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Review Article

Empirical Analysis on Mandated Csr and Performance of Listed Firms in India (2015-2018)

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Abstract - *The study carried out an empirical investigation on the effects of mandated CSR and firm performance of Indian firms, considering firms' profits and turnover ratio to incorporate shareholders' and managers' views of performance. The study engaged panel regression to analyze the impact of mandated CSR spending on firms' profits and turnover ratio metrics of financial performance. T-test was employed to ascertain whether there exists a significant difference in the performance of high CSR spending and low CSR spending Indian firms, in recent times. Fixed panel regression technique was employed to analyze the model of the study, which captured the effects of CSR spending, firm size, firm leverage, and board composition on firms' profits and turnover ratio metrics of financial performance. The study engaged fifteen listed firms on the Bombay Stock Exchange, over the periods of 2015 and 2018. Results from the t-test conducted found that there is a significant difference in profits among high CSR spending firms and low CSR spending firms. Results from the panel regression analysis showed that CSR impacted positively on firms' profits and turnover ratio. However, there was only a significant relationship between CSR and firms' profits, which suggests that CSR spending serves as a mechanism for improving firms' performance, if conducted purposefully. Hence, the study concluded that there is enough evidence that CSR significantly promotes the performance of Indian firms.*

Keywords - *Mandated Csr, Firms, Empirical*

I. INTRODUCTION

The notion of corporate social responsibility (CSR) has been defined and identified under various means, among researchers in the literature. Olaroyeke and Nasieku (2015) regarded CSR as a multiplicity of issues that revolve around the communications of a business with its society. Su and Jie (2015) provided a wider perspective on the focus of CSR, noting that it covers the relationship between a company and its surrounding, which includes groups such as customers, investors, business owners, government, workers, as well as competitors. Al Halbusi and Tehseen (2017) identified the core social obligations of a business to: include service to its community; improve the relationship it has with its workers; protect the environment, and ensure financial returns to its investors. From a broader view, Kumar (2017) noted that what drives a business towards engaging in corporate social responsibility are centered on three bases; which are to: care for its stakeholders (comprising of business owners, workers, suppliers, and the society); ensure the operations of the business are ethical, accountable, and transparent; and protect the environment by minimizing pollution and degradation of the environment. Overall, CSR implies that a business is responsible and responsive to its internal and external stakeholders.

The history of CSR dates back to the early civilization of mankind in ancient Mesopotamia around 1700 BC, when King Hammurabi created a code of conduct to ensure that business transactions do not bring about the death or inconveniency of citizens (Al Halbusi&Tehseen, 2017). Ancient Roman senators adopted a strategy that ensured that business failures were minimized, to ensure that taxes were raised from them to prosecute military warfare. Also, during the 17th century, there were claims among dissatisfied business owners of the Dutch East Indian Company, about the activities of its management (Farcane&Bureana, 2015). There was a widespread protest during the 19th century on the need to improve the standard of living among workers of private businesses; whose owners lived lavishly and cared less about the welfare of the workers, the environment, and the society (Agudelo, Johannsdottir&Davidsdottir, 2019). By 1906, the establishment of Kellogg Company set up principles on how private businesses should engage in CSR, which included promotion of employees' welfare and health, protecting the environment; and promoting healthy life living in the society (Menezes, 2019). However, between 1906 and 1920, only a few businesses (such as Cadbury and Kellog) were involved in CSR practice. In 1929, Wallace Donham, Dean of Havard Business School, proposed for increased CSR engagement, in his speech at North Western University (Tripathi & Bains, 2013). At the start of the 20th century, a series of events renewed the argument for CSR among private businesses. This includes: the formation of labor unions, the involvement of the government in economic activities that promoted welfare, and the creation of anti-trust policies. Gradually, corporations increased their CSR as part of their obligations during the 1950s (Agudelo, Johannsdottir&Davidsdottir, 2019). However, CSR was formalized in 1953 when Howard Bowen produced the foremost report that proposed its scope and basis (Tripathi& Bains, 2013). Ever since, the practice of CSR has grown among businesses, leading to its global acceptance among Institutions and Corporations like the European Commission, OECD, and the UNDP (Kumar, 2017).

In India, the practice of corporate social responsibility has evolved over the years, from communal participation to socially responsible relations among individuals in a society (Jaysawal&Saha, 2015). It is the Hindu tradition that man should be socially responsible to his society, as it is regarded to earn one a glorious life and afterward (Kumar, 2017). It is a culture and tradition in India to be socially responsible, which helped to foster the formal practice of CSR during the British colonial era. During the British colonial era in India, industrialists like Birla, Tata, and Bajaj encouraged the practice of CSR by establishing charitable groups that spurred development (Kaur & Tandon, 2017). Kumar (2017) noted that between 1914 and 1960, CSR was sustained, when Mahatma Gandhi encouraged wealthy private individuals to distribute their wealth among the poor. There were thirty years of Public Sector interventions between 1960 and 1990, wherein CSR took another dimension as the State engaged in wealth redistribution (Jaysawal&Saha, 2015). However, by 1990, CSR became an incentive among the private sector in the realization they cannot operate their business without being socially responsible to their environment (Kumar, 2017). In recent times, CSR has become mandatory in India, under the 2013 Companies Act (Kumar, 2017), thereby changing the manner in which corporate social responsibility is practiced in India (Jaysawal&Saha, 2015). Corporations in India are mandated to allocate a minimum of 2% of their average profit in 3years, for CSR purposes (Gathi, Vishwanath &Seele, 2018; Singh, Holvoet& Pandey, 2018).

Consequently, CSR in India evolved from a cultural practice prior to independence, to a voluntary practice among corporations after independence, and has now become legally binding among corporate entities (Kumar, 2017; Alejandra, 2019; Shivaram & Prasanna, 2018). With this, the practice of CSR in India opens a new discussion in the literature (Rajgopal&Tantri, 2018). Indonesia has a law on mandatory CSR for all businesses, while EU country members and Canada currently contemplate passing legislation on mandatory CSR (Manchiraju&Rajgopal, 2017; Rajgopal&Tantri, 2018). This is view is supported among environmentalists who seek higher and mandated participation of corporations and businesses, needed to improve environmental quality (Ramdhony, 2018). Already, there are varying perceptions among academic scholars on the overall relevance of CSR. Nobel Prize-winning economist, Milton Friedman, provided a famous criticism against CSR, noting that the basic responsibility of any business is to maximize profits for business owners, legally (Tripathi & Bains, 2013). Going by this assertion, firms that expend their resources to be socially responsible, run the risk of lowering their performance index. This proposition has led to divided opinions among academicians on the essence of CSR and its legitimacy.

In the literature, the majority of empirical studies among emerging markets agree that CSR significantly promotes firm performance (Rabi'u, Asma'u, Jamila & Musa, 2016; Mohammed, Zakaree& Oladele, 2016; Ashraf, Khan & Tariq, 2017; Bagh, Khan, Azad, Saddique& Khan, 2017; Resmi, Begum & Hassan, 2018; Mohamud, 2018; Amadi&Ndu, 2018). This indicatesthat firms that participate in CSR tend to stand out among their competitors because CSR helps to shape their public perceptions and reputations (Su&Jie, 2015). Empirical studies for developed markets produce mixed results, which, however, tilts in favor of CSR. Djalilov, Vasylieva, Lyeonov, and Lasukova (2015) found a significant positive relationship between CSR and bank performance among 16 countries of the defunct Soviet Union. Bajic and Yurtoglu (2018); and Simianescu and Dumitrescu (2018) agree that CSR significantly impacted positively on values of European firms. However, Johansson, Karlsson, and Hagberg (2015) found no significant relationship between CSR and firm performance among Swedish firms. Adeyemo (2018) found that CSR exerts different significant impacts on firm performance among different firms in the EU region. Akben-Selcuk (2019) investigated CSR and financial performance among firms in Turkey, while moderating the role of ownership. Results showed a positive relationship between CSR and firm performance, but ownership moderated a negative relationship between CSR and firm performance.

Literature is indifferent to the nexus between mandatory CSR and firm performance as currently practiced in India. Alejandra (2019) hinted that voluntary engagement of CSR better helps corporations to make contributions to their society efficiently, which guarantees to enhance their reputation and help them achieve higher financial performance. Hence, mandatory CSR would adversely lower the financial performance of businesses, which would discourage foreign direct investments (Alejandra, 2019, p. 11). This is corroborated by Lins, Servaes, and Tamayo (2017); differ, stressing that when firms engage in mandatory CSR spending above the minimum, it will transmit positive signals. This opinion is, however, based on management motivation. Thus, the imposition of mandatory CSR could motivate corporate managers to act lawfully, which would lower corporate spending Rajgopal and Tantri (2018); but could adversely affect their image and performance in the long run (Kim & Oh, 2019). However, the majority of the empirical literature (Mulukalapally; 2017; Arpit, 2017; Nayan, Asif & Ananda, 2018; Bhagawan&Mukhopdhyay, 2018) found that mandated CSR in India significantly improves firm performance. Menezes (2019) found a weak relationship between CSR and firm performance, while considering three metrics of firm performance – ROA, net profit, and EPS. However, Sudershan (2017) employed a panel data consisting of 1460 corporations between 2015 and 2018 and found that mandated CSR in India impacted negatively on firm performance.

From the foregoing, it is gainsaying that empirical literature reveals that literature is unanimous that both voluntary and mandatory CSR improves firm performance, though with opposing views among few studies. However, there are three methodological issues in the existing literature that this study seeks to address. Foremost, several metrics have been used to measure firm performance. However, this study will adopt two financial measures of firm performance, under the perspectives of managers and shareholders. Managers' perspective of firm performance relates to operating efficiency, while shareholders' viewpoint of firm performance considers profitability with regards to investments (Omar & Zineb, 2019). Thus, two metrics engaged for firm performance in this study are firm profit and assets turnover indicators, which reflect the performance perspectives of both the shareholders and the managers, respectively. In the literature, it is observed that regression analysis dominates estimation technique on the subject matter between CSR and firm performance. A few (such as Akinleye&Adedayo, 2017) engaged the granger causality, which provides robust insights on the subject matter. In order to provide robust findings on the relationship between CSR and firm performance, this study finds it imperative to engage the granger causality technique. Also, it is imperative to analyze whether there is a significant difference in the performance of firms with low and high CSR spending; so as to provide relevant insights on whether firms should engage in corporate social spending. Hence, this study shall reexamine the subject matter, while adopting: firm profit and assets turnover as a measure of firm performance to reflect shareholders' and managers' views, while the granger causality technique is engaged to complement regression analysis.

II. REVIEW OF LITERATURE

The rationale why businesses should engage in CSR has been extensively discussed in the literature. Bice (2015) noted that there are two contradictory perspectives on whether businesses should disclose their social responsibility information. One perspective draws from Friedman, which argues that businesses exist solely to maximize shareholders' wealth. The other perspective draws from Welfarian, stressing that, the responsibility of businesses is not limited to maximizing shareholders' investments. The Friedman School of Thought on CSR argues that CSR engagement by a firm will lower its shareholders' wealth (Cheng, Hong &Shue, 2016). Friedman (1970) (cited in Bhagawan& Mukhopadhyay, 2018) noted that the primary objective for a firm is to maximize profits and wealth for its shareholders. Hence, involvement in CSR activities may have adverse impacts on the primary objective (Bansal & Rai, 2014). Instead, Friedman argued that the government is obligated to improve the welfare of the society (Sarkar & Sarkar, 2015). Masulis and Reza (2015) corroborated this view that firms pay tax to the government, which should be used to improve the society, and that CSR engagement amounts to double taxation that could lower firms' value. Bhagawan and Mukhopadhyay (2018) noted that firms do not engage in corporate social spending because it benefits their performance, but it is done to sustain good relationships with categories of their stakeholders (Such as customers); which is at the cost of its shareholders (business owners) and may result into agency problem (Bhagawan& Mukhopadhyay, 2018). However, Cheng, Hong, and Shue (2016) argued that engagement of CSR by a firm may reduce if its managers hold a significant proportion of its ownership. As such, managers may not be keen on corporate social spending (Bhagawan& Mukhopadhyay, 2018).

Proponents of the Welfare School of Thought argue that engaging in CSR is the apt thing to do, which identifies a business as being a good citizen. The resource-based view (RBV) theory lends credence to firms' participation in CSR because it can promote competitive advantage (Allen & Craig, 2016). Further arguments on CSR put forth by Bratenius and Melin (2015), noted that corporations cannot neglect the societies where they interact. This is because businesses are set up and managed by individuals from the society. Hence, profit maximization and accumulation of capital are aided by the society. Michell and McManus (2013) noted that activities of the private sector, which have been enhanced by globalization, have impacted on the lives of societies through environmental pollution and labor exploitation. Thus, it becomes inappropriate that these businesses relate with constituent groups within the society for compensation (Fordham & Robinson, 2018). For this reason, corporate social responsibility has been linked with sustainable development, recognizing that businesses should make decisions that are not only financially or economically based, but societal and environmentally inclusive (Muhaheranwa, 2015). Sustainability emerged during the 1990s and has grown into becoming a globally recognized concept following the Brundtland report of the UN World Commission on Environment in 1987 (Boso, Afrane&Inkoom, 2017). The report recognizes the importance of meeting the needs of the present generation without inhibiting the ability of future generations to satisfy their needs (Fordham & Robinson, 2018). Thus, the growth of "sustainability" has promoted the practice of CSR, as firms are encouraged to engage in operations that sustain the global environment and promote the global economy for future generations (Boso, Afrane&Inkoom, 2017; Pradhan, 2018).

In the literature, theories have been developed to understand the positive link between CSR spending and firm performance. One theory that explains the positive relationship between CSR and firm performance is the stakeholder theory. The theory focuses on the morals and values of managing businesses. It was originally developed by Ian Mitroff in his work "Stakeholders of the Organizational Mind", in 1983 (McCray, 2015). The origin of the work was, however, reformed by Edward Freeman, in his book "Strategic management; a stakeholder approach" (Bice, 2015). Freeman identified the various groups that are stakeholders of a business, and recommended means in which business managers can offer adequate regards to these several groups of stakeholders. Basically, Freeman's work provided the framework that modeled who and what matters to an organization. Traditionally, only business owners or shareholders are considered as relevant to a company, whom the firm owes the responsibility to satisfy and increase their value. However, the stakeholder theory altered this view by noting that there are other groups important to a firm besides its owners, which extends to the firm's workers, its customers/consumers, financiers, various trade groups, and government organizations (Fordham & Robinson, 2018). Hence, the theory incorporates resource and market views with socio-political dimension; and recommends that the scope of stakeholders of a firm should be extended to other parties, including business owners. The basis of this theory is that businesses should incorporate internal and external stakeholders who exert direct and indirect impact on the business, and that each group should be accorded with their worth (McCray, 2015).

Another theory that explains the nexus between CSR and firm performance is the social exchange theory, which is attributed to the work of Blau (McCray, 2015). The theory draws upon economical, sociological, and psychological views, such by considering the social interactions (such as in friendships, romantic relationships, and professional relationships) between two groups that have risks and benefits. The theory recognizes that within such interactions, each party in the relationship considers the benefits and costs therein, which in turn determines the interaction. A relationship that guarantees net benefit would encourage interaction between both parties. Such social calculations have been adopted to explain phenomena within the marketplace. It is believed that the relationship between businesses and their customers is mutually beneficial; hence, each party considers costs and benefits in every trade transaction (Boso, Afrane&Inkoom, 2017). Similarly, it is believed that the relationship between firms and their (internal and external) environment involves costs and benefits. Premised on this theory, it is believed that the firm is rational and that funds expended by engaging in corporate social responsibility would be beneficial; otherwise, the firm would not engage in such interaction.

From the foregoing, it is believed that corporate social responsibility improves firm performance. Empirical studies have explored this assertion. Muhammad, Faisal, and Muhammad (2015) conducted an empirical investigation on the relationship between corporate social responsibility (CSR) and financial performance among one hundred and twenty-five listed Pakistan firms between 2009 and 2013. The study employed return on assets (ROA), and Tobin's Q. Results from the study found that CSR does not significantly impact on the financial performance of the firms during the short-term; while there was a significant positive relationship between CSR and ROA indicator during the long-run period. A slightly different result was obtained from Bagh, Khan, Azad, Saddique, and Khan (2017), whose empirical investigation between CSR and firm performance (proxied using market capitalization) of 30 commercial banks listed in Pakistan found a positive and significant relationship.

Further empirical results among Asian studies agree that CSR has a significant positive link with firm performance. Ashraf, Khan, and Tariq (2017) analyzed the effects of CSR on the performance of listed banks among Asian countries. Correlation and regression analyses were employed for this purpose. The results found that CSR exerted a positive and significant effect on the performance of the banks. Lin and Amin (2017) explored the relationship between CSR and ROE of listed firms in Indonesia and Taiwan between 2009 and 2014 with the aid of panel regression. The results obtained suggest that CSR significantly improves firm performance among the firms but was higher among firms in Taiwan. Results from Resmi, Begum, and Hassan (2018) found that between 2015 and 2017 that, there was greater performance among firms that practiced CSR in Bangladesh compared to those with poor CSR disclosures.

In Africa, there is a greater admission among empirical studies that CSR impacts significantly positively on firm performance. Akinleye and Adedayo (2017) analyzed the effects of CSR engagement on the profitability of firms in Nigeria between 2010 and 2014 using five randomly selected MNCs. Granger causality was employed to complement panel regression results. There was evidence of a weak negative relationship between CSR and the profitability of the firms. Granger results provided evidence of a causal relationship running from CSR to profitability, which suggests poor application of CSR schemes among the firms. However, Mohamud (2018) found a strong significant positive relationship between ROA and CSR of East African banks, but also found a negative relationship between ROE and CSR of the banks investigated. Further poor practice of CSR was illustrated by Chetty, Naidoo, and Seetharam (2015), who analyzed the relationship between CSR and firm performance among South African firms between 2004 and 2013 using regression analysis and found CSR has no significant impact on financial performance. This is also supported by Mansaray, Yuanyuan, and Brima (2017). CSR impacted negatively on firm performance among African firms between 2005 and 2015. Empirical results from Mohammed, Zakaree, and Oladele (2016) buttresses the fact that higher spending of CSR leads to higher firm performance among listed firms in Nigeria. Thus, there is a minimum investment in CSR that would guarantee increased firm performance.

In European literature, empirical results from Johansson, Karlsson, and Hagberg (2015) found no positive relationship between CSR and firm performance among Swedish listed firms between 2006 and 2009. Adeyemo (2018), however, found that CSR impacted positively on firm financial performance among EU-listed firms between 209 and 2017, which depends on the industry. Empirical results from Djalilov, Vasylieva, Lyeonov, and Lasukova (2015) corroborate a significant positive relationship between firms' performance and CSR among Central and Eastern European countries, only when there is a right motive in CSR engagement. Once again, literature regards the importance of CSR as imperative for achieving firm performance, only when motivation among managers is adequate.

In India, a different focus is shifted to ascertaining the relationship between CSR and firm performance, when CSR becomes mandatory. Arpit (2017) analyzed the relationship between mandated CSR and financial performance (proxied using net profits and EPS) of listed Indian firms between 2014 and 2016 and found a positive but insignificant relationship between CSR and firm financial performance. Nayan, Asif, and Ananda (2018) analyzed CSR engagement during the aftermath of the 2013 Companies Act, between 2015 and 2017. The study employed Exploratory Factor Analysis, Structural Equation Modeling, and ConfirmatoryFactor Analysis for its analysis. Results obtained from the study found that CSR had a significant positive impact on firm performance. Similarly, Menezes (2019) provided mixed results, when it was found that mandated CSR significantly impacted on net profit but did not have a significant impact on ROA and EPS of listed firms in India. Empirical results from Sudershan (2019) analyzed the relationship between mandatory CSR and firm performance between 2015 and 2018, among 1460 listed firms. ROA and ROE were employed as measures of firm performance. The results found that mandated CSR impacted negatively on the metrics of firm performance in India.

III. METHODOLOGY

The study adopts the social exchange theory, which is a socio-economic and psychological theory that investigates social behavior in the interaction of two groups of persons, wherein there is a cost-benefit analysis to ascertain risks and benefits between both parties. The theory has been adopted to understand human interactions within a business setting (between the seller and buyer). The study is attributed to Blau (McCray, 2015); and can be applied to understand the relationship between CSR and firm performance. Consequent to the theory, it is recognized that the decision by a firm to engage in corporate social responsibility has costs as well as benefits. Firms are rational; hence, spending in the form of CSR (costs) is believed to benefit in the form of improved performance. Hence, if the firm does not envisage benefits, there would be no motivation to engage in CSR.

Premised on the theoretical underpinnings, this study will adopt a model to capture the effects of CSR on firm performance in India. The study adopts the models of Rabi'u, Asma'u, Jamila, and Musa (2016), which recognize that corporate social responsibility, firm size, firm leverage, and board composition are determinants of firm performance. This can be represented in the functional form stated below as:

$$PER = f\,(CSR, SIZ, LEV, COM) \qquad (1)$$

However, this study will disaggregate performance indicators into firm profit and assets turnover. Thus, equation (1) is restated as:

$$PRO = f\,(CSR, SIZ, LEV, COM) \qquad (2)$$

$$TUR = f\,(CSR, SIZ, LEV, COM) \qquad (3)$$

Equations (2) and (3) are restated in linear form as:

$$PRO = \alpha_0 + \alpha_1 CSR_{it} + \alpha_2 SIZ_{it} + \alpha_3 LEV_{it} + \alpha_4 COM_{it} + \mu$$
$$TUR = \beta_0 + \beta_1 CSR_{it} + \beta_2 SIZ_{it} + \beta_3 LEV_{it} + \beta_4 COM_{it} + v$$

Where PRO is firm profit (a measure of firm performance)
TUR is assets turnover (a measure of firm performance)
CSR is Corporate Social Responsibility
SIZ is Firm's Size
LEV is the Firm's Leverage
COM is Board Composition
α_0 and β_0 are intercepts of their respective models
$\alpha_1 - \alpha_4$; and $\beta_1 - \beta_4$ are parameter estimates of their respective models
μ and v are the stochastic error terms
i= Cross-section dimension and ranges from 1 to n/number of periods
t= Time-series dimension and ranges from 1 to t/number of firms

Table 1. Data Description, Source, and Measurement

S/N	Variables	Description	Source	Measurement
1.	PRO	Firm Profit	Annual report of listed firms on Bombay Stock Exchange	This is measured as profit after tax.
2.	TUR	Assets Turnover	Author's computation from the annual report.	This is calculated by dividing total sales or revenue by total assets.
3.	CSR	Corporate Social Responsibility	Annual report of listed firms on Bombay Stock Exchange	This is obtained as the monetary value of CSR spending of the listed corporation.

4.	SIZ	Firm Size	Author's computation from annual report	This is done by taking the log of total assets of the firms.
5.	LEV	Financial leverage	Author's computation from annual report	This is measured as the ratio of total debt to total assets.
6.	COM	Executive Members on Board	Author's computation from the annual report.	This is computed by taking the ratio of non-executive members to total board members.

Source: Author's Compilation

In order to provide answers to analyses of the effects of CSR on firm performance in India, the study will engage the panel regression technique. However, the choice for panel regression technique employed in this study will be based on the Hausman Test. Hausman test is used to determine which of fixed effect model and random effect model are suitable for panel data analysis. Based on the under the null hypothesis, the Hausman test notes that the random effect model is better than the fixed-effect model; otherwise, the fixed-effect model should be preferable. The T-test is also employed in this study to examine whether there is a significant difference in the performance of low CSR spending firms and high CSR spending firms. In order to analyze the causal relationship between CSR and firm performance in India, Granger Causality Technique will be employed. The Granger causality test is a statistical hypothesis test for ascertaining whether one-time series is useful in forecasting another.This study engages quantitative panel data from annual reports of fifteen firms listed in the Bombay stock exchange. The period of the study draws from 2015-2018. The list of firms for this study is highlighted in the table below:

Table 2. Selected Firms for the Study

S/N	Sampled Corporations	Industry
1.	Reliance Industries Limited	Chemicals and plastics
2.	Mahindra & Mahindra Limited	Motor manufacturing
3.	Bharat Petroleum Corporation Limited	Petroleum
4.	Infosys Limited	IT and Network
5.	ITC Limited	Conglomerates
6.	Bharti Airtel Limited	Telecommunications
7.	Gail India Limited	Natural gas
8.	Abuja Cement Limited	Cement
9.	Hindustan Unilever Limited	Food production
10.	Sterlite Industrial Technologies Limited	Mining
11.	Maruti Suzuki India Limited	Motor manufacturing
12.	Indian Oil Corporation Limited	Petroleum
13.	NTPC Limited	Electric and Gas
14.	Larsen & Toubro Limited	Civil Engineering
15.	Hindalco Industries Limited	Mining

Source: Author's Compilation (August 2019)

IV. EMPIRICAL RESULTS

A. Descriptive Statistics

Table 3. Descriptive Statistics

Variables	Obs	Mean	Median	Std. Dev.	Maximum	Minimum
TUR	60	1.075440	0.865982	0.681074	2.915057	0.000666
PRO (thousand crores)	60	6.294147	5.706485	16.95512	39.83700	-103.833
CSR (crores)	60	165.3738	97.55900	181.8288	904.0000	0.300000
SIZ	60	11.21735	11.17395	1.358765	14.33537	7.827237
LEV	60	0.473860	0.568155	0.182622	0.731988	0.059132
COM	60	0.696392	0.750000	0.176284	1.000000	0.100000

Source: Author's Compilation (August 2019)

Table 1 summarizes the descriptive values for the data series among the fifteen firms for this study. Turnover ratio (TUR) of the firms recorded a mean value of 1.07, the highest value of 2.91, and the lowest value of 0.0006. The standard deviation value of 0.68 is low, which suggests evidence of high turnover and managerial efficiency among the firms investigated between periods of 2015-2016 and 2018-2019.

Net profit (PRO) of the firms recorded a mean value of 6.29 thousand crores, and lowest and highest values of -103.83 thousand crores and 39.83 thousand crores. The standard deviation value (16.95512) is high, which indicates that the firms recorded low net profit values during the years studied.

Mandated CSR spending among the firms recorded a mean value of 165.37 crores, with the lowest spending of 0.3 crores and the highest spending of 904 crores. Standard deviation value for CSR (181.8) is high, which indicates that the majority of the firms spent barely above the legislated CSR rate.

Firm size (SIZ) recorded an average value of 11.2, the highest value of 14.33, the lowest value of 7.82, and the standard deviation (1.35),which is low. This indicates that the firms investigated experienced an increase in size during the years.

Firm leverage (LEV) among the firm's recorded mean value of 0.47, lowest value of 0.05, and highest value of 0.73. With a standard deviation value of 0.18, it is indicative that during the firms held a higher proportion of external debts in their capital structure.

Lastly, board composition (COM) recorded a mean value of 0.69, the lowest value of 0.1, and highest value of 0.73. Standard deviation value (0.17) is low and suggests that non-executive board members are well represented on the board of the firms investigated.

Table 4. Correlation Analysis

	TUR	PRO	CSR	SIZ	LEV	COM
TUR	1.0000					
PRO	-0.0404	1.0000				
CSR	-0.1864	0.9101	1.0000			
SIZ	-0.2750	0.6098	0.6466	1.0000		
LEV	0.0388	0.0189	0.0428	0.1456	1.0000	-0.1369
COM	-0.2313	-0.4172	-0.3027	-0.2118	-0.1369	1.0000

Source: Author's Compilation (August 2019)

Table 2 provides the relationship among the data for the study. COM variable has negative relationships with TUR (-0.2313), PRO (-0.4172), CSR (-0.3027), SIZ (-0.2118), and LEV (-0.1369). LEV variable has positive relationships with TUR (0.0388), PRO (0.0189), CSR (0.0428), and SIZ (0.1456). SIZ variable has positive relationships with CSR (0.6466) and PRO (0.6098); but correlates negatively with TUR (-0.2750).PRO CSR variable has negative relationship with TUR (-0.0404).

B. Preliminary Test

a) Comparison between High and Low CSR Firms

Table 5. T-test Analysis

	CSR	PRO Variable	TUR Variable
Observations	279	279	279
Mean	High CSR Firms and Low CSR Firms	High CSR Firms and Low CSR Firms	High CSR Firms and Low CSR Firms
	253.5786 48.34424	12.08991 -0.62699	111.7159 106.4883
Pearson Correlation	0.81682	0.514131	0.008302
T-Stat	8.170737	3.981183	0.288392
P-Value	0.0000	0.0004	0.7751

Source: Author's Compilation (August 2019)

Table 3 summarizes t-test result on performance difference between low CSR spending firms and high CSR spending firms. The mean value for high CSR spending firms (253.5786) is higher than low CSR spending firms (48.34424). The probability value is statistically significant, indicating that there is significant difference in CSR spending among the two categories of firms. The mean net profit value for high CSR spending firms (12.08991) is higher than net profit for low CSR spending firms (-0.62699). The corresponding p-value indicates that there is significant difference in net profits among high CSR spending firms and low CSR spending firms. Also, the mean turnover value for high CSR spending firms (111.7159) is higher than the mean turnover value for low CSR firms (106.4883). The p-value obtained is not statistically significant. This implies that there is no significant difference in turnover performance among high CSR spending firms and low CSR spending firms.

b) Hausman Test

Table 6. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	11.419825	4	0.0222

Source: Author's Compilation (August 2019)

Table 4 shows that at 5% level, the null hypothesis is rejected. This implies that the fixed effect panel regression technique is preferable to analyses the model for the study.

C. CSR and Firm Performance

a) Panel Regression Results

Table 7. CSR and Firm Profit

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-13.32910	3.027964	-4.402000	0.0001
CSR	0.014086	0.003382	4.165429	0.0002
SIZ	1.731055	0.226967	7.626901	0.0000
LEV	-2.226765	0.805805	-2.763403	0.0086
COM	1.309041	2.476872	0.528506	0.6001
	Effects Specification			
Cross-section fixed (dummy variables)				
Weighted Statistics				
R-squared	0.986477	Mean dependent var		20.62822
Adjusted R-squared	0.980391	S.D. dependent var		18.58868
S.E. of regression	2.600308	Sum squared reside		270.4641
F-statistic	162.1040	Durbin-Watson stat		2.304276
Prob(F-statistic)	0.000000			

Source:Author's Compilation (August 2019)

Results from table 5 show that CSR exerts significant positive impact (0.014086) on profit of the firms; firm size impacts significant positive impact (1.731055) on profits of the firms; firm leverage exerts significant negative impact (-2.226765) on profits of the firms; and board composition has insignificant positive impact (1.309041) impact on profits of the firms. R-squared statistics indicate that CSR, firm size, firm leverage, and board composition accounted for 98% of the total changes in profits of the firms. Hence, the model is well fitted. F-statistic is statistically significant at 1% level. This shows that the model was rightly specified. Durbin-Watson statistic (2.304276) suggests that problem of serial correlation in the model is minimized.

Table 8. CSR and Firm Turnover

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.286504	0.652775	8.098509	0.0000
CSR	0.000145	0.000236	0.611980	0.5440
SIZ	-0.382330	0.061135	-6.253879	0.0000
LEV	0.056691	0.145223	0.390371	0.6983
COM	0.035191	0.166764	0.211025	0.8339
	Effects Specification			
Cross-section fixed (dummy variables)				
	Weighted Statistics			
R-squared	0.986939	Mean dependent var	1.788224	
Adjusted R-squared	0.981062	S.D. dependent var	1.495583	
S.E. of regression	0.157636	Sum squared resid	0.993969	
F-statistic	167.9229	Durbin-Watson stat	1.767355	
Prob(F-statistic	0.000000			

Source: *Author's Compilation (August 2019)*

From table 6, there is evidence that CSR has insignificant positive impact (0.000145) on turnover ratio of the firms; firm size has significant negative impact (-0.382330) on turnover ratio of the firms; firm leverage exerts insignificant positive impact (0.056691) on turnover ratio of the firms; and board composition has insignificant positive impact (0.035191) impact on turnover ratio of the firms. R-squared statistics indicate that CSR, firm size, firm leverage, and board composition accounted for 98% of the total changes in turnover ratio of the firms. Hence, the model is well fitted. F-statistic is statistically significant at 1% level. This shows that the model was rightly specified. Durbin-Watson statistic (1.767355) suggests that problem of serial correlation in the model is minimized.

b) Granger Causality Results

Table 9. Granger Causality

Null Hypothesis:	Obs	F-Statistic	Prob.
CSR does not Granger Cause TUR	44	0.08888	0.7671
TUR does not Granger Cause CSR		2.14487	0.1507
SIZ does not Granger Cause TUR	45	0.35492	0.5545
TUR does not Granger Cause SIZ		4.95756	0.0314
LEV does not Granger Cause TUR	45	0.15962	0.6915
TUR does not Granger Cause LEV		2.74417	0.1051
COM does not Granger Cause TUR	45	0.72372	0.3998
TUR does not Granger Cause COM		2.31508	0.1356
CSR does not Granger Cause PRO	44	6.66476	0.0135
PRO does not Granger Cause CSR		39.8052	2.E-07
SIZ does not Granger Cause PRO	45	0.03969	0.8431

PRO does not Granger Cause SIZ		0.02554	0.8738
LEV does not Granger Cause PRO	45	0.75661	0.3893
PRO does not Granger Cause LEV		0.19805	0.6586
COM does not Granger Cause PRO	45	6.9E-05	0.9934
PRO does not Granger Cause COM		0.16034	0.6909

Source: Author's Compilation (August 2019)

Table 7 shows that there is no causal relationship between CSR and turnover ratio of the firms investigated. Hence, CSR does not granger causes turnover ratio of the firms investigated. There is causality between firm size and firm turnover ratio, which runs from firm turnover ratio to CSR. There is no causal relationship between turnover ratio and firm leverage. Also, there is no causal relationship between turnover ratio and board composition among the firms investigated.

Conversely, there is causal relationship between CSR and profits among the firms investigated; which runs from CSR to profits of the firm, and from profits to CSR. This suggests that increasing CSR spending among the firms improves their profits; and increases in firms' profits increases their CSR spending. There is no causal relationship between firm size and profits of the firm. There is also no causal relationship between profits and firm leverage. Lastly, there is no evidence of causal relationship between profits of the firms and their board composition.

V. CONCLUSION

The study conducted an empirical investigation on the effects of mandated CSR and firm performance of Indian firms, considering firms' profits and turnover ratio to incorporate shareholders' and managers' views of performance. The study engaged panel regression to analyses the impact of mandated CSR spending on firms' profits and turnover ratio metrics of financial performance. T-test was employed to ascertain whether there exists significant difference in performance of high CSR spending and low CSR spending Indian firms, in recent times. Granger causality was employed to complement panel regression analysis.

Fixed panel regression technique was employed to analyses the model of the study, which captured the effects of CSR spending, firm size, firm leverage, and board composition on firms' profits and turnover ratio metrics of financial performance. The study engaged fifteen listed firms on the Bombay Stock Exchange, over the periods of 2015 and 2018.

Results from the t-test conducted showed that there is significant difference in CSR spending among Indian firms despite the 2013 Companies Act. Further t-test results found that there is higher profits and turnover ratio among high CSR spending firms than low CSR spending firms. However, there was only significant difference in profits among high CSR spending firms and low CSR spending firms. This provides impetus among Indian firms to engage in CSR spending. Results from the panel regression analysis showed that CSR impacted positively on firms' profits and turnover ratio. However, there was only a significant relationship between CSR and firms' profits; which suggests that CSR spending serves as a mechanism for improving firms' performance, if conducted purposefully. Granger causality test result found that a two0way causality between CSR and firms' profits; but there was no causal relationship between CSR and turnover ratio of the firms. In these results, there is enough evidence that CSR significantly promotes performance of Indian firms. These results are consistent with Nayan, Asif and Ananda (2018) and Menezes (2019); whose empirical results found that CSR significantly promoted performance of listed firms in India. However, considering the weak relationship between CSR and turnover ratio (management perspective of financial performance), it becomes imperative to advise managers of corporations in India to be committed to CSR activities so as to ensure that corporate social spending improve performance metrics of the firm.

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