

**AN ANALYSIS OF THE FIRM'S
FINANCIAL PERFORMANCE ON THE CSR DISCLOSURE PRACTICES**

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Abstract

Purpose: This paper seeks to examine the extent of corporate social responsibility disclosure (CSR) practices of chemical companies in India and to assess its impact on their financial performance.

Research Methodology: The data collected from the top 20 BSE-indexed chemical companies, for the period 2014-2016, was analyzed using Content Analysis. Two models were developed to measure the financial performance of the firms, based on Return on Assets (ROA) and Return on Equity (ROE). 'Financial performance' (ROA & ROE) was taken as the dependent variable, while 'age of the company' was considered as the control variable. Further, multiple regression analysis was run to test these models.

Findings: The study has revealed that the CSR practices are not being regularly adopted by chemical companies, in India. Moreover, from amongst the various practices, 'environment' and 'community' have positive impact on the firm's financial performance, as measured in terms of the ROA and the ROE.

Limitation/Future Research: The study is limited to chemical manufacturing firms, with a sample size of 20 firms only. There is ample scope for further research on CSR practices in other industries.

Research Implications: This paper broadens the scope of previous investigations and recommends CSR practices to the Indian chemical firms for an improved financial performance.

Originality/Value: The study extends the literature by examining the impact of CSR themes on a firm's financial performance in the Indian context.

Key words: Corporate social responsibility disclosures, Financial performance, Return on assets, Return on equity, Indian chemical industry.

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INTRODUCTION

In 1962, Milton Friedman, Nobel Laureate in Economic Sciences, in his book *Capitalism and Freedom*, mentioned one of his controversial theories, known as the Friedman Doctrine or the Stockholder Theory. He wrote: "There is one and only one social responsibility of the business-to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud." Since then, the notion of a corporation's social responsibility has progressed and evolved, due to the changed theoretical perspectives, into a concept that essentially deals with the ways in which companies conduct their business processes to produce a positive social impact. Even though there is no exact definition of Corporate Social Responsibility (CSR), various researchers have tried to define it in their respective studies.

Koket al. (2001) explained it as the accountability of the companies to use their resources in various ways, to increase the welfare and develop the community or society at large. Commission of the European Communities (2001) defines it as a concept whereby companies integrate the societal and environmental concerns within the ambit of a corporation's business operations on a voluntary basis. Khoury et al. (1999) touch upon a more wholesome approach to define CSR by including various dimensions. They define it as the overall relationship of the corporation with all of its stakeholders. These include customers, employees, communities, owners/investors, government, suppliers and competitors. Elements of social responsibility include investment in community outreach, employee relations, creation and maintenance of employment, environmental stewardship and financial performance

It has been observed, of late, that, academicians and researchers working in the field of CSR have shifted their focus, from measuring CSR to examining its determinants. The need for research in this field arises, especially in India, as the area of CSR has not been explored sufficiently, here, as compared to western countries. A sincere engagement in CSR practices on behalf of the companies has been observed to have a vital impact on the financial performance of the companies. Healthier financial performance of a company, advertently, increases its ability to involve itself in CSR practices. It also helps in drawing an assured response from various institutional investors. In light of this, the considerations regarding the expenditure relating to CSR practices should be examined and analyzed with thorough understanding.

REVIEW OF LITERATURE

A noteworthy aspect that can be observed is the shortage of scholarly research in CSR practices in India, despite having extensive literature in western countries and in a few developing countries. A few important studies regarding CSR includes Deegan and Rankin (1999), Deegan, Rankin and Voght (2000) in Australia; Adams, Hills and Robert (1998) in Western Europe; Zeghal and Ahmed (1990) in Canada and Samuel and Brian (2004) in UK. Delving into the influence of CSR practices has gained huge momentum world over. Hence, a large number of studies devoted to CSR practices are available.

Bayoud, Kavanagh and Slaughter (2012) assessed the effect of CSR on organizational performance of Libyan companies using quantitative and qualitative approach for the period 2007-2009. Findings have revealed a positive relationship between the level of CSR and organizational performance. Hameed et al. (2013) explored the relationship between CSR and

financial performance of Pakistani listed companies. 15 such companies listed at the Karachi stock exchange were taken as a sample for a period of 5 years (2008 to 2012). Correlation method was used to find the cause and effect relationship between CSR and financial performance of the companies. Once again a positive relation between the two was observed. Similarly, Aldosari and Atkins (2015) analyzed the changes in CSR reporting practices in 58 listed companies of Saudi Arabia for a period of 3 years. To investigate the extent of the level of CSR practices observed, the researcher used content analysis. The study revealed that there was an overall significant increase in CSR reporting.

A study conducted by Michelin, Boesso and Kumar (2013) sought to assess the impact of CSR initiatives on company performance. A sample of 188 companies was taken from S&P 500 for a period of 3 years (2005 to 2007). Multiple regression analysis was run to investigate the effect of CSR initiatives on company's performance. They found positive effect of CSR initiatives on company's performance. Another study by Uwuigbe and Egbide (2012) investigated the relationship between the firms' financial performance and the level of CSR of selected Nigerian firms and examined the relationship between the firms' financial leverage and the level of CSR. Secondary data was collected from the annual reports of selected 41 firms for the period of one year (2008). Multiple regression analysis was applied for analyzing the data collected. The findings showed that the firms' financial performance has a significant positive relation with the level of the CSR and a significant negative relationship was observed between the firms' financial leverage and the level of CSR.

Md. Abdul Rouf (2011) investigated the extent as well as the nature of CSR in corporate annual reports of listed companies in Bangladesh. OLS regression model has been applied to examine the relationship between CSR and explanatory variable. Findings revealed that the size of the company does not affect the level of CSR and that there is a positive relationship between the ratio of independent directors and CSR.

Yao, Wang and Song (2011) identified the determinant of CSR in China with the help of annual reports of over 800 listed firms on Shanghai Stock Exchange for the period of 2008-2009. It was observed that CSR is positively related with the firm's share ownership, size, media exposure, concentration and institutional shareholding.

Research Gap

There are several studies which examined the impact of CSR on financial performance of a firm using ROA and ROE methods. However, there is stark absenteeism of documentation in case of the impact of individual themes of CSR on financial performance, in Indian context. The present study seeks to assess the impact of various themes of CSR (Environment, Energy, Employees, Community, Product Safety/Customers, Green Initiatives and Investors) on the financial performance of chemical companies by controlling their age. To assess the individual effect of these parameters of CSR, these themes are taken as independent variables. Therefore, this study broadens the scope of previous investigation on the importance of these parameters in the CSR index and provides recommendations to the chemical sector on their theme-wise CSR performance along with their financial performance.

OBJECTIVES OF THE STUDY

The study was conducted with two objectives:

1. To examine the extent of the CSR practices/adopted by selected chemical manufacturing companies; and
2. To assess the impact of the CSR practices on the companies' financial performance.

Research Hypothesis

The following hypothesis was formulated for testing:

H₀: There is no significant impact of CSR disclosure (environment, energy, employees, community, product safety/ customers, green initiatives and investors) on the firm's financial performance, measured in terms of ROA and ROE.

RESEARCH METHODOLOGY

Sample Companies

On the basis of the judgmental sampling method, top twenty Indian chemical companies, listed on the Bombay Stock Exchange (BSE) of India, were selected. The data was gathered for the period 2014-15 and 2015-16. Due to the non-availability of their annual reports on their official websites, the final sample constituted of 16 chemical companies, with 32 observations.

Data and Data Sources

For the study, the data was obtained from the published annual reports and sustainability reports of the selected companies. These reports were downloaded from the official websites of the companies for the years 2014-15 and 2015-16.

Dependent Variables

The Return on Assets (ROA) and the Return on Equity (ROE) are accounting based performance measures which are commonly used as the dependent variables. We took both as dependent variables in two different models to ascertain the impact of CSR on financial performance of the companies.

CSR Disclosure Index and Independent Variables

With the help of GRI G4 framework and the relevant studies, a CSR disclosure index was developed. The following criteria were used for the development of the CSR index:

1. The Global Report Initiatives (GRI) G4 framework which was taken as the base for the themes and items. The earlier studies, included Branco and Rodrigues (2008), Kansal Joshi and Batra (2014), Purnomo and Widianingsih (2012), and Sharma and Dangwal (2014), and
2. The annual reports of the companies.

The constructed index was checked for its reliability by calculating Cronbach's alpha, a measure to check the internal consistency of the data. The alpha coefficient for the 82 items was 0.971, which indicates that the items have relatively high internal consistency (the alpha coefficient of 0.70 or higher is acceptable).

The CSRD index consisting of 82 items, grouped into seven themes, is listed in **Table 1**.

Sr. No.	Theme	Code	No. of Items
1.	Environment	ENV	17
2.	Energy	ENG	07
3.	Employees	BMP	26
4.	Community	COM	14
5.	Product Safety/ Customers	PSC	07
6.	Green Initiatives	GI	06
7.	Investors	INV	05
Total		82	

Content analysis was used to analyses the annual reports of the company. Content analysis is a research technique for analyzing large sentences and converting them into specific codes to draw inferences from the data (Prasad, 2008). This technique is also known as a method of analyzing documents. It allows the researcher to test theoretical issues to enhance understanding of the data (Elo and Kyngas, 2008).The present study used the unweighted disclosure index (Ragini, 2012; Kansal and Singh, 2012; Hossain, Islam and Andrew, 2006) in which the disclosure item is scored one (1), if this particular item is disclosed in the annual report of company and zero (0) if this item is not disclosed. After assigning the scores to the disclosure index, the total number of companies disclosing the item have been calculated and then these numbers were converted into percentage form. The following formula was used for this purpose:

$$D_p = \frac{\text{Number of Companies disclosing the Particular item}}{\text{Total number of Companies (16)}} \times 100$$

where, Dp= Percentage of disclosing companies

The independent variables included the seven themes of CSR, namely, environment (ENV), energy (ENG), employee (EMP), community (COM), product safety/customers (PSC), green initiatives (GI) and investors (INV). Age of the selected companies (AGE) was taken as a control variable.

Model Specification

The Ordinary Least Square (OLS) method was used to evaluate the effect of the CSR factors on financial performance of the companies. Two models were constructed by controlling the age of the selected companies:

$$ROA = \alpha_1 + \beta_1 ENV + \beta_2 ENG + \beta_3 EMP + \beta_4 COM + \beta_5 PSC + \beta_6 GI + \beta_7 INV + \beta_8 AGE + e$$

----- (1)

$$ROA = \alpha_1 + \beta_{11} ENV + \beta_{12}ENG + \beta_{13} EMP + \beta_{14} COM + \beta_{15}PSC + \beta_{16}GI + \beta_{17} INV + \beta_{18} AGE + e$$

----- (2)

While Equation 1 determines the impact of CSR factors on financial performance of companies, measured by ROA, Equation 2 determines the impact of CSR factors on financial performance of companies, measured by ROE.

DATA ANALYSIS AND INTERPRETATION

Level of CSR Disclosure of Sample Companies

Table 2 shows the detailed theme and item-based CSR disclosure, of sample companies, for the years 2014-15 and 2015-16. The result reveals that under the theme 'environment', more emphasis was given to the following items: 'environmental/CSR policy', 'committee on environmental/social concerns' and 'environmental protection/CSR expenditures and investments' (each item disclosed by 100% sample companies) for each period. On the other hand, none of the companies disclosed the item 'environmental reporting' under the same theme for both the periods (0%). Under the theme 'energy', items such as 'energy conservation/initiatives' and 'reduction in energy consumption through energy efficiency initiative' were disclosed by 100% companies for each period while only 12.5% of companies in each period disclosed the item 'awards/recognition/benefits for energy conservation initiative'. Items such as 'benefits provided to full time employees', 'programs for skill development', 'retirement benefits/pension schemes', 'stock option plans for employee's/employee investment schemes/ESOP' and 'employees' loan/credit facilities' under the theme 'employees' were disclosed by all sample companies (100%) for each period, whereas in both years, neither of the company disclosed the 'ratio of salary/remuneration of women to men' item (0%). The item 'presence of health and safety policy' was disclosed by 93.75% companies in the year 2014 and 100% in the year 2015.

Table 2: Level of CSR Disclosure (Theme and Item-wise CSR)

Sl. No:	Theme	Item	Year 2014-15		Year 2015-16	
			No. of Disc. Co.	D _p	No. of Disc. Co.	D _p
1	ENV	Environmental / CSR policy	16	100	16	100
		Environmental Management System	11	68.75	12	75
		Committee on environmental/social concerns	16	100	16	100
		ISO 14001 implementation	11	68.75	12	75
		Internal Environmental Auditing	4	25	2	12.5
		GHG emissions	3	18.75	4	25
		Reductions of GHG emissions	11	68.75	15	93.75

		Other air emissions	3	18.75	5	31.25
		Waste disposal Methods/Initiatives	15	93.75	15	93.75
		Water conservation	13	81.25	13	81.25
		Water recycling	8	50	7	43.75
		Waste recycling	9	56.25	12	75
		R & D for environmental concerns	6	37.5	7	43.75
		Biodiversity conservation	5	31.25	8	50
		Environmental reporting	0	0	0	0
		Environmental protection/CSR expenditures and investments	16	100	16	100
		Environmental/CSR awards/recognition/benefits	6	37.5	6	37.5
2.	ENG	Company's energy policy	14	87.5	15	93.75
		Energy conservation/Initiatives	16	100	16	100
		Utilization of waste materials for energy conservation	3	18.75	4	25
		Reduction in energy consumption through energy efficiency initiative	16	100	16	100
		Energy audit	3	18.75	5	31.25
		R & D for energy conservation/efficiency	11	68.75	13	81.25
		Awards/recognition/benefits for energy conservation initiative	2	12.5	2	12.5
3.	EMP	Benefits provided to full time employees	16	100	16	100
		Total no. of Employee turnover	10	62.5	13	81.25
		Rate of employee turnover by age, gender and region	1	6.25	2	12.5
		Presence of health and safety committee	5	31.25	8	50

		Presence of health and safety policy	15	93.75	16	100
		Type of injury	2	12.5	3	18.75
		Health and safety topics covered in formal agreements with trade unions	7	43.75	7	43.75
		Absenteeism due to injury/loss	1	6.25	1	6.25
		Free/low-cost medical facilities	14	87.5	15	93.75
		Presence of training and development centre	14	87.5	15	93.75
		Programs for skill development	16	100	16	100
		Educational programs/financial assistance to employees for their education	7	43.75	6	37.5
		Breakdown of employees by category and gender	1	6.25	3	18.75
		Special facilities for women employees	12	75	14	87.5
		Special facilities for disabled employees	2	12.5	2	12.5
		Ratio of salary/remuneration of women to men	0	0	0	0
		No. of grievances filed about working conditions/safety	1	6.25	1	6.25
		No. of grievances resolved through labour grievance mechanism	1	6.25	1	6.25
		No. of cases in which the freedom of association/collective bargaining violated and significant measures taken to support these rights	1	6.25	1	6.25
		No. of grievances about human rights impacts filed	1	6.25	1	6.25
		No. of grievances resolved through human rights grievance mechanism	1	6.25	1	6.25

		Retirement benefits/Pension schemes	16	100	16	100
		Worker participation in management	7	43.75	6	37.5
		Stock option plans for employee's/employee investment schemes/ESOP	16	100	16	100
		Employees' loan/credit facilities	16	100	16	100
		Awards/recognition/benefits for health and safety of employees	5	31.25	6	37.5
4.	COM	Impact of operations/activities/actions on community	5	31.25	7	43.75
		Programs for community development	16	100	16	100
		Education development through scholarship/donation	16	100	16	100
		Training/internship/project for students	13	81.25	14	87.5
		Educational Seminars/workshops/conferences sponsorship	10	62.5	10	62.5
		Aid to research/medical research	1	6.25	3	18.75
		Medical facilities for community/donation to hospitals	14	87.5	16	100
		Confirmed incidents of corruption and actions taken	1	6.25	1	6.25
		Women empowerment initiatives/programs	14	87.5	16	100
		Employee volunteerism for community work and development	4	25	5	31.25
		Regional rural development/village adoption	11	68.75	14	87.5
		Total number of non-monetary sanctions for non-compliance with laws and regulations	1	6.25	1	6.25

		Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcome	0	0	0	0
		Total value of political contributions by country and recipient/beneficiary	1	6.25	1	6.25
5.	PSC	Health and safety impact of products/services	7	43.75	11	68.75
		Product development and innovation for reduced negative externalities on health and safety	16	100	16	100
		R & D for product development and innovations	16	100	16	100
		No. of Incidents of non-compliance with regulations and codes concerning health and safety impacts of product and services	1	6.25	1	6.25
		Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	1	6.25	1	6.25
		Total number of substantiated complaints regarding breaches of	1	6.25	1	6.25
		customer privacy and losses of customer data				
		Fines for non-compliance with laws concerning provision and use of products	1	6.25	1	6.25
6.	GI	Usage of Eco-friendly materials/technology	11	68.75	13	81.25
		Eco-friendly products innovation	11	68.75	13	81.25
		Green Power	12	75	13	81.25
		Green Buildings	1	6.25	2	12.5
		Clean development management project	3	18.75	5	31.25

		Award for Green initiative	3	18.75	4	25
7.	INV	Presence of corporate governance policy	16	100	16	100
		Corporate governance committee	16	100	16	100
		No. of complaints filed by investors	16	100	16	100
		Complaints addressed and resolved by investor redressal mechanism	16	100	16	100
		Risk and opportunities related to climate change	3	18.75	5	31.25

The items 'programmes for community development' and 'education development through scholarship/donation' were disclosed by all the respondents, for both the periods, while the item 'medical facilities for community/donation to hospitals' was disclosed by 87.5% companies in 2014-15 and 100% in 2015-16 under the theme 'community'. None of the companies disclosed the item - 'total number of legal measures for anticompetitive behaviour, anti-trust, and monopoly practices and their outcomes' under the same theme. 100% Companies disclosed the items 'product development and innovation for reduced negative externalities on health and safety' and 'R & D for product development and innovations', under the theme product safety and customers' for 2014-15 and 2015-16. On the other hand, under the theme 'green initiatives', more stress was given on the items 'usage of eco-friendly materials/technology' and 'eco-friendly products innovation' (each item disclosed by only one company in 2014-15 and two companies in 2015-16). The theme 'investors' of the CSR index had five items under it. All the items except 'risk and opportunities related to climate change' were disclosed by all the companies for each period.

Descriptive Statistics

Descriptive statistics provides a summary of all the variables. The mean values of ROA and ROE are 6.4747 and 13.4238, respectively, which shows that the firms have positive performance. Standard deviation measures how concentrated the data is, around the mean. The values of standard deviation for ROA and ROE are 4.622 and 8.5672, respectively which shows that the data is less concentrated around their mean values. The highest mean value has been attained by the theme BMP (12.19) of CSR disclosure index and the least mean value is of PSC (2.81). The results are shown in **Table3**.

Table3: Descriptive Statistics

Variables	N	Mean	Standard Deviation
ROA	32	6.4747	4.6220
ROE	32	13.4238	8.5672
ENV	32	9.97	2.646
ENG	32	4.25	0.880
EMP	32	12.19	3.685
COM	32	7.09	1.228
PSE	32	2.81	0.821
GI	32	2.84	1.194
INV	32	4.25	0.440
AGE	32	52.19	27.705

Note: The measurement of each variable is as follows: ROA is the net income divided by the book value of total assets. ROE is the net income divided by the shareholders' equity. ENV is environment containing 17 items calculated by using content analysis. ENG is energy containing 7 items calculated by using content analysis. EMP is employees containing 26 items calculated by using content analysis. COM is community containing 14 items calculated by using content analysis. PSC is product safety/customers containing 7 items calculated by using content analysis.

GI is green initiatives containing 6 items calculated by using content analysis. INV is investors containing 5 items calculated by using content analysis. AGE is the difference between the current year and the established year of the company.

Correlation Analysis

Correlation matrix for the dependent and independent variables is given in **Table 4**.

Table 4: Correlation Coefficients

	ROA	ROE	ENV	ENG	EMP	COM	PSC	GI	INV	AGE
ROA	1									
ROE	0.776**	1								
ENV	-0.381*	-0.389*	1							
ENG	-0.273	-0.223	0.267	1						
EMP	-0.409*	-0.384*	0.712**	0.055	1					
COM	-0.157	-0.172	0.428*	0.157	0.559**	1				
PSC	-0.392*	-0.394*	0.354*	0.588**	0.236	0.242	1			
GI	-0.102	-0.075	0.182	0.315	0.285	0.406*	0.364*	1		
INV	-0.334	-0.517**	0.561**	0.250	0.647**	0.493**	0.402*	0.200	1	
AGE	-0.313	-0.344	0.465**	0.103	0.861**	0.391*	0.220	0.448*	0.671**	1

Note:** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed)

As shown in the table, there is a significant negative relationship of Environment (ENV), Employee (EMP) and Product Safety/ Customer (PSC) with financial performance, i.e., ROA. A negative and significant relationship is also observed between CSR disclosure themes, i.e. Environment (ENV), Employee (EMP), Product Safety/ Customer (PSC) and Investors (INV) and financial performance i.e. ROE. Correlation analysis indicates that there is a significant impact of CSR on financial performance of chemical companies. The results also explain that correlation between predictors is also not very high.

Multivariate Analysis and Hypothesis Testing

The result of the OLS regression of Equation 1 shows the coefficients of all the independent variables of Equation 1 by using ROA as a dependent variable. The analysis shows positive coefficients of independent variables of environment (ENV) and community (COM), which indicates that these variables have positive impact on companies' financial performance, as measured by ROA. A positive effect of age is also observed from the analysis which indicates that more aged chemical companies perform better. However negative coefficients for energy (ENG), employee (EMP), product safety/customers (PSC), green initiatives (GI) and investors (INV) indicates that these CSR factors have negative impact on companies' financial performance, as measured by ROA. Furthermore, the value of R^2 indicates that 31.4% of variation in financial performance of companies was accounted by the joint variation in independent variables. The Multiple Regression Analysis with Financial Performance (ROA) is given in **Table 5**.

Table 5: Multiple Regression Analysis with Financial Performance (ROA)

Model		Unstandardized Coefficients		T	Sig.	Collinearity Statistics	
		B	Std. Error			Tolerance	VIF
1	(Constant)	19.791	10.908	1.814	0.083	-	-
	ENV	0.211	0.577	0.366	0.717	0.274	3.656
	ENG	-0.930	1.174	-0.792	. 0.436	0.597	1.674
	BMP	-1.067	0.821	-1.298	0.207	0.070	14.375
	COM	0.925	1.054	0.878	0.389	0.381	2.626
	PSC	-1.365	1.323	-1.032	0.313	0.540	1.850
	GI	-0.01	1.048	-0.01	0.999	0.407	2.460
	INV	-1.122	3.327	-0.337	0.739	0.297	3.362
	AGE	0.068	3.327	0.692	0.493	0.085	11.789
	R = 0.560	R ² = 0.314		Adjusted R ² = 0.075			
	Std. Error of the Estimate = 4.44			Durbin-Watson=2.311 , F = 1.316 (0.285)			

Note: Dependent Variable: ROA

As shown in the table, the value of Durbin-Watson is 2.311 (as a rule of thumb values of $1.5 < d < 2.5$ show that there is no auto-correlation in the data). For this model the F-value is 1.316 and the significant value is more than 0.05, hence the model is insignificant.

The result of OLS regression of equation 2 shows the coefficients of all the independent variables of equation 2 by using ROE as a dependent variable. The analysis shows positive coefficients of independent variables environment (ENV), community (COM) and green initiatives (GI) which indicates that these variables have positive impact on companies' financial performance as measured by ROE. However negative coefficients for energy (ENG), employee (EMP), product safety/customers (PSC) and investors (INV) indicates that these CSR factors have negative impact on companies' financial performance as measured by ROE. Furthermore the value of R^2 indicates that 34.7% of variation in financial performance of companies was accounted by the joint variation in independent variables. The Multiple Regression Analysis with Financial Performance (ROE) is given in **Table 6**.

Table 6: Multiple Regression Analysis with Financial Performance (ROE)

Model		Unstandardized Coefficients		T	Sig.	Collinearity Statistics	
		B	Std. Error			Tolerance	VIF
2	(Constant)	54.367	19.718	2.757	0.011		
	ENV	0.067	1.043	0.064	0.949	0.274	3.656
	ENG	-0.343	2.122	-0.162	0.873	0.597	1.674
	EMP	-0.912	1.485	-0.614	0.545	0.070	14.375
	COM	1.521	1.905	0.798	0.433	0.381	2.626
	PSC	-2.279	2.392	-0.953	0.351	0.540	1.850
	GI	0.103	1.895	0.054	0.957	0.407	2.460
	INV	-8.882	6.015	-1.477	0.153	0.297	3.362
	AGE	0.077	0.179	0.433	0.669	0.085	11.789
	R = 0.589	$R^2 = 0.347$		Adjusted $R^2 = 0.120$			
	Std. Error of the Estimate = 8.03			Durbin-Watson=2.737 , F = 1.531 (0.201)			

Note: Dependent Variable: ROE

As shown in the table, the value of Durbin-Watson is 2.737 (as a rule of thumb values of $1.5 < d < 2.5$ show that there is no auto-correlation in the data). For this model the F-value is 1.531 and the significant value is more than 0.05, hence the model is also insignificant.

CONCLUSION

The study aimed to examine the extent of CSRD practices of selected chemical manufacturing companies, in India. It found that the CSRD practices were rarely adopted by these chemical companies. In addition, we assessed the impact of the practices on firms' financial performance. We found a positive impact of disclosure of 'environment' and 'community' themes and a negative impact of disclosure of 'energy' 'employee', 'product safety/customers' 'green initiatives' and 'investors' themes on companies' financial performance as measured by the ROA. however, the themes, such as environment,

community and 'green initiatives' had positive impact on companies' financial performance, and 'energy', 'employee', 'product safety/customers' and 'investors' had a negative impact on it, as measured by ROE

The firms may find the conclusion of the study useful for improving their CSR practices. These also have policy implications for the investors as they provide a comprehensive analysis of CSR disclosure practices on firms' financial performance.

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