which provide homogenized performance indicators. Therefore, the testable item linked to SDG-related CSR in knowledge-based IT companies is whether sustainability is a strategic benefit or a cost of compliance.

H1: The SDG framework has a **significant effect on the profitability (ROI)** of IT firms.

Rationale: Whether CSR aligned with SDGs (e.g. education (SDG 4) and innovation (SDG 9)) positively contribute to the profitability of the firm by increasing its reputation and stakeholder involvement.

H2: CSR–SDG initiatives have a **measurable impact on operational efficiency (ROTA)** of IT firms.

Rationale: Extends Assaf et al. (2017) who discovered that CSR positively affects the sales efficiency and the advertising costs to determine whether similar outcomes may arise in the IT companies that are motivated by human resources and technology.

H3: CSR–SDG integration has a **significant impact on firm growth metrics (GM)**.

Rationale: Expands the findings of Wu et al. (2020) and Paul and Devi (2016) to assess the hypothesis that innovation based on sustainability and long-term investment will result in the asset and market growth.

METHODOLOGY

The research paper will use a mixed-methods quantitative-qualitative approach to determine how integration of CSR and SDG affects the financial performance of the Indian IT industry. To establish a cluster of 10 top-ranked Indian IT firms listed in the NSE and BSE, a panel dataset (2014-2024) was developed. The sample of firms comprised of ongoing CSR disclosures and a minimum of three years of 2% compliance with Companies Act (2013).

The methodology has been designed into three consecutive stages to make it clear:

Phase I: Sample Selection and Data Collection

Ten top Indian IT companies like TCS, Infosys, Wipro were selected, mainly because they represent about 70% of the market, have continuous data (2014–2024), follow the 2% CSR rule and they share public CSR reports. Data was collected from both primary **(**company reports, financial statements, websites) and secondary sources **(**SEBI (BRSR), audits, and business news)

Phase II: Measuring SDG–CSR Influence

Step 1: Intensity Scoring Framework

The overall score on the questions of the CSR-SDGs engagement of each company was rated on a scale of **0-1** depending on the quality and depth of disclosure. This model was based on the one that has been suggested in *"Measuring Corporate Contributions to UN SDGs using Alternative Data and NLP Techniques."*

The scoring assesses the alignment of CSR activities of a company with certain SDGs using both internal (disclosed) and external (verified by third parties) data.

Table 1: CSR–SDG Scoring Framework (0–1 Scale)

Score	Criteria	Example
0	No mention of SDGs	—
0.25	SDGs referenced, no funded projects	Infosys CEO speech referencing SDGs
0.5	Existing CSR projects later mapped to SDGs	TCS mapping employee training to SDG 4
0.75	Dedicated SDG-linked CSR programs	Wipro's renewable energy under SDG 7
1	SDG impact measured and funded	HCL's AI-based SDG 9 innovation dashboard

Each SDG dimension (1–17) was assessed, with **C-SDG score** computed as:

$$\mathbf{C-SDG} = \sum_{i=1}^{17} \text{piSi}$$

where **pi** is the weight (1 if addressed, 0 if absent) and **Si** is the intensity score.

This allowed calculation of each firm's cumulative SDG engagement score across years.

Step 2: SDG–CSR Alignment and Intensity Evaluation

CSR initiatives were then evaluated by SDG coverage and measurable impact.

Table 2: CSR Initiatives and SDG Alignment with Impact Intensity

CSR Area	SDGs Addressed	Intensity (p-value)	Interpretation
Digital literacy & employability	SDG 4, SDG 8	0.75	Moderate impact
Hospital sanitation & cancer care	SDG 3, SDG 6	0.75	Needs redesign for measurable results
Childline tracking (missing children)	SDG 5, SDG 16	0.5	Moderate, scalable impact
Tree plantation drives	SDG 13, SDG 15	0.5	Environmental alignment
National Relief Fund support	SDG 1, SDG 17	0.25	Strong immediate social impact

Ultimately, the dataset contained the average C-SDG scores of all the sampled companies. The SDG alignment was observed to be 0.42-0.81 on average, which indicates a moderate and developing level of integration of CSR initiatives with the UN Sustainable Development Goals in the Indian IT sector.

Step 3: Financial Variables

The quantitative variables were summarized to measure corporate performance and Hypothesis testing.

Table 3: Dataset Overview — Variables and Measurements

Variable	Type	Measurement / Definition	Source
ROI	Dependent	Net profit ÷ total investment	Annual reports
ROTA	Dependent	Net profit ÷ total assets	Financial statements
Asset Growth	Dependent	Year-on-year asset growth (%)	CMIE database
C–SDG Score	Independent	Composite CSR–SDG intensity score	Calculated via scoring
CSR Spending	Control	Total CSR expenditure (₹ crore)	CSR disclosures
R&D Expenditure	Control	R&D ÷ total income	Annual reports
Firm Size	Control	Natural log of total assets	CMIE
Foreign Revenue	Control	% of total revenue from exports	Company reports
Net Profit	Control	Baseline profitability	Annual reports

Phase III: Econometric Framework and Model Specification

Step 1: Model Formulation

Two panel regression models were developed to test the hypotheses.

Model 1: CSR–SDG and Profitability

$$Financial\ Profitability(ROI, ROTA) = B0 + B1.C - SDG + B2R\&D\_Expenditure + B3Foregin\_Revenue + B4.Net\_Profit + B5.CSR\_Spending + \varepsilon it$$

Model 2: CSR–SDG and Growth

$$Growth\ Rate = B0 + B1.C - SDG + B2R\&D\_Expenditure + B3Foregin\_Revenue + B4.CSR\_Spending + \varepsilon it$$

Both models assess whether CSR alignment with SDGs (C-SDG score) enhances **profitability (H2)** and **growth (H3)** while controlling for strategic variables.

Step 2: Control Variables

Control variables were included to eliminate confounding influences:

- **Firm Size:** captures scale effects; larger firms may show higher CSR visibility**.**
- **R&D Expenditure:** accounts for innovation-driven performance.
- **Foreign Revenue:** measures global diversification risk.
- **Net Profit:** isolates CSR impact from baseline profitability.

These variables are consistent with empirical precedents (Waddock & Graves, 1997; Mishra & Suar, 2010; McWilliams & Siegel, 2001).

Step 3: Statistical Tools and Estimation

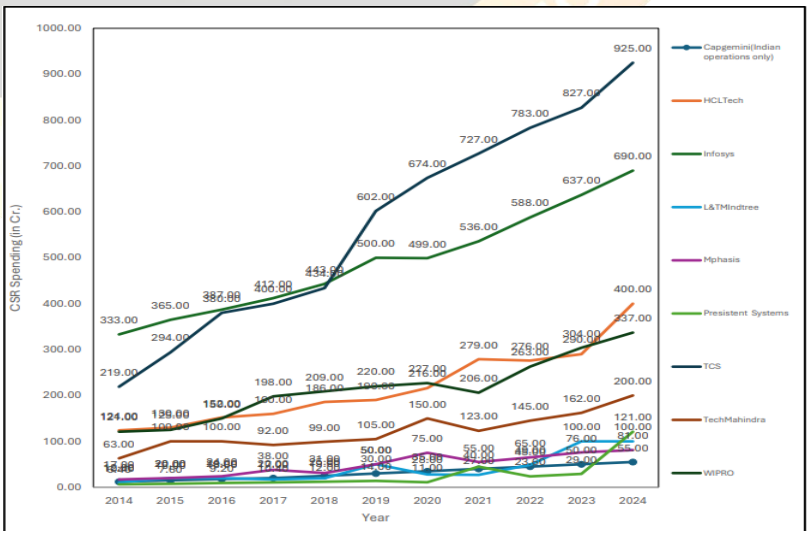
Panel data analysis was conducted using STATA (Version 17) to test the relationship between CSR–SDG and financial performance in Indian IT firms which followed three stages: descriptive statistics which include mean, standard deviation, minimum & maximum to describe the nature of data, correlation analysis to assess the strength and direction of variables, and third is the random-effects GLS regression models to analyse the impact on ROI, ROTA, and asset growth during 2014–2024. The study used only publicly available data (annual reports, BRSR filings, and MCA records), ensuring transparency and compliance with ethical standards.

RESULTS AND DISCUSSION

A. CSR Spending trends by Company

Figure 1: The line graph of CSR spending by company reveals distinct trends:

CSR Spending Trends in India's IT Sector (2014–2024)



The linear chart represents the spending pattern of various Indian IT companies over the last ten years. TCS and Infosys showed sustained growth, with TCS recording the highest overall spending with substantial rise between 2018 and 2019 from 443 to 602 crores, while Infosys demonstrated a consistent

growth each year. HCL Technologies and Tech Mahindra exhibited a gradual growth up to 2021, followed by a sharp rise to ₹400 crore and ₹200 crore respectively but the value dropped by a slight margin in 2021. In contrast, lower spenders like Wipro, Persistent Systems, L&T Mindtree, and Mphasis showed more varied patterns. Wipro shows consistent growth, whereas Persistent Systems and Mphasis also recorded a rise between 10 crores in 2010 to 121 crores in 2024. L&T Mindtree had a comparatively modest growth.

Overall, CSR budgets in the industry increased significantly during the 2014-2024 period, as it was according to stakeholders expectations and with Companies Act (2013) requirements. Although TCS, Infosys and HCL Technologies lead the pack in the absolute investment on CSR, smaller companies like Persistent Systems and Mphasis are experiencing phenomenal growth in terms of the proportional growth, suggesting a wider spread of sustainability involvement in the IT sector.

B. Descriptive Analysis

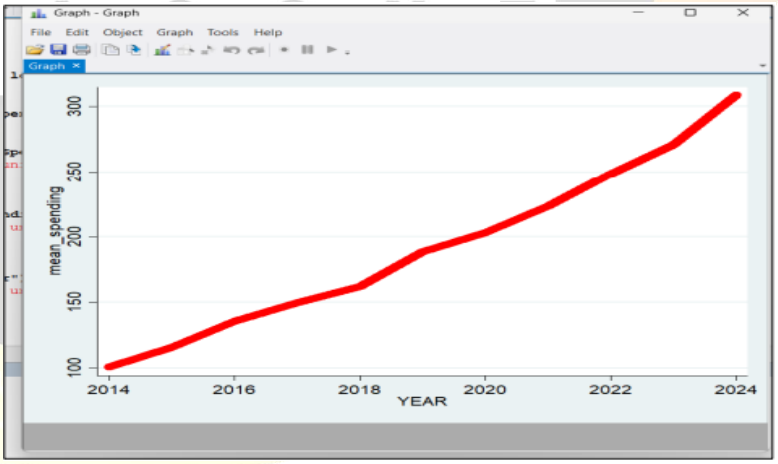
Figure 2: Descriptive Analysis

```
. summarize CSRSpending NetProfit ROI ROTA ASSESTGROWTHRATIO RDEXPENDITURE REVENUE L

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
  CSRSpending |         99     195.598    215.0025         6.4        925
   NetProfit |         99    10180.55    11590.02         320      46250
         ROI |         99    48.20995     12.1069    14.46281    90.6484
        ROTA |         99    21.08485     5.16656         9.8       38.1
ASSESTGROW~O |         99    14.88182    4.273921         6.5       28.4
-------------+---------------------------------------------------------
RDEXPENDIT~E |         99    1348.712    1007.988          78       3600
     REVENUE |         99     51044.1    49794.27        2600     240893
           L |         99    .5751818    .1322554         .25         .8
```

The descriptive analysis gives a summary of the important financial and sustainability variables among the top ten Indian IT companies studied in the period 2014 -2024. The sample size includes 99 firm-years, which is sufficient to guarantee good statistical validity and sector coverage. To measure the trends in corporate performance and social investment in the industry, measures of central tendency and variability were examined to assess them.

Figure 3: CSR mean spending year wise



The CSR expenditure data indicates a strong focus on sustainability with a mean expenditure of ₹195.60 crores and high standard variation of ₹215.00 crores, indicating significant differences across firms. The broad range of ₹6.4 crore to ₹925.4 crore indicates that large firms have huge CSR spending, resulting in a positively skewed distribution where a few major firms have a substantial share (see Figure 2 and Figure 3).

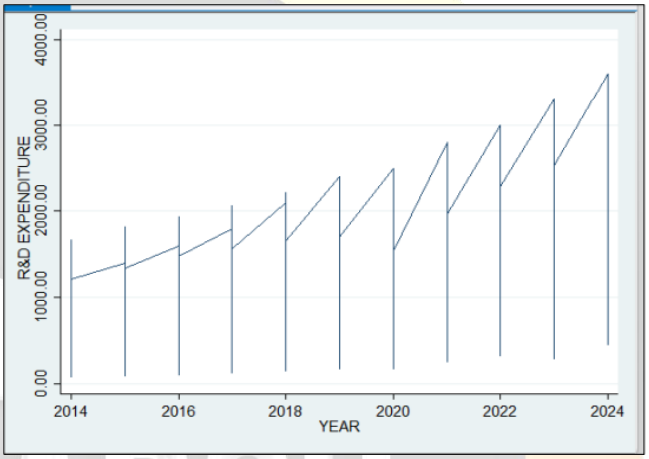
Net profit variable shows a strong financial performance, with a mean of ₹10,180.55 crore and SD ₹11,590.02 crore. The difference between middle and large size firms has been depicted in the wide range, with higher values being concentrated among a few leading firms.

48.21 is the mean ROI with moderate variation, indicating strong and consistent returns across firms, with some high-performing outliers. Similarly, Return on Total Assets (ROTA) has an average of 21.08 and lower variability which shows stable and efficient utilization of assets across the firms.

Asset growth shows a mean of 14.88% and a standard deviation of 4.27 % indicating steady and controlled expansion strategies. Usually, this drop in the growth level happens occasionally mainly due to economic slowdowns or strategic adjustments, particularly during the pandemic period.

Figure 4: R&D expenditure year wise cumulative

The research and development (R&D) spending analysis also highlights the focus of the industry on innovation. The average amount expended of 1348.71 crore (SD = 1007.99 crore; range ₹78 crore to ₹3,600 crore) indicates good but not balanced R&D investment. The outlays of R&D are higher in larger firms, especially those that have product-based divisions or technology laboratories and lower in small service-based firms. This difference is in line with the international findings indicating that the level of R&D is related to the size of the firm, the market orientation and the innovation strategy (Figure 4).



The kind of variation in revenue levels is quite high with the average being ₹51,044.10 crore and a standard deviation of ₹49,794.27 crore with a range of ₹2,600 crore to ₹240,893 crore. The statistics reveal that there is a strong Pareto effect in which few companies earn a disproportionate amount of revenue in the industry. The concentration of income solidifies the dominance of major IT companies like TCS, Infosys and HCL Technologies in the digital economy of India.

The average score on CSR-SDG alignment is 0.58 which implies a moderate commitment of alignment between the CSR initiatives and the UN Sustainable Development Goals (SDGs). Most companies gather around the centre, which means that they partially and slightly more include the concepts of sustainability; the range is 0.25-0.80, and the standard deviation is 0.13. Companies with a score under 0.25 have low SDG connectivity due to low-compliance-related CSR whilst firms close to 0.80 are strategic in their connection to sustainability goals including renewable energy, digital inclusion, and gender equality. This trend indicates slow shift of altruistic CSR to more practical sustainability models.

Altogether, the descriptive data show that the IT sector in India is resilient in terms of financial performance and stable profitability and makes progressive but disproportionate progress in implementing CSR and SDG goals. Large companies have the highest absolute expenditures and

sustainability practice, but the proportional rate of growth in mid-tier companies is significant, indicating an expansion in the desire to act responsibly in business practices throughout the industry.

C. Correlation Analysis

Figure 5: correlation matrix of various variables

. corr var20 revenue rdexpenditure assestgrowthratio rota roi csrspending netprofit
(obs=99)

	var20	revenue	rdexpe~e	assest~o	rota	roi	csrspe~g	netpro~t
var20	1.0000							
revenue	0.2204	1.0000						
rdexpendit~e	0.2840	0.6151	1.0000					
assestgrow~o	-0.1285	-0.2338	-0.4468	1.0000				
rota	-0.3081	-0.2779	-0.3777	0.1624	1.0000			
roi	0.0723	0.2554	-0.1437	0.1530	0.0321	1.0000		
csrspending	0.2048	0.8681	0.6418	-0.3085	-0.1674	0.2267	1.0000	
netprofit	0.1920	0.8920	0.6001	-0.2721	-0.1842	0.3556	0.9847	1.0000

Figure 5 is a correlation analysis of the relationship between the major financial, operational, and sustainability variables of India leading IT companies in 2014 2024. This analysis is aimed at assessing the quality and the orientation of the associations that can affect the corporate performance and strategic behaviour.

The findings indicate that there is a positive relationship between the revenue and the net profit (r = 0.9847) and the size of the firm and profitability are almost linear. This observation implies the pronounced importance of revenue growth as a motivating factor in financial results of scalable service sectors like IT. The high turnover companies such as TCS and Infosys are always reported to have better profitability which further supports the scalability-oriented efficiency which is a common feature of the industry.

There is also a moderate positive correlation between the revenue and R&D expenditure (r = 0.6418), which also demonstrates that bigger companies are more likely to spend on innovation and technological development to maintain the level of competitiveness and service differentiation.

Also, the relationship between CSR expenditure and net profit is weak but positive (r = 0.3556). This implies that those companies that have more wealth resources can commit greater resources to CSR programs, but this investment may not always yield direct profits. Instead, CSR expenditure also seems to operate as an adjunct strategy investment, which improves the reputation and trust of stakeholders in the long term, but does not improve short-term profitability.

On the other hand, the matrix shows that R&D expenditure and the asset growth ratio have a negative relationship (r = -0.4468) meaning that those firms that focus on R&D are more likely to record low physical assets accumulation. Investment in research and development is not usually capitalized but is expensed, and this trend certainly makes this trend make sense and this leads to a lack of consideration of the actual growth of the assets. The examples of such companies are the HCL Technologies that does not have too heavy asset bases, but, instead, the companies create value in terms of intangible resources such as patents and proprietary technologies.

The other significant indirect correlation that can be noted is between the CSR-SDG alignment score and return on total assets (r = -0.3081). This can suggest that companies that have a greater sustainability integration bear slightly reduced productivity of short-term assets. This trend might be explained by the use of resources to benefit the community, environment, or social projects that do not directly promote the efficiency of operations but help to generate value over the long term and corporate reputation.

There are some statistically weak and neutral relationships. The ROTA-ROI correlation (r = 0.0321) is insignificant and indicates that the two variables measure two different aspects of financial performance. ROI uses total investment efficiency with leverage effects whereas ROTA uses returns with assets. Likewise, there are weak positive relationships between the CSRSDG score and the revenue (r = 0.2204) and the net profit (r = 0.1920), so that larger and more profitable firms can be expected to invest more in SDG-related CSR activities. Yet, these small coefficients prove that alignment to sustainability is still a financial aspect but not a primary determinant of short-run profitability.

In general, the correlation analysis demonstrates that both financial and operational variables have a strong dependency, but the relationship between sustainability performance and financial results is positive, and it is not that strong. This implies that CSR-SDG activity helps in the corporate reputation and long-term competitiveness but has a minor direct impact on short-term profitability and asset payouts.

D. **Model 1: Pooled Regression Result Analysis**

Figure 6: Regression Data analysis

```
Random-effects GLS regression                   Number of obs      =        99
Group variable: YEAR                            Number of groups   =        11

R-sq:                                           Obs per group:
     within  = 0.6617                                         min =         9
     between = 0.9271                                         avg =       9.0
     overall = 0.6966                                         max =         9

                                                Wald chi2(6)       =    211.25
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
```

ROI	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
var20	13.7086	6.660102	2.06	0.040	.6550415	26.76216
RDEXPENDITURE	.0005695	.0009497	0.60	0.000	-.0012919	.0024308
EXPORTREVENUE	-.0002277	.000092	-2.47	0.013	-.000408	-.0000473
REVENUE	.0000701	.0000698	1.00	0.315	-.0000666	.0002068
NetProfit	.004769	.0003953	12.06	0.000	.0039942	.0055437
CSRSpending	-.2074479	.0190059	-10.91	0.000	-.2446989	-.1701969
_cons	52.69732	3.271401	16.11	0.000	46.28549	59.10915
sigma_u	0					
sigma_e	7.1543802					
rho	0	(fraction of variance due to u_i)				

The regression model analyses the Return on Investment (ROI) of ten Indian IT companies from 2014 to 2024 using panel dataset. The model explains about 70% of the changes in ROI because of strong explanatory power (R^2 = 0.6966) (Figure 6).

The results show that CSR–SDG alignment has a positive and significant impact on ROI meaning that the firms who better mingle sustainability into their strategy achieve great financial returns due to stronger reputation, stakeholder trust, and lower risk.

The CSR spending has a short-term negative effect on ROI indicating that CSR costs may reduce profits in the short run, while profits may appear later. It highlights the importance of how CSR is spent, designed and implemented.

The strongest positive determinant affecting ROI is net profit having a coefficient of 0.0048 (meaning each increase in net profit by a crore rupee results in a 0.48 percentage points improvement in ROI) highlighting that basic financial strength lead to better investment returns. Export revenue has a significant but negative relationship with ROI probably because of competition in the international market, exchange rate, and higher operating costs.

R&D spending shows a positive but is statistically insignificant (0.0006, p = 0.549), indicating that it may take time for innovation benefits to get reflected in financial performance or are inefficient in many firms.

Overall, firm-level decisions play a significant role in ROI than other external economic factors. The findings suggest that CSR aligned with SDGs improves performance if the firm has strong financial support and the resources are efficiently used. If the CSR expenditure is not planned properly then it may reduce short-term returns.

E. Model 2: Pooled Regression Result Analysis

Figure 7: Pooled Regression result analysis

```
. xtreg rota var20 csrspending netprofit rdexpenditure exportrevenue revenue

Random-effects GLS regression                   Number of obs     =        99
Group variable: year                            Number of groups  =        11

R-sq:                                           Obs per group:
     within  = 0.4028                                         min =         9
     between = 0.4589                                         avg =       9.0
     overall = 0.4109                                         max =         9

                                                Wald chi2(6)      =     64.18
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000
```

rota	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
var20	-8.175826	3.261558	-2.51	0.012	-14.56836	-1.78329
csrspending	.031639	.012134	2.61	0.009	.0078567	.0554213
netprofit	-.0001128	.0002468	-0.46	0.648	-.0005964	.0003708
rdexpenditure	-.0019067	.0005861	-3.25	0.001	-.0030554	-.000758
exportrevenue	-.0002717	.0000547	-4.97	0.000	-.0003789	-.0001645
revenue	.0001532	.0000415	3.69	0.000	.0000718	.0002346
_cons	28.38158	1.845926	15.38	0.000	24.76363	31.99952
sigma_u	0					
sigma_e	3.9977107					
rho	0	(fraction of variance due to u_i)				

The second regression analyses the factors affecting Return on Total Assets (ROTA) for nine Indian IT firms from 2014 to 2024. The model demonstrates an overall R^2 of approximately 0.45, showing that both firm-level strategies and time shape asset utilization performance.

The results show that CSR–SDG alignment has a negative and significant impact on ROTA having the coefficient of equal and opposite -8.176 (p = 0.012), meaning firms that depends on SDG may have low asset efficiency in the short run due to transition costs, such as investment in new systems, infrastructure, and long-term social programs.

On the contrary, CSR spending has a small but positive effect on ROTA indicating that efficiency of the firms can be improved through CSR by better employee engagement, workplace conditions, and resource use. However, the impact is limited.

R&D expenditure also has a negative effect on ROTA (β = –0.0019, p = 0.001)., indicating that innovation costs reduce short-term asset returns. Similarly, export revenue also has a negative effect on ROTA mainly due to high operating costs and market-related risks.

Total revenue of the firm has a strong positive effect on ROTA (β = 0.0002, p = 0.000), showing that asset efficiency can be improved by higher sales through economies of scale and better use of resources.

Overall, the findings show a short-term trade-off between sustainability transition and asset efficiency. While strategies that are aligned by SDG may reduce ROTA initially, but CSR benefits and scale advantages help to balance out these effects.

F. Model 3: Pooled Regression Result Analysis

Figure 8: Pooled Regression result analysis

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. xtreg ASSESTGROWTHRATIO L RDEXPENDITURE EXPORTREVENUE CSRSpending REVENUE

Random-effects GLS regression                   Number of obs     =        99
Group variable: YEAR                            Number of groups  =        11

R-sq:                                           Obs per group:
     within  = 0.5424                                         min =         9
     between = 0.0799                                         avg =       9.0
     overall = 0.2427                                         max =         9

                                                Wald chi2(5)      =     81.42
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000

------------------------------------------------------------------------------
ASSESTGROWT~O |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
            L |      5.8949   2.441497     2.41   0.016     1.109653    10.68015
RDEXPENDITURE |   -.0024944   .0003644    -6.85   0.000    -.0032085   -.0017802
EXPORTREVENUE |    .0000169   .0000354     0.48   0.000    -.0000525    .0000864
  CSRSpending |   -.0026556   .0032203    -0.82   0.410    -.0089674    .0036561
      REVENUE |   -2.04e-06   .0000279    -0.07   0.000    -.0000567    .0000526
        _cons |     14.68384   1.628146     9.02   0.000     11.49274    17.87495
--------------+---------------------------------------------------------------
      sigma_u |     1.848016
      sigma_e |    2.4709967
          rho |     .3586984   (fraction of variance due to u_i)
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The third model analyses the factors that help in the growth of the asset in Indian IT firms from 2014 to 2024 using panel data. The model explains that firm-level differences play a larger role than time-related factors as about 24% of the variation in asset growth is statistically significant.

The results show that the relationship between the CSR–SDG and asset growth is positive and significant, signifying that firms which concentrate more on sustainability tend to expand faster mainly due to better investor confidence, access to capital, and robust market opportunities.

The R&D expenditure has a negative impact on asset growth (β = –0.0025, p = 0.000) mainly because investments are mainly in intangible assets (technology and innovation) rather than physical assets. In the IT sector, the growth of the company is mainly driven by knowledge rather than infrastructure.

On the other hand, other variables like export revenue, CSR spending, and total revenue are statistically insignificant effect, suggesting that traditional factors like size or spending are less important in explaining growth in this sector.

Strategically, the findings implies that sustainability assist in the long-term expansion of the firm, while innovation investments may also enhance future competitiveness but can slow short-term physical asset growth.

CONCLUSION

This research shows how CSR and SDG alignment influence the financial performance of Indian IT firms between 2014 and 2024 with the analysis focusing mainly on three areas: profitability (ROI), asset efficiency (ROTA), and company growth.

The results show mixed effects. Firms that incorporate sustainability into their strategy perform better. However, spending on CSR can reduce profits in the short term. CSR expenditure shows how companies can efficiently use their resources, but at the early-stage sustainability efforts may have slow performance as they demand for long-term investment. Over time, firms that actively follow SDGs can grow faster. Overall, sustainability has both positive and negative

impacts. It may lower short-term financial returns but supports long-term growth and efficiency. CSR should be treated as a strategic tool for businesses rather than just a mere requirement. For policymakers, there is a need to shift from rules based on expenses to systems based on actual results.

In conclusion, sustainable practices can lead to long-term success in the IT sector, even if they cause a short-term financial pressure.

Future Research Directions

Such results may be the foundation of further research, which may rely on the lag models to explain the impact of CSR and R&D on the performance that cannot be noticed briefly. The relative study of different sectors or economies could help in identifying the disparity between the sectoral dynamics of sustainability-performance. In addition, the qualitative data would add value to the knowledge of internal culture and governance mediation of the financial returns of CSR initiatives such as the perceptions of stakeholders or ESG audit scores.

Lastly, the suggestion that Indian IT companies are gradually changing the compliance-based CSR into strategic sustainability integration can be seen. The short-term economic payoffs may be negligible, but the long-term positive results of CSR and SDG alignment are the powerful instrument of corporate competitiveness and national development.

REFERENCES

- Emina, K. A. (2021). Sustainable development and the future generations. Social
- Sciences, Humanities and Education Journal (SHE Journal), 2(1), 57 – 71.
- Porter and Kramer (2011) Porter, M. E., & Kramer, M. R. (2011). Creating shared value. Harvard Business Review, 89(1/2), 62–77. https://hbr.org/2011/01/the-big-idea-creating-shared-value
- Sachs (2012) Sachs, J. D. (2012). From Millennium Development Goals to Sustainable Development Goals. The Lancet, 379(9832), 2206–2211. https://doi.org/10.1016/S0140-6736(12)60685-0
- Nuryaman (2013) Nuryaman. (2013). The effect of corporate social responsibility activities on profitability and stock price (Studies on the companies listed on Indonesia Stock Exchange). Journal of Global Management, 6(1), 113–124.
- Banerjee (2008) Banerjee, S. B. (2008). Corporate social responsibility: The good, the bad and the ugly. Critical Sociology, 34(1), 51–79. https://doi.org/10.1177/0896920507084623
- Bebbington and Unerman (2018) Bebbington, J., & Unerman, J. (2018). Achieving the United Nations Sustainable Development Goals: An enabling role for accounting research. Accounting, Auditing & Accountability Journal, 31(1), 2–24. https://doi.org/10.1108/AAAJ-05-2017-2929

- IICA Report (2020) Indian Institute of Corporate Affairs. (2020). National CSR Data Portal Annual Report 2020. Ministry of Corporate Affairs, Government of India.
- Beck et al. (2018) Beck, C., Frost, G., & Jones, S. (2018). CSR disclosure and financial performance revisited: A cross-country analysis. Australian Accounting Review, 28(3), 231–247. https://doi.org/10.1111/auar.12183
- Mukherjee et al. (2022) Mukherjee, A., Banerjee, S., & Roy, M. (2022). Corporate social responsibility and firm performance: Evidence from India. Journal of Business Ethics, 170(3), 515–534. https://doi.org/10.1007/s10551-020-04652-3 49
- Jensen (2001) Jensen, M. C. (2001). Value maximization, stakeholder theory, and the corporate objective function. Journal of Applied Corporate Finance, 14(3), 8–21. https://doi.org/10.1111/j.1745-6622.2001.tb00434.x
- Lestari & Irma (2021) Lestari, S. D., & Irma, D. (2021). The effect of corporate social responsibility on financial performance: Evidence from Indonesia. Journal of Accounting and Investment, 22(1), 1–15.
- Mura et al. (2022) Mura, M., Longo, M., Micheli, P., & Bolzani, D. (2022). The evolution of corporate social responsibility in Italy: A longitudinal study. Journal of Business Research, 139, 1–12. https://doi.org/10.1016/j.jbusres.2021.09.057
- Alexander and Buchholz (1978) Alexander, G. J., & Buchholz, R. A. (1978). Corporate social responsibility and stock market performance. Academy of Management Journal, 21(3), 479–486. https://doi.org/10.5465/255728
- Bertrand et al. (2023) Bertrand, M., Bombardini, M., & Trebbi, F. (2023). Corporate social responsibility and firm performance: Evidence from a global survey. Quarterly Journal of Economics, 138(1), 1–45. https://doi.org/10.1093/qje/qjac034
- Ng & Rezaee (2020) Ng, A. C., & Rezaee, Z. (2020). Business sustainability performance and cost of equity capital. Journal of Corporate Finance, 64, 101694. https://doi.org/10.1016/j.jcorpfin.2020.101694
- Wan and Saeed (2015) Wan, H., & Saeed, A. (2015). Corporate social responsibility and financial performance: Evidence from the manufacturing sector of Pakistan. International Journal of Economics and Financial Issues, 5(1), 157–164.
- Hafez (2016) Hafez, M. (2016). Measuring the impact of corporate social responsibility practices on brand equity in the banking industry in Bangladesh. International Journal of Bank Marketing, 34(4), 540–558. https://doi.org/10.1108/IJBM-04-2015-0059
- Xu and Zeng (2016) Xu, S., & Zeng, S. (2016). Corporate social responsibility and firm performance: Evidence from China's manufacturing industry. Journal of Cleaner Production, 112, 325–339. https://doi.org/10.1016/j.jclepro.2015.09.101
- Min et al. (2017) Min, B., Kim, J., & Kim, H. (2017). The effect of corporate social responsibility on 50 financial performance: Evidence from Korea. Journal of Applied Business Research, 33(1), 1–10. https://doi.org/10.19030/jabr.v33i1.9865

- Brogi and Lagasio (2018) Brogi, M., & Lagasio, V. (2018). Environmental, social, and governance and company profitability: Are financial intermediaries different? Corporate Social Responsibility and Environmental Management, 25(6), 1198–1210. https://doi.org/10.1002/csr.1510
- Maqbool and Zameer (2018) Maqbool, S., & Zameer, M. N. (2018). Corporate social responsibility and financial performance: An empirical analysis of Indian banks. Future Business Journal, 4(1), 84–93. https://doi.org/10.1016/j.fbj.2017.12.002
- Rehan et al. (2018) Rehan, R., Ahmed, M., & Ahmed, S. (2018). Impact of corporate social responsibility on financial performance: Evidence from Pakistan. International Journal of Business and Society, 19(2), 362–386.
- Li et al. (2019) Li, F., Li, T., & Minor, D. (2019). CEO power, corporate social responsibility, and firm value: A test of agency theory. International Review of Financial Analysis, 63, 1–11. https://doi.org/10.1016/j.irfa.2019.01.003
- Singh et al. (2017) Singh, R., Darwish, T. K., & Potočnik, K. (2017). Measuring organizational performance: A case for subjective measures. British Journal of Management, 27(1), 214–224. https://doi.org/10.1111/1467-8551.12126
- Weber & Soderstrom (2021) Weber, O., & Soderstrom, S. (2021). Social finance and sustainable development: The role of impact investing. Journal of Sustainable Finance & Investment, 11(3), 213– 228. https://doi.org/10.1080/20430795.2020.1724860
- Barnea & Rubin (2021) Barnea, A., & Rubin, A. (2021). Corporate social responsibility as a conflict between shareholders. Journal of Business Ethics, 97(1), 71–86. https://doi.org/10.1007/s10551-010-0496-z
- Schramade (2017) Schramade, W. (2017). Investing in the UN Sustainable Development Goals: Opportunities for companies and investors. Journal of Applied Corporate Finance, 29(2), 87–99. https://doi.org/10.1111/jacf.12236

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