SCIENTIFIC CULTURE
www.sci-cult.com

SCIENTIFIC CULTURE, Vol. 12, No. 5, (2026), pp. 179-188
Open Access. Online & Print

DOI: 10.5281/zenodo.1250017

ENHANCING CORPORATE FINANCIAL PERFORMANCE THROUGH CORPORATE SOCIAL RESPONSIBILITY: AN EMPIRICAL ANALYSIS OF SELECTED INDIAN COMPANIES

Vandana Dubey[1]*, Susmit Roy[2], T S Narayanan[3], Jeesha Boyat[4]

[1,2] Indian Institute of Management, Indore.
[3] Amity, Indore.
[4] Arihant College, Indore.

Received: 15/04/2026
Accepted: 28/04/2026

Corresponding author: Vandana Dubey
(vandanad@iimidr.ac.in)

ABSTRACT

Interest and involvement in corporate social responsibility (CSR) have surged among several stakeholders such as investors and corporations, notwithstanding the ambiguity surrounding how CSR participation translates into financial gains. Consequently, numerous research studies have scrutinized integration between social responsibility and financial performance, yielding inconclusive findings. There is insufficient empirical documentation for a direct interconnection between CSR and financial results. Consequently, the aim of this investigation is to examine, whether engagement in corporate social responsibility directly influences financial results. In this study, a sample of 10 prominent Indian companies spanning various sectors was randomly chosen from the list of top CSR spending companies. Corporate social responsibility expenditure was designated as the independent variable, while several indicators such as Return on Assets, return on Equity and Net Profit were selected for gauging financial performance. Additionally, control variables including Firm Size, Firm Age, Ownership Type, and Leverage were incorporated. Employing a regression model for examination, the results indicated a positive correlation between social initiatives and financial outcomes spanning from 2017-18 to 2024-25.

KEYWORDS: CSR, Social Responsibility, Corporate Financial Performance, CFP, Indian Companies

1. INTRODUCTION

1.1. Introduction

Social responsibility of business, which have long been subjects of debate throughout history, have only recently gained recognition within mainstream management literature as a valid field of study (Lin et al., 2009). Earlier it was believed that the exclusive responsibilities of a business are to utilize its available resources and conduct activities aimed at maximizing its profits, if it operates within the boundaries of fair practices and transparent competition, without resorting to any fraud (Friedman, 1970). Ignoring society and other stakeholders in business can prove overly limiting and potentially hazardous. If companies prioritize maximizing shareholder wealth at the expense of harming other stakeholders such as through pollution, environmental exploitation, or employee discrimination, it could lead to detrimental outcomes (Lioui & Sharma, 2012). The notion of social responsibility of business implies that corporations are obligated not just by economic and legal duties but also by responsibilities to society that surpass these obligations (McGuire, 1971). Corporate social responsibility involves businesses dedicating themselves to advancing and accelerating sustainable and progressive economic development by collaborating with the local communities, employees, families of employees, and society at large to enhance overall socio-economic conditions. However, the connection between the social performance and the companies' financial performance has been under scrutiny for several decades. Despite extensive analysis, the findings remain inconclusive (Mcwilliams & Siegel, 2000). In the process of socio-economic development, managers should exercise caution if socially responsible actions show a negative correlation with financial performance, while a positive relationship may prompt increased pursuit of such activities or further investigation into their underlying causes (Cochran & Wood, 1984). Furthermore, it is notable to emphasize that most studies on social responsibility and a company's economic performance have concentrated on developed nations, predominantly utilizing data from Europe and the United States (Parastoo et al., 2015). Therefore, this paper investigates the empirical evidence from the perspective of Indian companies about enhancing corporate financial performance through corporate social responsibility.

1.2. Review of Literature

Research on corporate financial health and CSR's impact yields conflicting findings, sparking scholarly debates. Despite extensive study, consensus on the relationship remains elusive, with perspectives suggesting positive, negative, or neutral associations between the two constructs.

1.2.1. Positive Relation between CSR and CFP

The study showed that 80 of 96 surveyed companies deemed more socially responsible had greater profitability compared to other Fortune 500 firms, suggesting a positive correlation, despite methodological limitations (Parket & Eilbert, 1975). The study on five Indian companies, Tata Steel, Reliance Industries, Mahindra & Mahindra, Infosys, and Larsen & Toubro, from 2010 to 2014 found that CSR had no significant association with return on net worth but positively correlated with earnings per share (Yadav & Gupta, 2015). A study examined the consequence of Social Responsibility on profitability across various company ownership types in India, established a positive connection between Corporate Social Responsibility spending and net profit (Sawant, 2018). A panel regression model evaluated the influence of firm's social responsibility spending on the economic and financial performance of 22 Indian banking institutions from 2016 to 2022, uncovering a favourable link with profitability but lacking a notable correlation with market returns (George et al., 2023).

1.2.2. Negative Relation between CSR and CFP

An analysis of companies' market performance from 1972 to 1975 showed that socially responsible firms, contrary to expectations, demonstrated inferior stock performance compared to less socially responsible ones, indicating a negative linkup amid corporate social responsibility and market value (Vance, 1975). The analysis of 116 companies in South Africa showed that divestment announcements related to South African operations led to decreased stock prices, indicating a negative correlation between a firm's social responsibility and financial returns (Ferris, 1997). Firm's social responsibility efforts in the Nairobi Securities Exchange-listed firms in manufacturing and allied industries positively correlated with financial performance but were statistically insignificant, with a significant inverse relationship with manufacturing efficiency (Mwangi & Oyenje, 2013). Corporate social responsibility disclosure in Vietnamese listed companies negatively affected firm performance, according to the analysis (Nguyen et al., 2022).

1.2.3. Neutral Relation between CSR and CFP

The study examined 40 companies from 1970 to 1974, finding no discernible influence of corporate social responsibility on stock market performance, nor any significant correlation between CSR and stock risk levels (Alexander & Buchholz, 1978). The study explored the correlation and association

between a firm's social performance and a firm's financial performance in NSE and ESG India 500 listed firms from 2005 to 2011, revealing a predominantly neutral association with CSP potentially outweighing CFP predictability, urging government intervention to safeguard stakeholders (Tyagi, 2013). Financial data from nine Lithuanian energy companies were analysed from 2017 to 2020 to identify the impact and influence of social responsibility activities by corporates on their financial performance, revealing an unbiased correlation between a firm's social responsibility and the firm's financial returns (Adamkaite & Rudzioniene, 2023).

1.3. Objective of the Study

- To find the degree of impact and nature of association of social responsibility of companies on corporate financial performance of selected Indian companies.

1.4. Research Methodology

The study discusses the research methodology employed below:

1.4.1. Population of the Study

The research encompassed Indian enterprises established under either The Companies Act, 1956, or The Companies Act, 2013, fulfilling the certain yardstick stated in section 135 of the latter. Compulsory CSR expenditure is applicable to firms with a net value surpassing one thousand crores rupees, a turnover of five hundred crores rupees, or a net income of five crores rupees.

1.4.2. Sampling Frame

This research selected the top 100 Indian companies for corporate social responsibility spending, using a list published annually through the national corporate social responsibility portal administered by the Ministry of Corporate Affairs.

1.4.3. Sample Size

For this study, a sample size of the top 10 companies was chosen from the sampling frame. Table 1.1 displays the list of companies under study, detailing their establishment years and ownership status, either public or private.

Table 1.1: List of Selected Companies and its Establishment Year and Ownership Type

S.N.	Name of Company	Establishment Year	Ownership Type
1	Reliance Industries Limited	1973	Private Sector Company
2	Tata Consultancy Services Limited	1995	Private Sector Company
3	Oil And Natural Gas Corporation Limited	1993	Public Sector Undertaking
4	HDFC Bank Limited	1994	Private Sector Company
5	Indian Oil Corporation Limited	1959	Public Sector Undertaking
6	Infosys Limited	1981	Private Sector Company
7	ITC Limited	1910	Private Sector Company
8	NTPC Limited	1975	Public Sector Undertaking
9	Tata Steel Limited	1907	Private Sector Company
10	Power Grid Corporation of India Limited	1989	Public Sector Undertaking

Source: Created by Author

1.4.4. Sampling Method

The study utilized simple random sampling method. 10 Indian companies were chosen randomly from sampling frame.

1.4.5. Study Period

The analysis encompassed a dataset spanning eight fiscal years, covering the period from 2017-18 to 2024-25.

1.4.6. Variables for the study

Two crucial variables corporate social responsibility and companies' financial performance were taken for the study. corporate social responsibility served as independent variable, while financial performance was the dependent variable.

1.4.6.1. Measurement of the variable corporate social responsibility

Corporate social responsibility is measured in terms of the amount of expenses made by companies for the activities mentioned in Schedule VII of the Companies Act, 2013.

1.4.6.2. Measurement of the variable financial performance

In the present study return on assets and return on equity is taken as the parameters for the measurement for corporate financial performance.

1.4.6.2.1. Return on Assets

The Return on assets popularly known as ROA evaluates a corporate's effectiveness in utilizing its total assets (Kapoor, 2009). Typically expressed as a percentage (Riaz & Mehar, 2010),

The measurement is as follows:

ROA = (NP / TA) x 100

or

Return on Assets = (Firm's Net Profit / Total Assets) x 100

1.4.6.2.2. Return on Equity

ROE, or Return on Equity, stands as a vital metric linking a company's net profit or income to the stake held by its shareholders. (https://rbi.org.in/Scripts/Glossary.aspx). Shareholders' equity encompasses share capital, reserves, and surplus of the company. Typically expressed as a percentage, ROE serves as a measure for the dependent variable in analyses (Ali, Akhtar and Ahmed, 2011).

The measurement is as follows:

ROE = (NP / SF) x 100

or

Return on Equity = (Firm's Net Profit / Total Shareholders' Fund) x 100

Where,

Total Shareholders' Fund = Shareholders' Total Equity

Shareholders' Total Equity = Share Capital + Free Reserves + Free Surplus

1.4.6.3. Control Variables

To mitigate potential bias stemming from overlooked variables, this current analysis integrates several additional factors identified in earlier studies as potential influencers of an organisation's financial performance (Mir, 2019). Drawing from the conceptual framework and literature review, the present study selects four key variables: ownership type, firm age, leverage, and firm size.

1.4.6.4. Ownership

In this study, ownership was categorized into two types: State owned enterprises, popularly known as public sector undertaking and privately held corporations. State-owned enterprises such as Oil and Natural Gas Corporation Limited, Power Grid Corporation of India Limited, and NTPC Limited are classified as public sector undertakings. On the other hand, private enterprises such as Tata Consultancy Services Limited, Reliance Industries Limited, Infosys Limited, HDFC Bank Limited, Tata Steel Limited, and ITC Limited are among the top-ranked private sector companies in India.

1.4.6.5. Firm Age

The term "firm's age" pertains to the operational duration of a company in business, highlighting the span of time since its establishment. It underscores the unique trajectory of each company, encompassing differences in experience, skills, economies of scale, and expertise accumulated over time (Soch & Sandhu, 2008).

1.4.6.6. Leverage

Boosting shareholder earnings occurs when the cost of debt falls below the company's rate of return (Hamilton & Shergill, 1993). In this study, the equity multiplier was chosen as a measure of leverage because it is readily available on company balance sheets, providing a straightforward assessment of asset value and shareholder equity.

The measurement is as follows:

Leverage or Equity Multiplier = Total Assets / Shareholders' Equity (Ganti, 2023).

1.4.6.7. Firm Size

In numerous research studies investigating the influence of firm's social responsibility on the financial performance, "firm size" has been defined as the total assets of the company. This metric serves as a control variable in the model. (Reverte, et. al., 2016).

1.5. Theoretical Framework

Figure 1.1. illustrates the theoretical impact of the independent variable on the dependent variable, considering the control variables.

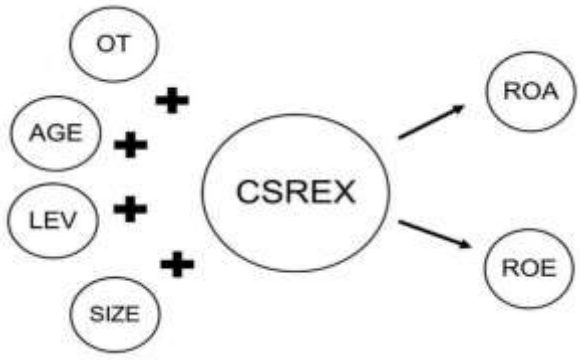


Figure 1: Theoretical Impact of Independent Variable on Dependent Variables with the Effect of Control Variables.
Source: Created by Author

Figure 1.1. depicts a theoretical framework that explores how a company's Corporate Social Responsibility Expenditure (CSREX) might influence its financial performance. Financial performance in the diagram is measured by a company's Return on Assets, which is ROA, and the firm's Return on

Equity, which is ROE. The four control variables that could also affect financial performance are: Ownership Type (OT), Firm's Age (AGE), Leverage (LEV) and Firm Size (SIZE). The arrows in the diagram suggest that these variables all have a potential influence on a company's ROA and ROE, and that CSREX could also be influenced by these same variables.

1.6. Hypothesis

The null hypothesis is framed by taking the firm's social responsibility expenditure as an independent variable, whereas the firm's return on assets and the firm's return on equity are dependent variables.

H_{01} = *There is no significant impact of corporate social responsibility expenditure, ownership type, firm age, leverage, and firm size on return on assets of the company.*

H_{02} = *There is no significant impact of corporate social responsibility expenditure, ownership type, firm age, leverage, and firm size on return on equity of the company.*

1.7. Result and Interpretation

Result and interpretation of the study is discussed below:

1.7.1. Average Value of Variables used in the Study

The mean values of the variables, such as the independent variable, the dependent variable, and the control variables, over the span of eight years, from 2017-18 to 2024-25, were calculated and elegantly presented in Table 1.2. These meticulously derived figures served as the basis for data calculations and analyses.

Table 1.2: Average Value of Variables used in the Study

SN	Name of Company	CSREX (in Crore)	ROA	ROE	LEV	SIZE (in Crore)
1	Reliance Industries Limited	₹830.35	4.34%	9.09%	2.23	₹1235496.17
2	Tata Consultancy Services Limited	₹603.33	27.37%	38.41%	1.49	₹126343.67
3	Oil And Natural Gas Corporation Limited	₹519.39	5.63%	11.71%	2.03	₹492192.86
4	HDFC Bank Limited	₹574.10	1.88%	15.55%	8.87	₹1738282.61
5	Indian Oil Corporation Limited	₹387.52	4.88%	13.65%	3.03	₹361311.47
6	Infosys Limited	₹352.14	19.85%	26.69%	1.43	₹101580.50
7	ITC Limited	₹330.07	19.91%	20.38%	1.21	₹75069.36
8	NTPC Limited	₹320.47	3.92%	12.04%	2.90	₹377972.63
9	Tata Steel Limited	₹304.91	5.99%	17.92%	3.06	₹252119.06
10	Power Grid Corporation of India Limited	₹255.50	4.98%	17.17%	3.71	₹247709.22

Source: Created by Author

1.7.2. Results of Regression Analysis of Null Hypothesis, H01

Result of regression analysis of Null Hypothesis, H01 is shown below:

ROA = β0 + β1 (CSREX) + β2 (OT) + β3 (AGE) + β4 (LEV) + β5 (SIZE) + Ɛ

ROA = Return on Assets

CSREX = Corporate Social Responsibility Expenditure

OT = Ownership Type

AGE = Firm's Age

LEV = Leverage

SIZE = Firm's Size

Ɛ = Standard Error

Table 1.3: Calculated Constant and β Values

Variables	Unstandardised Coefficient (B)	Standard Error	't'	Sig.
Constant	5.423	1.741	3.115	.036
CSREX	-.439	.576	-.763	.488
OT	.436	.130	3.355	.028
AGE	.001	.010	.091	.932
LEV	-.651	.163	-3.9999	.016
SIZE	-.519	.096	-5.381	.006

Source: Created by Author

Output of Regression Model was as follows:

ROA = 5.423 -.439 (CSREX) + .436 (OT) + .001 (AGE) -.651 (LEV) -.519 (SIZE) + Ɛ

Table 1.4: Model Summery for Regression Analysis

R	R Square	Adjusted R Square	Standard Error of Estimation
.991	.982	.960	.17281

Source: Created by Author

The value of adjusted R Square or adjusted coefficient of determination is 0.960, which indicates 96 % variation in Return on assets is possible by Corporate social responsibility expenditure and

Ownership Type Firm Age, Leverage, Firm Size. The standard error of estimation denotes the typical gap between the actual data points and those forecasted by the regression model. In this case, the value of 0.17281 is the standard deviation of the residuals. A reduced standard error suggests an improved alignment of the model with the data.

Table 1.5: Results of Statistical Test, Analysis of Variance

Model	Sum of Squares	Degree of Freedom (df)	Mean Square	F	Significance (P-Value)
Regression	6.618	4	1.324	44.321	.001
Residual	.119	5	.030		
Total	6.738	9			

Source: Created by Author

In the above table 1.5, the Analysis of Variance i.e. ANOVA output of the regression statistics indicates significant findings. The regression sum of squares (6.618) exceeds the residual sum of squares (.119), with degrees of freedom for regression and residual as 4 and 5 respectively. The F-ratio, at 44.321, is associated with a significant p-value (.000), suggesting a joint significance of independent variables. With the p-value lower than the significance level (0.05), the null hypothesis is failed to accept, affirming the regression model's acceptance. Consequently, corporate social responsibility expenditure, ownership type, firm age, leverage, and firm size significantly impact return on assets.

1.7.3. Results of Regression Analysis Null Hypothesis, H01

Result of regression analysis of Null Hypothesis, H01 is shown below:

ROE = β0 + β1 (CSREX) + β2 (OT) + β3 (AGE) + β4 (LEV) + β5 (SIZE) + Ɛ

ROE = Return on Equity

CSREX = Corporate Social Responsibility Expenditure

OT = Ownership Type

AGE = Firm's Age

LEV = Leverage

SIZE = Firm's Size

Ɛ = Standard Error

Table 1.6: Calculated Constant and β Values, Control Variables

Variables	Unstandardised Coefficient (B)	Standard Error	't'	Sig.
Constant	5.184	1.583	3.274	.031
CSREX	-.527	.524	-1.006	.371
OT	.388	.118	3.277	.031
AGE	.003	.009	.317	.767
LEV	.319	.148	2.156	.097
SIZE	-.477	.088	-5.443	.006

Source: Created by Author

The output of the regression model was as follows:

ROA = 5.423 -.439 (CSREX) + .436 (OT) + .001 (AGE) -.651 (LEV) -.519 (SIZE) + Ɛ

Table 1.7: Model Summary for Regression Analysis

R	R Square	Adjusted R-Square	Standard Error of the Estimation
.969	.939	.862	.15716

Source: Created by Author

The value of adjusted R Square or adjusted coefficient of determination is 0.862, which indicates 86.2 % variation in Return on assets is possible by Corporate social responsibility expenditure, Ownership Type, Firm Age, Leverage, and Firm Size. The standard error of estimation is the typical difference between the actual data points and those forecast by the regression model. In this case, the obtained value, 0.15716, is the standard deviation of the residuals. A reduced standard error suggests an improved alignment of the model with the data.

Table 1.8: Results of Analysis of Variance

Model	Sum of Squares	Degree of Freedom (df)	Mean Square	F	Significance (P-Value)
Regression	1.509	5	.302	12.217	.016
Residual	.099	4	.025		
Total	1.608	9			

Source: Created by Author

In Table 1.8, the ANOVA output for the regression model ROE = β0 + β1 (CSREX) + β2 (OT) + β3 (AGE) + β4 (LEV) + β5 (SIZE) + Ɛ is presented. The sum of squares for Regression was 1.509, while for Residual it

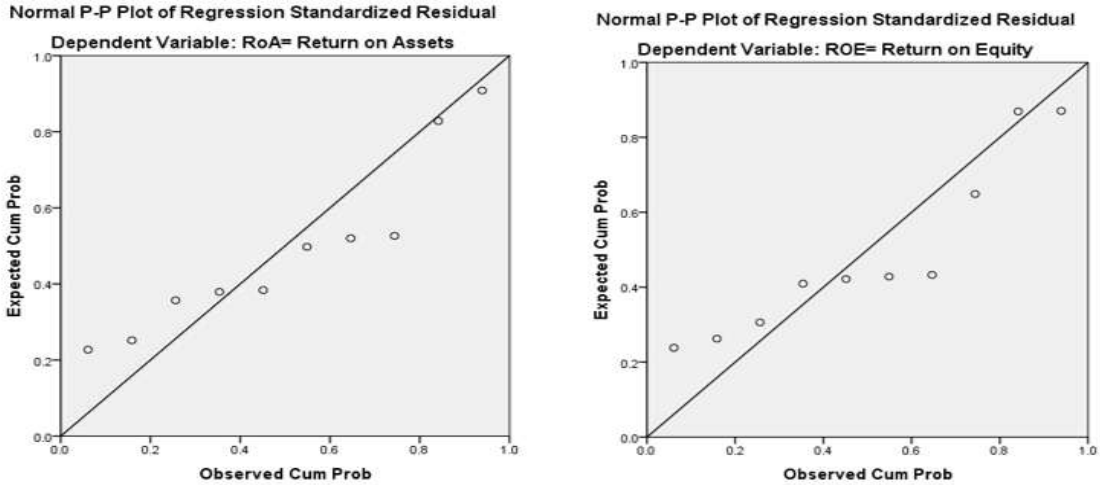
was 0.099 The Regression had 5 degrees of freedom (df), while the Residual had 4. The mean square values for the Regression and Residual were 0.302 and 0.025, respectively. The F ratio was calculated as 12.217, with a corresponding p-value of 0.016. The ANOVA or F-test assesses if all independent variables are jointly significant. In this case, with an F ratio of 12.217 and a p-value of test statistics is 0.016, which is notably lower than the predetermined significance level of .05, assumed null hypothesis is summarily rejected. Consequently, it can be inferred that corporate social responsibility expenditure, ownership type, firm age, leverage, and firm size collectively exert a notable influence on the company's return on assets.

1.8. Test of Assumptions of Regression Model

The key assumptions of the regression model were meticulously scrutinised, including residual normality, homoscedasticity, autocorrelation, and multicollinearity. This thorough evaluation aimed to validate the reliability and precision of the analysis, ultimately strengthening the trustworthiness of findings, and enhancing the robustness of conclusions.

1.8.1. Test of Normality of Residual

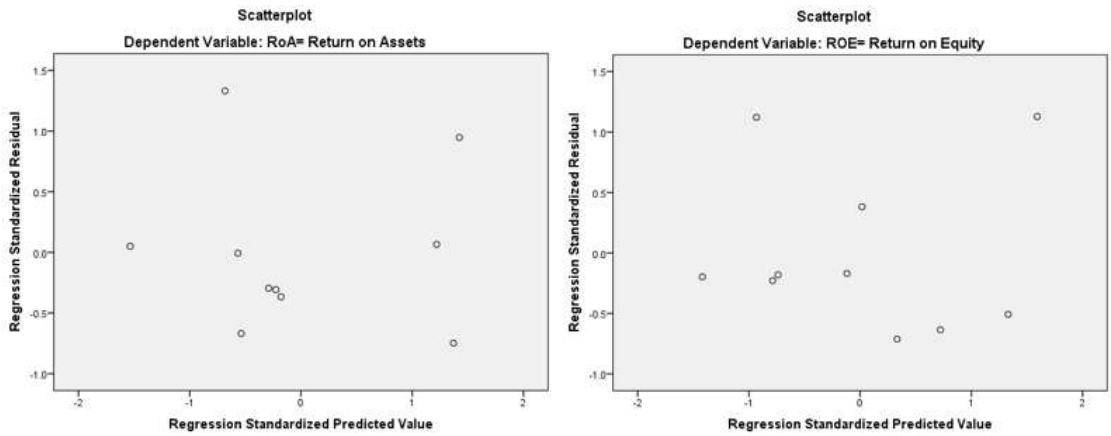
A commonly used graphical technique to assess normality is the normal probability plot, particularly a probability-probability (P-P) plot Garson (2012). The plot compares standardized residuals to a standard normal distribution. A straight line indicates normality. Residuals (y-axis) closely align with expected percentiles (x-axis), suggesting normality. Data points adhere closely to the diagonal line, implying normality in the residuals from the regression model.



Graph 1.1: P-P Plot of Regression Model of ROA & ROE
(Source: Created by Author through IBM SPSS 23 Software)

1.8.2. Test of Homoscedasticity

The regression model's robustness was assessed by examining the assumption of homoscedasticity, where residual variance stays constant across independent variable levels. Standardised residuals were plotted against predicted values, with homoscedasticity shown by a consistent spread of points along the y-axis. The graphical analysis revealed a uniform spread of residuals across predicted values, supporting homoscedasticity, and no systematic patterns like cones or fans, indicating the absence of heteroscedasticity.



Graph 1.2: Scatterplot of Variable Return on Assets and Return on Equity
(Source: Created by Author through IBM SPSS 23 Software)

1.8.3. Test of Autocorrelation

Autocorrelation assesses if a regression model's errors exhibit dependence across time points, violating error independence assumption crucial for accurate inference. Detecting and correcting autocorrelation is vital for unbiased parameter estimates, especially in time series analyses. The test statistic, d, ranges from 0 to 4: near 2 indicates no autocorrelation, near 0 suggests positive, and near 4 implies negative autocorrelation.

Table 1.9: Result of Durbin-Watson Test Statistics for Regression Model

Regression Model	Durbin-Watson Test Statistics
ROA = β0 + β1 (CSREX) + β2 (OT) + β3 (AGE) + β4 (LEV) + β5 (SIZE) + Ɛ	2.528
ROE = β0 + β1 (CSREX) + β2 (OT) + β3 (AGE) + β4 (LEV) + β5 (SIZE) + Ɛ	2.416

Source: Created by Author

Table 1.9 shows that the value of the Durbin-Watson Test Statistics is 2.528 and 2.416 for the regression models ROA and ROE, respectively. Since the value is slightly more than 2, it can be interpreted that there is a mild autocorrelation among variables.

1.8.4. Test of Multicollinearity

Multicollinearity in regression models arises when independent variables are highly correlated, complicating the differentiation of their individual impacts on the dependent variable. This can lead to unreliable coefficient estimates and inflated standard errors, affecting model interpretation and generalization. Diagnostic tools like Variance Inflation Factor (VIF) and Tolerance help assess multicollinearity. VIF gauges the extent to which multicollinearity affects the variability of regression coefficients, with readings exceeding 10 signifying substantial multicollinearity. Tolerance, which is the inverse of VIF, reflects the fraction of variance in a predictor not accounted for by other variables; values nearing 1 denote decreased multicollinearity.

Table 1.10: Variance Inflation Factor (VIF) and Tolerance Value of Variables of the Regression Model

Regression Model	ROA = β0 + β1 (CSREX) + β2 (OT) + β3 (AGE) + β4 (LEV) + β5 (SIZE) + Ɛ		ROE = β0 + β1 (CSREX) + β2 (OT) + β3 (AGE) + β4 (LEV) + β5 (SIZE) + Ɛ	
Independent Variable and Control Variable	Tolerance	Variance Inflation Factor (VIF)	Tolerance	Variance Inflation Factor (VIF)
Corporate Social Responsibility (CSREX)	.031	31.845	.031	31.845
Ownership Type (OT)	.736	1.359	.736	1.359
Firm' Age (AGE)	.029	34.374	.029	34.374
Leverage (LEV)	.374	2.677	.374	2.677
Firm' Size (SIZE)	.345	2.901	.345	2.901

Source: Created by Author

From the table 1.10, it is evident that the VIF values for all variables such as Corporate Social Responsibility Expenditure (CSREX) was 31.845, Ownership Type (OT) was 1.359, Firm' Age (AGE) was 34.374, Leverage (LEV) was 2.677, and Firm Size (SIZE) was 2.901. All the obtained values, except Corporate Social Responsibility (CSREX) and Firm' Age (AGE) fall within the range of 1 to 5, indicating no significant issue of multicollinearity in the regression model. However, the Variance Inflation Factor of variable Corporate Social Responsibility (CSREX) and Firm' Age (AGE) is abnormally high (greater than 10), which shows the strong correlation between them. This characteristic of variable Corporate Social Responsibility (CSREX) and Firm' Age (AGE) my effect the result.

1.9. Conclusion and Implication

This research offers empirical insights that could shed light on the variations observed in previous studies. Utilising a panel dataset spanning six years and comprising data from ten Indian companies, the study examined the influence and impact of corporate social responsibility activities and Ownership Type, Firm Age, Firm Size, and Leverage as control variables on a firm's financial results. The outcome indicates that the adjusted R-Square value (96%) in the regression model of hypothesis H01 shows that there is a strong impact of corporate social responsibility expenditure and ownership type, firm age, leverage, and firm size on return on assets of the company. Similarly, the value of adjusted R Square (86.2%) in regression model of hypothesis H02 shows that there is a strong impact of corporate social responsibility expenditure and ownership type firm age, leverage, firm size to return on equity of the company. By combining both the empirical values, it can easily conclude that investing in corporate social responsibility significantly boosts the company's financial performance. The findings underscore the importance of CSR as a valuable and unique asset that can be utilized to establish a competitive advantage for the company. These findings affirm previous research outcomes, emphasizing the integration of

CSR into the firm's long-term business strategy rather than treating it as an optional endeavour.

1.10. Limitation and Further scope of Research

Although this research study provides esteemed perspectives, it is crucial to acknowledge its constraints. The focus solely on qualitative aspects of CSR expenditure overlooks the diverse array of CSR activities undertaken by companies. The inclusion of multiple companies from the same sector, alongside the exclusion of several sectors, hints at the need for broader representation. Further, research on corporate social responsibility and financial performance can explore longer time frames, additional variables like product quality and brand image, primary data collection methods, diverse financial performance metrics, sector-wise comparisons, geographical impact analysis, and investigations into Micro, Small, and Medium Enterprises (MSME) sectors for novel insights.

Funding: The authors received no direct funding for this research.

Conflict of interest: On behalf of all authors, the corresponding author states that there is no conflict of interest.

REFERENCES

Adamkaite, J., Streimikiene, D., & Rudzioniene, K. (2023). The impact of social responsibility on corporate financial performance in the energy sector: Evidence from Lithuania. *Corporate social responsibility and environmental management*, 30(1), 91–104.

Arlow, P., & Gannon, M. J. (1982). Social Responsiveness, Corporate Structure and Economic Performance. *The Academy of Management Review*, 7(2), 235–241.

Alexander, G. J., & Buchholz, R. A. (1978). Corporate Social Performance and Stock Market Performance. *Academy of Management Journal*, 21(3), 479–486.

Ali, K., Akhtar, M. F., & Ahmed, H. Z. (2011). Bank-Specific and Macroeconomic Indicators of Profitability: Empirical Evidence from the Commercial Banks of Pakistan. *International Journal of Business and Social Science,* 2(6), 235–242.

Cochran, P. L., & Wood, R. A. (1984). Corporate social responsibility and financial performance. *Academy of management Journal*, 27(1), 42–56.

Friedman, M. (1970). The Social responsibility of Business is to increase its Profits. *New York Times Magazine*, September 13, 1970, 122–126.

Ganti, A. (2023). What Is the Equity Multiplier? Definition, Formula, and Examples. https://www.investopedia.com/terms/e/equitymultiplier.asp

Garson, D. G. (2012). Testing Statistical Assumptions, *Statistical Associate Publishing*.

George, A. K., Kayal, P., & Maiti, M. (2023). Nexus of Corporate Social Responsibility Expenditure (CSR) and Financial Performance: Indian Banks. *The Quarterly Review of Economics and Finance,* 90, 190–200.

Hamilton, R. T., & Shergill, G. S. (1993). The logic of New Zealand Business. *Oxford University Press,* Auckland.

Kapoor, S. (2009). Corporate Social Responsibility and Its Impact on Financial Performance: A Study of Selected Companies in India. *Unpublished Doctoral Thesis, Department of Commerce and Business Management, Guru Nanak Dev University, Amritsar.*

Lioui, A., & Sharma, Z. (2012). Environmental corporate social responsibility and financial performance: Disentangling direct and indirect effects. *Ecological Economics*, 78, 100–111.

Lin, C. H., Yang, H. L., & Liou, D. Y. (2009). The impact of corporate social responsibility on financial performance: Evidence from business in Taiwan, *Technology in Society*, 31(1), 56–63.

McGuire, J. W. (1971). Business Society. *Sage Publication*, 38(3), 268–295.

McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: Correlation or misspecification? *Strategic Management Journal*, 21(5), 603–609.

Mir, U. A. (2019). Impact of CSR Initiatives on Financial Performance: A Study of Select Companies in India. *Unpublished Doctoral Thesis, Department of Management Studies, School of Business Studies, Central University of Kashmir.*

Mwangi, C. I., & Oyenje, J. J. (2013). The Relationship between Corporate Social Responsibility Practices and Financial Performance of Firms in the Manufacturing, Construction and Allied Sector of the Nairobi Securities Exchange. *International Journal of Business, Humanities and Technology*, 3, 81-90.

Nguyen, C. T., Nguyen, L. T., & Nguyen, N. Q. (2022). Corporate Social Responsibility and Financial Performance: The case in Vietnam. *Cogent Economics and Finance*, 10(1).

Nollet, J., Filis, G., & Mitrokostas, E. (2016). Corporate social responsibility and financial performance: A non-linear and disaggregated approach. *Economic Modelling*, 52, 400-407.

Parket, 1. R., & Eilbert, H. (1975). Social Responsibility: The Underlying Factors. *Business Horizons*, 18(4), 5-10.

Riaz, S., & Mehar, A. (2010). The Impact of Bank Specific and Macroeconomic Indicators on the Profitability of Commercial Banks. *Romanian Economic Journal*, 16(47), 91–110.

Reserve bank of India (https://rbi.org.in/Scripts/Glossary.aspx).

Reverte, C., Gomez-Melero, E., & Cegarra-Navarro, J. G. (2016). The Influence of Corporate Social Responsibility Practices on Organizational Performance: Evidence from Eco-Responsible Spanish firms. *Journal of Cleaner Production*, 1–15.

Saeidi, S. P., Sofian, S., Saeidi, P., & Saeidi, S. P. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of Business Research*, 68(2), 341–350.

Sawant, P. (2018). Corporate Social Responsibility and its Impact on the Profitability of select Private, Public and Multi-National Companies in India: An Empirical Study. International *Journal of Management Studies*, 4(8), 89–95. doi: 10.18843/ijms/v5i4(8)/09

Sawant, P. D. (2017). Corporate Social Responsibility and Its Impact on Profitability of Select Companies in India: An Empirical Study. *Unpublished Doctoral Thesis, Department of Management Studies, Goa University. August.*

Soch, H., & Sandhu, H. S. (2008). Does Customer Relationship Management Activity affect Financial Performance? *Global Business Review*, 9(2), 189–206.

Sturdivant, F. D., & Ginter, J. L. (1977). Corporate Social Responsiveness: Management Attitudes and Economic Performance. *California Management Review*, 19(3), 30-39.

Tyagi, R., & Sharma, A. (2013). Corporate Social Performance and Corporate Financial Performance: A Link for the Indian Firms. *Issues In Social and Environmental Accounting*, 7(1), 4–29. http://www.isea.icseard.uns.ac.id

Vance, S. (1975). Are Socially Responsible Firms Good Investments Risks? *Management Review,* 64(8), 18–24.

Wright, P., & Ferris, S. P. (1997). Agency Conflict and Corporate Strategy: The Effect of Divestment on Corporate Value. *Strategic Management Journal*, 18(1), 77–83.

Yadav, M. P., & Gupta, M. (2015). A Study on Linkage between Corporate Social Responsibility and Return on Net Worth (RONW) of Selected Companies: An Empirical Analysis. *IOSR Journal of Business and Management*, 17(1), 13–17.