

# Business Responses to COVID-19 Through CSR: A Study of Selected Companies in India



Sumona Ghosh

## 1 Introduction

Currently, the world is passing through very difficult and alarming times. We have faced three coronaviruses during the twenty-first century—SARS in 2002 in China and MERS in 2012 in Saudi Arabia resulting in severe respiratory disease outbreaks and finally death and now COVID-19 in 2019. We observe that fatality rate in case of SARS and MERS were higher than COVID-19; however, dispersion was much easier in case of COVID-19, which resulted in an increase in the number of positive cases and deaths. On 11 March 2020, World Health Organization (WHO) declared ‘COVID-19 as a pandemic’ (Hewings-Martin, 2020).

The COVID-19 pandemic has brought about far-reaching changes globally. It is being regarded as the most harmful health emergency having a deleterious effect not only on the health of people but also on the global economy. This pandemic has resulted in millions suffering due to stringent social isolation and death of near and dear ones, and simultaneously it has given severe shocks to the global economy where it was in the verge of stagnation. The Director-General of the WHO, Dr Tedros Adhanom Ghebreyesus, expressing his concerns about the multiple impacts of this pandemic had observed “This is not just a public health crisis; it is a crisis that will touch every sector. So, every sector and every individual must be involved in the fights” (Ducharme, 2020). This pandemic saw people struggling with health disaster and financial crisis simultaneously. The pain the people suffered during this time was “personal, emotional, psychological, societal, economic, and cultural; and it will leave scars. In many regards, we view Covid-19 as analogous to that which Taleb (2008) calls a ‘Black Swan Event’—a shocking event that changes the world” (He & Harris, 2020). During this time of uncertainty, companies as a part of their Corporate

---

S. Ghosh (✉)

Department of Commerce, St. Xavier’s College (Autonomous), Kolkata, West Bengal, India

Social Responsibility (CSR) can play a pivotal role in supporting and reviving communities and society in general, rather than just employees and customers, by undertaking various social initiatives through diverse CSR programs, as they did during the Asian Tsunami in 2004, Hurricane Katrina in the United States in 2005, the Central Java Earthquake in Indonesia in 2006, Hurricane Ike in the United States in 2008, the Sichuan Earthquake in China in 2008, the Haitian Earthquake in 2010, the Great Eastern Japan Earthquake and Tsunami in 2011, to name a few.

The Director-General of the WHO, Dr Tedros Adhanom Ghebreyesus, urged the companies to come forward and contribute in his opening speech on 6 March 2020. He said, “We look forward to businesses stepping up to play their part. We need you. WHO is working with the World Economic Forum to engage companies around the world, and earlier this week I spoke to more than 200 CEOs about how they can protect staff and customers, ensure business continuity and contribute to the response? We’re all in this together, and we all have a role to play.” (Ducharme, 2020).

The physically or economically vulnerable people unfortunately face more uncertainties and risks with respect to their health, income and safety. Therefore, the priority during the time of pandemic is health, safety and supporting the vulnerable people. In this regard, corporate social responsibilities undertaken by the companies can be treated as an excellent mechanism to accomplish sustainable development (Mahmud et al., 2020). On the one hand, companies can enhance their reputation and financial performance while also deliver social benefits that can help people at large to sustain the COVID-19 pandemic period and overcome the crises (Bapuji et al., 2020; Guan et al., 2020; Guerriero et al., 2020; Kucharska & Kowalczyk, 2019).

However, detailed understanding and research about the corporates’ response to the pandemic situation is still little explored, especially with respect to health. There is limited knowledge about the ways in which the corporates are protecting the society and, in particular, the most vulnerable individuals and those most affected by the COVID-19 pandemic. Besides, “the studies are limited to the understanding of the phenomenon for developed economies” (McKibbin & Fernando, 2020). Given this background, the main aim of this present chapter is twofold. First, we would like to study the responses of the business to COVID-19 with respect to health through CSR. Second, we would also like to construct a Corporate Health Disclosure Index (CHDI) for the time period 2019–2021 across all companies and to differentiate the companies on that basis in order to find out the extent to which the companies in India are being responsive to such a disclosure during the pandemic years.

The remaining article is organised as follows. Section ‘Literature Review’ gives an overview of the literature review. Section ‘Methodology’ details the methodological aspects as implemented for the study in the chapter. In the ‘Results and Discussion’ section, the results along with a discussion is presented followed by concluding remarks and limitations in the ‘Conclusion and Discussion’ section.

## 2 Literature Review

COVID-19 pandemic has affected the world severely in two ways—first, the world is finding it difficult to provide proper treatment to the millions of people affected by this disease and, second, it is finding difficult to support a large number of people to survive since many of them are without wages (Bapuji et al., 2020). The COVID-19 pandemic has widened social inequalities. Millions of part-time or full-time job-holders lost their jobs. Lockdowns called by most of the cities resulted in millions becoming unemployed, demanding security benefits, especially in the developed part of the world. This would have a major impact on the future social stability and economic growth affecting life, health, education, in other words, overall human development (Bapuji et al., 2020). According to Peeri et al. (2020), “It seems that we did not learn from the two prior epidemics of Coronavirus and were ill-prepared to deal with the challenges the COVID-19 epidemic has posed.”

Since countries across the world are trying to curb the rapid spread of COVID-19 either by imposing quarantine nationwide, or closure of educational institutions and specific business operations, or bans on public gatherings, the companies are struggling to keep their global supply chains active. Most of the world’s population were under some quarantine or the other and most were following ‘Stay Home, Stay Safe’ policy (Kaplan et al., 2020). Strict nationwide lockdown forced many small businesses to shut down creating pressure on the other businesses to fill the demand–supply gap in the country (Sibley et al., 2020). Restrictions imposed on the transport services affected the supply of many critical raw materials for production, resulting in shortages of many essential commodities (Beck & Hensher, 2020; Gostin & Wiley, 2020). Disrupted working environment resulted in increased corporate failures (Willcocks, 2020). The pandemic also resulted in disruptions in country’s geopolitical condition, enhanced financial shocks and oil prices which decreased the firm’s value of the profit (Zhang et al., 2020; Sharif et al., 2020).

Thus, COVID-19 pandemic forced the companies to shift their business model to contingent models to take care of the health measures of the various stakeholders (He & Harris, 2020; Anser et al., 2020a, 2020b). Thus, according to Euro News (2020), “The impact of Covid-19 on the global economy is likely to be unprecedented since the 1930s Great Depression.”

During any crisis moment, a company is responsible and accountable to all its stakeholders be it consumers, employees or society at large (George, 1981). According to Boadi et al. (2019), “Community trust is the crucial rope to tie the mutual interests of business and community, and empathy is an important cue for establishing trust”. The problems faced by society during such times, especially job loss, can be solved by helping each other (Aknin & Whillans, 2020). Exemplary performances of the firms could be seen during the pandemic, especially with respect to CSR policies related to health, economic and social needs of the community (Aguinis et al., 2020). It was observed that major corporations across the world extended their support either in cash or in-kind to prevent the spread of this virus (Gokarna & Krishnamoorthy, 2021). Most recently, Mahmud et al. (2020) observed

that US firms in collaboration with government authorities and NGOs responded quickly to any kind of help demanded by the affected people.

From the Indian perspective, Chaudhary et al. (2020) assessed the impact of COVID-19 on affected sectors, such as aviation, tourism, retail, capital markets, MSMEs and oil. Duvendack and Sonne (2021) presented a case study based on 'systems thinking and complexity theory' on how the city of Mumbai has responded to COVID-19 where non-profit organizations, businesses and citizen volunteers along with the government had got together to fight against the pandemic. Singh et al. (2020) used 'principal component analysis' to identify the latent dimensions regarding people's preventive measures during the pandemic and found that they were following lockdown and social distancing rules and using naturopathy for immunity. Ladha (2020) presented a framework so as to decide between 'national and local lockdown' in response to the coronavirus pandemic and find the "optimum level of lockdown that balances the benefits (avoided ailments) of lockdown against its cost (arising from reduced economic output)." Rao et al. (2022) in their paper analysed the 'psychological impact of the COVID-19 pandemic' on engineering undergraduates in South India, who are in the age group of 19–22, and found that there was severe inclination towards depression and stress amongst the students.

It can therefore be concluded that firms should design effective CSR policies and programmes, which would efficiently deal with environmental and social challenges imposed by COVID-19 pandemic (Donthu & Gustafsson, 2020; Aguinis et al., 2020; García-Sánchez & García-Sánchez, 2020).

### 3 Methodology

#### 3.1 Data Source and Selection of Companies

An empirical and analytical study of Corporate Health Disclosure during the pandemic was made for the financial years 2019–2020 to 2020–2021. Secondary sources were used for the study whereby the company's annual reports, websites and sustainability reports were analysed. 'Longitudinal Qualitative Document Analysis' was used to generate data for the specific period. Qualitative Document Analysis, according to Glaser and Strauss (1967), described "the meanings, prominence and the theme of messages and emphasized the understanding of the organization as well as how it was presented." For the data coding procedure used in this study, the author read between the lines of the annual reports, sustainability reports and the documents uploaded on the websites. Identification and classification of Corporate Health Disclosure was made by the author from the data generated through the document analysis since there was absence of any standardized guidelines regarding such disclosures. Data analysis was done through Microsoft Office excel sheets in the research line-up of Voegtlin and Greenwood (2016) and Xiao et al. (2020). From the ET 500 list published by the *Economic Times*, top 100 companies were selected for the years 2019–2020 and 2020–2021. From the list of

**Table 1** Sample data set

| Non-service sector                   | BFSI sector                                      |
|--------------------------------------|--|
| Reliance Industries                  | General Insurance Corporation of India           |
| Indian Oil Corporation Ltd.          | Bajaj Finserv Ltd.                               |
| Rajesh Exports                       | Indian Bank                                      |
| ONGC                                 | Bank of India                                    |
| Vodafone Idea Ltd.                   | Kotak Mahindra Bank                              |
| Power Grid Corporation of India Ltd. | HDFC Life Insurance Company Ltd.                 |
| Redington (India) Ltd.               | SBI Life Insurance Company Ltd.                  |
| Motherson Sumi Systems Ltd.          | Axis Bank  |
| Maruti Suzuki India Ltd.             | Union Bank of India                              |
| UltraTech Cement Ltd.                | ICICI Prudential Life Insurance Company          |
| Hindustan Unilever Ltd.              | Bank of Baroda                                   |
| Jindal Steel and Power Ltd.          | Canara Bank                                      |
| HCL Technologies Ltd.                | Punjab National Bank                             |
| JSW Steel Ltd.                       | HDFC Bank Ltd.                                   |
| Grasim Industries Ltd.               | ICICI Bank Ltd.                                  |
| GAIL India Ltd.                      | State Bank of India                              |
| Mahindra and Mahindra Ltd.           | Housing Development Finance Corporation of India |
| Steel Authority of India             | Power Finance Corporation Ltd.                   |
| Wipro Ltd.                           |  |
| ITC Ltd.                             |  |
| Coal India Ltd.                      |  |
| NTPC                                 |  |
| Bharti Airtel Ltd.                   |  |
| Hindalco Industries Ltd.             |  |
| Vedanta Ltd.                         |  |
| Infosys Ltd.                         |  |
| Tata Motors                          |  |
| Bharat Petroleum Corporation Ltd.    |  |
| Hindustan Petroleum Corporation Ltd. |  |
| Tata Consultancy Services Ltd.       |  |
| Larsen and Toubro                    |  |
| Tata Steel                           |  |

100 most valuable companies, the first 50 companies were chosen for the study on the basis of market capitalization. These companies were ranked on the basis of market capitalization since this parameter gives us an indication of not only the present but future prospects of the company as well. The companies were analysed for the time period 2019–2021. Out of the selected data set of 50 companies, shown in Table 1, 18 companies belonging to the Banking, Financial Services and Insurance (BFSI) sector (4 insurance companies, 3 finance companies, 11 banking companies) and the remaining 32 belonged to the non-service sector. We have included

both service and non-service sectors for our study because the disruptions caused by COVID-19 affected both the sectors.

### 3.2 *Research Design and Methodology*

We begin with the construction of the CHDI (Corporate Health Disclosure Index). We begin with 41 indicators of business responses to health during COVID-19, grouped into six main categories: (a) Health Care Services, (b) Health system strengthening, (c) Financial Support, (d) Wellness and Health programmes, (e) Innovative responses to combat COVID-19 and (f) Others. Each indicator was assigned a value of 1 if the company disclosed information about this and 0 otherwise in order to get the score.

In Table 2, the basis for assignment of binary to the different parameters relating to Health Care Services (HCS1–HCS14), Health system strengthening (HSS1–HSS12), Financial Support (FS1–FS6), Wellness and Health programmes (WHP1–WHP4), Innovative responses to combat COVID-19 (IRCC1) and Others (OTH1–OTH4) for developing CHDI is given below.

To arrive at the CHDI value, we added the scores of all the 41 individual parameters and divided it by the maximum possible value (see Equation 1). The maximum value for CHDI is 41.

#### **Equation 1 Corporate Health Disclosure Index**

The CHDI can be calculated as follows:

$$\text{CHDI} = \left( \sum di/n \right) \times 100 = (\text{TS}/n) \times 100$$

where CHDI is Corporate Health Disclosure Index (CHDI),  $di = 1$  if indicator  $i$  is disclosed and 0 if indicator  $i$  is not disclosed,  $n$  is no. of indicators (i.e. maximum score) and TS is total score.

### 3.3 *Research Framework*

A structured process was followed for defining the data, selection of content, data coding and data analysis. This structured framework is shown in Fig. 1. The concept of this framework has been developed taking insights from Hasan et al. (2019, 2020) and Xiao et al. (2020).

**Table 2** Parameters used for construction of CHDI (Corporate Health Disclosure Index)

---

*The basis for assignment of binary values for each parameter is explained as follows:*

---

**(a) Health care services score**

*HCS1. Daily COVID-19 symptom checker—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS2. Digital health consultations provided—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS3. Free video consultation with doctors and receive virtual healthcare, counselling, diagnosis and prescription—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS4. Daily monitoring of health and reinforcing safety and hygiene practices—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS5. Assistance in vaccination programme—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS6. Implementing aggressive RT-PCR and antigen testing for employees—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS7. Provided access to medical care facilities—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS8. Assistance in doctor consultations—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS9. Support towards hospitalisation—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS10. Assistance with medical amenities—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS11. Assisting in home testing—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS12. Community-based testing for the vulnerable—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS13. Providing experienced and well-trained medical professionals to take care of employees—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HCS14. Telehealth consultation/video conferencing—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

**(b) Health system strengthening**

*HSS1. Developing COVID-19 testing capabilities—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HSS2. Supported healthcare infrastructure—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HSS3. Providing efficient ambulance services—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HSS4. Providing COVID-19 protective gears—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HSS5. Setting up a 24x7 emergency helpline number for employees and families for any emergency situation—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*HSS6. Providing Mobile Medical Units/clinic—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

(continued)

**Table 2** (continued)

|  |
|--|
| <i>HSS7. Providing mobile health vans—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <i>HSS8. Tie-ups with leading hospitals for providing treatment—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <i>HSS9. Providing tele-medicine centres—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>  |
| <i>HSS10. Providing mobile testing vans, swab collection booths—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <i>HSS11. Providing dedicated covid testing laboratory—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>  |
| <i>HSS12. Establishment of hubs to train healthcare professionals on various aspects related to COVID-19—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>                    |
| <b>(c) Financial support</b>   |
| <i>FS1. Contribution to the PM CARES Fund/Covid Relief measures—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <i>FS2. Medical benefits/medical reimbursements/treatment support/financial assistance/financial support for covid research—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i> |
| <i>FS3. Medical insurance scheme/COVID Indemnity Health Cover—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <i>FS4. Contribution to Chief Ministers' Relief Fund/State Disaster Management Authorities—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>                                  |
| <i>FS5. Funding for upgrading health infrastructure/procurement of medical equipment—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>  |
| <i>FS6. Financial support to access to COVID-19 care packages—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <b>(d) Wellness and health programmes</b>  |
| <i>WHP1. Health talks/mental health talks—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <i>WHP2. Emotional and wellness support—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <i>WHP3. Online counselling—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <i>WHP4. Tele-counselling services for frontline health and childcare workers—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <b>(e) Innovative responses to combat COVID-19</b>   |
| <i>IRCC1. Innovative responses undertaken by the company to combat COVID-19—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>   |
| <b>(f) Others</b>  |
| <i>OTH1. Online learning program, on the fundamentals of infection prevention and control of COVID-19—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>                       |
| <i>OTH2. Training and mentoring healthcare providers on prevention and management of COVID-19 and social behaviour—This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise</i>          |

(continued)



**Table 2** (continued)

---

*OTH3.* Conducting periodic COVID-19 health risk assessment of employees through online surveys: calling, and contact tracing—*This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

*OTH4.* Supporting the wards of deserving paramedical staff and housekeeping staff (providing groceries)—*This variable is assigned a value of 1 if the company discloses information about this and 0 otherwise*

---

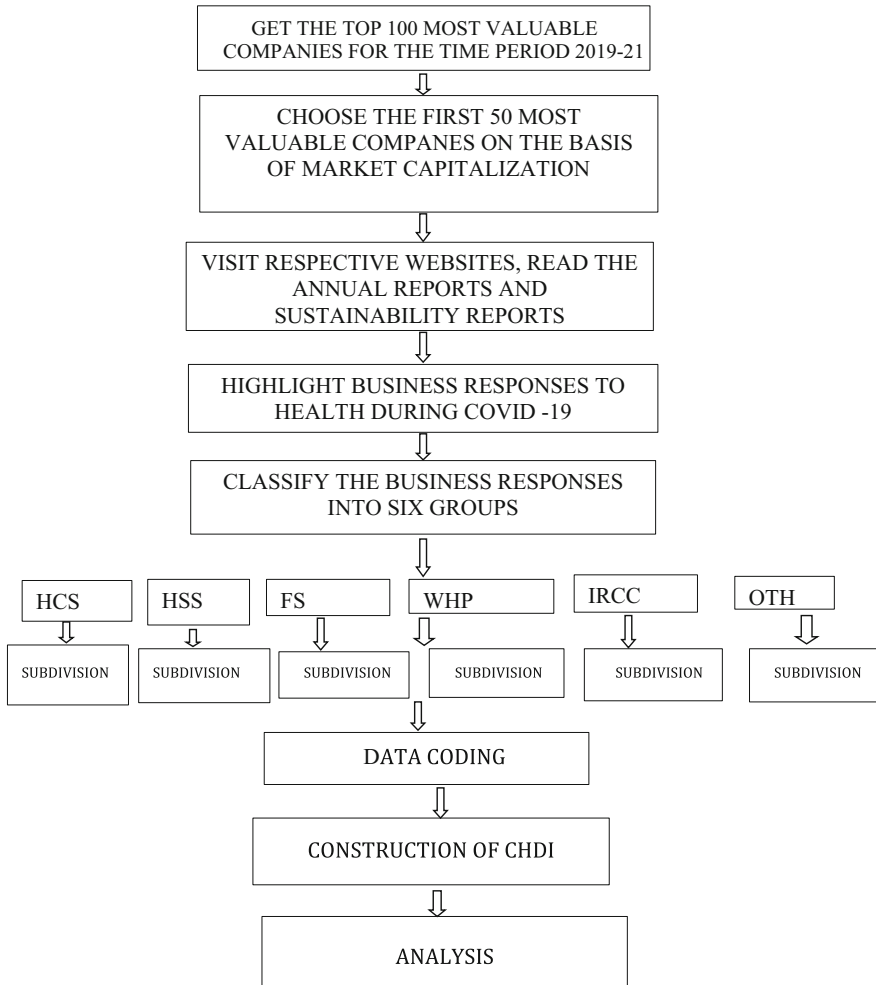
Source: Author's own development

## 4 Results and Discussion

Out of the 41 parameters listed in Table 2, we observed that four parameters have turned out to be highly significant and they are HSS2, HSS4, HCS5 and FS1. HSS2 highlights companies' assistance in providing ventilators, oxygen concentrators, beds in hospitals, isolation centres, Covid care centres, critical medical equipment, saline stand, locker sets and trolleys, and 86% of the companies have provided such assistance to strengthen health system. HSS4 highlights companies providing COVID-19 protective gears such as PPE kits, sanitisers, masks, gloves, soaps, immunity booster kits and medical protective clothing, and 84% of the companies have distributed such protective gears to the society. HCS5 highlights companies' augmenting the country's vaccination programme including rolling out own vaccination programme across locations for all employees of the firm and eligible family members, organising vaccination camps and creating vaccination tracking portal, and 68% of the companies have indulged in healthcare services and have provided assistance with respect to vaccination programme for the employees and the society at large.

Financial Services 1 (FSI) signifies companies' contribution to the PM CARES Fund/Covid Relief measures, and 76% of the companies have been responsive to this parameter. It is noteworthy to specify here that the Ministry of Corporate Affairs (vide its General Circular No. 10/2020 dated 23 March 2020) has clarified that funds spent for COVID-19 will be considered as an eligible CSR activity. According to General Circular No. 15/2020, F. No. CSR-01/4/2020-CSR-MCA Government of India, Ministry of Corporate Affairs, the following will constitute CSR expenditure:

- 'Contribution made to the PM CARES Fund': The *Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PM CARES Fund)* was created on 27 March 2020 for 'combating, containment and relief efforts' against the coronavirus outbreak and similar situations in the future.
- 'Contribution made to State Disaster Management Authority to combat COVID-19 shall qualify as CSR expenditure'.
- 'Spending CSR funds for COVID-19-related activities will qualify as CSR expenditure'
- 'If any ex-gratia payment is made to temporary/casual workers/daily wage workers over and above the disbursement of wages, specifically for the purpose of fighting COVID-19, the same will be admissible towards CSR expenditure.'



Source. Illustration made by author.

Note: HCS- Health Care System, HSS-Health System Strengthening, FS-Financial Services, WHP-Wellness and Health Programmes, IRCC-Innovative Response to Combat Covid -19, OTH- Other Programmes.

**Fig. 1** Research framework. Source. Illustration made by author. Note: *HCS* Health Care System, *HSS* Health system strengthening, *FS* Financial Services, *WHP* Wellness and Health programmes, *IRCC* Innovative response to combat COVID-19, *OTH* Other programmes

The overall results are provided in Table 3.

The 41 indicators of business responses to health during COVID-19 were grouped into six main categories: (a) Health Care Services (HCS), (b) Health system strengthening (HSS), (c) Financial Support (FS), (d) Wellness and Health

**Table 3** Responsiveness of the companies towards individual CHDI parameters (%)

| CHDI parameters | Responsiveness of the companies towards CHDI parameters (%) |
|-----------------|---|
| HCS1            | 2.00  |
| HCS2            | 8.00  |
| HCS3            | 4.00  |
| HCS4            | 4.00  |
| <b>HCS5</b>     | <b>68.00</b>  |
| HCS6            | 34.00   |
| HCS7            | 18.00   |
| HCS8            | 10.00   |
| HCS9            | 4.00  |
| HCS10           | 4.00  |
| HCS11           | 0.00  |
| HCS12           | 4.00  |
| HCS13           | 8.00  |
| HCS14           | 10.00   |
| HSS1            | 4.00  |
| <b>HSS2</b>     | <b>86.00</b>  |
| HSS3            | 24.00   |
| <b>HSS4</b>     | <b>84.00</b>  |
| HSS5            | 28.00   |
| HSS6            | 6.00  |
| HSS7            | 2.00  |
| HSS8            | 10.00   |
| HSS9            | 8.00  |
| HSS10           | 2.00  |
| HSS11           | 4.00  |
| HSS12           | 2.00  |
| <b>FS1</b>      | <b>76.00</b>  |
| FS2             | 32.00   |
| FS3             | 14.00   |
| FS4             | 18.00   |
| FS5             | 6.00  |
| FS6             | 18.00   |
| WHP1            | 20.00   |
| WHP2            | 24.00   |
| WHP3            | 8.00  |
| WHP4            | 4.00  |
| IRCC1           | 16.00   |
| OTH1            | 2.00  |
| OTH2            | 4.00  |
| OTH3            | 2.00  |
| OTH4            | 2.00  |

Source: Author's own computation

**Table 4** Responsiveness of the companies towards CHDI parameters categorized into groups

| CHDI parameters categorized into groups | Responsiveness of the companies (%) |
|---|-------------------------------------|
| HCS                                     | 13.00                               |
| <b>HSS</b>                              | <b>22.00</b>                        |
| <b>FS</b>                               | <b>27.00</b>                        |
| WHP                                     | 14.00                               |
| OTH                                     | 3.00                                |
| IRCC                                    | 16.00                               |

Source: Author's own computation

programmes (WHP), (e) Innovative responses to combat COVID-19 (IRCC) and (f) Others (OTH). Table 4 presents companies responsiveness towards these six groups. Out of the six groups, HSS and FS turned out to be significant where in 22% of the companies invested in strengthening the health system of our country to fight against the pandemic and 27% of the companies made financial contribution to support the country to fight against COVID-19.

Further analysis of the group scores of individual companies as presented in Table 5 highlights the fact that *Reliance Industries*, an Indian multinational conglomerate company with a diverse range of businesses including energy, petrochemicals, natural gas, retail, telecommunications, mass media and textiles, made the highest contribution in *Health Care Services group (HCS)* securing a score of 0.43. They contributed through efforts such as (1) organising for daily COVID-19 symptom checker for all employees; (2) health consultations provided through Jio Health Hub app; (3) employees and family members could book a free video consultation with RIL doctors and receive virtual healthcare, counselling, diagnosis and prescription; (4) encouraging daily monitoring of health and reinforcing safety and hygiene practices; (5) 'rolling out own vaccination programme, R-Surakshaa, across locations for all the employees and eligible family members' and (6) implemented aggressive RT-PCR and antigen testing for employees entering the premises.

*Jindal Steel and Power Ltd.*, an Indian steel and energy company, made the highest contribution towards *Health Service Strengthening (HSS)* group, securing a score of 0.58. It helped strengthening the healthcare system by (1) supporting the healthcare infrastructure by providing ventilators, oxygen concentrators and 30-bed isolation centres; (2) providing COVID-19 protective gears such as PPE kits, sanitisers, masks, gloves, soaps, etc. to the employees and society at large; (3) providing mobile clinic and ambulance; (4) providing dedicated Covid testing laboratory and (5) providing tele-medicine centres.

*Bajaj Finserv Ltd.*, a core investment company, *Kotak Mahindra Bank*, a banking company and *Redington (India) Ltd.*, a supply chain solution provider, had made the highest contribution towards *Financial Services group (FS)*, and their score being 0.67. Their efforts included (1) reimbursing expenses towards procurement of oxygen cylinders; (2) reimbursement of purchase of medicines for the employees and their family members; (3) reimbursement towards servicing of generators for the healthcare centres; (4) reimbursement towards repairing charges of medical

**Table 5** Individual company group score

| Name of the companies                            | HCS         | HSS         | FS          | WHP         | IRCC        | OTH         |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| NTPC   | 0.36        | 0.42        | 0.33        | <b>0.50</b> | 0.00        | 0.00        |
| Reliance Industries                              | <b>0.43</b> | 0.33        | 0.17        | <b>0.50</b> | 0.00        | 0.00        |
| Mahindra and Mahindra Ltd.                       | 0.21        | 0.33        | 0.50        | 0.25        | <b>1.00</b> | 0.00        |
| Bajaj Finserv Ltd.                               | 0.21        | 0.25        | <b>0.67</b> | 0.25        | 0.00        | <b>0.25</b> |
| Jindal Steel and Power Ltd.                      | 0.14        | <b>0.58</b> | 0.33        | 0.00        | 0.00        | 0.00        |
| HCL Technologies Ltd.                            | 0.21        | 0.33        | 0.33        | 0.25        | <b>1.00</b> | 0.00        |
| Bharti Airtel Ltd.                               | 0.29        | 0.25        | 0.33        | 0.25        | 0.00        | 0.00        |
| Hindalco Industries Ltd.                         | 0.21        | 0.33        | 0.33        | 0.25        | 0.00        | 0.00        |
| Larsen and Toubro                                | 0.14        | 0.33        | 0.33        | <b>0.50</b> | 0.00        | 0.00        |
| Wipro Ltd.                                       | 0.29        | 0.25        | 0.33        | 0.00        | 0.00        | 0.00        |
| Vedanta Ltd.                                     | 0.07        | 0.42        | 0.33        | 0.25        | 0.00        | 0.00        |
| Kotak Mahindra Bank                              | 0.07        | 0.17        | <b>0.67</b> | <b>0.50</b> | 0.00        | 0.00        |
| ICICI Bank Ltd.                                  | 0.14        | 0.33        | 0.50        | 0.00        | 0.00        | 0.00        |
| Tata Consultancy Services Ltd.                   | 0.14        | 0.25        | 0.17        | 0.25        | <b>1.00</b> | <b>0.25</b> |
| ICICI Prudential Life Insurance Company          | 0.21        | 0.17        | 0.33        | 0.25        | <b>1.00</b> | 0.00        |
| Redington (India) Ltd.                           | 0.07        | 0.08        | <b>0.67</b> | 0.25        | 0.00        | <b>0.25</b> |
| Grasim Industries Ltd.                           | 0.14        | 0.33        | 0.33        | 0.00        | 0.00        | 0.00        |
| Infosys Ltd.                                     | 0.14        | 0.25        | 0.17        | 0.25        | <b>1.00</b> | 0.00        |
| Axis Bank  | 0.21        | 0.17        | 0.17        | 0.50        | 0.00        | 0.00        |
| HDFC Bank Ltd.                                   | 0.14        | 0.25        | 0.50        | 0.00        | 0.00        | 0.00        |
| State Bank of India                              | 0.07        | 0.25        | 0.33        | 0.00        | <b>1.00</b> | <b>0.25</b> |
| GAIL India Ltd.                                  | 0.14        | 0.33        | 0.17        | 0.00        | 0.00        | 0.00        |
| ITC Ltd.   | 0.21        | 0.25        | 0.17        | 0.00        | 0.00        | 0.00        |
| Bharat Petroleum Corporation Ltd.                | 0.21        | 0.25        | 0.17        | 0.00        | 0.00        | 0.00        |
| Tata Steel                                       | 0.14        | 0.25        | 0.17        | 0.25        | 0.00        | 0.00        |
| Housing Development Finance Corporation of India | 0.07        | 0.25        | 0.33        | 0.25        | 0.00        | 0.00        |
| Maruti Suzuki India Ltd.                         | 0.14        | 0.25        | 0.00        | 0.25        | <b>1.00</b> | 0.00        |
| Hindustan Unilever Ltd.                          | 0.14        | 0.17        | 0.17        | 0.25        | <b>1.00</b> | 0.00        |
| ONGC   | 0.07        | 0.25        | 0.17        | 0.00        | 0.00        | <b>0.25</b> |
| SBI Life Insurance Company Ltd.                  | 0.07        | 0.17        | 0.50        | 0.00        | 0.00        | 0.00        |
| Power Finance Corporation Ltd.                   | 0.07        | 0.25        | 0.17        | 0.25        | 0.00        | 0.00        |
| Indian Oil Corporation Ltd.                      | 0.07        | 0.17        | 0.33        | 0.00        | 0.00        | 0.00        |
| UltraTech Cement Ltd.                            | 0.07        | 0.25        | 0.17        | 0.00        | 0.00        | 0.00        |
| JSW Steel Ltd.                                   | 0.14        | 0.17        | 0.17        | 0.00        | 0.00        | 0.00        |
| Steel Authority of India                         | 0.14        | 0.17        | 0.17        | 0.00        | 0.00        | 0.00        |
| Coal India Ltd.                                  | 0.07        | 0.25        | 0.17        | 0.00        | 0.00        | 0.00        |
| Tata Motors                                      | 0.14        | 0.17        | 0.00        | 0.25        | 0.00        | 0.00        |
| Hindustan Petroleum Corporation Ltd.             | 0.07        | 0.17        | 0.33        | 0.00        | 0.00        | 0.00        |
| HDFC Life Insurance Company Ltd.                 | 0.07        | 0.08        | 0.17        | <b>0.50</b> | 0.00        | 0.00        |
| Canara Bank                                      | 0.07        | 0.08        | 0.50        | 0.00        | 0.00        | 0.00        |
| Power Grid Corporation of India Ltd.             | 0.07        | 0.08        | 0.33        | 0.00        | 0.00        | 0.00        |
| Motherson Sumi Systems Ltd.                      | 0.07        | 0.17        | 0.17        | 0.00        | 0.00        | 0.00        |

(continued)

**Table 5** (continued)

| Name of the companies                  | HCS  | HSS  | FS   | WHP  | IRCC | OTH  |
|--|------|------|------|------|------|------|
| Indian Bank                            | 0.00 | 0.17 | 0.33 | 0.00 | 0.00 | 0.00 |
| Union Bank of India                    | 0.07 | 0.08 | 0.33 | 0.00 | 0.00 | 0.00 |
| Punjab National Bank                   | 0.00 | 0.17 | 0.33 | 0.00 | 0.00 | 0.00 |
| Bank of Baroda                         | 0.07 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vodafone Idea Ltd.                     | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| General Insurance Corporation of India | 0.00 | 0.00 | 0.17 | 0.00 | 0.00 | 0.00 |
| Bank of India                          | 0.00 | 0.00 | 0.17 | 0.00 | 0.00 | 0.00 |
| Rajesh Exports                         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Source: Author's own computation

equipment of the healthcare institutions; (5) Corona Kavach insurance policy/medical insurance cover provided to the employees; (6) contribution to the PM CARES Fund/Chief Minister's Public Relief Fund; (7) Covid Care Allowance for the employees to support Covid-related care such as tests, scans, medicines and buying other items like oximeter, masks and sanitisers; (8) financial assistance to employees for medical expenditure; (9) financial assistance to upgrade healthcare infrastructure and (10) 'Protecting the Protectors', where the employees raised money to support COVID-19 relief operations undertaken by the doctors.

*NTPC*, India's largest energy conglomerate; *Reliance Industries* and *Larsen and Toubro*, Indian multinational conglomerates, with a diverse range of business including engineering, construction, manufacturing, technology and financial services; *Kotak Mahindra Bank* and *HDFC Life Insurance Company Ltd.*, life insurance companies—all have contributed immensely in *Wellness and Health programmes group (WHP)*, with a score of 0.50. They took the following initiatives: (1) multiple health initiatives for employees such as virtual medical consultations, yoga sessions and guidance on mental health/various health issues, emotional and wellness-related initiatives were organised; (2) psychological guidance sessions were arranged on well-being and shared with employees; (3) wellness initiatives, popularly recognised as 'Health to the Power Infinity', and various health and wellness-related initiatives through online and onsite interactions such as Emotional Assistance program, Employee Outreach program were organised; (4) 'Mindful Morning Movement' series for mindfulness, meditation and yoga; 'November Movement', with focus on men's health; 'Walkathon', with focus on walking and contributing to a cause, were organised; (5) SNEHAL-24 × 7 online counselling program was introduced and (6) 'iCall' online counselling was introduced.

Interestingly, *Innovative Responses to Combat COVID-19 (IRCC)* was observed in few companies. *Mahindra and Mahindra Ltd.*, an Indian multinational conglomerate (score 1), launched Mhealthy, a comprehensive solution powered by new-generation technologies to enable data-driven digital diagnostics to enable workforce and community safety against COVID-19 (antibody and screening tests). The company also contributed to UNICEF's 'Flush the Virus'—a Community

Toilet Sanitisation initiative. *HCL Technologies Ltd.*, an Indian multinational information technology services and consulting company (score 1), launched the #TakeCareHCL program to create COVID-19 awareness. *Tata Consultancy Services Ltd.*, an Indian multinational information technology services and consulting company (score 1), provided “TCS Data Marketplace solution, to support Indigenisation of Diagnostics, an ambitious new project launched by the Government of India to scale up indigenous Covid-19 diagnostic test-kit production capacity to a million test kits a day”. *ICICI Prudential Life Insurance Company*, a life insurance company (score 1), created an app—‘iWorkSafe’ for employees to submit their health status daily. *Infosys Ltd.*, an Indian multinational information technology company (score 1), “created mobile applications like ‘Crush Covid RI’ and ‘Apthamitra’ to help local governments in their fight against COVID-19”. *State Bank of India*, an Indian multinational public sector bank and financial services (score 1), came up with Project Praana, which aimed to design an electro-mechanical ventilator with locally available components so that the production of the ventilators can be rapidly scaled up. They also launched the India Health Alliance (IHA), a collaborative healthcare programme and HelloSwasti™, a comprehensive tele-care solution for the vulnerable. *Maruti Suzuki India Ltd.*, an Indian automobile manufacturer (score 1), developed a health application named ‘Kushal Mangal’ and provided to Tier-1 supplier partners at free of cost towards their COVID-19 management. *Hindustan Unilever Ltd.*, a consumer goods company (score 1), launched ‘Project U CARES’ a Health Improvement Program. The Rural Telehealth program ‘Jio Mobile Doctornia’ was launched as a revolutionary telehealth ecosystem. ‘Mum’s Magic Hands’ (MMH) handwashing behaviour change programme was initiated in order to reduce health and hygiene risks related to diarrhoea and COVID-19.

Apart from the above, some companies (score 0.25) have also undertaken certain other measures (OTH) such as conducting periodic COVID-19 health risk assessment of employees through online surveys: calling and contact tracing by *Bajaj Finserv Ltd.* “TCSiON CoronaWarriors, an online learning program, was specifically created for paramedical and professional healthcare workers on the fundamentals of infection prevention and control of COVID-19” by *Tata Consultancy Services Ltd. Redington (India) Ltd.* supported the wards of deserving paramedical staff and housekeeping staff by providing groceries. *State Bank of India*, partnered with ECHO India for training and mentoring healthcare providers on prevention and management of COVID-19. *ONGC*, an Indian government-owned crude oil and natural gas corporation, initiated training by in-house doctor/medical staff on Covid protocols and sensitized about Covid-appropriate social behaviour.

Using the 41 parameters listed in Table 2 above, we have computed the CHDI score using the method explained above. The CHDI computed in the above manner will help us to compare the health disclosure standards across our sample firms during COVID-19. The CHDI scores are in the ranges ( $\leq 0.05$ ), ( $>0.05-0.10$ ), ( $>0.10-0.15$ ), ( $>0.15-0.20$ ), ( $>0.20-0.25$ ), ( $>0.25-0.30$ ) and ( $>0.30-0.34$ ). The minimum CHDI score is 0.00 and the maximum CHDI score is 0.34. For instance, NTPC has disclosed 14 parameters out of the 41 parameters specified in Table 2,

hence its CHDI score is 0.34 (14/41). The rest of the companies CHDI have been calculated similarly. This implies that while all the companies, except one, have disclosed their responses to COVID-19, they have failed to be responsive to many crucial actions (Table 2) that had to be taken to curb such a pandemic. The companies have been classified according to these ranges wherein the range ( $>0.30-0.35$ ) denotes Group 7 and ( $\leq 0.05$ ) Group 1. The remaining ranges denote Groups 6, 5, 4, 3 and 2, respectively. Group 7 denotes companies whose CHDI fall within the highest range ( $>0.30-0.35$ ) and Group 1 denotes companies whose CHDI fall within the lowest range ( $\leq 0.05$ ). This has been highlighted in Table 6.

Out of a sample set of 50 companies, we observe about 28% (14) of the companies fall in Group 3 where the CHDI range is ( $>0.10-0.15$ ) and only 4% (2) companies fall in the highest tier Group 7 where the CHDI range is ( $>0.30-0.35$ ) as presented in Table 7.

## 5 Conclusion and Discussion

Out of the 41 parameters, we observed that four parameters turned out to be highly significant and they are supporting healthcare infrastructure (HSS2), providing COVID-19 protective gears (HSS4), assisting in vaccination programme (HCS5) and contributing to the PM CARES Fund/Covid Relief measures (FS1). Out of the six groups, HSS and FS turned out to be significant wherein 22% of the companies invested in strengthening the healthcare system of our country to fight against the pandemic and 27% of the companies made financial contribution to support the country to fight against COVID-19. Reliance Industries, an Indian multinational conglomerate company with a diverse range of businesses including energy, petrochemicals, natural gas, retail, telecommunications, mass media and textiles, made the highest contribution in Health Care Services group (HCS), securing a score of 0.43. Jindal Steel and Power Ltd., an Indian steel and energy company, made the highest contribution towards Health Service Strengthening (HSS) group, securing a score of 0.58. Bajaj Finserv Ltd., a core investment company, Kotak Mahindra Bank, a banking company and Redington (India) Ltd., a supply chain solution provider, had made the highest contribution towards Financial Services group (FS), their score being 0.67. NTPC, India's largest energy conglomerate; Reliance Industries and Larsen and Toubro, Indian multinational conglomerates; Kotak Mahindra Bank and HDFC Life Insurance Company Ltd., life insurance companies—all have contributed immensely in Wellness and Health programmes group (WHP), with a score of 0.50. Interestingly, 'Innovative responses to combat COVID-19 (IRCC)' was observed in few companies. Apart from the above, some companies such as Bajaj Finserv Ltd., Tata Consultancy Services Ltd., Redington (India) Ltd., State Bank of India and ONGC have also undertaken certain other measures (OTH) such as conducting periodic COVID-19 health risk assessment of employees through online surveys, online learning program. From our study we also



**Table 6** Individual company CHDI score

| Name of the companies                   | ≤0.05 | >0.05-0.10 | >0.10-0.15 | >0.15-0.20 | >0.20-0.25 | >0.25-0.30 | >0.30-0.34 | Group nos. |
|---|-------|------------|------------|------------|------------|------------|------------|------------|
| NTPC                                    |       |            |            |            |            |            | 0.34       | 7          |
| Reliance Industries                     |       |            |            |            |            |            | 0.33       | 7          |
| Mahindra and Mahindra Ltd.              |       |            |            |            |            | 0.28       |            | 6          |
| Bajaj Finserv Ltd.                      |       |            |            |            |            | 0.30       |            | 6          |
| Jindal Steel and Power Ltd.             |       |            |            |            |            | 0.28       |            | 6          |
| HCL Technologies Ltd.                   |       |            |            | 0.25       |            |            |            | 5          |
| Bharti Airtel Ltd.                      |       |            |            | 0.25       |            |            |            | 5          |
| Hindalco Industries Ltd.                |       |            |            | 0.25       |            |            |            | 5          |
| Larsen and Toubro                       |       |            |            | 0.25       |            |            |            | 5          |
| Wipro Ltd.                              |       |            |            | 0.23       |            |            |            | 5          |
| Vedanta Ltd.                            |       |            |            | 0.23       |            |            |            | 5          |
| Kotak Mahindra Bank                     |       |            |            | 0.23       |            |            |            | 5          |
| ICICI Bank Ltd.                         |       |            |            | 0.23       |            |            |            | 5          |
| Tata Consultancy Services Ltd.          |       |            | 0.20       |            |            |            |            | 4          |
| ICICI Prudential Life Insurance Company |       |            | 0.20       |            |            |            |            | 4          |
| Redington (India) Ltd.                  |       |            | 0.20       |            |            |            |            | 4          |
| Grasim Industries Ltd.                  |       |            | 0.20       |            |            |            |            | 4          |
| Infosys Ltd.                            |       |            | 0.18       |            |            |            |            | 4          |
| Axis Bank                               |       |            | 0.20       |            |            |            |            | 4          |
| HDFC Bank Ltd.                          |       |            | 0.20       |            |            |            |            | 4          |
| State Bank of India                     |       |            | 0.18       |            |            |            |            | 4          |
| GAIL India Ltd.                         |       |            | 0.18       |            |            |            |            | 4          |
| IITC Ltd.                               |       |            | 0.18       |            |            |            |            | 4          |
| Bharat Petroleum Corporation Ltd.       |       |            | 0.18       |            |            |            |            | 4          |
| Tata Steel                              |       |            | 0.18       |            |            |            |            | 4          |

(continued)

Table 6 (continued)

| Name of the companies                            | ≤0.05 | >0.05-0.10 | >0.10-0.15 | >0.15-0.20 | >0.20-0.25 | >0.25-0.30 | >0.30-0.34 | Group nos. |
|--|-------|------------|------------|------------|------------|------------|------------|------------|
| Housing Development Finance Corporation of India |       |            |            | 0.18       |            |            |            | 4          |
| Maruti Suzuki India Ltd.                         |       | 0.15       |            |            |            |            |            | 3          |
| Hindustan Unilever Ltd.                          |       | 0.15       |            |            |            |            |            | 3          |
| ONGC   |       | 0.15       |            |            |            |            |            | 3          |
| SBI Life Insurance Company Ltd.                  |       | 0.15       |            |            |            |            |            | 3          |
| Power Finance Corporation Ltd.                   |       | 0.15       |            |            |            |            |            | 3          |
| Indian Oil Corporation Ltd.                      |       | 0.13       |            |            |            |            |            | 3          |
| UltraTech Cement Ltd.                            |       | 0.13       |            |            |            |            |            | 3          |
| JSW Steel Ltd.                                   |       | 0.13       |            |            |            |            |            | 3          |
| Steel Authority of India                         |       | 0.13       |            |            |            |            |            | 3          |
| Coal India Ltd.                                  |       | 0.13       |            |            |            |            |            | 3          |
| Tata Motors                                      |       | 0.13       |            |            |            |            |            | 3          |
| Hindustan Petroleum Corporation Ltd.             |       | 0.13       |            |            |            |            |            | 3          |
| HDFC Life Insurance Company Ltd.                 |       | 0.13       |            |            |            |            |            | 3          |
| Canara Bank                                      |       | 0.13       |            |            |            |            |            | 3          |
| Power Grid Corporation of India Ltd.             |       | 0.10       |            |            |            |            |            | 2          |
| Motherson Sumi Systems Ltd.                      |       | 0.10       |            |            |            |            |            | 2          |
| Indian Bank                                      |       | 0.10       |            |            |            |            |            | 2          |
| Union Bank of India                              |       | 0.10       |            |            |            |            |            | 2          |
| Punjab National Bank                             |       | 0.10       |            |            |            |            |            | 2          |
| Bank of Baroda                                   | 0.05  |            |            |            |            |            |            | 1          |
| Vodafone Idea Ltd.                               | 0.03  |            |            |            |            |            |            | 1          |
| General Insurance Corporation of India           | 0.03  |            |            |            |            |            |            | 1          |
| Bank of India                                    | 0.03  |            |            |            |            |            |            | 1          |
| Rajesh Exports                                   | 0.00  |            |            |            |            |            |            | 1          |

Source: Author's own computation

**Table 7** Frequency of companies and CHDI score range

| CDHI score           | Frequency of companies | Percent     | Cumulative percent |
|----------------------|------------------------|-------------|--------------------|
| ≤0.05                | 5                      | 10.0        | 10.0               |
| >0.05–0.10           | 5                      | 10.0        | 20.0               |
| <b>&gt;0.10–0.15</b> | <b>14</b>              | <b>28.0</b> | <b>44.0</b>        |
| >0.15–0.20           | 13                     | 26.0        | 70.0               |
| >0.20–0.25           | 8                      | 16.0        | 88.0               |
| >0.25–0.30           | 3                      | 6.0         | 96.0               |
| >0.30–0.35           | 2                      | 4.0         | 100.0              |
| Total                | 50                     | 100.0       |                    |

Source: Author’s own computation

observe that out of a sample set of 50 companies, about 28% (14) of the companies fall in Group 3 where the CHDI range is (>0.10–0.15) and only 4% (2) of the companies fall in the highest tier Group 7 where the CHDI range is (>0.30–0.35).

We developed a CHDI score by using 41 parameters developed through Longitudinal Qualitative Document Analysis of the company’s annual reports, websites and sustainability reports for the financial years 2019–2021. Our results showed that business response towards health during COVID-19 was average. Businesses have mostly concentrated on short-term plans, primarily supporting healthcare infrastructure, assisting in vaccination programmes and contributing to the PM CARES Fund. Long-term plans for reintegrating people, especially the vulnerable one, into normalcy were not so much emphasized by companies in general. This study attempted to develop a Corporate Health Disclosure Index during the pandemic era, and we believe that the results will be useful to the companies and administrators in evaluating their performance in terms of health-related steps taken during COVID-19 and what necessary plans can be prepared to improve the situation. Since literature shows that study in this regard is very limited, we have tried to be as innovative as possible in our approach, taking the first 50 large listed companies. Therefore, the sample was restricted.

## References

Aguinis, H., Villamor, I., & Gabriel, K. P. (2020). Understanding employee responses to COVID-19: A behavioral corporate social responsibility perspective. *Management Research, 18*(4), 421–438.

Aknin, L. B., & Whillans, A. V. (2020). Helping and happiness: A review and guide for public policy. *Social Issues and Policy Review, 15*, 1–32.

Anser, M. K., Islam, T., Khan, M. A., Zaman, K., Nassani, A. A., Askar, S. E., Abro, M. M. Q., & Kabbani, A. (2020a). Identifying the potential causes, consequences, and prevention of communicable diseases (including COVID-19). *BioMed Research International, 2020*, 1–13. Article ID: 8894006.

- Anser, M. K., Yousaf, Z., Khan, M. A., Sheikh, A. Z., Nassani, A. A., Abro, M. M. Q., & Zaman, K. (2020b). Communicable diseases (including COVID-19)—Induced global depression: Caused by inadequate healthcare expenditures, population density, and mass panic. *Front Public Health*, 8, 398.
- Bapuji, H., Patel, C., Ertug, G., & Allen, D. G. (2020). Corona crisis and inequality: Why management research needs a societal turn. *Journal of Management*, 46(7), 1205–1222.
- Beck, M. J., & Hensher, D. A. (2020). *Insights into the impact of Covid-19 on household travel, working, activities and shopping in Australia—the early days under restrictions*. Retrieved from <https://ses.library.usyd.edu.au/handle/2123/22247>
- Boadi, E. A., He, Z., Bosompem, J., Say, J., & Boadi, E. K. (2019). Let the talk count: Attributes of stakeholder engagement, trust, perceive environmental protection and CSR. *SAGE Open*, 9(1), 1–15.
- Chaudhary, M., Sodani, P. R., & Das, S. (2020). Effect of COVID-19 on Economy in India: Some Reflections for Policy and Programme. *Journal of Health Management*, 22(2), 169–180.
- Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research*, 117, 284–289.
- Ducharme, J. (2020, March 11). World Health Organization declares COVID-19 a “Pandemic.” Here’s what that means. *The Time*. <https://time.com/5791661/who-coronavirus-pandemic-declaration/>
- Duvendack, M., & Sonne, L. (2021). Responding to the multifaceted COVID-19 crisis: The case of Mumbai, India. *Progress in Development Studies*, 21(4), 361–379.
- Euronews. (2020). *COVID-19: World economy in 2020 to suffer worst year since 1930s Great Depression, says IMF*. Retrieved <https://www.euronews.com/2020/04/14/watch-live-international-monetary-fund-gives-world-economic-outlook-briefing-on-covid-19>
- García-Sánchez, I. M., & García-Sánchez, A. (2020). Corporate social responsibility during COVID-19 pandemic. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 126.
- George, R. D. (1981). Moral responsibility and the corporation. *Philosophic Exchange*, 12(1), Article 3.
- Glaser, B. G., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine Publishing.
- Gokarna, P., & Krishnamoorthy, B. (2021). Corporate social responsibility in the time of COVID-19 pandemic: An exploratory study of developing country corporates. *Corporate Governance and Sustainability Review*, 5(3), 73–80.
- Gostin, L. O., & Wiley, L. F. (2020). Governmental public health powers during the COVID-19 pandemic: Stay-at-home orders, business closures, and travel restrictions. *Jama*, 323(21), 2137–2138.
- Guan, D., Wang, D., Hallegatte, S., Davis, S. J., Huo, J., Li, S., et al. (2020). Global supply-chain effects of COVID19 control measures. *Nature Human Behaviour*, 4, 577–575.
- Guerriero, C., Haines, A., & Pagano, M. (2020). Health and sustainability in post-pandemic economic policies. *Nature Sustainability*, 3, 494–496.
- Hasan, M. M., Nekmahmud, M., Yajuan, L., & Patwary, M. A. (2019). Green business value chain: A systematic review. *Sustainable Production and Consumption*, 20, 326–339.
- Hasan, M. M., Popp, J., & Oláh, J. (2020). Current landscape and influence of big data on finance. *Journal of Big Data*, 7, 21.
- He, H., & Harris, L. (2020). The impact of Covid-19 pandemic on corporate social responsibility and marketing philosophy. *Journal of Business Research*, 116, 176–182.
- Hewings-Martin, Y. (2020, April 10). How do SARS and MERS compare with COVID-19? *Medical News Today*. <https://www.medicalnewstoday.com/articles/how-do-sars-and-merscompare-with-covid-19>
- Kaplan, J., Frias, L., & McFall-Johnsen, M. (2020, July 11). A third of the global population is on coronavirus lockdown—Here’s our constantly updated list of countries and restrictions. *Business Insider*. <https://www.businessinsider.com/countries-on-lockdown-coronavirus-italy-2020-3>

- Kucharska, W., & Kowalczyk, R. (2019). How to achieve sustainability? Employee's point of view on company's culture and CSR practice. *Corporate Social Responsibility and Environmental Management*, 26(2), 453–446.
- Ladha, R. S. (2020). Coronavirus: A framework to Decide between national and local lockdown. *Journal of Health Management.*, 22(2), 215–223.
- Mahmud, A., Ding, D., Kiani, A., & Hasan, M. (2020). Corporate social responsibility programs and community perceptions of societal progress in Bangladesh: A multimethod approach. *SAGE Open*, 10(2), 1–17.
- McKibbin, W. J., & Fernando, R. (2020, March 2). *The global macroeconomic impacts of COVID-19: Seven scenarios*. CAMA Working Paper No. 19/2020, Available SSRN: <https://ssrn.com/abstract=3547729> or <https://doi.org/10.2139/ssrn.3547729>
- Peeri, N. C., Shrestha, N., Rahman, M. S., Zaki, R., Tan, Z., Bibi, S., Baghbanzadeh, M., Aghamohammadi, N., Zhang, W., & Haque, U. (2020). The SARS, MERS and novel coronavirus (COVID-19) epidemics, the newest and biggest global health threats: What lessons have we learned? *International Journal of Epidemiology*, 49, dyaa033.
- Rao, S. S., Pushpalatha, K., Sapna, R., & Monika Rani, H. G. (2022). An analysis of the psychological implications of COVID-19 pandemic on undergraduate students and efforts on mitigation. In D. Garg, S. Jagannathan, A. Gupta, L. Garg, & S. Gupta (Eds.), *Advanced computing. IACC 2021. Communications in computer and information science* (Vol. 1528). Springer.
- Sharif, A., Aloui, C., & Yarovaya, L. (2020). COVID-19 pandemic, oil prices, stock market, geopolitical risk and policy uncertainty nexus in the US economy: Fresh evidence from the wavelet-based approach. *International Review of Financial Analysis*, 70, 101496.
- Sibley, C. G., Greaves, L., Satherley, N., Wilson, M. S., Lee, C., Milojev, P., et al. (2020). Short-term effects of the COVID-19 pandemic and a nationwide lockdown on institutional trust, attitudes to government, health and wellbeing. *The American Psychologist*, 75, 618–630.
- Singh, A. K., Agrawal, B., Sharma, A., & Sharma, P. (2020). COVID-19: Assessment of knowledge and awareness in Indian society. *Journal of Public Affairs*, 20(4), e2354.
- Taleb, N. N. (2008). Infinite variance and the problems of practice. *Complexity*, 14(2).
- The Ministry of Corporate Affairs. (2020). *Vide General Circular No. 10/2020 dated 23rd March, 2020*. Government of India.
- Voegtlin, C., & Greenwood, M. (2016). Corporate social responsibility and human resource management: A systematic review and conceptual analysis. *Human Resource Management Review*, 26(3), 181–197.
- Willcocks, L. P. (2020). The Covid-19 pandemic shines a spotlight on the systemic risk to global business. *LSE Business Review*. Retrieved from [http://eprints.lse.ac.uk/104378/1/businessreview\\_2020\\_04\\_28\\_the\\_covid\\_19\\_pandemic\\_shines\\_a\\_spotlight\\_on.pdf](http://eprints.lse.ac.uk/104378/1/businessreview_2020_04_28_the_covid_19_pandemic_shines_a_spotlight_on.pdf)
- Xiao, M., Cooke, F. L., Xu, J., & Bian, H. (2020). To what extent is corporate social responsibility part of human resource management in the Chinese context? A review of literature and future research directions. *Human Resource Management Review*, 30(4), 100726.
- Zhang, D., Hu, M., & Ji, Q. (2020). Financial markets under the global pandemic of COVID-19. *Finance Research Letters*, 36, 101528.

**Sumona Ghosh** has been associated with St. Xavier's College Kolkata since 2002. She was the head of the Department of Law from 2003 to 2018. Presently she is the Joint Coordinator of the Foundation Course. After completing her post-graduation in Commerce with rare distinction, Prof. Ghosh has been conferred with the Degree of Philosophy in Business Management by the University of Calcutta on 31st of July 2014. Her area of research was on Corporate Social Responsibility (CSR). The title of her doctoral dissertation was "Pattern of participation of Public and Private sector companies in Corporate Social Responsibility Activities".

She has published in journals of national and international repute. Dr Ghosh has been highly acclaimed for her guest lectures on CSR in premier institutes of higher learning including the Indian

Institute of Management (Calcutta), Indian Institute of Management (Shillong). She has taken sessions in Management Development Programmes conducted by premier institutes on CSR. She has presented papers on CSR at various national and international conferences. Her research interest lies in Corporate Social Responsibility, Sustainable Development, Integrated Reporting and Philosophies of management. Dr Ghosh is also a Certified Assessor for Sustainable Organizations (CASO), certification conferred upon her by UBB GmbH Germany. Dr Ghosh has been appointed as the Council member of the Sustainable Businesses Council of the very first independent National Business Chamber for Women that has been established in India—Women’s Chamber of Commerce and Industry (WICCI) ([www.wicci.in](http://www.wicci.in)).