The Financial and Non-Financial Determinants of Corporate Social Responsibility Disclosures - An Empirical Analysis from India

Abstract

Over the last few decades, a number of studies, mostly in the western countries, have investigated the nature and frequency of corporate social responsibility disclosures, their patterns and trends, and their general relationships with corporate size and profitability. This study seeks to extend the knowledge regarding the relationship between a number of financial and non-financial corporate characteristics and the level of social responsibility disclosures based on an extensive sample of top Indian companies. Corporate size and industry category are found to correlate with the corporate social disclosures of the companies and the corporate reputation as recognised through awards and social ratings have also been observed to be a significant factor that influences the social disclosures made by the Indian companies.

1. Introduction

Over the last few decades, there has been a great deal of academic research into the social and environmental reporting practices of corporations operating in different parts of the world. Researchers and academics working in the realm of corporate social responsibility CSR have moved their focus from measuring corporate social responsibility disclosures (CSRD) to exploring their determinants (Purushotahman et al. 2000; Eng and Mak 2003; Ghazali 2007; Khelif and Souissi 2010; Kotonen 2009; Saleh et al. 2010). Academic researchers have made rigorous efforts to explore the financial and non-financial determinants of the social and environmental disclosures made by the corporate sector, including areas relating to the size of the business, its financial performance, the age of the company, the board characteristics, the ownership structure and the nature of the industry. However, a large body of literature on corporate social reporting in different parts of the world remains
inconsistent as to whether size, financial performance, industry, risk and other variables influence the CSRD (Ullman 1985; Cowen et al. 1987; Porwal and Sharma 1991; Patten 1992; Hackston et al. 1996; Griffin and Mahon 1997; Waddock and Graves 1997; Haniffa and Cooke 2005; Wu 2006; Branco and Rodrigues 2008; Reverte 2009; Aras et al. 2010; Abu and Ameer 2011). The motivation for this paper emerges out of the realisation that most of the research in this sphere of knowledge has explored the corporate social disclosures in the western world, and only a small number of studies have been conducted on the level of CSRD and its determinants in developing economies such as India, Pakistan, Malaysia, Indonesia, Bahrain and other Asian countries. Prior research evidences that there has been very little research on Indian corporate sector despite strong global contribution of the Indian economy. Therefore the context of India as a rapidly growing economy with a historically unique philanthropic social structure and culture will provide a new contribution to the existing literature on corporate social disclosures and the factors determining the level of disclosures. This paper for the first time comprehensively investigates CSRD efforts in Indian corporate sector and aims to make a significant contribution to the existing literature on CSRD by analysing the CSRD made by top performing Indian companies selected on the basis of their market capitalisation. This paper will also analyse the influence of non-financial and qualitative factors on the CSRD practices of the sample companies in addition to the traditional performance determinants such as size, profitability, leverage, industry type and company age. Therefore, this paper aims to make a significant contribution to the existing literature on CSRD by analysing the CSRD made by top Indian companies. The remaining parts of this paper include a meaning and overview of corporate social responsibility (section 2), summery of the relevant literature (section 3), a description of research methodology (section 4), development of hypotheses (section 5) empirical analysis and discussion of the results (section 6) and conclusions (section 7).

2. Meaning and overview of corporate social responsibility: CSR has emerged as an important dimension in company’s activities (Wolf 2002; Vilanova et al. 2009); the increased
globalisation of trade, the rise in the strategic importance of stakeholder relationships, and the growth of corporate image management have been key drivers for the increasing importance of CSR in the corporate world (Azim et al. 2008). CSR has sustained a long standing interest and the attention of academicians, researchers, NGOs and governments. It is also worth noting that CSR still does not have a universal and acceptable definition. The current CSR definitions are ambiguous and have been subjected to differing interpretations (Clarkson 1995; Valor 2005; Kaur and Kansal 2009) and a variety of perspectives have been adopted for CSR (Balasubramanian 2005). Dahlsrud (2008) analysed 37 definitions of CSR originating from 27 authors covering a time span from 1980 to 2003 and found that the definitions covered varied aspects of the corporate social responsibility phenomenon. Consequently, rather than attempting a common or comprehensive definition of CSR, the definition given by the World Business Council for Sustainable Development (WBCSD, 2002) has been used as the operational definition for this paper: “The commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life.”

CSR has been a tradition in India (Sagar and Singal 2003; Balasubramanian 2005) and has been practiced by leading corporations for over 100 years. Founders of the Tata group established the JN Tata Endowment Fund in 1892 to encourage Indian scholars to take up higher studies abroad. The JN Tata Endowment fund was the first of a large number of philanthropic initiatives by the Tata Group. Over generations, members of the Tata family have contributed much of their personal wealth to the many trusts that they have created to benefit society. The Birla group of companies has also been among the pioneers in the field of CSR in India, and this group works in 3000 villages for community development. The Birla Group runs 42 schools in India, which provide quality education to 45,000 children; over 18,000 of them receive a free education. Over the years, the concept has evolved from charity or philanthropy to Corporate Social Responsibility, Corporate Citizenship and Responsible Business (Chahoud et al. 2007; Deora 2011). CSR has ranged from a narrow
economic view (Zenisek 1979) to a comprehensive societal view as “the company’s status and activities with respect to its perceived societal or, at least, stakeholder obligations” (Brown and Dacin 1997, p. 68). The concept has become very relevant, and its strategic significance has been widely accepted (Mintzberg 1978; Ullmann 1985 p. 552; UNDP 2002; Balasubramanian et al. 2005; Baker 2006; Chahoud et al. 2007; Hazlett et al. 2007; Thorne et al. 2008; Polonsky and Jevons 2009). Gyves and O’Higgins (2008) suggest that voluntary and strategic CSR initiatives produce the most sustainable mutual benefit for the company and its social beneficiaries.

3. Literature review

The vast amount of literature devoted to CSRD throughout the world is a testimony to the importance of the concept through the decades. Previous research has highlighted the corporate social disclosures in the western world (Guthrie and Parker 1990; Roberts 1992; Mathews 1993; Gray et al. 1995a b; Gray et al. 2001), specifically in the UK (Ernst and Ernst 1978; Samuel and Brian 2004; Adams and Harte 1998; Gray et al. 1995), Canada (Zeghal and Ahmed 1990), South Africa (Savage 1994), New Zealand (Hackston et al. 1996), Western Europe (Adams et al. 1998), the UK and Germany (Carol 2002), and Australia (Deegan and Gordon 1996; Deegan and Rankin 1999; Deegan 2000 2003; Deegan et al. 2000 2002; Barut 2007). In developing countries, the studies carried out in this domain are quite minimal except for those focusing on Bangladesh. Relatively fewer studies are found in Asian countries, e.g., Hong Kong (Lynn 1992), Singapore (Tsang 1998; Purushotahman 2000), Thailand (Nongnooch and Sherer 2004; Sunee et al. 2006), and South Korea (Ki-Hoon 2007). However, in Bangladesh, CSR has emerged as an important area of research and has been well studied (Imam 2000; Belal 2000 and 2001; Shahed 2002; Sobhan 2006; Belal and Owen 2007; Islam and Deegan 2008; Sobhani et al. 2009; Azim et al. 2009; Khan et al. 2009). Empirical evidence has been found for the inadequacy of the research focus and the subsequent need to zero in on the CSRD phenomenon in developing countries (Gray et al. 1996; Belal 2001; Ahmad and Islam 2009).
India is a fast growing economy, and it has witnessed substantial corporate and economic growth in recent years, particularly in the post-liberalisation era. Former UK Prime Minister Gordon Brown advised that India could emerge as the fastest growing economy in the world in next ten years (Hindustan Times 2010, November 20). As discussed earlier, CSR is a tradition in India, and the Indian corporate sector has always made efforts to make significant social contributions to the society, but only a few studies are found that primarily focus upon the disclosure patterns and the content of social disclosures in the annual reports of India (Singh and Ahuja 1983; Hegde et al. 1987; Cowen 1987; Agarwal 1992; Chander 1992; Vasal 1995; Raman 2006; Chaudhri and Wang 2007; Murthy 2008; Murthy and Abeysekera 2008). The research in South Asian countries in general, and specifically in India, is scanty and scattered around the nature and the extent of the CSR disclosures. There is definitely a need to explore the current level of CSR disclosures made by the top companies in the second largest economy of the world. There is much less research in India on the inter-industry variations and determinants of CSRD (Singh and Ahuja 1983). Singh and Ahuja facilitate the understanding of CSRD and divided their sample into various industries. Within the domain of CSR research, an area of research that has observed growing attention focuses on the determinants of disclosures relating to the corporate social responsibility of the firms. The relationship of CSRD as determined by financial attributes (size, profitability and the leverage of the firms) has been widely investigated and reported in the management and social sciences literature (Haniifa and Cooke 2005; Amran and Devi 2008; Mahadeo et al. 2011; Criso´stomo et al. 2011). Most of these studies have been conducted in western countries and the results are inconclusive with regard to what determines the CSRD in these countries. This paper aims to fill the gap in knowledge regarding the CSRD of large companies operating in India as it examines the level of disclosures made by Indian companies and also analyses the financial and non-financial determinants of social disclosures by these companies. The primary objective of the study is achieved through following research questions:
• What is the level of CSR disclosures made by the top Indian firms?
• Is there any difference in the level of disclosures based on the nature of industries?
• To what extent are the CSRD determined by the size, profitability or risk of the companies?
• Do non-financial attributes of the firms determine the level of CSR disclosures made by Indian companies?

To answer these research questions, this study measures the CSR disclosures of the top 100 companies in India and relates the weighted CSEEE scores (Corporate Social, Environment, Energy and Emissions scores measured on a six point scale) to financial and non-financial determinants. This study is the first to explore non-financial factors as determinants of CSRD in India. An effort has been made to add a new dimension to the literature on the determinants of CSRD by connecting the CSRD in India to corporate recognition and reputation. This study has used traditional financial variables (size, profitability and risk) and surrogates for the non-financial attributes (age, corporate recognition and industry) in the model for exploring the variations in CSRD. This study is innovative because it tries to examine hitherto unexplored areas in CSR reporting and relies upon the extant literature on corporate communication and reputation management to sketch the significant relationship between reputation and respectability to CSRD. This emerging area is interesting to explore because a new philanthropic wave is emerging from the top businessmen throughout the globe that has earned these businessmen a significant personal reputation, e.g., Warren Buffet of Berkshire Hathaway, Ratan Tata of Tata Group, Azim Premji of Wipro Group (Kansal and Singh 2012). Balasubramanian and Kimber (2000) also held the view that academic research on corporate reputation is extensive and developing. By establishing the relationship between CSRD and corporate reputation in addition to testing the traditional determinants of CSRD, the study makes a significant contribution to the existing literature on the determinants of CSRD.
4. Research methodology

The purpose of this research is to investigate the association between CSR disclosure and corporate financial characteristics such as profitability, risk, and size and non-financial factors such as age, industry, corporate reputation and respect. This research objective has been achieved by investigating the CSR disclosures made by the top 100 companies in the Bombay Stock Exchange (BSE) - 500 index selected on the basis of their market capitalisation and relating the disclosure levels with financial and non-financial determinants. The content analysis method is used to measure the CSR disclosures of the sample companies. For this purpose, the CSEEE index is constructed based on an exhaustive list of items of social importance (Hackston and Milne 1996; Hall 2002) and earlier CSRD indices used in India (Singh and Ahuja 1983; Porwal and Sharma 1991; Agarwal 1992). An emerging category, emissions is added to reflect recent changes happening in social and environmental reporting. Some country specific items based on a pilot study of social disclosures made by 20 randomly selected companies in their annual reports are added. In this process, a list of 111 items is prepared and Cronbach’s alpha is used for checking internal consistency of index. The value of Cronbach’s alpha on standardised items (N=111) is .864 and fifteen items with zero variance are excluded from the final index. The final CSEEE index, consists of 96 items, classified under seven themes i.e. Community development (CD), Human resources (HR), Product & services - safety and innovation (PSI), Environment (ENV), Energy (ENG), Emissions (EMN) and ‘ Others CSR’ is recently used by Kansal and Singh (2012). The data with regard to corporate financial characteristics has been taken from the Prowess Database managed by CMIE (Centre for Monitoring the Indian Economy).

The weighted mean disclosure for the year 2009-10 has been calculated using the following formula based on 0-5 rating scale to calculate the extent of CSRD:
\[
CSEEE\text{score}_i(w) = \sum_{j=1}^{J} \sum_{i=1}^{n} d_{ij}
\]

where \( j \) represents the number of companies (80 final companies in the sample); \( d_{ij} = 0 \) if the item has not been disclosed; \( d_{ij} = 1 \) if only one or less than one sentence has been disclosed; \( d_{ij} = 2 \) if more than one sentence has been disclosed; \( d_{ij} = 3 \) if only one quantitative figure is found; \( d_{ij} = 4 \) if the disclosure is non-monetary and comprises more than one figure; \( d_{ij} = 5 \) if the disclosure is expressed in monetary terms; \( n = \) the maximum number of items a company is expected to disclose (96 items)

The simple regression model is used to understand how far CSRD measured through CSEEE score is explained by corporate financial characteristics. The financial explanatory variables used are Sales, Total Assets (proxy for size), Profit after Tax (PAT), Return on Capital Employed (ROCE), Market Prices, i.e., an average of the closing market price for the last 365 days (proxy for the market rate of return), Debt Equity Ratio (an accounting measure of financial leverage) and Beta (the systematic risk relating to stock and financial markets). The natural log of total assets, total sales and PAT is used due to a high level of skewness of these variables (Table 2). Previous studies use total assets/log of total assets as a proxy for the size of the company (Hackston and Milne 1996; Naser and Al-Khatib 2000; Williams 2001; Ho and Wong 2001; Naser et al. 2002; Bozzolan et al. 2003; Eng and Mak 2003; Barnea and Rubins 2004; Gul and Leung 2004; Mohd Nasir and Abdullah 2004; Alsaeed 2005; Haniffa and Cooke 2005; Wilekens et al. 2005; Barako et al. 2006; Cheng and Courtenay 2006; Mohd Ghazali and Wheetman 2006; Said et al. 2009).

Relative measures of profitability have also been widely used by many researchers working on CSRD (Ho and Wong 2001; Bliss and Balachandran 2003; Eng and Mak 2003; Mohd Nasir and Abdullah 2004; Haniffa and Cooke 2005; Wilekens et al. 2005; Barako et al. 2006). Some measures of non-financial variables such as awards and certifications received by a company in various categories of CSR (a proxy for corporate recognition), age and industry have been used to explain the CSR disclosures. The age of the firm has been
extracted from the Prowess database as the number of years since its establishment, as used by previous research studies (Cochran and Wood 1984; Roberts 1992; Moore 2001; Yong et al. 2011). Recognition and respect is measured as the number of CSR categories in which the company has received awards or certifications. Recognition through rewards and certifications has been considered instead of the absolute number of awards because companies can receive multiple awards for the same endeavours from different organisations. A company is regarded as socially recognised and respected for a category if it receives any award/certification in a particular category. For all the six categories of CSR that are considered in this paper (i.e. environment, energy, HR, product safety and innovation, community development and emissions), any company could earn a maximum of six recognitions. A multiple regression model is used to understand the contribution of explanatory variables in determining the CSEEE scores.

CSEEE score = α + β1Age + β2IND1 + β3IND2 + β4IND3 + β5IND4 + β6IND5 + β7IND6 + β8IND7 + β9IND8 + β10Recognition + ε

Where α is the constant, β1, β2, β3 ..... β10 are the regression coefficients and ε is the error term. Table 1 defines the sample selection and provides a brief overview of the selected companies along with the code assignment scheme that is used for analytical purposes.

Table 1- Profile of the sample by industry group and form of ownership

<table>
<thead>
<tr>
<th>Industry Group</th>
<th>Industry</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND1</td>
<td>Refineries and Oil Drilling &amp; Exploration</td>
<td>10</td>
<td>12.5</td>
</tr>
<tr>
<td>IND2</td>
<td>Telecommunications &amp; Computers - Software</td>
<td>10</td>
<td>12.5</td>
</tr>
<tr>
<td>IND3</td>
<td>Steel &amp; Metals - Non Ferrous</td>
<td>7</td>
<td>8.8</td>
</tr>
<tr>
<td>IND4</td>
<td>Power - Generation/Distribution</td>
<td>9</td>
<td>11.3</td>
</tr>
<tr>
<td>IND5</td>
<td>Pharmaceuticals</td>
<td>6</td>
<td>7.5</td>
</tr>
<tr>
<td>IND6</td>
<td>Engineering &amp; Auto</td>
<td>10</td>
<td>12.5</td>
</tr>
<tr>
<td>IND7</td>
<td>Construction &amp; Contracting</td>
<td>6</td>
<td>7.5</td>
</tr>
<tr>
<td>IND8</td>
<td>Cement - Major</td>
<td>3</td>
<td>3.8</td>
</tr>
<tr>
<td>IND9</td>
<td>Miscellaneous</td>
<td>18</td>
<td>23.8</td>
</tr>
<tr>
<td>Form of Ownership</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>-------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 broadly provides an outline of sample companies. The top 100 companies have been selected from the BSE 500 index on the basis of their market capitalisation in the year 2009-10. Out of these 100 companies, the 20 companies in the financial sector have been excluded. Earlier studies have also excluded the financial sector because some of the themes of CSR such as energy, environment, product, and carbon disclosures are not directly relevant to the financial sector companies (Cooke 1989; Hossain et al. 1994; Hossain et al. 1995; Raffournier 1995; Depoers 2000; Haniffa and Cooke 2002; Kuo et al. 2011). For example, Brammer and Pavelin (2008) argued that the financial sector, being a service-oriented industry, has fewer environmental concerns and impacts. This sample of 80 companies is a logical sample to generalise the findings of the study as 80 sample firms belong to 21 industrial sectors according to the BSE classification of industries. Further to the prior literature also evidence similar studies with use of sample size less than 100 companies to understand CSDR level of the corporate sector in a country, for example Hackston and Milne (1996) with a sample of 50 companies; and Mahadeo et al (2009) with 40 companies. These companies have been re-coded into 9 industry groups on the basis of the nature of the industries. Any company that is in an industry group for which the number of companies was ≤2 has been put into the Miscellaneous category. The Miscellaneous industry group is used as the baseline group (it represents the majority group in a random manner) for creating dummy variables in the multiple regression analysis. Refineries and Oil Drilling and Exploration, Telecommunications & Computers – Software and Engineering & Automobiles are the three dominant groups, having 10 companies each and together representing 37.5% of the total sample in the study. Steel & Metals industry consists of 8.8% of the sample, whereas the Power - Generation/Distribution and Construction & Contracting
industries comprise 7.5% of the sample each. There are 77.5% of the sample companies that are privately owned and 22.5% that are under public ownership.

5. Descriptive statistics and hypothesis development

Table 2- Descriptive statistics of CSEEE score and predictor financial variables

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>S. E. Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSEEE</td>
<td>3</td>
<td>120</td>
<td>47.43</td>
<td>3.477</td>
<td>31.100</td>
<td>0.50</td>
</tr>
<tr>
<td>Sales</td>
<td>.00</td>
<td>329987.00</td>
<td>20990.97</td>
<td>5009.28</td>
<td>44804.371</td>
<td>5.01</td>
</tr>
<tr>
<td>Total Assets</td>
<td>68.53</td>
<td>245953.16</td>
<td>24883.37</td>
<td>4214.92</td>
<td>37699.351</td>
<td>3.68</td>
</tr>
<tr>
<td>PAT</td>
<td>-1044.80</td>
<td>16126.32</td>
<td>1833.21</td>
<td>318.64</td>
<td>2849.968</td>
<td>3.33</td>
</tr>
<tr>
<td>ROCE (%)</td>
<td>-20.16</td>
<td>134.33</td>
<td>17.88</td>
<td>2.14</td>
<td>19.13</td>
<td>3.13</td>
</tr>
<tr>
<td>M.P</td>
<td>32.99</td>
<td>4024.63</td>
<td>610.79</td>
<td>75.44</td>
<td>670.508</td>
<td>2.42</td>
</tr>
<tr>
<td>Debt Equity Ratio</td>
<td>0</td>
<td>4</td>
<td>.55</td>
<td>.084</td>
<td>.751</td>
<td>2.06</td>
</tr>
<tr>
<td>Beta</td>
<td>.31</td>
<td>2.04</td>
<td>1.0215</td>
<td>.04565</td>
<td>.40834</td>
<td>0.50</td>
</tr>
</tbody>
</table>

N= 80, Sales, Total Assets and PAT are in ₹Crores (one crore rupees= 10 million rupees). The market prices of stock are taken as the average of the closing Price over 365 days.

Table 2 shows the descriptive statistics of the CSR disclosures of the 80 companies in the sample. The mean CSEEE score per company is 47.43. This score is very low compared to a total possible score of 480 (i.e., 96 indicators* maximum score 5). The range of CSEEE scores widely varies from 3 to 120 for the sample companies. The literature points towards the CSR disclosures being low in developing countries in general and India in particular (Chaudhary and Wang 2007; Shobani et al. 2009; Azim et al. 2009; Menassa 2010). The average sales are ₹209,909 million and the mean total assets and profit after tax are ₹248833 million and ₹18332 million. The descriptive statistics show that the data are positively skewed in the CSEEE scores, indicating that most of the companies make less than the average number of disclosures because the data lies on the left side of the mean.

Table 3- Zero order correlation matrix between CSEEE score and corporate financial variables
Table 3 depicts the correlation matrix of CSEEE scores and the financial attributes of the sample companies. P-values below 0.05 and 0.01 indicate statistically significant non-zero correlations at the 95.0% and 99% confidence level. Two values of correlation deserve particular attention here, i.e., the CSEEE score is weak, but it is positively and significantly related to the total assets ($r=0.331$) and to PAT ($r=0.352$). There are some other significant correlations among the independent variables, but these correlations do not present a serious risk of multicollinearity in the data while interpreting the regression results as $r<0.8$ in all cases (Hanniffa and Cooke 2005, p. 414; Field 2005, p. 186). Therefore, a Durbin Watson test has been used as a check for the multicollinearity issue. All of the values of the DW statistics are found to be well within the limits of 1 to 3 (Field, 2005 p170).

5.1 The relationship between CSR disclosures and financial corporate characteristics

5.1.1 CSR disclosures and size of the companies: The existing literature leads us to propose and test the hypothesis that larger firms disclose CSR information to a greater extent than smaller firms (Purushotahman et al. 2000; Gray et al. 2001; Adams 2002; Cowen
et al. 2004; Hossain and Reaz 2007; Aras et al. 2010; Siregar and Bachtiar 2010). The research studies show a significant positive association between the company size and corporate social disclosure. The existing literature reported that the size of the company influences the social disclosures made by the company (Dierkes and Preston 1977; Pang 1982; Patten 1991; Roberts 1992 Hackston and Milne 1996; Adams et al. 1998; Brown and Deegan. 1999). Cowen et al. (2004) asserted that the corporate size and the industry category are only correlated with certain types of CSRD. A study conducted by Porwal and Sharma (1991) argued that larger Indian companies in both the public and private sectors made more disclosures than the smaller companies as measured by size of the assets.

It is reasonable that the larger companies make more disclosures because large companies tend to receive more attention from the general public and therefore are under greater pressure to exhibit social responsibility. Moreover, these companies can have more shareholders who are concerned with the social programs undertaken by the company (Cowen et al. 1987), more visibility in supply chain management (CSRWORLD survey report 2002 series), a greater need to legitimise their actions and limit governmental interference in their business activities (Purushotahman et al. 2000), more infrastructure and higher cash flows available at their disposal (Criso´stomo et al. 2011). Day and Woodward (2009) have proposed that more disclosures by large companies can indicate a resource issue. Therefore, the directional hypothesis is formulated for relating CSRD to the size of the companies.

H1: Large-sized companies tend to disclose more CSR information than small-sized companies.

H1a: Firms with a higher level of sales disclose CSR information to a greater extent than firms with a lower level of sales.

H1b: Firms with a higher level of total assets disclose CSR information to a greater extent than firms with a lower level of total assets.

5.1.2. The relationship between CSR disclosures and profitability
The literature appears to be incoherent on the research results that examine corporate profitability as a determinant of CSRD. The research presents a mixed reaction in the form of a positive, a negative or an uncertain relationship between the profitability of the firms and CSRD. Some researchers fail to find any association between profitability and CSRD (Porwal and Sharma 1991; Patten 1992; Hackston et al. 1996; Aras et al. 2010). However, some researchers have found a positive and significant relationship between profitability and CSRD (Roberts 1992; Waddock and Gravess 1997; Ab Manan and Mohd Iskandar 2003; Jaffar et al. 2007; Pahuja 2009; Oeyono et al. 2011). Criso’s stomo et al. (2011) present the argument that only excess cash flows arising through higher portability can justify spending resources on CSR to the shareholders and creditors. A few studies have also asserted that there is a negative relationship between CSR initiatives and disclosures and financial performance on the premise of the high cost of extensive charitable contributions, community development plans, the maintenance of facilities in economically depressed locations, the establishment of environmental protection procedures compared to the socially less responsible firms (McGuire et al. 1988; Williams et al. 1993; Walley and Whitehead 1994; Siregar and Bachtiar 2010; Rahman 2011).

So far as the market rate of return is concerned, there are some studies indicating that CSR has an impact on the financial markets (Spicer 1978; Anderson and Frankle 1980; Shane and Spicer 1983). Some researchers examined the value-relevance of corporate environmental reputation (CER) information and its potential usefulness to investors in predicting future earnings (Garcia-Ayuso and Larrinaga 2003; Hussaineey and Salama 2010). These researchers contend that the firms with higher CER scores exhibit higher levels for the share price anticipation of future earnings than the firms with lower CER scores. Saleh et al. (2010) examined the relationship between CSR disclosure and the market prices of stock and reported that CSR activities can be leveraged to attract institutional investors to actively invest in public limited companies with strong CSR practices. Thus, empirical results provide evidence that CER information influences market prices. Researchers are more or less
clueless regarding the likelihood of market prices influencing CSR disclosures. To gain better insight into the influence on CSRD of profitability ( interchangeably used as corporate financial performance (CFP) or financial performance in the existing literature), profitability has been considered using three approaches: first, the absolute approach, i.e., profit after tax (PAT); second, a relative measure return on capital employed (ROCE); and third, a market based measure, i.e., market price for the shares of the respective company. The above discussion leads to the development of the following hypotheses exploring the connection between CSRD and financial performance.

H2: Firms with higher profitability disclose CSR information to a greater extent than those with lower profitability.

H2a: Firms with higher profit after tax disclose CSR information to a greater extent than those with lower profit after tax.

H2b: Firms with a higher ROCE disclose CSR information to a greater extent than those with a lower ROCE.

H2c: Firms with higher stock market prices disclose CSR information to a greater extent than those with lower stock prices.

5.1.3. CSRD and risk

The relationship between CSRD and risk is not as widely explored by the academic researchers as CSRD’s relationship with firm size and profitability. A significant relationship between CSRD and risk is traced in the earlier literature, highlighting that the firms with a higher degree of debt equity ratio make more CSRD (Purushotahman et al. 2000; Khelif and Souissi 2010). Siregar and Bachtiar (2010) concluded that leverage does not have a significant impact on corporate social reporting. Based on the empirical findings of the above studies, the following hypothesis is suggested to test the relationship between CSRD and risk. Risk is considered in terms of financial leverage measured through the DER (debt
equity ratio) and the market systematic risk, Beta. The definitions of DER and Beta are given in Appendix 2.

H3a: Firms with higher financial leverage disclose CSR information to a greater extent than firms with lower financial leverage.

H3b: Firms with higher values for beta disclose CSR information to a greater extent than firms with lower values for Beta.

5.2. The relationship between CSR disclosures and non-financial corporate characteristics

The research community working in the CSR domain recently tried some new combinations of financial and non-financial attributes to explain CSRD, e.g., the political economy framework (Purushothahman et al. 2000), lower managerial ownership (Eng and Mak 2003), the stage of internationalisation and general contextual factors such as social and cultural context (Kotonen, 2009), ownership dispersion, analysts following/recommendations, audit firm size, and institutional ownership, (Khilf and Souissi 2010; Ghazali 2007 and Saleh et al. 2010). Therefore, this paper adopts non-financial variables such as the age of the firm, the industry type and the corporate reputation, a totally unexplored variable, in addition to the financial variables as the determinants of CSRD to explain the CSRD of Indian firms.

5.2.1. CSR disclosures and industry

The insights provided by the literature present a mixed answer to the question of whether the industry to which a firm belongs influences its communication of social information. There are a large number of studies, mostly conducted in developed countries, establishing that the industry sector is significantly associated with the amount of corporate social disclosure (Cowen et al. 1987; Patten 1991; Patten 1992; Roberts 1992; Tilt 1994; Hackston and Milne 1996; Adam et al. 1998; Imam 2000; Gray et al. 2001; Newson and Deegan 2002; Stanton and Stanton 2002; Graafland et al. 2003; Decker 2004; Rizk et al. 2008 Kotonen 2009; Pahuja 2009). On the contrary, Low (1985) related the level of corporate social disclosure to
industry, and he could not find any association. However, other researchers trying to associate corporate social reporting with industry size could not gather enough evidence to confirm or refute the association of CSRD with industry (Andrew et al. 1989; Purushotahman et al. 2000; Sunee et al. 2006). Furthermore, inter-industry comparison studies show that CSRD in some industries (banking) were significantly fewer than other industries, i.e., food and beverages and hotels (Tsang 1998). The relationship between CSRD and industry groups is not widely explored. However, some studies indicate that industry specific factors do influence CSRD; for instance, Uday (2008) suggested that the concept of corporate social disclosure has not penetrated too deeply in the insurance industry.

The relationship between industry and corporate social disclosure can occur due to consumer perceptions, government pressure (Cowen et al. 1987) or the environmental or social impacts of a particular industry (Pang 1982; Cowen et al. 1987; Dierkes and Preston 1977; Patten 1991; Roberts 1992; Hackston and Milne 1996). The need for CSR, and consequently CSRD, can appear due to the supply of resources peculiar to that industry; for example, Murthy and Abeysekera (2008) suggested that a shortage of skilled labour in the software sector in India might have led to the CSRD practices in the human resources category. The above discussion forms the foundation for formulating the following hypothesis associating industry and CSRD.

H4: The specific industry to which a firm belongs establishes/determines the level of CSR disclosures by the firm.

5.2.2. CSRD and age: Previous research established that the age of the firm influences the CSR involvement of the firm and that long-established firms are likely to make more voluntary social disclosures. Some researchers reported a positive relationship (Roberts 1992; Moore 2001; Zakimi and Hamid 2004; Cormier et al. 2005), whereas Cochran and Wood (1984) and Rahman et al. (2011) denied any relationship between the age of the firm and the CSR disclosures.
The hypothesis testing the relationship between CSR D and age follows. Because many researchers report the existence of this relationship, the directional hypothesis is formulated as follows:

H5: Long-established companies disclose more CSR information than newly established companies.

5.2.3. **CSRD and corporate recognition and respectability**: ‘The reputation theory’ might explain the relationship between recognition and CSR disclosures. According to the American Heritage Dictionary (1970: 600) ‘reputation’ is ‘the general estimation in which one is held by the public’. Reputation is a measurement of organisational character (Devine and Halpern 2001), and Bebbington et al. (2008) propose that a negative social or environmental incident affects the organisation’s reputation, which in turn has a second order impact on corporate legitimacy. The companies seeking to establish a better reputation need to fulfil their ethical and social responsibilities in addition to their economic and legal responsibilities (Schreiber 2008). An extant body of reputation management and corporate communication literature cite CSR as an aspect, an appeal and an activity that influences the reputation of a firm (Fombrun and Shanley 1990; Zyglidopoulos 2001; Siltaoja 2006; Hidayat 2011). The work of Adams (2008) reacts to reputation theory. However, some recent studies have suggested that CSR is a key driver of corporate reputation given its potential to foster this intangible, but very important, resource for the organisation (Caves and Porter 1977; Barney 1991; Fombrun 1996; Brown and Logsdon 1999; Mahon 2002; Lewis 2003; Ricks 2005; Kristoffersen 2005). Aspen (2008) reported the findings of a survey suggesting that ‘reputation and image’ are the main benefits of meeting social responsibilities. In addition, literature provides evidence that the firms use CSR as a means to influence public perceptions, to legitimise a firm’s actions (Saleh et al. 2010; Abu and Ameer 2011; Alniacik et al. 2011), to protect and enhance its reputation and image (Neu et al. 1998; Hooghiemstra 2000; Adams 2002; Saleh et al. 2010; Abu and Ameer 2011) and for the increased visibility of the firm (Burke and Logsdon 1996).
Enhanced CSRD leads to the realisation of different benefits through corporate reputation. CSR reporting enhances corporate reputation (Kuo 2011) confirming the findings of previous studies (Turban and Greening 1996; Fombrun et al. 2000; Friedman and Miles 2001; Lewis 2003; Fombrun 2005; Kolk 2005; Adams and Zutshi 2006; Bertels and Peloza 2008; Ferns et al. 2008). The positive or negative CSR information for a firm enhances or weakens the intentions of the key stakeholders towards the company (Fombrun and Shanley 1990; Turban and Greening 1997; Mitchell et al. 1997; Agle et al. 1999; Lafferty and Goldsmith 1999; Greening and Turban 2000; Ahmed and Sulaiman 2004; Mohr and Webb 2005; Sen et al. 2006; Alniacik et al. 2011) and makes it easier to charge premium prices (Klein and Leffler 1981; Milgrom and Roberts 1986), attract better applicants (Stigler 1962), access capital markets (Beatty and Ritter 1986), and attract investors (Milgrom and Roberts 1986). Past empirical studies have also argued that CSR reporting has become an increasingly important part of how stakeholders assess the company’s reputation (Bebbington et al. 2008; Fombrun and Gardberg 2000; Lewis 2003; Zylidopoulos 2003).

Furthermore, corporate reputation has a positive relationship with stock market returns (Brown, 1998) and a negative relationship with social risk (Spicer 1978; Herremans et al. 1993). Therefore, corporate managers should employ CSR to enhance the reputation of their company in the eyes of its stakeholders and should disclose this CSR Information to influence the stakeholders’ intentions because various stakeholders want to see positive contributions to social and environmental causes (Alniacik et al. 2011; Melo and Garrido 2011). Corporations also need to disclose their efforts because CSR disclosures build the corporate reputation and create value (Hooghiemstra 2000; Dawkins 2004; Rowe 2006). The corporate reputation leads to reputational ratings, and firms with high corporate social performance (CSP), reputational ratings can improve relationships with bankers and investors and thus facilitate their access to capital (Spicer 1978). These companies can also attract better employees (Turban and Greening 1997; Greening and Turban 2000) or
increase their current employees’ goodwill, which in turn can improve financial outcomes (Davis 1973; McGuire et al. 1988; Waddock and Graves 1997).

**Exhibit 1- Connect between CSR, CSRD and Corporate Reputation and Respect**

![Diagram showing the connect between CSR, CSRD and Corporate Reputation and Respect]

The trend of CSR reporting is not only gaining momentum in developed countries; emerging and developing countries are being pressured to follow the lead (Othman et al. 2011). The governments in developing countries (for instance, Malaysia) encourage companies to take more CSR initiatives and to follow better CSR disclosure practices to boost their reputations (Bursa Malaysia 2011). The Indian government rewards the efforts of the companies doing good CSR work in various categories. These CSR endeavours not only benefit the wider group of stakeholders but also the company itself in terms of recognition, respect and financial benefits, which more than offset the cost incurred these initiatives. Some examples can certainly be quoted. Prickett (2007) notes that the award-winning corporate social responsibility initiatives undertaken by London cab firm Radio Taxis Group, which became carbon neutral, earned ‘Capital gains’ because it gained good publicity, an ISO 140041 accreditation and a financial management reward by spending an annual cost of £120,000 on being carbon neutral. Some examples are reported from India as well. Excel Industry took initiative to recycle garbage in Mumbai (India) and earned an enormous reputation as a business house through this innovative, volunteer effort for the benefit of the community at large (Gupta 2005). Another Indian company, Hindustan Construction Company (HCC), gained a huge reputation when they installed equipment that could clean up and make ground water usable for construction. Earlier, this company was buying water for ₹100,000 a
day from the local municipality and cost of equipment of ₹3,000,000 was recovered in a month" (Kumar 2011).

In India, a ‘family-centred’ style of management is common because most of the large corporations in India are controlled by family groups (Sundar 2000). The CSR model working in India embeds CSR as ‘the business case’ combined with the ‘caring model’ (Balasubramanian 2005). The examples in the preceding paragraphs show that the firms with caring attitudes earn significant reputation and corporate social ratings. Wu (2006) opined that these reputational ratings assume that CSP reputations are good reflections of underlying CSR values and behaviours. Therefore, the companies seek high rankings in respected publications. In India, there is no formal and widely accepted mechanism for corporate reputation ratings such as Kinder Lydenberg Domini (KLD), Fortune, Moskowitz, or Business Ethics to hallmark the corporate social performance except for a rating provided by Karamyog, an initiative of a Charitable Trust (Karmayog 2004).

Moreover, in India, the CSR-oriented CEO or key corporate figure is ‘highly respected’ (Sundar, 2000; Balasubramanian, 2005) by the government and other social agencies. Mrs. Rajashree Birla, a Director on the Board of all the major companies of Aditya Birla Group (Grasim, Hindalco, Aditya Birla Nuvo and UltraTech Cement Ltd.) received Padma Bhushan Award 2011 (the highest civilian award in India) and the ‘Corporate Citizen of the Year 2011’ award for the CSR efforts of Aditya Birla Group. There are various other awards and certifications announced by the government, the leading management schools, and the international and national business dailies, and journals (some examples are given in Appendix 3).

These awards by governments and various other bodies are certainly a reflection of benchmark social and environmental performance by the companies. For these reasons, companies in India flaunt their CSR efforts in various business dailies, annual reports, and websites. Annual reports, being the most authoritative form of corporate communication, are a prime vehicle for this increasingly necessary reputational work (White et al. 2004).
Furthermore, Abu and Ameer (2011) contend that the better performing companies are more concerned about their CSR activities and their CSR disclosures are easier to read because they want their stakeholders to easily comprehend the messages in the disclosures, thereby laying the foundation for an enhanced reputation. Based upon the above deliberations, the following hypothesis is proposed.

H6: Companies whose CSR efforts are recognised through award and appreciation make more disclosures than the non-recognised or less recognised companies.

Analysis and Discussion:

Table 4: Regression results for CSRD on financial determinants

<table>
<thead>
<tr>
<th>Model</th>
<th>Independent variable (Expected sign)</th>
<th>Intercept (P value)</th>
<th>Slope (P value)</th>
<th>Adjusted R² (%)</th>
<th>F statistic</th>
<th>Durbin–Watson statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sales (+ve)</td>
<td>14.4451 (0.5091)</td>
<td>3.65543 (0.1293)</td>
<td>3.04</td>
<td>2.35</td>
<td>1.72</td>
</tr>
<tr>
<td>2</td>
<td>Total Assets (+ve)</td>
<td>-17.8376 (0.4991)</td>
<td>6.86606 (0.0151)*</td>
<td>3.56</td>
<td>6.17</td>
<td>1.77</td>
</tr>
<tr>
<td>3</td>
<td>PAT(+ve)</td>
<td>-12.9984 (0.5299)</td>
<td>8.72416 (0.0041)**</td>
<td>10.62</td>
<td>8.80</td>
<td>1.75</td>
</tr>
<tr>
<td>4</td>
<td>ROCE(+ve)</td>
<td>6.4572 (0.0000)**</td>
<td>0.0133801 (0.6181)</td>
<td>0.32</td>
<td>0.25</td>
<td>1.72</td>
</tr>
<tr>
<td>5</td>
<td>Market Prices (+ve)</td>
<td>46.1866 (0.0000)**</td>
<td>0.00147 (0.8346)</td>
<td>0.05</td>
<td>0.04</td>
<td>1.68</td>
</tr>
<tr>
<td>6</td>
<td>Debt Equity ratio (+ve)</td>
<td>6.93868 (0.0000)**</td>
<td>-0.437738 (0.5218)</td>
<td>0.53</td>
<td>0.41</td>
<td>1.67</td>
</tr>
<tr>
<td>7</td>
<td>Beta (+ve)</td>
<td>54.4416 (0.0000)**</td>
<td>-7.4073 (0.3991)</td>
<td>0.91</td>
<td>0.72</td>
<td>1.68</td>
</tr>
<tr>
<td>8</td>
<td>Age (+ve)</td>
<td>33.6681 (0.0000)**</td>
<td>0.340056 (0.0239)*</td>
<td>6.37</td>
<td>5.31</td>
<td>1.76</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 4 presents evidence that the size of the company, measured in terms of the total assets, determines the social disclosures made by the company. The Beta coefficient of the total assets varies significantly from zero (β=6.87), and $R^2= 3.56$ is statistically significant at
a 95% level of confidence. This finding is consistent with earlier studies that argued that the CSR disclosures of companies are influenced by their size (Dierkes and Preston 1977; Pang 1982; Patten 1991; Roberts 1992; Hackston and Milne 1996; Adams et al. 1998; Brown and Deegan 1999; Purushothaman et al. 2000; Gray et al. 2001; Adams 2002; Cowen et al. 2004; Hossain and Reaz 2007; Aras et al. 2010). However, the relationship of total sales, as a measure of the size of the firm, with CSRD is not significant. The company’s financial performance in absolute terms, i.e., PAT, explains a significant proportion of the variation in CSRD (R²= 10.62%). However, profitability in relative terms, i.e., ROCE, and the market based return of profitability, do not significantly contribute towards an explanation of the variations in CSRD. Earlier research by Wu (2006) also confirms that an accounting-based measure of profits is a better predictor of social performance than the market-based measures. These findings support the slack-resource theory, suggesting that the more profitable firms are more engaged in CSR because they have more organisational slack.

The statistical results for DER and beta as the determinants of CSRD do not support hypothesis H3a and H3b because R² at 0.53% and 0.91%, respectively, is not significant at a 95% level of confidence. Similar to the earlier results reported by Branco and Rodrigues (2008), we have found a negative relationship between the CSRD and the financial leverage of the firm (β= -.44). The coefficient for market risk Beta for CSRD is also negative at 7.41. Thus, contrary to our expected relationship, we find that a significant relationship does not exist between risk (either financial or market) and CSRD. The earlier literature also substantiates that leverage does not influence CSRD in a statistically significant manner (Haniffa and Cooke 2005 p.395). Roberts (1992) and Hossain et al. (1994) opined that a higher level of debt compels a firm to disclose more environmental disclosures.

The age of the firm is a statistically significant determinant of the CSRD made by the firm with R²= 6.37% and β coefficient= 0.34, significant at a 95% level of confidence. Because the beta coefficient is positive, the relationship is direct, concluding that the older firms make more social disclosures. Zakimi and Hamid (2004) and Cormier et al. (2005) also found that
the age of a business significantly influences the disclosure patterns of the firm. This relationship could be because long-established firms have received more benefits from society than newly established firms and, with time, the relationship matures and the firm perceives a greater role as a leader and develops a greater sense of responsibility towards society. In India, the value system is very strong; the firms carry on CSR endeavours generation to generation as, for example, with Tata and the Birla group. These examples explain and support the viewpoint that CSR is a tradition in India.

**Table 5a: Total CSEEE score across industry grouping**

<table>
<thead>
<tr>
<th>Industry Groups</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refineries and Oil Drilling &amp; Exploration</td>
<td>52.50</td>
<td>29.372</td>
<td>.881</td>
</tr>
<tr>
<td>Telecommunications &amp; Computers - Software</td>
<td>43.50</td>
<td>29.319</td>
<td>.826</td>
</tr>
<tr>
<td>Steel &amp; Metals - Non Ferrous</td>
<td>82.14</td>
<td>32.143</td>
<td>-.037</td>
</tr>
<tr>
<td>Power - Generation/Distribution</td>
<td>56.00</td>
<td>30.046</td>
<td>-.005</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>36.67</td>
<td>28.353</td>
<td>.734</td>
</tr>
<tr>
<td>Engineering &amp; Auto</td>
<td>45.60</td>
<td>29.330</td>
<td>.636</td>
</tr>
<tr>
<td>Construction &amp; Contracting</td>
<td>30.00</td>
<td>30.705</td>
<td>1.378</td>
</tr>
<tr>
<td>Cement - Major</td>
<td>38.67</td>
<td>12.503</td>
<td>1.621</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>41.21</td>
<td>31.336</td>
<td>.391</td>
</tr>
<tr>
<td>Total</td>
<td>47.43</td>
<td>31.100</td>
<td>.501</td>
</tr>
</tbody>
</table>

**Table 5b: ANOVA Table for CSEEE score by industry grouping**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>16484.5</td>
<td>8</td>
<td>2060.57</td>
<td>2.33</td>
<td>0.0275*</td>
</tr>
<tr>
<td>Within groups</td>
<td>62666.2</td>
<td>71</td>
<td>882.623</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (corr.)</td>
<td>79150.8</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

The prominent findings in this comparative analysis are summarised in Table 5a, which provides an overview of the sample companies categorised into nine industries. The study reveals a mean level of CSR disclosure of 47.43, indicating that, on average, the top Indian companies disclose 47.43 scores against a maximum score of 480, i.e., approximately 10% of all possible CSR information is in their annual reports. The table further indicates that the
highest scoring industry is Steel & Metals - Non Ferrous (82.14), followed by followed by Power - Generation/Distribution (56) and Refineries and Oil Drilling and Exploration (52.5). The Construction & Contracting (30) and Pharmaceuticals industries (36.67) made low disclosures. The cement industry has the lowest overall variability in CSRD. The CSEEE scores for Steel & Metals and Power - Generation/Distribution depict negative skewed data, implying that many of the companies in these industries have higher CSR disclosures than the average overall disclosures by all industries. For all of the other industries, the CSEEE scores are positively skewed showing most of the clusters of data on the left side of average, meaning that the Telecommunications & Computers – Software, the Pharmaceutical, the Engineering & Auto, the Construction & Contracting, the Cement and the Miscellaneous industries categories are making fewer disclosures. The high values of the standard deviations, ranging from 12% to 32%, support the hypothesis that the CSRD practices of firms are influenced by the industry groupings, proving that industry grouping is a statistically significant factor in determining CSR disclosures. A one-way analysis of variance (ANOVA) has been conducted for the CSEEE score to test whether there are any significant differences among the means of the CSEEE scores for the various industries. The F-ratio, equal to 2.3346 and a P-value <0.05 indicate that there is a statistically significant difference between the mean CSEEE score from one industry to another at the 95.0% confidence level (Table 5b). Therefore, it is concluded that the number of CSRD by a firm is determined by the industry to which it belongs.

Table 6a: Summary statistics for CSEEE scores and awards and certifications

<table>
<thead>
<tr>
<th>Awards and Certifications</th>
<th>Count</th>
<th>Average</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>21</td>
<td>20.90</td>
<td>16.2293</td>
</tr>
<tr>
<td>1</td>
<td>18</td>
<td>44.44</td>
<td>24.2031</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>55.33</td>
<td>24.4813</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>51.14</td>
<td>32.6045</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>72.56</td>
<td>28.6361</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>74.2</td>
<td>45.5104</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>107.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>46.88</td>
<td>31.6529</td>
</tr>
</tbody>
</table>
The table 6a explains the summary statistics for the CSEEE score categorised into various groups based on the number of awards/certifications received by the companies. The greater the number of awards received by companies, the higher the inclination to disclose the CSR activities. The 21 companies that received no awards/certifications during the year have the lowest CSEEE score at 20.90, and for the next 18 companies that received at least one award/certification the disclosure are noticeably higher at 44.44. The companies that have received four, five and six awards/certifications achieve CSR disclosures of 72.56, 74.2 and 107, respectively. Thus, the companies whose efforts have been recognised through awards/certifications are encouraged to make the maximum communication of their CSR initiatives. The recognition of CSR efforts encourages the corporate world to make greater CSR efforts and to disclose them. This relationship confirms the public relations role of CSR communications and its consequent enhancement of goodwill and image in the eyes of the public. The existing literature also supports this finding. Sumiani et al. (2007) reports that the awards/prizes/certifications made by a government for example, the Malaysia Environmental and Social Reporting Awards (MESRA) have some level of influence on the voluntary environmental reporting in Malaysia.

Table 6b: ANOVA for CSEEE score by awards and certifications

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>28667.1</td>
<td>6</td>
<td>4777.85</td>
<td>6.91</td>
<td>0.0000**</td>
</tr>
<tr>
<td>Within groups</td>
<td>50483.7</td>
<td>73</td>
<td>691.557</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (Corr.)</td>
<td>79150.8</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contrast</th>
<th>Sig.</th>
<th>Difference</th>
<th>+/- Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 1</td>
<td>*</td>
<td>-23.5397</td>
<td>16.8348</td>
</tr>
<tr>
<td>0 – 2</td>
<td>*</td>
<td>-34.4286</td>
<td>18.9661</td>
</tr>
<tr>
<td>0 – 3</td>
<td>*</td>
<td>-30.2381</td>
<td>18.0835</td>
</tr>
<tr>
<td>0 – 4</td>
<td>*</td>
<td>-51.6508</td>
<td>20.881</td>
</tr>
<tr>
<td>0 – 5</td>
<td>*</td>
<td>-53.2952</td>
<td>26.0804</td>
</tr>
<tr>
<td>0 – 6</td>
<td>*</td>
<td>-86.0952</td>
<td>53.6443</td>
</tr>
<tr>
<td>1 – 4</td>
<td>*</td>
<td>-28.1111</td>
<td>21.3967</td>
</tr>
<tr>
<td>1 – 5</td>
<td>*</td>
<td>-29.7556</td>
<td>26.495</td>
</tr>
<tr>
<td>1 – 6</td>
<td>*</td>
<td>-62.5556</td>
<td>53.8471</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
There is a statistically significant difference between the mean CSEEE scores on the basis of the different levels of recognition and respect (measured in terms of the awards and the certifications earned in different dimensions of CSR) at a 95.0% confidence level (F-ratio=6.91 and P< 0.05 and .001). The table 6b shows significant differences between the CSR disclosures of the companies that receive high recognition (awards in 4 or more dimensions of CSR) and those from companies who have received an award in any one dimension. Moreover, the non-award receiving companies disclose significantly less than the companies that receive awards or certifications even in one dimension.

**Exhibit 2- CSEEE scores and Awards and Certifications**

Thus, the hypothesis proposing that the more recognition a company gains for its CSR efforts, the greater the number of its corporate social disclosures cannot be rejected at a 95% level of significance. The higher respect and a greater reputation received by the companies leads to more voluntary disclosures of CSR information.

**6.1. CSRD and non-financial variables: A statistical substantiation through a multiple regression model**

The inferential statistics discussed above indicate that non-financial determinants, namely the age of the company, the industry and the recognition/reputation all influence the CSR
disclosures. A multiple regression analysis has been conducted to understand the interplay of these independent variables with CSRD.

**Table 7: T- statistics of the intercept and the Beta coefficients for non-financial variables**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Standard Error</th>
<th>T Statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>36.054</td>
<td>9.06698</td>
<td>3.9765</td>
<td>0.0002**</td>
</tr>
<tr>
<td>IND1</td>
<td>-16.261</td>
<td>10.2014</td>
<td>-1.5940</td>
<td>0.1155</td>
</tr>
<tr>
<td>IND2</td>
<td>-25.377</td>
<td>10.4958</td>
<td>-2.4178</td>
<td>0.0183*</td>
</tr>
<tr>
<td>IND3</td>
<td>0.5602</td>
<td>11.7404</td>
<td>0.0477</td>
<td>0.9621</td>
</tr>
<tr>
<td>IND4</td>
<td>-12.792</td>
<td>10.4111</td>
<td>-1.2287</td>
<td>0.2233</td>
</tr>
<tr>
<td>IND5</td>
<td>-9.737</td>
<td>12.8654</td>
<td>-0.7568</td>
<td>0.4517</td>
</tr>
<tr>
<td>IND6</td>
<td>-10.745</td>
<td>10.5760</td>
<td>-1.016</td>
<td>0.3132</td>
</tr>
<tr>
<td>IND7</td>
<td>-19.434</td>
<td>12.7404</td>
<td>-1.5254</td>
<td>0.1317</td>
</tr>
<tr>
<td>IND8</td>
<td>-24.127</td>
<td>16.3884</td>
<td>-1.4722</td>
<td>0.1455</td>
</tr>
<tr>
<td>Age</td>
<td>0.0920</td>
<td>0.132939</td>
<td>0.692128</td>
<td>0.4912</td>
</tr>
<tr>
<td>Awards and Certifications</td>
<td>9.9246</td>
<td>1.97019</td>
<td>5.03738</td>
<td>0.0000**</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 7 depicts the p values associated with the estimates of different variables. The b coefficient that is associated with corporate reputation (9.92) is positive, indicating that there is a positive relationship between rewards and certifications and CSRD, where the probability of the t-statistic (5.034) for the b coefficient is <0.001. It can be concluded that there is a statistically significant relationship between awards and certifications and CSRD.

**Table 8- Analysis of variance of CSEEE score across non-financial explanatory variables**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>32147.8</td>
<td>10</td>
<td>3214.78</td>
<td>4.72</td>
<td>0.0000**</td>
</tr>
<tr>
<td>Residual</td>
<td>47002.9</td>
<td>69</td>
<td>681.202</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (Corr.)</td>
<td>79150.8</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R-squared (adjusted for d.f.) = 40.616 percent
Standard Error of Est. = 26.0998
Durbin-Watson Statistic = 1.72079 (P=0.0951)

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

The minimum ratio of valid cases to independent variables for the multiple regressions is 5 to 1. With 80 valid cases and 3 independent variables, the ratio for this analysis is 26.67 to 1, which satisfies the minimum requirement. In addition, the ratio of 26.67 to 1 satisfies the preferred ratio of 15 to 1. Table 8 shows the results from fitting a multiple linear regression.
model to describe the relationship between the CSEEE score and the three explanatory variables industry, age and corporate reputation.

The equation of the fitted model is

\[ \text{CSEEE score} = 36.0548 - 16.2618 \times \text{IND1} - 25.3772 \times \text{IND2} + 0.56029 \times \text{IND3} - 12.7923 \times \text{IND4} - 9.73751 \times \text{IND5} - 10.7452 \times \text{IND6} - 19.4346 \times \text{IND7} - 24.127 \times \text{IND8} + 0.0920108 \times \text{Age} + 9.92461 \times \text{Awards and certifications} \]

The probability of the F statistic (4.72) for the overall regression relationship for all independent variables is <0.001, less than or equal to the level of significance of 0.05. We reject the null hypothesis proposing that there is no relationship between the set of all independent variables and the dependent variable \( R^2 = 0 \). Thus, there is a statistically significant relationship between the variables at the 95.0% confidence level. The R-squared statistic indicates that the model as fitted explains 40.616\% of the variability in CSEEE scores. The adjusted R-squared statistic (32\%) is more suitable in this model due to the number of explanatory variables. The standard error of the estimate shows that the standard deviation of the residuals is 26.10. Because the P-value of the DW test is greater than 0.05, there is no indication that there is serial autocorrelation in the residuals at the 95.0\% confidence level.

It has been found that profit after tax, total assets, industry affiliation and corporate reputation have a significant association with the CSEEE score at a 5\% level of significance. In simple terms, it can be concluded that size (measured in term of total assets) and financial performance (PAT) have a statistically significant relationship with CSR disclosures and the non-financial factors also have a significant influence on the level of CSR disclosures. Those companies have been recognised for their efforts through awards and other social ratings are motivated to show more CSR and disclose their CSR activities to different stakeholders. These actions lead to enhanced CSR efforts by the companies to maintain their images as more socially responsible companies.
7. Conclusion

This paper examined the current level of corporate social reporting in a well represented and fast emerging Indian economy with a large corporate sector. This is a comprehensive study on CSRD in India and it investigated various financial and non-financial determinants of CSRD. The study found that the overall disclosures are low and the results are similar to the results reported by earlier studies in the developing countries (Chaudhary and Wang 2007; Shobani et al. 2009; Azim et al. 2009; Menassa 2010). Size and profitability of the firm significantly influences the CSRD. Larger and more profitable firms make higher level of disclosures than small and less profitable firms. These results are similar to earlier research suggesting that size determines the CSRD (Purushothaman et al. 2000; Gray et al. 2001; Adams 2002; Cowen et al. 2004; Hossain and Reaz 2007; Aras et al. 2010). The finding that profitability determines CSRD in a positive manner is similar to results reported by Roberts (1992), Waddock and Gravess (1997) and Wu (2006). The study could not confirm any association between CSRD and risk, which is consistent with earlier research (Haniffa and Cooke 2005).

Non-financial variables age, industry and social recognition determine the communication of social efforts. These results are similar to results shown by previous studies where age (Roberts 1992; Moore 2001; Zakimi and Hamid 2004; Cormier et al. 2005) and the nature of industry (Graafland et al. 2003; Decker 2004; Rizk et al. 2008; Kotonen 2009) influenced CSRD. The results are crucial and according to the expectations because of the 'business case + caring model' and long established CSR tradition and high respect for the companies seriously involved in CSR in India.

The study has some limitations as the study has considered the data for only one year from the annual reports of the sample companies and has not considered some other corporate disclosure sources such as media and corporate websites. The content analysis method though widely used for CSRD studies, may still be subject to errors due to human judgement and bias with regard to the weighting assigned to any CSR information. The financial and
non financial determinants model can be replicated and confirmed in other countries as well.

Future researchers can investigate the motivations behind CSRD by the corporate sector by conducting interviews with managers and board of directors. The paper offers important strategic implications for policy making not only with regard to taking social initiatives but also disclosing them from reputational perspectives.

References


