Factors Impacting Corporate Social Responsibility of Top Firms Listed in India

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Abstract

Purpose : The present research work examined the sample of Indian firms to determine the factors impacting top organizations' corporate social responsibility (CSR) across selected industrial sectors. The objective of this study was to find out the significant determinants of CSR disclosure using financial and non-financial variables.

Methodology : Data sources used included annual reports, CSR reports, the company website, and other available public sources. Fixed-effect regression was applied to 708 data observations for the period from 2014–2015 to 2019–2020. The study has developed a total of four regression models for individually testing the influence of promoters' ownership, institutional ownership, company popularity, and innovation on CSR disclosure.

Findings : The findings of this study reported that firm size, firm age, and leverage (gearing) are strong determinants that positively influence CSR reporting. Apart from that, ownership of promoters showed a weak negative effect on CSR disclosure of Indian firms, but profitability does not appear to have any impact on CSR score. However, institutional ownership and innovation are not significant determinants of CSR disclosure.

Practical Implications : Larger firms are more accountable and hold a prominent place in society and the community as a whole, therefore, they are supposed to disclose greater CSR information. Furthermore, Indian companies with greater promoter ownership stakes make lesser CSR reporting due to lower information asymmetry and agency conflicts.

Originality : The present research on factors affecting CSR, which is under-researched in India, has offered an extensive range of variables by developing advanced regression models.

Keywords : corporate social responsibility, financial and non-financial variables, fixed effects, ownership structure

JEL Classification Codes : D21, D22, G32, L21

Paper Submission Date : August 25, 2022 ; Paper sent back for Revision : March 27, 2023 ; Paper Acceptance Date : April 20, 2023 ; Paper Published Online : June 15, 2023

The role of corporate social responsibility (CSR) can be presumed in the form of a vehicle by implementing which companies have become able to return quality social value to the community (Golda, 2020). The crucial association between CSR reporting and implementation conveys that it is strategic implementation upon which the reporting of CSR practices largely depends (Govindasamy et al., 2018). Firms that report more CSR information are more likely to obtain higher corporate governance ratings (Chan et al., 2014). Thus, there can be a relationship between social disclosure and the social and economic performance of the companies (Belkaoui & Karpik, 1989). From this perspective, companies are assimilating community development

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DOI : https://doi.org/10.17010/ijf/2023/v17i6/171974

objectives into the business goals by taking into account the responsibilities toward their activities and their influences on all stakeholders and the environment as a whole (Kumari, Sharma, & Sehrawat, 2017) with the motive to ensure environmental and biological protection as well (Behal & Gupta, 2022). To demonstrate a socially responsible figure and show activities as morally reasonable, firms generally provide social responsibility information to their various stakeholders. In this way, firms attempt to influence the perception of their reputation and standing in the outside world (Branco & Rodrigues, 2008). Since the past few decades, academic research attention on the subject of CSR practices followed has been increasing at a global scale by viewing its impact on the local community as well (Kumari, Sehrawat, and Sharma, 2017). Moreover, there has been some development in research work from estimating the extent of CSR disclosure only to studying its financial and non-financial (firm-level) determinants (Bidari & Djajadikerta, 2020; Chiu & Wang, 2015; Eng & Mak, 2003; Elfeky, 2017; Hussainey et al., 2011; Habbash et al., 2016; Masoud & Vij, 2021).

However, the research investigation on probing into the determinants of CSR disclosure in India is growing (Fahad & Nidheesh, 2021; Golda, 2020; Kansal et al., 2014), but it is still at a narrow scale, which constitutes a research gap for undertaking the present study. Hence, rigorous academic research is required in India to determine the financial and non-financial determinants of CSR disclosures made in the firms' reports. Therefore, the core purpose of this study is to find out significant determinants of CSR disclosure for Indian firms using financial and non-financial variables.

The growing attention on CSR research over the past two decades reflects its significance/demand as it has immense potential to influence the development of CSR agendas of firms in the current scenario. Undoubtedly, the area of CSR has attracted vast philanthropic implications, but the significance of its inferences in the real business environment has also started increasing (Ramesh & Peswani, 2017). The rationale behind it suggests that by using several recommendations on CSR disclosure and its determinants, firms are better able to design their CSR framework in line with established standards and manage their profitability scenarios accordingly. Its relevance has also been viewed from several shreds of evidence that demonstrate that CSR disclosure inversely affects accounting conservatism (Patro & Pattanayak, 2017), which shows the greater potential of social and environmental disclosures in ensuring better post-business responsibility reporting and generating improved market valuation (Charumathi & Ramesh, 2017). Thus, CSR can reward a firm with increased brand image and loyalty, thereby accelerating brand performance (Singh & Verma, 2017). Overall, to survive in the long run, organizations have to assimilate CSR in their policy-making as a voluntary endeavor, not follow it as a mere deed (Malagatti, 2017). On these grounds, the following research question has been framed for this study:

↳ **Research Question 1 :** What are the main factors influencing the CSR disclosure of firms listed in India?

Review of Literature

Applicable CSR Theoretical Frameworks

Different theoretical viewpoints govern the extent of CSR and present a basis for comprehending the phenomenon behind low or high disclosure of CSR practices. Such theories mainly include agency theory, positive accounting theory, stakeholder theory, and legitimacy theory. As per the agency theory described by Jensen and Meckling (1976), companies seem to minimize agency costs by disclosing more voluntary information. In such a way, the agency-based disagreement between shareholders and managers gets mitigated when there is symmetry between the interests of managers (or agents) and shareholders (i.e., principals). However, keeping in mind the concentrated ownership structure of Indian listed companies, the application of agency theory propositions is to be viewed from a different angle, that is, companies are less encouraged to provide voluntary disclosures as there is lower information asymmetry and thereby decreased agency costs (Fama & Jensen, 1983). The positive accounting explanation for CSR under agency theory shows that expending on social performance and disclosing the same is mainly done by managers due to reputational sake and public welfare issues. Such social performance expenditures decrease the level of net income, therefore, the firms that carry out social performance and disclose it experiences less contracting and monitoring costs but have to face greater political costs (Wuttichindanon, 2017).

In addition, according to stakeholder theory, firms should not take into account the financial interests of their shareholders only rather, they must prioritize the requirements of all stakeholders, including employees, local communities, government, suppliers, and customers (Edward et al., 2002; Mitchell et al., 1997). In fact, according to this theory, several company-level characteristics, such as size, ownership, industry, and age, can impact CSR reporting. Supporting the stakeholder's approach, firm size is highly linked with social disclosure quality (Chiu & Wang, 2015). Large firms carry greater visibility and are highly conspicuous to the outside world, thereby captivating a huge amount of focus from external parties, including the government, professional groups, media, the general public, and the community. The main reasoning suggested in the literature is that large firms with greater visibility carry a positive association with CSR ratings (Li et al., 2019).

Furthermore, there can be sectoral variation in disclosing CSR information, wherein environmental information or disclosure about safety and health issues is much reported in the manufacturing sector. Moreover, stakeholder theory also suggests that few societal groups are quite stronger relative to others, namely shareholders and employees (Bayoud et al., 2012). Overall, it is the stakeholders that force the firms to make CSR reporting, which in turn depends upon the firm size, age, and type of industry (Nguyen et al., 2021). It has been apprehended that while understanding the contextual settings of CSR, the stakeholder theory occupies greater importance as compared to the positive accounting theory, as firms have to report their social responsibility initiatives to become answerable to their stakeholders and society (Wuttichindanon, 2017).

Under another legitimacy theory perspective, it views society as a whole, and its underlying notion bespeaks the social contract between the firm and the community, wherein the firm performs its operations by leveraging economic resources. Therefore, this perspective posits that by providing CSR information in financial statements and sustainability reports, companies can be able to generate and validate their contribution from the economic and political aspects. The range of CSR initiatives, to a greater extent, depends upon the association between usual societal expectations, management outlook toward such societal expectations, and the behavior of the corporate itself in reality. It indicates the political and social pressure due to which firms have to engage in corporate environmental reporting. By legalizing a firm's continuation and its orientation toward society through environmental and social disclosure, this theory also proposed that older firms generally make higher CSR disclosure than younger firms (Nguyen et al., 2021). Legitimacy gives importance to reputation, wherein a firm has to satisfy the community about its activities by aligning them with societal values (Masoud & Vij, 2021). It has also been observed from past research work that there can be a combination of two theories, such as a legitimacy theory and a resource-based theory, which can offer a better interpretation of social responsibility disclosure (Branco & Rodrigues, 2008).

Determinants of CSR Disclosure

By following the abovementioned theories, some variables have been selected from past studies, such as size, age, profitability, leverage, promoter ownership, and industry group. A description of these factors has been given below, along with their supported empirical research.

Size of the Company (Firm Size – SIZE)

This variable has been selected from several previous studies, including Bayoud et al. (2012), Bidari and

Djajadikerta (2020), Hussainey et al. (2011), and Issa (2017), on the ground that firm size can significantly impact CSR spending (Kumar et al., 2021). The academic literature on firm size shows that there can be a positive association between firm size and CSR or voluntary reporting, which covers studies such as Alsaeed (2006), Alturki (2014), Elfeky (2017), Issa (2017), Habbash et al. (2016), and Nguyen et al. (2021). On the other side, some researchers have pointed out that firm size may not hold any relationship with CSR disclosure in their studies, which includes Hussainey et al. (2011). The null hypothesis (H01) for the firm size variable has been framed as follows:

↳ **H01 :** There is no relationship between CSR information disclosure levels and firm size.

Age of the Company (Firm Age – AGE)

It is observed that firm age can significantly affect CSR spending (Kumar et al., 2021). This "age" variable has mainly been extracted from Bhattacharyya et al. (2012), Bayoud et al. (2012), Issa (2017), and Bidari and Djajadikerta (2020). In this study, the null hypothesis for firm age has been proposed as the empirical work in existence to date has provided different research findings in opposite directions. Some studies have shown positive and significant effects of firm age on CSR/voluntary disclosure (Habbash et al., 2016), whereas, others did not report any significant influence (Nguyen et al., 2021; Wuttichindanon, 2017). The null hypothesis has been framed as follows:

↳ **H02 :** There is no relationship between CSR information disclosure levels and firm age.

Promoter Ownership (PROM)

This variable has been selected after a thorough study of past research (Fahad & Nidheesh, 2021; Hussainey et al., 2011; Habbash et al., 2016). The effect of ownership structure on corporate disclosure has been examined in various ways. A research paper by Eng and Mak (2003) used the block holder ownership variable for analysis purposes but could not find any relationship with disclosure. However, this study has revealed a negative association between managerial ownership and voluntary disclosure. Another research work by Huafang and Jianguo (2007) observed that increasing block-holder ownership was related to greater disclosure. In the study by Habbash et al. (2016), the variable family ownership showed a positive relationship with voluntary disclosure and explained this finding by stating that family firms are willing to create a good image and reputation, providing more information. Recently, Fahad and Nidheesh (2021) examined the relationship of promoter ownership with environmental and social disclosure made by Indian firms and noted that they are negatively related. Similar to Fahad and Nidheesh (2021), the null hypothesis has been formulated about promoter ownership as follows :

↳ **H03 :** There is no relationship between CSR information disclosure levels and the extent of promoter ownership in the firm.

Profitability (Return on Assets [ROA])

The choice of profitability factor is made by the following studies: Hussainey et al. (2011), Bhattacharyya et al. (2012), Issa (2017), and Bidari and Djajadikerta (2020). Some studies have reported a significant positive relationship between profitability with CSR or voluntary disclosure, for example, Alturki (2014), Elfeky (2017), Hussainey et al. (2011), Habbash et al. (2016), and Issa (2017). But there are some other studies as well, such as Al-Janadi et al. (2013) and Wuttichindanon (2017), which have found the opposite result, that is, CSR disclosure is not significantly associated with economic performance or profitability. Taking this into account, the following hypothesis has been formulated:

- **H04 :** There is no relationship between CSR information disclosure levels and firm profitability.

Gearing/Leverage (GEAR)

The effect of leverage on CSR disclosure is yet not confirmed in the related past research. Where some research studies have demonstrated a significant and positive effect of leverage on CSR reporting of environmental and social information (Elfeky, 2017; Fahad & Nidheesh, 2021), other studies such as Hussainey et al. (2011), Alturki (2014), Issa (2017), and Wuttichindanon (2017) could not report its econometrically relevant impact on CSR disclosure. The positive influence of leverage on social and environmental (CSR) disclosure score points out that the expectations of creditors, especially leveraged firms, need to be fulfilled with heightened information disclosure that also decreases the level of information asymmetry and agency cost (Fahad & Nidheesh, 2021). On the contrary, studies have also shown the negative effect of leverage (Habbash et al., 2016), which can be explained on the ground that where the company carries higher debt or carries greater leverage in its capital structure, it restricts the extent of CSR practices and their reporting as well. Given that financial leverage can influence the CSR information disclosure level (Viet Ha et al., 2019), the present study has developed a null hypothesis about the above as below :

- **H05 :** There is no relationship between CSR information disclosure levels and firm leverage or gearing.

Liquidity (LIQ)

It is observed from past research that liquidity positively influences the level of CSR disclosure (Nguyen et al., 2021). However, this positive relationship has not been observed by other research studies such as Hussainey et al. (2011), Samaha and Dahawy (2011), and Kamel and Awadallah (2017), which have rather disclosed results in the insignificant direction. The null hypothesis for the liquidity variable is presented as follows:

- **H06 :** There is no relationship between CSR information disclosure levels and firm liquidity.

Industry Group (IND)

This variable is taken as a control variable in the model, which was also taken in the studies of Issa (2017) and Wuttichindanon (2017). The statistical association of the "type of industry" variable with CSR/voluntary reporting has been proved in many studies (Al-Janadi et al., 2013; Bayoud et al., 2012; Habbash et al., 2016; Issa, 2017; Kansal et al., 2014). Broadly, the financial sector provides more disclosure in comparison to the service and industrial sectors (Al-Janadi et al., 2013). Therefore, it becomes imperative to cover this variable for testing its empirical effect on the level of CSR reporting. Hence, the null hypothesis framed for the industry group is as follows:

- **H07 :** There is no relationship between CSR information disclosure levels and the industry group.

Variable Selection

Based on previous research work, the following variables have been identified for achieving the research objectives of this study (refer to Table 1).

Table 1. ***Definition of the Variables***

S. No.	Variable Selected	Definition
1.	*SIZE*	Natural logarithm of the book value of total assets of a firm.
2.	*AGE*	Total number of years since the firm has been incorporated.
3.	*PROM*	Percentage of shares owned by the promoters.
4.	*ROA*	Return on assets (EBIT/total assets).
5.	*GEAR*	The ratio of total debt to book value of equity.
6.	*LIQ*	The ratio of current assets to current liabilities.
7.	*IND*	Type of industry: IT, MM&M, C&F, O&P, P&EG, and AM sectors.

As observed from Table 1 (which presents the variables of interest along with their definitions), the natural logarithm values have been used for size (total assets) as this variable is found to be highly skewed. Moreover, due to the data inadequacy issue, the variable "government ownership" has been dropped from the list of independent variables in the model and, therefore, continued with promoter ownership and institutional ownership only.

Research Methodology

Sampling Techniques : Sample Size, Population, Period, and Justification

The sample of the study was selected from the population of all BSE-listed companies in India, but after deleting banks, insurance companies, and companies representing sectors other than information technology (IT); minerals, metals, and mining (MM&M); chemicals and fertilizers (C&F); oil and petroleum (O&P); power and electricity generation (P&EG); and automobile (AM) sector. To extract the topmost firms, market capitalization as of March 31, 2020, was considered after ranking them in descending order. In this way, the final sample of 118 companies from six selected sectors was picked for the period of analysis from 2014–2015 to 2019–2020. The financial year 2014–2015 was primarily chosen because it represented the first complete year for implementing CSR provisions after the enactment of the Companies Act, 2013. Therefore, the sample size consists of 708 observations of panel data as it is comprised of 118 firms across 6 years.

The abovementioned sampling framework can be justified on the grounds of representing a major chunk of listed corporates that are engaged in developing CSR policies as per regulatory guidelines applicable in India.

Computation of CSR Disclosure Score

CSR disclosure scores of selected companies were computed by aggregating the total score obtained by a firm concerning four different CSR categories, that is, "environment and sustainability," "community engagement and development," "employee relations," and "consumer and products." These four categories included a total of 33 items that were extracted using past literature and estimated by way of dummies, wherein value "1" was assigned if the corresponding social responsibility initiative was present in the firm's reports and '0' otherwise. Hence, a "1" score was given to the item if disclosed, and a "0" if not disclosed. A similar criterion was adopted by Prado-Lorenzo et al. (2008), Habbash et al. (2016), Bidari and Djajadikerta (2020), Masoud and Vij (2021), and Nguyen et al. (2021).

Methods of Data Collection : Process

The data with respect to firm-specific variables (as listed above) was obtained from the corporate-oriented database, popularly titled Prowess$_{dx}$ (CMIE). This database mainly relied on annual reports of companies, stock exchanges, and regulators as its chief sources of data. It primarily encompassed the accounting data on profit and loss statements, cash flow statements, quarterly financial statements, balance sheets, and various pre-defined ratios using these financial statements. In case the data on some of the variable(s) was missing, the same was retrieved from the annual reports and websites of selected companies.

In an attempt to relate social disclosure levels with financial and non-financial indicators, the CSR disclosure values were computed with the help of the content analysis method. The current study used annual reports, CSR reports, the company website, and other available public sources as data sources for collecting CSR disclosure score information. These reports were gathered from company websites and Prowess Database.

Tools Employed : Developing Equation in the Regression Model

This regression model incorporated the fixed effects (as reported under the Hausman test in Table 4) to demonstrate the time-invariant nature of intercepts of each of the entities under consideration as subjects (Gujarati et al., 2017). Under the fixed-effects regression, the variables selected for the present study were modeled into the following equation :

$$Y_{it} = \beta FS_{it} + \beta X_{it} + \mu_{it} \qquad (1)$$

where,

Y_{it} = value of a dependent variable indicating the CSR disclosure score of a specific firm "*i*" in a particular year "*t*,"

β = regression coefficient,

Fs_{it} = a group of firm-specific variables including firm size, age, industry, number of employees, profitability, company sales, gearing, liquidity, and ownership structure,

X_{it} = a group of control variables,

μ_{it} = the error term.

By expanding the above equation, the following regression model was tested using fixed effects:

$$Y_{it} = \beta SIZE_{it} + \beta AGE_{it} + \beta PROM_{it} + \beta ROA_{it} + \beta GEAR_{it} + \beta LIQ_{it} + \beta IND_{it} + \mu_{it} \text{ (Model 1)}$$

Herein, i = company/firm (1,…, n) and t = period (1,…, T).

The abovementioned basic equation was extended by adding more independent variables (*INSTLOWN, PPLT, and INNOV*) into the model:

$$Y_{it} = \beta SIZE_{it} + \beta AGE_{it} + \beta PROM_{it} + \beta ROA_{it} + \beta GEAR_{it} + \beta LIQ_{it} + \beta INSTLOWN_{it} + \beta IND_{it} + \mu_{it} \text{ (Model 2)}$$

$$Y_{it} = \beta SIZE_{it} + \beta AGE_{it} + \beta PROM_{it} + \beta ROA_{it} + \beta GEAR_{it} + \beta LIQ_{it} + \beta PPLT_{it} + \beta IND_{it} + \mu_{it} \text{ (Model 3)}$$

$$Y_{it} = \beta SIZE_{it} + \beta AGE_{it} + \beta PROM_{it} + \beta ROA_{it} + \beta GEAR_{it} + \beta LIQ_{it} + \beta INNOV_{it} + \beta IND_{it} + \mu_{it} \text{ (Model 4)}$$

Analysis and Results

The data has been analyzed using fixed-effects regression after testing its viability through various assumptions in STATA software.

Application of Fixed-Effects Modelling Structure

Before discussing the main findings, it is important to test the following assumptions of fixed-effects regression.

Testing of Assumptions

Multicollinearity

The assumption of testing for multicollinearity has been tested with the help of variance inflation factor (VIF), whose maximum acceptable value is taken as 10. It has been observed that the VIF values of all independent variables are under the acceptable limit of maximum value, that is, 10. Therefore, multicollinearity is not a severe issue in running the regression model for the current study.

Heteroscedasticity

To test the heteroscedasticity, the likelihood-ratio test has been used wherein the presence of heteroscedasticity is ascertained from the significance level (i.e., prob. value) of models covered in the study. In this test, the null hypothesis refers to the absence of heteroscedasticity, while the alternate indicates its presence. The results of Table 2 have highlighted the intense case of heteroskedasticity by reporting significant probability values in all models.

Table 2. ***Application of Likelihood-Ratio Test Using STATA Software***

Particulars	Model 1	Model 2	Model 3	Model 4
LR chi-square value	711.27	747.25	729.83	728.66
Prob. value	0.000	0.000	0.000	0.000
Heteroskedasticity is present	**Yes**	**Yes**	**Yes**	**Yes**

Autocorrelation

To check the presence of autocorrelation, the Wooldridge test has been used by developing the null hypothesis of

Table 3. ***Application of Wooldridge Test Using STATA Software***

Particulars	Model 1	Model 2	Model 3	Model 4
F-statistic value	7.184	7.508	7.542	7.589
Prob > *F* statistic	0.0347	0.0314	0.0304	0.0298
Autocorrelation is present	**Yes**	**Yes**	**Yes**	**Yes**

the absence of first-order autocorrelation. The prob. values in Table 3 have reported a clear presence of autocorrelation in the models.

Application of the Hausman Test

The present study has applied the Hausman test to test the null hypothesis, which states that the preferred model is random effects. It tests basically if the unique errors are not correlated with the independent variables, then it will follow random effects (Gujarati et al., 2017). According to this null hypothesis, the random effects model is preferred to the fixed-effects structure. The value of the Hausman test will indicate whether to accept or reject the null hypothesis. If the null hypothesis is rejected, it will show a result in favor of the existence of fixed effects. Table 4 shows that fixed-effect models will be applicable in all cases.

It is worth mentioning that the analysis of assumptions in panel data modeling has revealed the severe presence of heteroscedasticity and autocorrelation in the data set under consideration. Therefore, robust standard errors with company-wide clustering have been used while performing the estimation of the parameters of the variables. These standard errors are mainly characterized as heteroscedasticity, panel robust, and serial-correlation consistent errors as clustered errors permit heteroskedasticity and autocorrelated errors within an entity, however, does not allow for correlation over the entities taken in the model.

Table 4. ***Application of Hausman Test Using STATA Software***

Particulars	Model 1	Model 2	Model 3	Model 4
Chi-square value	41.58	37.55	39.23	28.89
Prob. value	0.0000	0.0001	0.0000	0.0045
Effect (fixed or random)	**Fixed**	**Fixed**	**Fixed**	**Fixed**

Findings

Determinants of CSR Disclosure

The output of regression results has been presented, showing the coefficients of the variables in Column 3 of Table 5 with its standard errors (Column 4). Statistical findings of the fixed-effects regression model report that

Table 5. ***Panel Data Regression : Using Fixed-Effects Modelling***

(1)	(2)	(3)	(4)	(5)
Variables	**Explanatory Variable**	**Coefficient**	**Standard Error**	**Significance Level**
Constant		17.2941	1.8227	0.000
SIZE	Firm size	3.2472	0.1641	0.000
AGE	Firm age	1.6891	0.1136	0.032
PROM	Promoters' ownership	–0.6249	0.2247	0.091
ROA	Profitability	0.0429	1.1278	0.134
GEAR	Leverage/gearing	1.8235	0.1443	0.040
LIQ	Liquidity	0.7618	0.2505	0.085

IT	Information technology	1.4434	0.1716	0.025
MM_M	Minerals, metals, and mining	1.0143	0.1823	0.036
O_P	Oil and petroleum (O&P)	0.7639	0.2679	0.142
P_EG	Power and electricity generation (P&EG)	1.9478	0.1721	0.028
AM	Automobile	0.8872	0.7347	0.113
F-statistic		**7.24**		
Significance		**0.000**		
Adjusted *R*-square		**14.78**		

the coefficient of SIZE is significantly and positively associated with the CSR disclosure at a 1% level (H01 is rejected). It implies that as the firm's size grows from small to large, CSR disclosure will also tend to improve. Thus, it offers sufficient statistical support to reject H01, which states that firm size is not related to CSR disclosure. Moreover, this positive finding is in line with the research outcomes of Eng and Mak (2003), Al-Janadi et al. (2013), Alturki (2014), Chan et al. (2014), Issa (2017), Modugu and Eboigbe (2017), and Bidari and Djajadikerta (2020). Furthermore, Haniffa and Cooke (2005) have also shown a significant relationship between firm size and a firm's social reporting.

The results of another independent variable, that is, age, have indicated a positive coefficient at the 5% significance level, thus rejecting H02. This finding buttresses the argument of past literature by stating that as the firms grew in age, the disclosure of CSR also started increasing. It conveys the observation that older and established firms report more CSR initiatives. This is similar to the results shown in Alturki (2014), Habbash et al. (2016), and Fahad and Nidheesh (2021). Furthermore, the promoter ownership variable has reported a negative relationship with CSR disclosure, however, at a weak significance level (i.e., H03 is rejected). The negative direction hints at the point that higher ownership concentration in the hands of promoters reduces the chances of information asymmetry and, thus, leads to fewer agency problems. Such situations will decrease the incentives for making greater disclosures (Fama & Jensen, 1983).

The direction of the profitability variable is found to be positive, however, it is statistically insignificant (which could not reject H04). This insignificant result does not match with the significant outcome displayed by Haniffa and Cooke (2005), Hussainey et al. (2011), Alturki (2014), Issa (2017), and Bidari and Djajadikerta (2020). Hence, this study is unable to conclude that with an increase in profitability, firms appear to disclose more about CSR practices in their reports. Studies such as Wuttichindanon (2017) also state that firm profitability bears no relationship with social information disclosure.

Similar to firm size and firm age, leverage has also been found as significantly positively related to CSR; hence, H05 is rejected. The finding of the leverage variable is consistent with Chan et al. (2014) and Modugu and Eboigbe (2017), who have too reported a positive association with voluntary disclosure. This positive relationship states that highly leveraged Indian firms are more required to legitimize their operations to stakeholders, therefore, disclose more CSR information in their reports and financial statements (Issa, 2017). Therefore, it does not support the insignificant influence of leverage on CSR disclosure, as reported in Wuttichindanon (2017). It is also opposite to the finding of Eng and Mak (2003), which showed a negative association between debt and disclosure.

It is further found that liquidity positively drives the CSR reporting in Indian companies but at a weaker level as its coefficient is positive and significant at only a 10% level, thus rejecting H06. This observation matches the result of Nguyen et al. (2021) but highly contrasts with the findings of Hussainey et al. (2011), Samaha and Dahawy (2011), and Kamel and Awadallah (2017), which found an insignificant association between the two.

Similarly, Aly et al. (2010) have also not observed any relationship between liquidity and corporate Internet reporting. As far as the IND variable in the regression model, fixed-effects regression has reported a positive and significant effect on CSR disclosure made by firms operating in different sectors. This significant finding is similar to Haniffa and Cooke (2005), Issa (2017), Habbash et al. (2016), and Masoud and Vij (2021). Overall, this result offers the observation that firms belonging to different industries have different levels and types of corporate social information disclosure.

Further Empirical Testing

Effect of Institutional Ownership

Greater institutional ownership is believed to stimulate the company management to positively take into account the social pressure by disclosing more information on social responsibility initiatives so that the stakeholders' expectations can be properly met (Masoud & Vij, 2021). Thus, the empirical testing has again been conducted by adding the institutional ownership variable along with other variables in the regression model (except promoters' ownership). Fixed-effects regression results revealed in Table 6 (Model 2) reported an insignificant association of institutional ownership on CSR disclosure. This result is found to be in line with various studies that too showed an

Table 6. ***Panel Data (Fixed Effects) Regression: Effect of Institutional Ownership, Popularity, and Innovation***

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Model 2		Model 3		Model 4	
Variables	**Coefficient**	**Standard Error**	**Coefficient**	**Standard Error**	**Coefficient**	**Standard Error**
Constant	18.3224	1.9529	16.3591	1.8623	18.2140	1.8461
SIZE	3.1497	0.1587	3.0982	0.1721	3.2319	0.1608
AGE	1.6642	0.1105	1.6446	0.1159	1.6799	0.1174
PROM	–0.6143	0.2209	–0.6196	0.2268	–0.6283	0.2275
ROA	0.0416	1.1194	0.0419	1.1564	0.0469	1.1183
GEAR	1.8067	0.1412	1.8119	0.1429	1.8151	0.1457
LIQ	0.7604	0.2486	0.7511	0.2500	0.7592	0.2437
INSTOWN	0.1315	1.2204				
PPLT			–0.6089	0.2362		
INNOV					0.1201	1.5387
IT	1.4132	0.1722	1.4012	0.1775	1.4313	0.1708
MM_M	1.0162	0.1816	1.0137	0.1864	1.0215	0.1810
O_P	0.7658	0.2688	0.7630	0.2673	0.7661	0.2599
P_EG	1.9488	0.1739	1.9465	0.1772	1.9392	0.1736
AM	0.8816	0.7320	0.8829	0.7381	0.8833	0.7358
F-statistic		**7.07**		**7.68**		**7.29**
Significance		**0.000**		**0.000**		**0.000**
Adjusted *R*-square		**14.55**		**15.04**		**14.84**

insignificant relationship between the two studies, such as Eng and Mak (2003) and Masoud and Vij (2021), but could not provide significant findings as shown in Nurleni et al. (2018).

Effect of Company Popularity (PPLT)

In additional testing, one more variable, that is, popularity, has been included in the regression model. The reason behind adding this independent variable has been mentioned in the study by Fahad and Nidheesh (2021), which states that the visibility of the firm has to be improved in light of greater public attention and inquiry by providing the finest social responsibility disclosures to satisfy the interests of their stakeholders and, thus, diminish agency costs.

The PPLT variable has been measured using the ratio of advertisement amount to net sales. The finding of the company popularity variable, as shown in Model 3 of Table 6, revealed a weakly positive and significant coefficient with CSR reporting as in the study by Fahad and Nidheesh (2021), which had observed a significant association of company popularity with environmental and social disclosure scores. Overall popularity variable bears minuscule significance in influencing the level of CSR.

Effect of Innovation (INNOV)

Similar to the above, the influence of the level of "innovation" has also been studied by taking direction from Fahad and Nidheesh (2021). The "innovation" has been estimated as the ratio of research and development expenditure to total assets. , Similar to studies like those by Fahad and Nidheesh (2021) and Ratajczak and Szutowski (2016) report, Model 4 of Table 6 explains that innovation could not show any significant relationship with CSR disclosure by Indian firms. These studies, too, have brought into light the lack of consistency and widely recognized theory behind predicting CSR-innovation association.

Managerial Implications

The current research examines the factors impacting the CSR disclosure of top firms across selected sectors in India. The results of the fixed-effect model have demonstrated quite interesting CSR outcomes in that it benefits the firms, their managers, and other practitioners in the industry. For example, larger companies release greater disclosure on their social responsibility initiatives as these firms possess the higher capability to make quality reporting to their investors (Al-Janadi et al., 2013). It could be because of the greater accountability of larger firms for which they are more obliged to disclose CSR information. Thus, it suggests that because larger firms hold a prominent place in society and the community as a whole, therefore, they are supposed to disclose greater CSR information (Masoud & Vij, 2021). In this context, agency theory states that large firms minimize the agency costs arising because of information asymmetry between various interested parties, and they reduce it by providing a large flow of information disclosure (Basuony & Mohamed, 2014). To support stakeholder theory, this finding states that with the growth of firms, stakeholders become more interested in their activities, and hence, firms need to be highly receptive to their stakeholders' demands.

The older firms appear to disclose more on social responsibility practices in their reports and, hence, support the idea proposed in studies such as Masoud and Vij (2021). It also indicates the observation that as the firms start following CSR practices, the expectations of stakeholders further increase, due to which firms have to continue and even strengthen their CSR reporting. However, this result is directly opposite to what was observed in Wuttichindanon (2017).

In addition, as the ownership of promoters in a company increases, CSR disclosure will decrease because of lesser incentives due to reduced information asymmetry. As far as the profitability variable is concerned, it cannot emerge as a key driver for Indian-listed companies to report more on CSR information. The findings of leverage state that highly leveraged firms disclose more information voluntarily to give assurance to their creditors about the stability and viability of their business operations and their good debt-repaying capacity too. In addition, the weakly positive finding for liquidity highlights that increasing liquidity ratios in firms show superior financial performance as greater liquidity can result in the availing of innovative business opportunities. This encourages the companies to disclose voluntarily more information on CSR.

Contrary to promoter ownership, institutional shareholding cannot be taken as an important factor in determining the extent of CSR disclosure. Similarly, firm innovation could not impact CSR disclosure; however, it has been observed that a firm's popularity is not a strong determinant of CSR score. Considering the abovementioned set of findings, it can be set forth that those variables that appear insignificant or lesser significant to overall CSR might be because of the weak statistical power of any one or more of the four dimensions inherent therein. Overall, companies need to focus on significant variables that have been turned into important factors in estimating the level of CSR disclosure and, thereafter, planning the social reporting policy.

Conclusion

Using the theoretical perspectives of stakeholders' theory, legitimacy theory, positive accounting theory, agency theory, etc., certain propositions have been made to find out the possible determinants of CSR disclosure that is inclusive of four core dimensions, namely environment and sustainability, community engagement and development, employee relations, and consumers and products. The determinants have been tested by way of inserting several firm-specific and financial indicators into the regression model equations. It has been found that with the growth in size and maturity level (i.e., age), firms are keener to disclose information on CSR matters. However, Indian companies with greater promoter ownership stakes make lesser CSR reporting due to lower information asymmetry and agency conflicts. This suggests that because promoters who are shareholders have greater access to management and the board, a lesser need is being felt to make greater CSR information disclosure.

The current investigation mainly concludes that the disclosure of CSR practices is highly impacted by firm size, age, ownership, the extent of leverage, and the group of industry where the firm operates. The control variable, the industry group, is found to be positively related, thus showing that different industries have different CSR reporting. Thus, the empirical analysis has been able to detect significant variables impacting the CSR of top-listed organizations from selected sectors in India. Furthermore, testing has also confirmed that the variables, including institutional ownership and innovation, are not significant determinants of CSR disclosure; hence, they are found irrelevant in influencing firms' reporting of social information.

The disclosure of CSR is improving but is still at the embryonic stage. Companies must make CSR priorities to identify relevant areas for ensuring societal development. The regulatory bodies should intensify efforts in the direction of enforcing firms' compliance with CSR and other relevant provisions at a wider scale. Moreover, stakeholders are required to put more pressure on the firms to enhance their voluntary CSR reporting, which is also suggested by Fahad and Nidheesh (2021). In addition, effective partnering between corporate, government, and non-governmental organizations can foster social development in India.

Limitations of the Study and Suggestions for Future Research

There can be a possibility that the determinants that have been observed as insignificant might appear as significant when a dimension-based analysis of CSR will be conducted. Such testing can be performed in the future to extract more advanced research findings. Moreover, the time duration and sample of the study can be enhanced to study the deeper impact of determinants of CSR disclosure over a longer period. Apart from the abovementioned suggestions, this study can further be extended to conduct a comparative analysis of determinants of CSR reporting between public and private listed firms in India. This will also yield advanced insights in the area of determining different CSR priorities for public as well as private corporates.

Authors' Contribution

Vikas Behal and Prof. Rajinder Kumar Uppal conceived the idea and developed a quantitative design to undertake the empirical study. Vikas Behal extracted the research papers with high repute, filtered these based on keywords, and generated concepts and codes relevant to the study design. Prof. Rajinder Kumar Uppal verified the analytical methods and supervised the study. The numerical computations were done by Vikas Behal using STATA. Vikas Behal wrote the manuscript in consultation with Prof. Rajinder Kumar Uppal.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

Funding Acknowledgement

The authors received no financial support for this article's research, authorship, and/or publication.

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