CORPORATE SOCIAL RESPONSIBILITY AND FIRM CHARACTERISTICS: EVIDENCE FROM BSE 500

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Abstract

The purpose of this paper is to test the relationship between corporate social responsibility and different firm characteristics for 500 Indian firms. Using CSR rating from Karmayog-2010 survey, the empirical analysis has been conducted using simple regression and ordered probit model. The firm performance and other variables have been extracted from PROWESS (Release 4.0), a leading database in India. We have used both accounting and market based measures to measure firm performance. The results show that CSR does not have significant relationship with the firm performance measures of the sampled firms. Further, the results indicate positive relationship of CSR with size but negative relation with leverage and firm age indicating that larger, younger and levered firms are more active towards CSR in India than their counterparts. The results also imply that firms with higher equity shareholding are more aggressive in implementing CSR activities.

Keywords: Corporate Social Responsibility, Firm Performance, Firm Size, Leverage, Age

1. Introduction

In today's competitive environment, companies are also accountable for the way they impact communities and their surroundings where they operate. India has a long tradition towards Corporate Social Responsibility (CSR) activities, but it is now only that the issue has become more prominent in the country. The recent modifications in the Indian Companies Act (Section 135) makes it mandatory for every company (having net worth of Rs 500 crore or more; or turnover of Rs 1000 crore or more; or net profit of Rs 5 crore or more during any financial year to constitute CSR Committee comprising of three or

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more directors, including an independent director) should spend at least 2% of its average net profits in the current financial year on CSR activities. The recent changes will certainly lead to rise in CSR activities in Indian corporate sector in the coming years. Here, the question arises whether the firms highly engaged in CSR gets an improvement in financial performance or it acts as an additional burden leading to drainage of valuable resources of firms, thereby, impacting financial performance negatively. Our study tries to find out the linkages between CSR rating and firm performance and other characteristics for a representative sample of Indian firms.

The argument that socially responsible spirit of a firm improves the reputation and financial performance has been given by many scholars like Dodd, 1932; McGuire et al., 1988; Waddock and Graves, 1997; Griffin, 2000; Orlitzky et. al., 2003; Wu, 2006; Barnett, 2007; Wagner et. al., 2009 and Khanifar et. al., 2012. One set of researchers (like Albinger and Freeman, 2000; Allouche and Laroche, 2005; Goll and Rasheed, 2004; Bird et. al., 2007; Nelling and Webb, 2009) believe that CSR activities improve firm's reputation and its relationship with its stakeholders which is often translated into economic benefits. Authors like Parert and Eibert (1975); Ullmann (1985) and Roberts (1992) stated that the firms with relatively better financial results are more willing to invest in CSR activities. Similarly, Ullmann (1985) asserted that companies with weaker performance, i.e., less stable stock market patterns would be relatively less keen to commit its resources towards social demands.

The other set of researchers (viz., Roman et. al., 1999; McGuire et. al., 1988; Bromiley and Marcus, 1989; Wright and Ferris, 1997) reported negative relationship between CSR and firm performance, arguing that high investments in CSR activities result in additional costs. Some studies also reported no significant relationship between CSR and financial performance (Teoh et. al., 1999; Margolis and Walsh, 2003; Surroca et. al., 2010; Lech, 2013).

Some researchers studied firm performance and CSR linkages by introducing the effect of other

ISSN 2076-9202

moderating firm characteristics like previous years' performance, size of firm, leverage etc. It has been shown by authors like McWilliams & Siegel (2001) and Barnett & Salomon (2003) that the link between CSR and firm performance disappears when control variables are introduced into econometric models, such as proxies for growth opportunities etc.

There has been an increasing intensity of research on the issue of CSR, but the relationship between CSR and firm performance has been mainly explored in developed economies. However, the empirical work on this issue is still at its infancy in India. Current research on CSR in India is mostly limited to self reported questionnaire surveys on CSR (for example, Khan and Atkinson, 1987; Krishna, 1992), nature and characteristics of CSR in India (Arora and Puranik, 2004; Sood and Arora, 2006), without testing its linkages with firm performance.

The impact of firm performance and characteristics has been examined on CSR rating for the top 500 Indian companies by Jain and Mishra (2011) and Soni and Arora (2016), Chahal et. al (2015). Against this backdrop, our study makes an empirical contribution to the existing literature by examining the linkages between CSR rating and firm performance and other firm characteristics which might influence firms involvement in CSR activities. We employ alternate estimation techniques for the analysis purposes i.e., regression analysis and ordered probit method. Further, departing from the conventional system of the prior studies of related literature and instead of focusing on a single measure framework, we utilize a range of measures of firm performance. We have used both accounting and market-based measures of firm performance.

The remainder of the paper is organized as follows: next section reviews the literature on the relationship between CSR and different firm characteristics. Section 3 discusses the variables, data sources, hypotheses construction and empirical model specification. Section 4 presents the empirical results on the relationship between CSR and firm characteristics and discussion thereof. The final section

ISSN 2076-9202

concludes the study.

2. Review of Literature

The stakeholder theory suggests that social and financial performance of a firm are positively related as it improves stakeholders' satisfaction level and consequently, a firms' reputation and financial performance. Barnett (2007) suggested that the ability of socially responsible activities to create firm value lies in its positive stakeholder relations for the firm. Belkaoui (1976) also found positive relationship between economic performance and social responsibility.

According to Turban and Greening (1997), the companies which have a strong CSR commitment have an increased ability to attract and retain employees leading to reduced turnover and training costs. Cochran and Wood (1984) used CSR rankings developed by Moskowitz (1972) to test the relationship between CSR activities and performance of the firm but a weak positive association was found.

The studies like Goll & Rasheed (2004) and Allouche & Laroche (2005) proved that CSR has a positive impact on financial performance of a company. Similarly, Wu (2006) also found positive relationship between social and financial performance, proving that benefits of socially responsible actions are more than the cost of being socially responsible. Also, according to him, firm size has no impact on CSR or on financial performance.

On the same lines, Roberts and Dowling (2002), there is strong positive link between CSR and financial performance. Frooman (1997) has added that socially irresponsible firms' had decreasing shareholders' wealth implying that socially responsible behavior is necessary to increase shareholders' wealth. The reputation of a firm provides crucial link between social responsibilities and profitability by reducing transactional costs and increasing product demand (Peloza, 2006 and Gardberg & Fombrun, 2006). A analysis of 52 studies by Orlitzky et. al., (2003) found positive relationship between CSR and financial performance; wherein, reputation was used as a proxy for CSR.

ISSN 2076-9202

In a related study, Nelling and Webb (2009) found that the relationship between CSR and financial performance is a virtuous circle since it determines whether doing well socially contributes to healthy financial performance or firm exhibit superior financial performance by devoting more resources for social obligation. They used OLS regression with ROA and return on firm's common stock as dependent variable and weighted CSR score as independent variable and found positive results.

Additionally, CSR has the ability to motivate, attract and retain the desired workforce and improve financial performance, according to Albinger and Freeman (2000). In a recent study, Li (2013) empirically examined the effect of firm performance on CSR disclosure in terms of disclosure frequency and quality among Chinese listed firms. His findings showed that better-performing firms are more likely to disclose CSR information and produce higher quality CSR reports.

On the other hand, studies like Trotman & Bradley (1981) and Mahapatra (1984) stated that CSR activities may lead to increased systematic risk. Similarly, Roman et. al., (1999) also presented negative relationship between CSR and financial performance as social activities involve financial costs. Friedman (1970) has also put it as a relative competitive disadvantage compared to other firms that are less socially active. Hence, a firm's higher involvement in social activities may lower its financial performance if its social actions involve huge costs as pointed by Preston and O'Bannon (1997). These findings are also supported by Wright & Ferris (1997) and Cordeiro & Sarkis (1997) who reported negative relationship between analysts' earnings-per-share forecasts and CSR activities of a firm. Frankle and Anderson (1978) differed with Belkaoui's (1976) conclusions arguing that non-disclosing firms had performed consistently better in the market.

At the same time, Teoh et al., (1999) found no relationship between CSR and firm's financial performance. The same has been confirmed by Surroca et. al.,(2010) reporting no significant relationship

ISSN 2076-9202

between CSR and financial performance for a sample of 599 companies in 28 countries. In a recent study of Polish firms by Lech (2013), it has been found that CSR is not statistically significant in determining the financial performance.

Aras et al., (2010) investigated the relationship between CSR and financial performance and found no significant relationship between CSR and company's profitability. They performed a regression analysis with profitability as dependent variable and firm size as an independent variable and found significant relationship between the two. Further, by adding R&D intensity as independent variable, it still produces negative relationship. This contradicts with Lioui and Sharma (2012) study that found negative interaction between CSR and firm performance but produced positive relationship when R&D was added as an independent variable. They supported McWilliams and Siegel (2000) statement, specifying that some studies on the relationship between social and firm performance suffers from several important theoretical and empirical limitations due to omitted R&D intensity in the variable.

In the Indian context, Jain and Mishra (2011) attempted to establish the relationship between different firm characteristics (such as number of employees, age of the firm, sales volume and firm performance) and CSR rating using stepwise regression method. The results showed that firm profitability and age does not influence CSR rating. The findings also show that a large firm i.e., a firm with large number of employees and high sales volume are working more actively towards social responsibility than counter firms.

Most of the empirical research on the relationship between social and financial performance of a firm remains inconclusive. This may be attributed to the use of different measures of CSR and performance variables and differences in the research methodologies. Against this backdrop, our study uses alternate measures of firm performance i.e., a combination of accounting as well as market-based measures and tries to include the necessary intervening variables in the analysis in the form of firm characteristics.

ISSN 2076-9202

3. Research Design and Methodology

This section provides discussion on data sources, selection of firms and construction of the model for estimating the relationship between CSR rating and firm performance. It also presents the stylized facts of the companies engaged in CSR and not engaged in CSR.

3.1 Data

For the analysis purposes, CSR ratings have been obtained from Karmyog-2010 survey. The Karmayog CSR study presents a snap-shot of the largest 500 companies in India, with specific focus on their CSR initiatives. The study enables an understanding of how different kinds of companies (government owned, private and multi-national) from 30 different industries are responding to global and local conditions that demand and need more responsible behavior by all stakeholders. Karmayog's objective of undertaking an annual CSR rating is to present a common person's view and understanding of companies and how they behave. We have obtained CSR rating for the year 2010 from Karmayog survey.

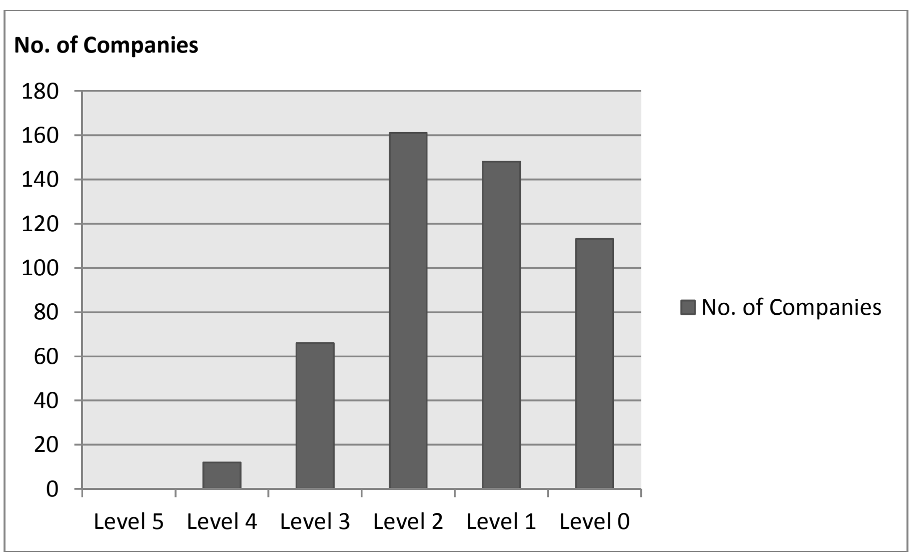

Figure 1: CSR Score of Company, Karmayog Survey

(Level 5- High CSR Rating and Level 0 - No CSR activity)

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The firm performance and other variables have been extracted from PROWESS[3] (Release 4.0), a leading database in India. We have used both accounting and market based measures to measure firm performance, namely; Return on Assets (ROA), Return on Equity (ROE), Return on Capital Employed (ROCE), Net Profit Margin (NPM), Stock Returns (SR) and Market Value to Book Value (M.V/B.V). Next, we have used both long-term and short-term ROA and ROE as performance measures. The long-term firm performance measures (ROA and ROE) are calculated by averaging the performance of last five years. The alternative firm performance measures and other firm characteristics are described in Table 1.

Table 1: Description of Variables used in the analysis

S.No	*Variable*	*Full Form*	*Definition*
Panel A: Corporate Social Responsibility			
1.	CSR	CSR Rating	CSR Rating taken from Karmayog 2010- Survey
Panel B: Firm Performance Measures			
2.	ST-ROA	Short-Term Return on Assets	PBDIT/Total Assets
3.	LT-ROA	Long-Term Return on Assets	Average of past 5-years ROA
4.	ST-ROE	Short-Term Return on Equity	PBDIT/Paid–up Equity Capital + Reserves and funds
5.	LT-ROE	Long-Term Return on Equity	Average of past 5-years ROE
6.	ROCE	Return on Capital Employed	PBT/Capital Employed
7.	NPM	Net Profit Margin	PBDIT/Net Sales
8.	SR	Stock Returns	(Stock Price at year t+1 - Stock Price at year t + Dividends)/Stock Price at year t+1
9.	M.V/E.V	Market Value to Book Value	Market Capitalization/ Enterprise Value
Panel C: Other Firm Characteristics			
10.	Age	Firm Age	Present year – Incorporation year
11.	Lev	Leverage	Borrowings/Total Assets
12.	Size	Firm Size	Natural log of Sales
13.	Adv*Int*	Advertising Intensity	Natural log of (Advertising Expenses/Sales)
14.	RD*int*	Research & Development Intensity	Natural log of (Research and Development Expenses/Sales)

[3] The PROWESS database is maintained by CMIE and is broadly similar to Compustat database of US firms. It is increasingly being employed in the literature for firm-level analysis of Indian industry and contains financial information on around 27,000 companies, either listed on stock exchanges or the major unlisted companies.

ISSN 2076-9202

15.	MNC	MNC Dummy	Equals 1 when the firm is a multi-national and 0 otherwise.
16.	PSU	PSU Dummy	Equals 1 when the firm is public sector undertaking and 0 otherwise.
17.	PVT	PVT Dummy	Equals 1 when the firm is a private concern and 0 otherwise.

We use age, size, leverage, advertising intensity, research and development intensity and company type (MNCs, PSUs and private firms) as the firm characteristics. These variables have been defined in Panel C of Table 1. Indeed, these variables have an effect on both: engagement of the firm in CSR process and on financial performance. Hence, they may act as controls in our conceptualized model for estimating the possible interdependencies between CSR and firm performance.

3.2 Empirical Model Specification and Construction of Empirical Hypotheses

To examine the effects of firm characteristics on CSR rating, we develop the following baseline model and the empirical analysis has been conducted using simple regression model. Since the dependent variable; CSR rating is an ordinal variable, we also use ordered probit model for robustness.

$$CSR_i = \alpha_0 + \beta_0 * FP_i + \beta_1 * X_i + \varepsilon_i$$

where,

CSR_t indicates CSR rating 2010 for firm i, obtained from Karmayog Survey,

FP_t are alternate performance variables used in the analysis for firm *i*,

X_i is a vector of firm characteristics,

α_0 - intercept, β_0, β_1 - coefficients,

i -1 to 500 firms,

ε_i - error term.

3.2.1 CSR and Firm Performance

Peloza (2009) reviewed 128 studies that exploring the relationship between CSR and financial

ISSN 2076-9202

performance and reported that 59% found positive relationship, 27% found mixed or neutral relationship and 14% reported negative relationship between the two. We form the following hypothesis on the basis of majority of the previous studies:

H_1: There is a positive relationship between CSR rating and firm performance.

3.2.2 CSR and Age

The age of a firm could have an effect on the maturity and experience level of a firm. An old company reflects a higher level of maturity level which results in greater ease of engagement (St-Pierre, 2010). It shows that the companies recently established would be those which are intensely involved in CSR activities. This can be explained by the verity that a young firm may adopt more pro-active and positive attitude on CSR issue. Therefore, we expect negative relationship between engagement in CSR initiatives and age of firms.

H_2: There is negative relationship between CSR and age of firm.

3.2.3 CSR and Size

Vives et. al., (2005) asserted the existence of a relationship between size and socially responsible behavior. Research on organizational legitimacy implies that larger and more visible organizations experience more pressure to conform to societal expectations (DiMaggio and Powell, 2000). Large firms are more visible to the public (Suchman, 1995) and are likely to be under scrutiny. Empirically, a positive relationship has been demonstrated between size and involvement of firms in the local community or with an environmental commitment (Besser 1999; Murphy et. al., 1992; Vives et. al., 2005). If the size of a firm is small, the commitment of adopting CSR approach is also low (Waddock and Graves; 1997). Thus, the following hypothesis is formed:

H_3: There is positive relationship between CSR and firm size.

3.2.4 CSR and Beta

ISSN 2076-9202

Systematic risk (beta) is defined as the covariance between returns on a risky asset (e.g. a company's stock) and market portfolio, divided by the variance of the market portfolio (Copeland and Weston, 1983). Companies having lower systematic risk are expected to have higher level of CSR activities as they have more stable pattern of stock returns. The stable market performance can enhance their discretion to commit resources in CSR activities (Roberts, 1992).

H_4: There is negative relationship between beta and CSR rating.

3.2.5 CSR and Advertising, Research & Development (R&D) Intensity

Recent studies have demonstrated that advertising as well as research and development (R&D) are related to socially responsible behaviour of a firm and it is important to take them into consideration while estimating the impact of firm characteristics on CSR. There is a theoretical literature linking investment in R&D to improvement in firm performance (Griliches, 1979), considering R&D as a form of investment in technical capital. Investment in technical capital results in knowledge enhancement, which leads to product and process innovation. There is strong empirical evidence to support this hypothesis. We hypothesize that R&D and CSR are positively related, since many aspects of CSR create either product innovation, process innovation, or both.

H_5: There is a positive relationship between advertising intensity and CSR.

H_6: There is a positive relationship between R&D intensity and CSR.

3.2.6 CSR and Firm-Type Dummies

The inclusion of firm-type dummies is to control the firm-level factors which explain variation in CSR performance across different types of companies, such as economies of scale and competitive intensity. Three dummies are created for capturing the effect of different type of companies: PSUs, private concern, Indian multinational and International multinational company. The dummies created are one less than the different types of companies i.e., three dummies.

ISSN 2076-9202

4. Empirical Results

In this section, we present estimation results for the impact of firm characteristics on CSR rating. But before moving to the main analysis, the basic properties of the data have been studied.

Table 2: Comparison of firms engaged in CSR activities and not engaged in CSR activities on the basis of firm characteristics

	Panel A: Firms engaged in CSR					**Panel B: Firms not engaged in CSR**				
	N	Min.	Max.	Mean	Std. Dev.	N	Min.	Max.	Mean	Std. Dev.
Firm Performance Variables										
ST-ROA	384	-0.151	0.581	0.136	0.080	111	-0.037	0.515	0.121	0.072
LT-ROA	120	-0.062	0.495	0.139	0.082	40	0.047	0.449	0.138	0.076
ST-ROE	384	-0.805	4.193	0.458	0.381	111	-0.234	1.235	0.346	0.215
LT-ROE	383	-1.208	2.098	0.445	0.345	111	-0.088	14.103	0.481	1.320
ROCE	384	-0.615	1.576	0.154	0.176	111	-0.314	2.962	0.148	0.314
M.V/E.V	371	-2.110	80.890	1.225	4.638	108	-29.680	5.670	0.392	3.135
Total Returns	371	-4.300	11.150	0.457	1.985	108	-6.100	14.470	0.531	2.755
NPM	340	-0.262	1051.364	9.425	79.549	106	-0.329	76.119	0.896	7.378
Other Firm Characteristics										
Beta	355	0.230	2.090	1.025	0.297	101	0.300	1.840	1.037	0.315
Age	385	1.000	147.000	39.720	26.320	112	3.000	109.000	29.610	19.846
Size	236	3.989	12.208	8.399	1.351	52	2.996	10.712	7.414	1.485
Lev	379	0.000	1.324	0.276	0.220	108	0.000	0.658	0.317	0.182
RD*int*	181	-12.789	-2.346	-6.382	2.006	33	-9.074	-2.563	-6.564	1.660
ADV*int*	199	-10.740	2.859	-5.572	2.339	66	-10.925	-2.130	-6.896	2.470

We examine the potential difference between the firms engaged in CSR (firms with 1-5 CSR rating) and those not engaged in CSR (firms with 0 CSR rating), by comparing the characteristics of these two types of firms in Table 2. Based on the firm characteristics reported in Panel A and B of Table 2, it has been observed that, on an average, firm performance variables have higher mean values for firms engaged in CSR. In case of Short-Term Return on Equity (ST-ROE) the mean return for firms not actively engaged in CSR is 0.356 and on the other hand mean score for firms engaged in CSR is 0.458. Further, from the analysis of mean score of other firm characteristics like Age, Lev and Size; the results indicate that larger,

ISSN 2076-9202

older and less levered are more active on CSR front.

Table 3: One Way ANOVA: Categorical Variable CSR score

Indicator	Sum of Squares	Degree of Freedom	F-score	Significance Level
STROA	0.05	4.000	2.058	0.085*
LTROA	0.02	4.000	0.595	0.667
STROE	1.45	4.000	2.951	0.020*
LTROE	0.38	4.000	0.196	0.940
ROCE	0.27	4.000	1.486	0.205
M.V/E.V	73.97	4.000	0.975	0.421
Total Returns	4.23	4.000	0.221	0.927
NPM	84909.26	4.000	4.518	0.001
Beta	0.64	4.000	1.788	0.130
Age	11382.83	4.000	4.557	0.001*
Size	88.24	4.000	12.620	0.000*
Lev	0.98	4.000	5.636	0.000*
RD*int*	4.42	4.000	0.286	0.887
ADV*int*	137.05	4.000	6.230	0.000*

To check whether the differences observed in mean values are statistically significant or not, we applied One-way Anova test (see Table 3) on our dataset. We categorize our dataset on the basis of CSR score which ranged between 0 and 4 i.e. from lowest to highest grade. The results for the same have been presented in Table 3. The null hypothesis of no significant differences in mean values was rejected for ST-ROE, Age, Size, Lev and ADV*int* indicating that the differences among the above mentioned variables are statistically significant. Further, the null hypothesis of no significant difference was accepted for other variables. Thus, the results indicate that the differences in CSR rating do not impact the financial variables except for return on equity in short-term (ST-ROE). While the control variables like Age of firm (Age), Sales (Size), Level of borrowings (Lev) and Advertising Intensity, differ among companies which are graded with different CSR score.

After the F-test analysis, we proceed towards our main analysis and estimate the relationship between

ISSN 2076-9202

CSR rating (dependent variable) and firm characteristics (explanatory variables) using OLS and ordered probit regression method. The OLS results have been reported in Table 4 and the results from ordered probit regression are shown in Table 5. The alternate firm performance variables have been taken as the dependent variables in different columns (from 1 to 8) and the coefficients have been reported accordingly. We have run eight different analyses using each performance variable as the dependent variable one by one and the results have been reported in Table 4 and 5.

Table 4: Impact of Firm Characteristics on CSR Rating using Ordinary Least Squares Method

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	0.218 (2.535)	0.309 (1.413)	0.563 (1.411)	0.407 (1.400)	0.585 (1.380)	0.378 (1.448)	0.549 (1.394)	-2.181 (1.676)
LTROA	3.628 (3.052)							
STROA		1.745 (1.826)						
LTROE			0.016 (0.539)					
STROE				0.516 (0.581)				
ROCE					-0.423 (0.351)			
NPM						0.556 (1.137)		
SR							0.045 (0.078)	
M.V/E.V								1.941 (0.730)
Beta	0.980 (0.779)	0.253 (0.626)	0.019 (0.609)	0.209 (0.615)	0.064 (0.572)	0.045 (0.580)	0.077 (0.587)	0.230 (0.552)
Age	-0.010 (0.008)	-0.010* (0.006)	-0.010* (0.006)	-0.010* (0.006)	-0.010* (0.006)	-0.010* (0.006)	-0.011* (0.006)	-0.011** (0.006)
Size	0.200 (0.296)	0.319** (0.143)	0.352*** (0.141)	0.330** (0.141)	0.363*** (0.138)	0.355*** (0.140)	0.364*** (0.141)	0.393*** (0.133)
Lev	-2.300 (1.471)	-1.700* (0.944)	-2.027** (0.890)	-1.992** (0.881)	-2.364*** (0.918)	-1.979** (0.891)	-1.983** (0.887)	0.078 (1.152)

ISSN 2076-9202

RD*int*	0.119 (0.151)	0.056 (0.091)	0.037 (0.091)	0.054 (0.091)	0.037 (0.088)	0.033 (0.089)	0.046 (0.091)	0.030 (0.084)
Adv*Int*	-0.114 (0.136)	0.051 (0.082)	0.072 (0.080)	0.054 (0.081)	0.072 (0.078)	0.075 (0.079)	0.089 (0.084)	0.073 (0.075)
R^2	0.5255	0.2648	0.2532	0.2632	0.2714	0.2563	0.2575	0.3344

Note: *, ** and *** indicate significance at 10%, 5% and 1% levels.

The figure in parentheses indicates standard error.

The estimated results show that firm performance of Indian firms is positively related to CSR rating (except ROCE), although the coefficients are not statistically significant. Therefore, our null hypothesis of significant positive relationship between CSR rating and firm performance is rejected because of the lack of significance. It implies that it is not necessary that financially better performing firms are more socially active. The results indicate positive relationship between CSR and firm size, which is consistent with the findings of Waddock and Graves, (1997); Walker and Tobias, (2006) implying that larger firms are more actively engaged in CSR activities. Certainly, larger the size of the firm, more its visibility in the society and thus, it requires more socially responsible behaviour as it raises stakeholder's pressure on firms to be in tune with their social environment. Further, the age and leverage of firms turns out to be negatively related with CSR, thereby accepting null hypothesis. This finding is supported the previous studies like Cabagnols & Le Bas, (2008) and St-Pierre, (2010); confirming that younger firms are more active towards CSR in India than their counterparts. The analysis show that leverage has a negative impact on CSR rating implying that firms engaged in CSR activities have less leverage in their capital structure. The results are not very encouraging in case of other firm characteristics also like beta, advertising intensity and R&D intensity, which is in contrast with McWilliams and Siegel, (2000). It might be because of the different estimation techniques used by them for the analysis.

Table 5: Impact of Firm Characteristics on CSR Rating using Ordered Probit Method

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
LTROA	6.154 (4.243)							
STROA		1.760						

ISSN 2076-9202

		(1.813)						
LTROE			-0.043 (0.528)					
STROE				0.483 (0.572)				
ROCE					-0.513 (0.382)			
NPM						0.553 (1.127)		
SR							0.047 (0.076)	
M.V/E.V								2.276 (0.815)
Beta	1.712* (1.087)	0.267 (0.622)	0.021 (0.605)	0.219 (0.614)	0.067 (0.579)	0.060 (0.577)	0.102 (0.585)	0.256 (0.588)
Age	-0.013 (0.010)	-0.010* (0.006)	-0.010* (0.006)	-0.010* (0.006)	-0.010* (0.006)	-0.010* (0.006)	-0.010* (0.006)	-0.012** (0.006)
Size	0.256 (0.400)	0.363*** (0.149)	0.398** (0.146)	0.375** (0.147)	0.414*** (0.146)	0.399*** (0.145)	0.410*** (0.147)	0.466*** (0.148)
Lev	-3.837** (1.979)	-1.836** (0.943)	-2.151** (0.891)	-2.122** (0.888)	-2.565*** (0.941)	-2.101*** (0.892)	-2.094*** (0.891)	0.204 (1.224)
RD*int*	0.259 (0.217)	0.059 (0.090)	0.037 (0.088)	0.055 (0.089)	0.038 (0.087)	0.035 (0.087)	0.049 (0.089)	0.028 (0.087)
Adv*Int*	-0.238 (0.191)	0.046 (0.082)	0.070 (0.080)	0.052 (0.081)	0.071 (0.079)	0.071 (0.079)	0.087 (0.084)	0.080 (0.079)

Note: *, ** and *** indicate significance at 10%, 5% and 1% levels.

The figure in parentheses indicates standard error.

This relationship is further tested using ordered probit specification in Table 5 which also reflects the similar story. The simple OLS method might give biased results as our dependent variable (i.e., CSR rating) is an ordinal variable, therefore; for robustness, ordered probit method has been used. The performance of Indian firms is found to be positively related to CSR activities; although the coefficients are not statistically significant using ordered probit method also. It implies that CSR behavior is not motivated by firm's financial performance. These results are contradictory to the accumulating body of empirical studies which support positive impact of CSR on financial performance. This contradiction

ISSN 2076-9202

could arise due to different firm performance or CSR measures used or different estimation techniques used. Further, it is observed in ordered probit results also that larger (measured by size of the firm) and younger (measured by age) Indian firms are more actively engaged in CSR activities. It signifies that younger firms might adopt more pro-active and inclined attitude on CSR issue.

The results verify the firms engaged in CSR have less leverage in their capital structure as shown by the negative leverage coefficient. The negative impact of leverage on CSR indicates that firms with lower debt financing have higher CSR ratings. It implies that firms with higher equity shareholding are more aggressive in implementing CSR activities. We could not establish any relationship between advertising; R&D intensity and CSR rating as their coefficients are not found to be significant at any of the significance level. It might be possible that advertising; R&D intensity does not influence CSR rating.

Table 6: Outcome of the Hypotheses

Hypothesis 1	Rejected
Hypothesis 2	Accepted
Hypothesis 3	Accepted
Hypothesis 4	Rejected
Hypothesis 5	Rejected
Hypothesis 6	Rejected

5. Conclusion

The present study serves as a pointer to the relationship between CSR and firm characteristics for the top 500 Indian firms. The current research on CSR in India is mostly limited to nature and characteristics of CSR in India without focusing on the social and financial performance relationship. However, some recent studies have tested this relationship but they have not focused on other firm characteristics. Our study intends to fill this gap by empirically testing the relationship between CSR and firm characteristics.

ISSN 2076-9202

The analysis leads us to several conclusions: CSR and firm performance link does not hold good for our sample which means CSR behavior of the firms is not motivated by their current/past profitability. However, other firm characteristics like age, size and leverage do influence the CSR behavior in a company. The negative relationship between firm age and CSR ratings imply that recent/newer firms are more active in pursuing socially responsible behavior and older firms should adopt similar strategies because ignoring CSR in the long-term may lead to increased stakeholder pressure, thereby, leading to critical situations. Further, the positive relationship between firm size and CSR ratings are in line with Besser (1999); Murphy et. al., (1992) and Vives et. al.,(2005) which have shown that the behavior of firms varies according to size of the firm. Larger the size of the firm, more the visibility, thereby raising stakeholder pressure on firms to be socially responsible. We can say that the factors like age, size and leverage of the firm have significant impact on CSR activities of the firm rather than its financial performance. It seems that the accounting and market performance of the firm does not influence CSR rating but its age, visibility in the market etc. does.

Some additional factors can be explored further which influence CSR activities in a firm. Future research work should also concentrate on qualitative aspects like mission/vision of the organization, organizational culture, ethics, religion of manager or founder etc. which are also important factors which can influence CSR behavior.

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